

THE IMPACT OF INTERNAL MANAGEMENT ON ORGANIZATIONAL
PERFORMANCE

A Dissertation

by

STEPHEN ANDREAS SARGENT

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2009

Major Subject: Political Science

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ABSTRACT

The Impact of Internal Management on Organizational Performance. (August 2009)

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This dissertation explores the impact of internal management on the performance of public organizations. This research descends from the management matters research agenda and uses the Meier/O'Toole model to present the organizational process. I identify five types of internal management: goal setting, human resource management, structure (delegation), budgeting and technology (use). Additionally, I identify multiple indicators of performance: efficiency, outputs, service outcomes, responsiveness and democratic outcomes. The development of measures of internal management and the use of multiple performance indicators will allow for the development of a strategic guide for management.

DEDICATION

To my mother, Elaine, who taught me to read and write, to my father, Ernest, who sparked my interest in knowledge. To my Grandmothers, Dorothy Sargent, and Frankie Grover, and to my Grandfathers, Ernest Sargent, and Dr. Earnest Grover; to all my family and friends who supported me and never let me quit on this journey.

TABLE OF CONTENTS

	Page
ABSTRACT.....	iii
DEDICATION.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	ix
CHAPTER	
I INTRODUCTION: ADVANCING A MANAGEMENT MATTERS RESEARCH AGENDA.....	1
Explaining the Meier/O'Toole Model.....	2
Advancing Management Research.....	4
Developing Multiple Measures of M ₁	7
Developing a Multiple Measures of Performance.....	11
Methodology.....	14
Methodology for Determining Measures of M ₁	14
Measuring Performance Indicators.....	15
Hypotheses.....	15
Hypotheses on M ₂ and Performance Indicators.....	19
Retesting the Hypotheses.....	19
Summary.....	19
II EXPLORING THE COMPONENTS OF INTERNAL MANAGEMENT.....	21
History of Management Theory and the Roots of M ₁	21
Environment and Informal Influences.....	23
Simon Says.....	24
The New Public Administration, New Public Management and Leadership.....	25
Four Streams and the Birth of M ₁	27
Components of M ₁	29

CHAPTER	Page
Components in the Literature and Links to Organizational Ends.....	29
Goal Setting	30
Budgeting Efficiency	31
First Era.....	31
Second Era	32
Third Era	33
Era Four	34
Era Five.....	34
Human Relations.....	35
Structure.....	36
Technology	37
Definitions of Components	37
Links to Organizational Ends.....	39
Chapter Summary	41
 III DESIGNING MEASURES OF INTERNAL MANAGEMENT	 43
Are the Measures Valid	44
Goal Ambiguity	44
Designing an Assessment of the Impact of Organizations Goals.....	47
Methods for Measure Developing	48
Activist Tone.....	48
Target Clarity	49
Focus	49
Goal Difficulty	50
Goal Commitment.....	50
Section Summary	50
Human Relations.....	51
Analysis of Large Samples of Firms.....	52
Measuring Human Relations: Recruitment.....	55
Training.....	55
Work Design/ Innovation.....	55
Structure.....	56
Measuring Control	56
Findings.....	57
Measuring Structure.....	60
Structuring.....	60
Span of Control.....	60
Technology	60
Budgeting Efficiency	61
Chapter Summary	62

CHAPTER	Page
IV HUMAN RESOURCE MANAGEMENT.....	64
Performance and Democracy.....	64
Human Resources Management.....	67
Measures and Data.....	69
Models.....	70
Controls.....	71
School Policy.....	72
Environment.....	72
Teacher Quality and Financial Resources.....	72
Results.....	73
College Readiness and Turnover.....	77
Turnover in the Original Models.....	82
Conclusion.....	83
What Do the Results Mean Specifically for Education.....	85
Implications for Future Research.....	85
V BUDGETING AND PERFORMANCE.....	87
What Is Budget Efficiency?.....	89
Niskanen and the Problem of Budget Misuse.....	89
Criticisms.....	90
The Niskanen Legacy.....	91
Literature Review.....	93
Hypotheses.....	96
Methodology.....	97
Measures.....	98
Models.....	99
Controls.....	100
School Policy.....	101
Environment.....	101
Teacher Quality and Financial Resources.....	102
Unique Control for Model One.....	102
Managerial Experience/Quality.....	102
Results.....	103
How Does Slack Reduction Impact Performance?.....	106
Conclusion.....	109

CHAPTER	Page
VI SUMMARY: FUTURE DIRECTIONS IN THE STUDY OF M ₁	111
Components of M ₁	111
Performance Indicators	114
Data	114
Results.....	115
Future Areas of Research.....	116
Study of Performance Indicators	117
Future Fields of Study.....	118
REFERENCES	121
APPENDIX.....	136
VITA.....	146

LIST OF TABLES

TABLE		Page
1	Impact of HR on APASS	74
2	Impact of HR on SAT	75
3	Impact of HR on College Readiness.....	78
4	Impact of HR on Turnover.....	79
5	Impact of HR on SAT/Turnover	80
6	Impact of HR on APASS	81
7	Institutional Capacity and Slack Reduction.....	104
8	Slack Reduction and Performance	107
9	Slack Reduction and Performance 2	108
10	HR and APASS.....	138
11	SAT Model Two	139
12	HR and College Readiness.....	140
13	Slack Reduction	142
14	Slack Reduction and APASS	143

CHAPTER I

INTRODUCTION: ADVANCING A MANAGEMENT MATTERS RESEARCH

AGENDA

In the past decade, the field of public administration has experienced a renaissance of research which focuses on the role that management serves in improving organizational performance. In particular, the management model developed by O'Toole and Meier (1999) has been at the forefront of the management matters research agenda. Their research has examined the role of networking, how interaction and collaboration with other organizations can boost organizational performance. While we have learned a great deal about the impact of networking, there is much to be learned about internal management, "management's contribution to organizational stability through additions to hierarchy/structure as well as regular operations" (Meier and O'Toole 2007, p.5). The management matters research agenda will be strengthened by the development of measures of internal management. Developing measures of internal management will help scholars of public administration gain a broader view of managements' impact on organizational performance.

Another way that we can enhance our knowledge of management's impact on performance is by broadening the types of performance indicators used in management studies. It is common for research to focus on how a certain management activity impacts

This dissertation follows the style of the *American Journal of Political Science*.

a single performance indicator. For example management studies may explore how administrative actions can improve test scores in schools or increasing the number of patients treated in hospitals, etc. While examining performance indicators that are unique to public organizations is important, there is a need to explore performance indicators that all organizations share in common, if our goal is to develop theories of management that are generalizable to multiple types of organizations.

Thus I will attempt to advance the management matters research agenda in four ways in this study. The first contribution of this study will be to develop measures of internal management. The second contribution of this study will be to identify a standard set of performance indicators which may be used to study multiple public organizations in different fields. The development of measures of internal management and the addition of performance indicators will allow for the development of a strategic guide for management. That is, once we have measures of internal management and external management and multiple performance indicators, we can test to determine the type of management activities which are most effective in different arenas of organizational performance. Finally, the expanded universe of performance indicators will lay the framework for testing the theoretical model on multiple types of organizations.

Explaining the Meier/ O'Toole Model

Scholars have long sought to determine the best method for improving the performance of public organizations (Taylor 1911, Gulick 1937, Simon 1946, Rainey 2003). Multiple theories have posited the determinants of organizational excellence. Some scholars have attributed organizational success to environment (Kaufman 1985); others have asserted that it is the design or structure of an organization that determines

performance outcomes. O'Toole and Meier (1999) approach organizational performance from the perspective that management matters. Their approach develops and tests a theoretical performance model using data collected on public organizations. The O'Toole and Meier model of organizational performance, clearly articulates the important variables affecting organizational outputs. Meier and O'Toole model organizational performance as

$$O(t) = B_1(S + M_1)O(t-1) + B_2(X_t/S)(M_3/M_4) + E_t$$

where: $O(t)$ is output or organizational performance

S is a measure of stability

M_1 is the amount of internal management

$O(t-1)$ is past performance

X_t are resources and environmental factors

M_3 & M_4 are networking (the buffering and exploitation of the environment)

E is the error term

The Meier/O'Toole Model has been tested extensively using Texas school data from the Texas Education Agency (TEA) and superintendent surveys. The performance indicators in their study such as pass rates on standardized tests and attendance rates are obtained from the TEA, while Meier and O'Toole conducted statewide management surveys of Texas school superintendents in order to document and gage their management activities. Incorporated into this model are three basic principles about the management systems that deliver public programs, 1) they are autoregressive systems, 2) the model is nonlinear and 3) success in public management depends on many other factors. The autoregressive term means that the best predictor of organizational behavior in the future

will be the past behavior of an organization. Second the model is not strictly additive but rather nonlinear. Finally, many factors play a role in making public administration work.

The Meier/ O'Toole Model explains management as a function of three factors: 1) M_1 , the internal management of organizations, 2) M_3 , how the management of an organization is able to exploit their environment and 3) M_4 , how organizations protect themselves from external shocks. M_3 and M_4 are often combined to form M_2 which is the ratio of M_3 and M_4 . As Meier and O'Toole 2007 note, most of their research has focused on the development of the latter portion of the model. The focus of the management matters agenda on M_2 or networking means that there are tremendous opportunities for developing M_1 , which I seek to exploit.

Advancing Management Research

In spite of the contributions of the Meier/O'Toole model, the management matters research agenda is faced with four major challenges. The first major challenge is developing multiple measurements of internal management (M_1). Whereas the measurement of networking may be done by documenting who and how many times a manager contacts an actor in a network, M_1 is less straightforward. The internal responsibilities of managers consist of adjusting levels of spending, assigning responsibilities, hiring new employees, etc. The process of developing measurements of M_1 is complicated because there are so many different functions that a manager must perform to enhance the internal operation of an organization. However, developing these measures is absolutely necessary to gain a comprehensive perspective about how management activities influence performance.

After developing several measures of M₁, the next challenge of the “management matters” agenda is to develop additional measures of performance. Studies of organizational performance often look at a single performance indicator. This is problematic for two reasons. The first reason that the use of single performance indicators is insufficient is because managers perform multiple tasks, thus there needs to be multiple ways to evaluate how well these activities are performed. The second reason that the use of unitary performance indicators is problematic is because it prevents referencing across separate fields in public administration. That is, most organizations have more commonalities than differences. While public organizations such as hospitals, schools and police departments serve separate functions, treating the infirmed, educating the public and enforcing the law, there are things managers of all these organizations have in common. The managers of all these organizations must receive reports, plan, budget, etc. Thus when evaluating the management of these organizations, it is important not to confine analysis to the performance indicators, which these organizations specialize in such as, patients treated, pass rates or persons arrested; researchers must also examine the areas that these organizations have in common. Such an approach will allow information sharing and the improvement of public management across fields.

Once measures of internal management and performance indicators have been developed, the next step is to determine under which circumstances internal management, networking or a mixture of the two, is the best strategy to achieve improved organizational performance. Hicklin, O’Toole and Meier (2008) address an important part of this question in their paper. Hicklin, O’Toole and Meier examine where networking at increasing rates eventually leads to diminishing returns. More specifically

the authors examine the subject from the perspective of an equilibrium inquiring whether effective management entails balancing the use of internal management and networking. “While managerial networking should result in considerable payoffs much of the time, there could be a limit to these pay-offs meaning that at some point there is nothing or at least less, to gain from more external interactions” (p. 6). The authors find evidence of diminishing returns with networking, but also find that quality managers and managers with larger central administrations can overcome this problem.

While the findings of this paper are important, there are other important issues that remain unaddressed. Improving performance is not simply a matter of whether a manager should network more or less in a certain situation but also, whether a manager should network at all. That is, there are certain situations where the most effective strategy for a manager is to either employ networking or internal management. Thus effective management is not simply a question of what amount of networking is necessary but in some circumstances, whether networking is necessary at all. If researchers can determine the types of problems where the most effective solution is networking, internal management or a mixture of both, this information could profoundly improve the performance of public organizations.

Once measures of internal and external management are developed, the next step is to generate hypotheses about how internal and external management affect performance outputs and test them in an area of public administration. We should expect to see four patterns emerge: 1) M_1 leads to improved performance, 2) M_2 leads to improved performance, 3) both of these techniques work in concert to improve performance and 4) neither M_1 nor M_2 have an impact on performance. Examining the

coefficients of these regressions should help answer the balancing questions raised by Hicklin, O'Toole and Meier. After these hypotheses are tested, they should be retested in another area of public administration, in order to determine if these hypotheses may be generalized to the discipline as a whole.

Thus in this dissertation project, I adopt a four-part strategy for gaining a better understanding of public administration. The first priority of this research project is to develop multiple measures of internal networking (M_1). The next step of the project is to organize existing performance indicators into standardized categories for multiple public organizations across various policy fields. The third step of the process is to generate hypotheses about how the components of M_1 affect performance and test these hypotheses using Texas school data. The final step is to establish how these hypotheses may be retested in order to generate a generalizable statement about how internal and external management impact the performance of public organizations.

Developing Multiple Measures of M_1

Meier & O'Toole (2007) describe M_1 , their measure of internal management as "management's contribution to organizational stability through additions to hierarchy/structure as well as regular operations" (p.5). The literature on public administration provides a wide spectrum of what the regular "operations" of internal management might be. My strategy for developing measures of M_1 is to identify the different internal management activities highlighted by the public administration and management literatures. I will use the management activities identified in the management literature as the basis for my measures of M_1 . The following is an

examination of literature which is focused on the internal management of an organization.

The literature on public administration has identified goals as potentially one of the most important determinants of organizational success. Looking at goals, specifically official goals are useful because they let us know what the values and purposes of an organization are. A popular approach to studying goals in the field of public administration is examining goal clarity. Several studies have highlighted goal clarity as an important component of organizational success (Gold 1982, Wilson 1989, Popovich 1998, Hale 1996, Chun and Rainey 2005). Chun and Rainey (2005) examined organizational goal ambiguity, and developed three “viable ways of conceiving and measuring organizational goal ambiguity for government agencies” (p.546). Additionally, Chun and Rainey (2005) were among the first to demonstrate empirically that goal clarity enhances aspects of organizational performance. Whereas, there is literature which supports the notion that goal clarity impacts organizational performance; and goal setting is the responsibility of administrators, I include goal setting as a component of internal management.

Another important component of internal management identified by the literature is budgeting. Budgeting represents an activity that all managers engage in. The way that public managers spend money reflects the priority that bureaucrats place on satisfying their constituents. The allocation of funds in budgets represents the political tension between varying interests in the populace, and it also represents how accountable public organizations are to citizens. “Budgets provide a powerful tool of accountability to citizens who want to know how the government is spending their money and if

government has generally followed their preferences. Budgeting links citizens' preferences and governmental outcomes" (Rubin 1997, p.2). Budgets are both administrative and political in nature. Because of the way that the public scrutinizes budgets and because budgets represent how managers use resources, budgets represent an important part of internal management. I will include budgeting in this study as one of the components of internal management.

Human relations management is also a very important approach to studying internal management. Human relations management is specifically concerned with ways to motivate employees (Rainey 1997). This research emphasizes the importance of the "comprehensive employee recruitment and selection procedures, incentive compensation and performance management, and intensive employee involvement and training" (Huselid 1995). It has been argued that organizations often do not realize their potential because employees are not performing at their optimal level (Bailey 1993). Thus the literature suggests that the proper utilization of recruitment and training procedures can contribute to employee development and thus lead to higher organizational performance. The extent that managers engage in human relations management will be examined in this study.

Structure has been asserted as an important determinant of organizational performance. Structure refers to the arrangement of hierarchical levels in an organization. Rainey (2003) provides 4 dimensions of structure: centralization, formalization, red tape and complexity. Centralization refers to how much power is concentrated in the upper levels of an organization. Formalization is the level of formal written rules that guide an organizations policy. Red tape is administrative rules that constrain the ability of

employees to do their job. Finally, complexity has been described as the level of specialization in an organization. Factors such as the size of the organization, environment and the technology and tasks of the organization are all said to influence the structure. While a manager may not be responsible for formalized rules, red tape or the complexity of the environment that an organization operates in, managers can influence structure through centralization. Managers impact centralization through the way that they delegate responsibilities. I will include the delegation of authority as a component of internal management in this study.

Technological developments in computers and communication have been asserted to have a major impact on organizations (Rainey 2003). “Computers, the internet, electronic mail, and communication technology make possible more elaborate and interactive networking of people and organizational units, both within and between organizations” (Rainey 2003, p.212). Managers play a major role in the acquisition of technology for their organization. The level of technology used by an organization is a reflection of management. I will include the level of technology as a function of internal management.

My examination of the literature has led me to posit that there are at least five components of internal management: goal setting, budgeting, human relations management, structure and technological acquisition. I do not make the claim that the five components that I have listed is a final list. However, based on my current knowledge of the literature, I believe this list to be representative of most of the internal activities performed by public administrators.

Developing a Multiple Measures of Performance

After creating measures for internal management and networking, the next step is identifying performance indicators for public organizations. While all public organizations perform different tasks, it is possible to organize the various organizational outputs of organizations under general categories. Boyne (2002) fuses elements of the 'economy-efficiency-effectiveness' (3E's) model and the inputs-outputs-outcomes model to create five domains of performance indicators. The five domains discussed by Boyne are: outputs, efficiency, service outcomes, responsiveness and democratic outcomes.

Outputs often refer to the performance indicators that are unique to each type of public organization. For example pass rates on standardized test scores may represent outputs for school districts, whereas clearance rates for cases would represent outputs for police departments. The attitude of the public towards government is a way to measure responsiveness. Boyne (2002), notes that an important aspect of responsiveness is consumer satisfaction. Several authors study the role that the performance of public organizations plays on citizen satisfaction (Swindell and Kelly 2004, Tyler and Folger 1980,).

Public support may be used as a measure of consumer satisfaction. Public Support refers to the extent that citizens are pleased with a public organizations performance. Meier and O'Toole (2003) formulated measures of public support. "Our survey asked superintendents to rate community and school board support on a five-support scale from excellent to inadequate. The survey also asked for a similar evaluation of parental involvement" (p. 692). Thus, measuring public support is an established means of measuring responsiveness.

Efficiency is an easy performance indicator to assess if budget data is available for the organization being studied. While, service outcomes refer to the equity and impact that policies have on citizens. It often takes years to determine the impact of service outcomes.

Democratic outcomes are another important performance indicator for public organizations. One of the most extensively discussed conceptualizations of democratic outcomes is accountability. Romzek and Dubnick (1987) refer to accountability as “the means by which public agencies and their workers manage diverse expectations generated within and outside the organization” (p. 228). Romzek and Dubnick claim that there are at least 4 types of accountability that organizations must deal with: bureaucratic, legal, professional and political. A bureaucratic accountability system is one in which an official relationship between a superior and an employee exists, and there is a form of regulation or supervision. Legal accountability is similar in form to bureaucratic accountability; however it is a relationship between the public organization and an outside agency. In a system characterized by professional accountability control is placed in the hands of employees with the most expertise. Finally, political accountability is characterized by responsiveness to citizens. Specifically, this relationship is defined by a representative and her or his constituents. Thus discussing how to improve the accountability of public organizations is a complex issue.

O’Loughlin combines three of the categories (political, professional, and legal) developed Romzek and Dubnick to develop a more comprehensive concept of accountability. O’Loughlin (1990) argues that in order for organizations to make bureaucratic agencies accountable to them three factors must exist: 1) an effective

communication system through which public organizations can explain and justify their actions, (2) the capability of outside organizations to influence bureaucratic decisions, and 3) both discretionary and nondiscretionary decision arenas. O'Loughlin argues that both of these arenas are needed to ensure that the democratic nature of decision-making as well as the discretionary authority of government institutions is maintained. In order to measure the effectiveness of a bureaucracy's communication system, O'Loughlin (1990) suggests that we count the quantity of formal and informal mechanisms that bureaucracies use to communicate with their constituents. In addition, researchers may use their own judgment to determine whether the information that public organizations supply their principals is important.

We may attempt to gauge the capacity of outside organizations to influence bureaucracies by measuring the frequency with which outside actors use mechanisms to hold public organizations accountable. Finally, O'Loughlin suggests that we may measure the spheres of discretionary and nondiscretionary decision-making by: 1) looking at agency decision-making and determining if their process may be divided into the two said spheres and 2) examining the "attitudinal or consciousness level of the actor" to see if they have "conceptually divided policy questions into these two spheres" (O'Loughlin 1990, p. 287).

While each of the five categories performance indicators is important, I will study the impact of M_1 on outputs and efficiency in this study. While I do not explore the impact of internal management on each form of performance indicator in my dissertation project, I will lay out a complete theory for the study of internal management.

Methodology

The Texas School district management surveys conducted by Ken Meier and PERG at Texas A&M University provide a wealth of information on the management practices of Texas superintendents. These surveys inquire information about: networking, management style, education (of the manager), goals and time allocation. I will use the measure of networking (M₂) that Meier and O'Toole developed from these surveys in my study.

Specifically, Meier and O'Toole asked superintendents "how frequently they interacted with five key environmental actors-school boards members, local business leaders, state legislators, other superintendents, and the state education agency-on a 6-point scale from daily to never" (Meier and O'Toole 2005, p. 528). The authors subsequently factor analyzed these frequency ratings to create a single measure of network management. The measure of M₂ created by Meier and O'Toole is positively correlated with improvement on statewide standardized test scores in Texas.

Methodology for Determining Measures of M₁

I identified five components of M₁ earlier in this chapter. I will propose methods of measuring these components after conducting investigations in the literature on the most common and effective techniques which have been used. In areas where sufficient methodologies have not been developed, I will propose measures based on my understanding of the literature. I am aware that there will be limitations; do to the fact that the data that I am using may not have the necessary information to test certain measures. However, it is my position that scholarly progress is achieved if methods of

measuring the components of M_1 are identified, even if they must be studied in subsequent studies.

Measuring Performance Indicators

The performance indicators of this study were discussed earlier in this paper. The measures of public support in this study are identical to those used by Meier and O'Toole (2003). The outputs used as performance indicators in this study are the pass rate on the state standardized test score (TAKS). These data are all available from the Texas Education Agency.

Hypotheses

The hypotheses in this study will predict how internal management and networking affect outputs. My strategy is to review the literature and determine how each component of M_1 impacts the chosen performance indicator. To be more specific, I will examine five components of internal management and examine the literature to see if it predicts a relationship for outputs. I will use this process to formulate the hypotheses for the components of M_1 . Subsequently, I will review the literature on networking to determine its relation to the performance indicator of this study and formulate the hypotheses for M_2 .

The first component of M_1 that I will examine is goal setting. The research on goal setting provides evidence that organizations with specific and difficult goals perform better than those with no goals, simple goals or unclear goals (Locke 2000; Locke and Latham 1990). It is apparent from the literature that goal setting impacts the personal attitudes of employees. Goal setting should impact organizational outputs (TAKS scores). School districts with higher standards and difficult goals should have higher test scores

than districts with vague goals and lower standards. Thus examining goal setting leads to the following hypothesis: H1) organizations with difficult and clear goals will perform better on outputs.

The next component of M_1 examined in this study is human relations management. The literature on human relations management indicates that human relations management is associated with increased outputs (Katz, Kochan and Gobeille 1983, Bartel 1994, Authur 1994). The literature on human relations management argues that managers who make the work environment more suited to the needs of the employee increase the performance of employees. Katz, Kochan and Gobeille (1983) demonstrated that quality of work life enhanced productivity. Bartel (1994) provided evidence that training programs are related to higher levels of productivity. Author (1994) found that companies which emphasized creating employee commitment had lower turnover and greater creativity. Huselid (1995) predicts that HRM should be associated with greater productivity. Examining human relations as a component of M_1 leads to a second hypotheses: H2) increases in human relations management leads to increases in outputs.

The third component of M_1 examined in this paper is budgeting efficiency. Budgeting efficiency is likely the most unique component of M_1 , as budgeting efficiency may be considered either as a management action or a performance outcome. I include budget efficiency as both an independent and a dependent variable in the study.

The literature on efficiency and outputs is mixed. One of the ways that managers have tried to achieve budgeting efficiency is through contracting out services. Meier and O'Toole (2004a) did not find evidence that contracting out increased outputs. Some scholars have even argued that serving the needs of the public and budget efficiency are

not necessarily congruent goals. In spite of proponents of privatization, who advocate it because of the belief that private industry is more efficient, there is no strong evidence that supports the notion that increased budget efficiency leads to increased outputs (Hodge 1998). However, there are scholars such as Dunk (1992) and Wang (2000) who argue that public organizations perform better when they maximize their budget. This idea is based on the idea that government budgets are small when policy makers are ignorant of constituent needs, but that public institutions will increase spending to serve public needs when supplied with correct information (Downs 1957). Some scholars argue that managers should include subordinates in the budget process in order to gain the information to purchase the services needed by the public (Dunk 1992, Fisher et al. 2002). Thus, I will test H3) reducing budget slack leads to increased organizational performance.

Technology is the 4th component of M₁ examined in the study. The literature on the use of technology in public organizations links technology with outputs. The literature asserts that advances in information technology results in organizations that are smaller and decentralized, able to more efficiently coordinate both internally and with outside organizations (Rainey 2003). Thus the examination of technology as a component of M₁ yields one hypothesis: H4) increases in information technology leads to increased outputs.

The last component of M₁ examined in this study is structure. There are several ways that structure may be examined. For instance some have studied the structure of organizations by examining the number of rules that an organization has, while others have examined how stringently these rules are enforced (Rainey 2003). Rainey (2003)

claims that there are 4 dimensions of structure: centralization, formalization, red tape and complexity. Centralization refers to how much of an organizations power is concentrated in the top tiers of its hierarchy. Thus an organization with most of its power concentrated at the upper levels is considered highly centralized. Whereas an organization in which authority is delegated to a great degree is considered decentralized. Formalization is the extent to which organizations operational procedures are established in a set of written rules. Red Tape refers to administrative rules which limit the discretion of employees. Finally, complexity refers to the amount of specialization in an organization; the more policy domains that an organization operates in, the more complex the organizational environment.

In this section I will examine the role that centralization has on organizational performance. I focus on centralization because power is something that a manager can delegate whereas a manager may not be responsible for the rules (formalization, red tape) or the complexity that an organization operates in. Additionally, I would like to note that while I focus exclusively on the role of centralization, it does share a common thread with formalization and red tape. Centralization, formalization and red tape are all related to the level of discretion that employees in an organization enjoy. Each of these measures of structure limits the decision making ability of employees in an organization. The literature implies a linkage between structure and outputs.

Prominent in the literature on public administration is the idea that more discretion enhances performance. A 1986 National Academy of Public Administrators study reported that the complex rules that federal managers had to abide by reduced the capacity and motivation of managers to work. In Rainey, Facer, and Bozeman (1995)

they reported that approximately 90 percent of the managers that they queried said that personnel rules significantly constrained their ability to perform their job. A 1998 Bozeman and Rainey survey indicates that managers prefer more discretion. If giving employees more discretion reduces constraints on employees, we should expect that as more authority is delegated employee performance will improve. Thus an examination of the structural component of M₁ yields one hypothesis: H5) reductions in centralization leads to increases in outputs.

Hypothesis on M₂ and Performance Indicators

The management literature has demonstrated that M₂ leads to improved organizational performance on standard outputs (Meier and O'Toole 2001; 2003). Thus hypothesis 6 states that as M₂ increases performance on outputs will increase.

Retesting the Hypotheses

In order to make general statements about effective management it is not enough to simply predict how management works in one area of public administration. It will be necessary to test the hypotheses of this study in areas outside of education. In Chapter VI I will discuss how the hypotheses of this study may be tested in other fields of public administration. I will specifically focus on how this study may be replicated in criminal justice. In addition, I will also propose political campaigns as an area where M₁ can be studied.

Summary

In this dissertation I intend to contribute to the public administration literature research with a focus on the role of management. In this section of the proposal I provide

a detailed summary and a chapter by chapter outline of the dissertation. I propose a six chapter dissertation using empirical data to test my hypotheses.

Following the introduction of the dissertation (Chapter I), Chapter II of the dissertation will focus exclusively on what Meier and O'Toole refer to as the M_1 or internal management. The purpose of this chapter is to develop multiple measures of internal management that can be used in future management studies. Specifically, I will explore how activities such as planning, reporting, delegation, budgeting and technology may be measured and used as indicators of M_1 .

Chapter III of the dissertation will focus on developing multiple measures of organizational performance. I identify methods for measuring each of the five components of M_1 . However, the data which I am using only allow me to study the impact of two such components: HR and budgeting. In Chapter IV of the dissertation, I study the impact of human resources management on organizational performance. In Chapter V, I examine the impact that budgeting has on the performance of public organizations. Finally Chapter VI of the study will focus on the implications of the study's findings and future directions in the study of public management. Chapter VI will be focused on identifying organizations where the hypotheses posited in Chapter III of this dissertation may be tested. Specifically this chapter will be focused on seeking data that can be used to study the hypotheses of this dissertation in other organizations.

CHAPTER II

EXPLORING THE COMPONENTS OF INTERNAL MANAGEMENT

This chapter will focus on internal management or what Meier and O'Toole refer to as M₁. I will begin by reviewing the previous attempts by authors to classify internal management activities, thus providing the reader with a history of management theory and the roots of M₁. Subsequently, I will present the logic of my classification system and how the components of internal management that I present in this chapter fit into that logic. Next I will use a three prong strategy to justify each component of M₁, in each case I will demonstrate: 1) that the component is supported by the literature, 2) each of the components of M₁ is conceptually separate from each other and 3) that the component is linked with a valid and definite organizational end. Finally, I will include a section which discusses the validity of the measures used in the study. This chapter is comprised of the following three sections: 1) a literature review of management theory and the origins of M₁, 2) the components of M₁ and 3) measures of M₁.

History of Management Theory and the Roots on M₁

Management theory has its origins in the work of Fredrick Taylor (1911). In *The Principles of Scientific Management* Taylor sought to establish efficient management by discovering the scientific principles by which it could be approached. His work focused on issues such as selection of workers, division of labor, cooperation among employees, etc. The major focus of Taylor's scientific management is the employment of similar production activities and "seeks to maximize efficiency by planning procedures according to a technical logic, setting standards, and exercising controls to ensure

conformity with standards and thereby with technical logic” Thompson (1967) p.5. Thus Taylor’s research focused on finding the “one best way” for managers and employees to perform their duties.

The work of Gulick and Urwick (1937) represents one of the most influential works of the scientific management movement. This work argued that most of what managers do is summed up by the acronym POSDCORB. This acronym represents the following activities: planning, organizing, staffing, directing, coordinating, reporting and budgeting. Although there is considerable overlap among the listed activities; POSDCORB was very influential in early management studies. POSDCORB is useful because it divides management activities into basic tasks. POSDCORB is also important because it infers strategic management as a remedy for organizational problems. “If an organization appears to lack direction planning may be the answer, if communication and coordination are poor across departments within an organization, reorganization may be in order” (Agranoff and McGuire 2001).

The human relations theory of management also challenged the traditional scientific management approach. The Hawthorne Studies provided evidence which suggested that changing the environment of an organization has an impact on the productivity of employees. The majority of organizational theorists claim that the Hawthorne studies are important because they demonstrate the impact of social and psychological factors on the behavior of workers. The studies found that the manner in which supervisors show concern for employees as well as the relationships and experiences that workers share influence organizational outcomes. Additionally, the researchers found that employees establish informal norms regarding productivity. These

norms regulate the intensity with which work is done. The Hawthorn Studies are regarded by many as the most important research highlighting the influence of “social and psychological factors” in a place of employment up to that point in the literature.

One of the most influential works in the human relations literature is that of McGregor (1960). McGregor introduced two competing theories: Theory X and Theory Y. Theory X assumes that most individuals dislike work and that they must be coerced and controlled to properly function. However, Theory Y assumes that people do not innately disfavor work, and says that when they are committed to goals, they will use self-direction and self-control to achieve goals. Based on these assumptions Theory X managers will use oversight and control mechanisms to direct employees. Theory Y managers attempt to encourage the creativity of employees and merge the goals of employees and the organization to create a more productive organization. Both POSDORB and human relations are among the management models that may be referred to as rational or open systems because they imply that management plays a role in changing performance outcomes.

Environment and Informal Influences

While Taylor and Gulick promoted a “rational-system” model of management, scholars such as Chester Barnard (1938), and Clark (1956) were proponents of a school of thought which emphasized environmental factors and informal processes in organizations. This research points to the conclusion that organizations are not autonomous but rather are heavily influenced by environmental factors.

Barnard introduced the idea that management theories needed to account for the work environment or culture of an organization. Within this conceptualization, the

complex organization is composed of interdependent parts that collectively make the whole. Each part contributes to and receives from the whole. “Central to the natural-system approach is the concept of homeostasis, or self stabilization, which spontaneously, or naturally, governs the necessary relationships among parts and activities and thereby keeps the system viable in the face of disturbances stemming from the environment.” (Thompson 1967, p.7). In this view spontaneous adaptation is a necessity for survival. The natural-system school describes an organization as “a unit in the interaction with its environment.” (p.7)

The rational system approach proved to be an important contribution to the public administration literature. Bernard and other environmental scholars highlighted the need to recognize that administrators are not the only influence on organizational outcomes. However, the perspective was incomplete because like its “open system” counterparts, it did not fully recognize the relevance of an alternative perspective.

Simon Says

While the early decades of management theory were dominated by the scientific management and environmental literature, the 1940's and 1950's were heavily influenced by the work of Herbert Simon. In 1945 Simon provided a damaging critique of the principles of public administration. Simon argued that the principles of public administration were imprecise and contradictory proverbs. In addition to dismantling the principles of public administration, Simon (1957a), along with other authors, (March and Simon 1958, Cyert and March 1963) was influential in initiating a new tradition in management theory which avoids the “closed-versus-open system” problem. This new approach allowed scholars to conceptualize of managers as working rationally and

purposely even though they do not have complete control over environmental factors.

The New Public Administration, New Public Management and Leadership

Following Simon's dismantling of the principles of public administration there was a period (the mid 1950's to the early 1980s) where few theoretical contributions focusing on management in PA were made. However, two movements, the New Public Administration and the New Public Management, emerged offering a different approach to public administration. The New Public Administration and the New Public Management among other things emphasized the role of "leadership" in public administration.

The New Public Administration (NPA) had its origins in the late 1960's. The scholars who founded this approach had a great concern for addressing social injustice. They argued that administrators are not value neutral actors. These scholars argued that equity and accountability should be some of the values maximized by bureaucrats (Frederickson 1971 & 1976). The NPA is primarily concerned with social equity and management practices which promote democracy.

Advocates of the new public administration placed the blame for social inequities on public administration. Specifically, they charged that the procedures of bureaucracy were biased in favor of the white middle class. Proponents of the NPA urged public administrators to eliminate social disparities by becoming advocates of the rights of the poor and racial minorities. The new public administration proposed several strategies to achieve its social goals. The decentralization of bureaus was one of the major proposals of the NPA. Another major suggestion of the NPA was that organizations be temporary, "set up to achieve a single task and disbanded after its completion" Meier 1987 p. 178.

Meier (1987) notes that many of the ideas of the NPA were not new; but rather borrowed from other scholars such as Paul Appleby as well as Maass and Lawrence Radway (1959). Additionally, Meier notes three impediments to the success of the new public administration. First Meier notes that the norm of “technical neutrality” is deeply ingrained in the political culture of the American bureaucracy. Next he notes that NPA solutions such as decentralization, confrontation, etc. are not guaranteed to create social equality. Finally Meier notes that while “social equity” is a lofty goal it is rather ambiguous and therefore difficult to achieve.

The New Public Management (NPM) emerged in the late 1980s and early 1990s. The basis of the NPM lay in...lessening or removing differences between the public and the private sector and shifting the emphasis towards a greater element of accountability in terms of results” (Hood 1995, p. 95). According to Hood (1995) there are seven major features which characterize the New Public Management movement. The first factor that characterizes the NPM is a movement towards dividing organizations into individually managed corporatized units. Secondly, the NPM emphasizes a competition driven market. This entails competition between public organizations as well as competition between public and private organizations. Another practice of NPM is following the private sector trends in management. The NPM views the private sector as the role model for public institutions. The NPM has an emphasis on finding the most cost efficient means of delivering a service. “Hands-on-Management” is a characteristic of the NPM. That is, more visible control of public organizations by top management. Measurable standards of performance are also emphasized in the NPM. Finally, another characteristic of the NPM is the attempt to control public organizations by means such as

predetermined outputs. Hood notes that the NPM is linked to debates on how closely the public sector should be engaged with the private sector.

The current research project is relevant because it not only seeks to outline the history of public administration research, but it also seeks to direct future research. My specific aim is to lay out the origins of the management matters literature and to identify areas where the agenda may be advanced. Cataloging the history of the literature is important so that the reader may understand why the original research that I will conduct in this dissertation is a natural extension of the research previously completed. In the following sections I will discuss the research stream from which Meier and O'Toole's *M1* concept flows and will lay out a strategy for additional research.

Four Streams and the Birth of M1

Upon review of the management literature it becomes evident that four streams of management thought have been dominant: 1) the scientific management movement, 2) the environment school 3) integrated models which incorporate scientific management and environmental schools and 4) schools which emphasize the importance of leadership. The Meier/ O'Toole model has its roots in the integrated school initiated by Simon and March. Simon promoted the idea of using aspects of both rational and natural models as early as 1957, with the exception of Thompson et al. (1968) and Moore (1995), few management scholars have conceptualized management in such a valuable way.

One reason why Thompson's et al. (1968) work is important is because it made the distinction between two types of management strategies: closed system and open system strategies. According to Thompson et al. (1968) closed system strategy attempts to make sense of management by focusing on aspects that administrators can control

while an open system strategy assumes that there are more variables than can be comprehended at once. Although Thompson et al. note that there are environmental factors which play a role in organizational outcomes, he also points out that an individual or organization may seek to manage the environment.

Moore (1995) demonstrates that an administrator may use multiple management strategies, in organizational administration. Moore argues that the duties/actions of a manager should be viewed as a three-pronged possibility. Specifically, Moore argues that administrators manage upward, downward and outward in relation to their environment. "Management upward, downward, and outward is a shorthand expression for a much longer and more complex set of managerial functions and efforts, but it has the virtue of parsimonious exposition while also serving as an explicit reminder that managers must work in several directions and on several tasks to accomplish their objectives...these distinctions imply behavioral features" (Moore 1995). Indeed, I think it is implicit that when managers manage in different directions they are attempting to achieve different ends. O'Toole and Meier argue that managing outward may be conceived as networking, while managing up and down may be viewed as managing within the confines of an organization.

The management model developed by Kenneth Meier and Larry O'Toole extended the line of research initiated by Simon and further expounded by Thompson (1968) and Moore (1995). However, the Meier/O'Toole model does more than simply state that managers perform duties both within and outside the boundaries of their organization. Their model provides public administrators with the means to empirically test the theoretical implications of management action, whether they are utilizing open or

closed system stratagems. Meier and O'Toole have experienced great success demonstrating the utility of network management (O'Toole and Meier 1999, Meier and O'Toole 2003). It is their concept M_1 (internal management) that has for the most part remained under-tested empirically. In Chapter I, I presented five components of M_1 , in the following section I will seek to justify my inclusion of each of these components.

Components of M_1

My examination of the literature has led me to posit that there are at least five components of internal management. I do not make the claim that the five components that I have proposed is a final list. However, based on my current knowledge of the literature, I believe this list to be representative of most of the internal activities performed by public administrators. I will use a three prong strategy to justify each component of M_1 , in each case I will demonstrate that each component is: 1) supported by the literature 2) is conceptually separate from other components, and 3) is linked with an organizational end.

Components in the Literature and Link to Organizational Ends

In this section of the Chapter I reintroduce the components of M_1 : goal setting, budgeting, human relations management, structure and technological acquisition. Although I have already demonstrated that each of the components of M_1 is present in the management literature, I will briefly review the literature supporting each proposed component of M_1 . The following is a brief examination of the literature support for the components of M_1 .

Goal Setting

The role that goals play in organizations is discussed extensively in the public administration literature. Scholars such as Lowi (1979), and Seidman and Gilmour, (1986) discuss the fact that vague goals are often associated with public programs. Wildavsky (1979) states that conservation agencies are routinely given the conflicting mandates of conserving and developing natural resources. DiIulio (1990) says that prison officials are assigned the seemingly conflicting goals of punishing and rehabilitating prisoners. Moore (1995) notes the multiple duties of police chiefs: respecting rights, enforcing the law, keeping peace, preventing crime, etc. Chun and Rainey (2005) examined the relationship of three types of goal ambiguity (priority, directive, and evaluative) with organizational performance. The specific type of organizational performance studied was managerial effectiveness. The study found all three types of ambiguity to be negatively related to organizational performance. One can say with confidence the issue of goal ambiguity is well documented in the literature.

Goal vagueness is not only documented in the literature but it is also mainly associated with public organizations. Buchanan's studies (1974, 1975) concluded that the managers of government bureaucracies had lower levels of occupational satisfaction and motivation than their counterparts in private industry. Boyatzis (1982) found that public managers "goal and action" competencies were not on par with private managers. Thus goal vagueness is not only documented in the public administration literature but it is primarily associated with public organizations. It is implicit in the literature that goal vagueness may be eliminated by establishing and implementing clear and consistent goals.

Budgeting Efficiency

Throughout the history of public administration in America, one of the most important topics studied has been budgeting (Tyler and Willand, 1997). Schick (1996) noted that depending on the situation budgets have been associated with planning, improving management or financial control. Rubin (1996) argues that budgets may also represent prioritization and accountability. Tyler & Willand (1997) argue that the various representations of budgeting may be divided into five eras of budgeting innovation reform: (1) an emphasis on control at the turn of the century, (2) focus on management in the new deal/ post WWII era, (3) planning in the 1960's, (4) the 1970s and 1980s in which prioritization was emphasized and (5) accountability in the 1990s. Although my concept of budgeting efficiency refers to a very specific method of budgeting, (accountability), I will present a historical view of budgeting in this section to help the reader understand how the concept developed.

First Era

The first era of budgeting policy in America emerged through attempts to control financial resources. Some have claimed that initial budget reforms were in response to political machines, which grew in power as a result of massive waves of immigration (Tyler and Willand, 1997). However, there is debate about how immigration actually impacted budgeting policy. Ross and Levine (1996) argue that the arrival of immigrants created a conflict between citizens with different political norms, while some claim that Protestant Americans were not willing to support government programs that did into benefit them (Hennessey, 1970).

In the progressive era reformers united with the business community to combat political machines. One of the major characteristics of the progressive era was the emphasis on executive responsibility. Specifically, the goal of these reforms was to weaken the power of legislative bodies and to create a dichotomy between administration and politics, (Buck 1929; Fleischman and Marquette, 1986). At the municipal level, the New York bureau of municipal research was influential in promoting reform by emphasizing “uniformity and responsibility in governmental finance” (Tyer and Willand, 1997). On the national level the Commission on Economy and Efficiency, initiated by Taft, was the catalyst for change.

Line-item budgeting was another prominent feature of the early period. While line-item budgets only listed the categories in which money was spent, they were very popular. The popularity of line-budgets to politicians derived from their simplicity and they were easy to comprehend and they did not focus on specific policy choices (Tyer and Willand, 1997). Additionally, Schick (1971) notes that line-item budgets made it easier for financial control. Line-item budgets were followed by performance budgeting.

Second Era

The Hoover commission of 1949 brought performance budgeting to popularity. According to Miller and Shamsie (1996) performance budgeting encountered a number of problems. One of the problems that Miller notes is that performance budgeting was not adequately equipped to measure outputs (the measuring of outputs was inaccurate). The activities of government rather than its purchases are the focus of performance budgeting. The primary focus of performance budgeting is on how finances may be used efficiently

(Tyler and Willard, 1997). Schick (1971) claimed that overall the reforms of performance budgeting were trivial and did not aid government officials in formulating policy.

Third Era

Program budgeting represents another approach to budget reform. The major characteristics of program budgeting are performance and cost-benefit analysis as well as long range planning (Burkehead 1961). However, program budgeting was plagued by misidentification as performance budgeting or the planning, programming budgeting system school (Miller, 1996). “Program budgeting was more forward looking while performance budgeting tended to focus on what had been accomplished already.” (p. 197). Some of the key characteristics of program budgeting are goal setting, long range planning and program identification. Indeed program budgeting was but one of the important parts of the overall programming, budgeting systems reform (PPBS) Tyler and Willard 1997 (p. 197).

According to Schick (1971) individuals in the data science, planning and economic fields emphasized the use of PPBS, which became popularized under the Johnson Administration. The goal of PPBS was to bring together the multiple elements under one system. On the federal level PPBS has been criticized for not being as effective as predicted. However, elements of the system remain in some federal agencies while state governments have continued to use parts of the system.

Era Four

The concept of Zero based budgeting was first popularized by a 1970 article written by Peter Pyhrr in the Harvard Business Review. The Zero Based Budgeting system is one that requires continual justification of budgets. In this system managers give explanations about how the different levels of funding impact their programs. While ZBB became popular in the early 1970s, the latter part of the decade and 1980s were a time of important changes. Limitations of tax and spending were adopted in most American states during the 1970s and 1980s. However, because it was such a time of change, no “major budgeting system dominated the 1980s public sector landscape” (Hyde 1992, p. 338).

Era Five

The 1990s brought about a renewed interest in performance budgeting. While there were several factors that brought about the renewed interest in performance budgeting the publication of “Reinventing Government” by Osborne and Gaebler (1992) was very influential. Their research highlighted the cynicism of American citizens toward government, as a solution, results-based budgeting was suggested. “The idea was to hold governments accountable for results rather than focus upon inputs as traditional budgets and management did” (p. 203).

The 1990s experienced performance related reforms at federal, state and local levels. At the federal level the Government Performance and Results Act of 1993 called for government agencies prepare strategic plans and performance reports. “Measurable goals, such as benchmarks and performance measures” were implemented by state

government during the 1990s. While both federal and state implemented performance related change in the 1990s, local government always led the way in innovation.

Human Relations

The literature focusing on human relations management is extensive. Zander (1994) argues that in order for groups to work, leaders must respect members of the group and work to maintain unity. As stated earlier the human relations school was birthed from the Hawthorne experiment, which demonstrated the importance of environmental factors in the work place. Another important breakthrough in human relations was provided by the work of Abraham Maslow. Maslow developed a theory which organized human needs into distinct categories of importance. According to this theory once certain basic needs such as food and safety were met individuals would pursue higher levels of “self-actualization” (Rainey 2003, 39). The practice of making hierarchal distinctions between human needs was “attractive to writers emphasizing human relations in organizations” (Rainey 2003, 39).

McGregor emphasized the importance of managers working to inspire employees. McGregor’s work on Theory X and Theory Y emphasized that management approaches in the American workplace were based on the perception of supervisors towards employees. McGregor was a proponent of management practices that allowed more employee involvement such as the disbandment of centralized systems. Argyris (1957) argued that there are often conflicts between the needs of the employee and the organization. Argyris (1957) argued that conflict exists between organizations needs and that of mature personalities because individuals seek autonomy to use their skills in the work place. Perrow (1970) provided a thorough critique claiming that evidence is needed

to support the notion that human relations leads to the enhanced performance of organizations. Critics of the human relations literature complained that structure and environment were not adequately addressed by human relations researchers.

Structure

Organizational structure has long been posited to have an impact on performance outcomes. The structure of an organization has been linked to personal performance outcomes; scholars such as Knott and Miller (1987) note that structure has been emphasized as a way to reduce corruption in public organizations. This end may be achieved when administrators establish formal rules, which many authors claim is a proxy for conceptualizing structure (Hage and Aiken 1969, Pandey and Scott 2002, Pugh, Hickson, Hinings, and Turner 1969). As early as 1937 Gulick discussed the role of structure in administration. Specifically, Gulick emphasized clear chains of authority and centralized power as the way to properly direct an organization. Gulick advocated centralized control of organizations as a way of making them more effective. During the New Deal and the post World War II era Gulick and other scholars promoted organizing government organizations under the control of larger departments or agencies. However during the middle of the nineteen hundreds the view that there was one common way to organize organizations began to be criticized (Rainey 2003, p. 186).

In the 1980s and the 1990s the literature began to emphasize the importance of flexible decentralized organizations. Researchers such as Peters (1988) and Thompson (1993) began to emphasize informal rules and procedures which “flattened” government respectively. There are indeed several ways to measure structure: centralization, formalization, red tape and complexity (Rainey 2003). However, this dissertation uses

centralization as its measure because of the Meier/O'Toole models focus on hierarchy and networking. While there are varying ways to measure centralization methods usually equate the preponderance of rules with centralization and the lack thereof with decentralization.

Technology

The modes and mechanisms which modern organizations use to communicate and network have been dynamically impacted by the rapid developments of technology. Computer applications and the internet play a major role in shaping the manner in which modern organizations operate (Kramer and Dedrick 2007). Thus the level of access that organizations have to modern information technology should lead to varying performance outcomes. One of the ways that technology is said to impact an organization is in the way that it communicates with clients (Rainey 2003). Additionally technology is said to have an impact on the structure of organizations. Organizations are said to become flatter with increases in technology (Daft 2001).

Now that I have demonstrated that each proposed component supported by the literature, I will show that each component is conceptually separate by reviewing the definitions of these components as discussed in the literature and show that in each case they represent a unique manifestation of internal management.

Definitions of Components

The purpose of this section is to demonstrate that each component of M₁ presented is conceptually distinct. It is important to establish that each component of M₁ is unique so that we will not have a case where the same phenomenon is presented more than once under a different name. Adcock and Collier (2001) note “the clarification and

refinement of concepts is a fundamental task in political science, and carefully developed concepts are, in turn, a major prerequisite for meaningful discussions of measurement validity” (p. 529). In order to establish the uniqueness of each component I will thoroughly examine the definitions of each component in the literature and show that in each case they represent independent concepts.

Goal clarity is discussed as an important function of managers. Rainey (2003) describes a goal as “a future state that one strives to achieve” (p. 230). It is posited by several authors that the level of motivation or job satisfaction is influenced, by the level of goal clarity in the organization. Thus goal clarity as a function of M_1 expresses the level to which managers articulate their objectives.

While the idea that managements influence on employees’ impacts organizational performance was popularized by the Hawthorne studies, it was more clearly articulated by Huselid (1995). Huselid discusses the importance of recruitment, selection and training procedures to influence employee performance. My understanding of this literature leads me to define Human Relations Management as management procedures that are implemented to develop the potential of employees.

As stated earlier in this chapter, structure may be conceptualized in a number of ways. Centralization is the way that structure is studied in this dissertation. Centralization refers to how much power is concentrated in the upper levels of an organization. Thus the level of centralization in an organization would depend on the level of delegation that a manager engages in. In the case of structure it seems the argument is that a certain level of delegation leads to more efficiency.

Budgeting refers to the allocation of finances by organizations or individuals. Efficient budgeting refers to the ability of an organization to remain faithful to the financial objectives that it has set. Thus the closer the actual amount spent by an organization is to the budgeted amount, the more efficiently an organization is said to have acted.

As a concept technological acquisition is concerned with the extent that managers acquire the appropriate technologies for their organization. The level of information technology that an organization has is a reflection of at least two factors: the organization's resources and management priorities. Thus it is first necessary to control for resources. The level of technological acquisition is defined as a manager's level of investment in a specific technology per fiscal year.

Link to Organizational Ends

The components of M_1 are linked with several predicted outcomes. In this section of the paper I will discuss the five components M_1 and the outcomes that they are associated within the public administration literature. The purpose of this section is to validate the use of each component as an independent variable. Furthermore demonstrating the organizational ends that each component is associated with will help give the reader a clear understanding of where the dependent variables in this project are derived.

Goal clarity has been linked to several organizational ends. Buchanan (1974, 1975) links goals to the commitment, involvement, and satisfaction of employees. According to some scholars the lack of goal clarity leads to evaluation based on faithfulness to procedure and obedience to the rules [Barton 1980, Dahl and Lindblom

1953, Lynn 1981, Meyer 1979, Warwick 1975]. Lynn (1981) links the lack of clear goals with a pattern of inevitable bureaucracy. Lynn describes this as a situation in which demands for more accountability in the organization leads to more emphasis on hierarchical control and rule compliance.

The organizational end most closely associated with budgeting efficiency is accountability. Tyler and Willard (1997) states that a performance budget “is a service oriented document rather than the traditional line item” (p.206). Furthermore they note that a performance budget is a “communications device with citizens and taxpayers” (p. 207).

Several studies claim that human relations management is related to employee morale. HRM has been criticized for lack of evidence (Perrow, 1970). However, Rainey (2003) notes that there are still many instances in which uninformed management practices negatively impact the morale of employees.

When management scholars discuss structure, they speak of the hierarchical arrangement and official rules that guide an organizations’ policies. “Public managers have considerable authority over the structure of their organizations and make many decisions in relation to technology and tasks” (Rainey 2003, p.183). “The contingency perspective on organizational structure rejected the quest for one common set of principles to guide organizational design” (p.186). During the 1980’s and the 1990’s management experts began to more heavily promote the idea of flexible organizations being more effective (Peters, 1988).

According to Dalton, et al. (1980) there are a number of studies in which centralization is correlated with performance (Beck & Betz, 1975, Luke, Block, Davey,

& Averch, 1973, Pennings, 1976; Soresen & Baum. Dalton also notes a number of studies with zero associations (Bowers, 1964, Fiedler & Gillo, 1974; Khandwalla, 1973; Hage & Dewar, 1973; Reimann, 1975). However he points out that it is difficult to make strong conclusions about these finding because researchers have tended to use soft measures like alienation and performance perceptions as dependent variables. Dalton states “the limited evidence tends to support a negative relationship between centralization and performance...otherwise little is known of the association between centralization and performance” (p. 59).

Technology is linked with definite organizational outcomes. The assumption is that organizations with “better” information technology will perform at a higher level than those that don’t. According to Rainey information technology helps to improve the network capacity of organizations. If this holds to be true this could be very beneficial information for managers, as Meier and O’Toole have conducted research which links networking to improved organizational performance. If information technology leads to improved networking capacity and networking leads to improved organizational outcomes then increases in an organizations information technology may enhance their overall performance. Lee and Perry (2002) say that investment in information technology by state governments led to increased economic performance.

Chapter Summary

In this chapter I provided the reader with a historical outline of management theory. I specifically highlighted four major research streams in the literature. Subsequently, I demonstrated how Meier and O’Toole’s concept of M_1 is linked to the previous literature and I presented the five components which I posit make up M_1 . In the

second half of the chapter I used three methods to support my choice of components. The first way that I defended my components was to show that there is support for each one in the literature. After I showed that each component was in the literature I used the definition and description of each component in the literature to demonstrate that each of the five components was conceptually distinct from the others. Next I showed that each component was linked to an organizational end. After I defended my choices for the parts of M_1 , I included a section on the validity of the measure that I use for M_1 . Specifically I attempt to establish the validity of my measures by showing that such measures or similar measures have been used in previous studies. The next phase of development for the components of M_1 will be the formulation of hypotheses and empirical testing.

CHAPTER III

DESIGNING MEASURES OF INTERNAL MANAGEMENT

In this chapter, I will present the method, which I used to develop the measures in this study. I will review the most popular methods of measuring these items in the literature. My strategy will serve two purposes: (1) it will demonstrate the most common and accepted measure to date and (2) will serve as a basis for the measures I recommend. This chapter not only presents but critiques past approaches to measures. In some cases, the measure will be experimental because all of the subjects of this study are not adequately addressed in the literature. However, in each case every attempt will be made to develop this chapter on the best empirical and theoretic management literature. I will present methods of measurement for five components of internal management discussed in the previous chapters.

My overall goal is to develop a complete method for measuring the components of internal management. While I will only test the impact of human relations and budgeting efficiency in this project; I think it is important to develop as complete a theory as possible. Thus, this chapter will review methods to measure each of the five components of M_1 , in hopes of progressing towards the goal of establishing a set of universal measures for studying public organizations across fields. While it is not feasible to examine every aspect of M_1 in this study, it is possible to establish the foundation for future research.

Are the Measures Valid?

Adcock and Collier (2001) discuss the importance of measurement validity. They state “measurement validity is specifically concerned with whether operationalization and the scoring of cases adequately reflect the concept the researcher seeks to measure” (p. 529). In this section of the chapter I will examine the measures that I have proposed for each component of M₁. Specifically, I will discuss each measure that I use in this study, using the literature to justify the measures that I use.

Goal Ambiguity

Goal ambiguity is a topic that is discussed at length in the public administration literature. Weiss and Piderit (1999) explore the role of goals in organization performance by examining mission statements. This study was conducted by analyzing the mission statements of 304 Michigan public schools (the schools were from two counties). Mission statements were coded to be analyzed on the four dimensions of content, focus, clarity and activist tone. The authors used 11 themes that emerged from the mission statements to measure the content of the mission statements. The mission statement was coded with a 1 on each theme that was present and a 0 if a theme was not present. Focus was measured by adding the amount of themes discussed in mission statements and subtracting from 11. Thus the mission statements ranged from 10 (very focused) to 1 (entirely inclusive). The authors use the Gunning Fox Index to measure clarity.

The authors coded activist tone by examining three features of language in the statement: whether it was written in future tense, whether it was written in first or third person and whether it is written in an active or passive tone. All of the statements were coded for the way that “voice, tense and person” were used in the statement (Weiss and

Piderit 1999, 203). In this study school performance was measured by the academic performance of students. The researchers controlled for such factors as previous performance, resources, student characteristics and school districts. Two of the most interesting findings were that schools with academic learning themes did not perform better than schools that didn't have learning themes and that the worse performing schools were those that had the "all children can learn theme" in their mission. The authors presented a plausible explanation for the poor performance of the theme. "The all children can learn theme is different rhetorically than the other themes, [because] it does not identify an objective for school staff to achieve but rather articulates a belief or premise" (Weiss and Piderit 1999, p. 219).

Additionally, both focus and clarity showed no significant associations with performance. Mission statements written in an activist tone did demonstrate a positive relationship with school performance. Thus both the content and the rhetorical style of mission statements had small but significant impacts on performance. Further tests revealed that "high activist tone in the mission statement seems to amplify the impact of mission statement content" while "low activist tone seems to suppress the impact of mission statement content" (Weiss and Piderit 1999, p. 214). Similarly, when a high activist tone was combined with commitment to learning there was a stronger impact on performance.

In a subsequent study Chun and Rainey (2005) note that, few PA scholars have taken the time to clarify and measure the concept of goal ambiguity. Chun and Rainey (2005) developed four measures of goal ambiguity: mission comprehension ambiguity, directive goal ambiguity, evaluative goal ambiguity, and priority goal ambiguity. Chun

and Rainey (2005) used the Gunning-Fog Index (GFI) to examine the mission statements. However, the mission comprehension variable developed by Chun and Rainey did not perform well in their tests.

Very little empirical research has been conducted on the role of goals and performance. However, both Weiss and Piderit (1999) Chun and Rainey (2005) provide valuable insight on how to approach the study of goals and their impact on performance. Weiss and Piderit (1999) found that the activist tone in a mission statement was influential in predicting, performance, while no evidence supported the notion that mission statement clarity predicted performance of schools. Chun and Rainey (2005) found goal ambiguity to be negatively associated with performance (which may be used as a proxy for clarity). From the little evidence available it seems that analyzing the activist tone of mission statements is an effective way to study the impact of goals.

Boyne and Chen (2006) examine the impact of clear goals on organizational performance. They argue that the most important theoretical issue is determining when a target or goal has a positive or negative impact on organizational outcomes. More specifically the authors raise the important question of whether goals are more effective when they are vague or specific. The authors cite research from both perspectives: Quinn 1980 and Mintzberg 1994 (vague) and Lan & Rainey 1992 and Hendrick 2003. Quinn (1980) and Mintzberg (1994) argue that goals should be kept vague so that important issues are not overlooked. Lan and Rainey (1992), Hendrick (2003) and Chun and Rainey (2005) argue that goals must be specific in order to avoid ambiguity. The authors note that the current literature also supports the view that difficult goals lead to positive productivity outcomes.

Wright (2007) examines how goals affect members of an organization. Wright claims that there are two major factors, which affect worker motivation: (1) Goal content and (2) Goal commitment. The two measures that Wright uses are Self-efficacy and job-goal importance. He has three propositions: (1) job-goal importance has a direct positive effect on work motivation, (2) the perceived importance of organizational goals has indirect positive effect on work motivation, and (3) rewards that are contingent on performance have a positive impact on job-goal importance. Goal content was studied by examining the specificity and difficulty of organizational goals. Goal Commitment is assessed by examining self-efficacy and job goal-importance. Sims, Szilagyi and McKemey (1976) developed a scale of “effect performance expectancy” (E1) this was used to measure self-efficacy. Job goal specificity was measured by using a role ambiguity scale. This measure is related to an employee’s perception of how effort and performance are connected. The authors claim that this perception is influenced by individuals self esteem and their past experiences in analogous circumstances. “Expectancies were measured by an instrument which was adapted from the questionnaire used by House and Dessler (1973). The response categories were a seven-point Likert scale ranging from “definitely not true” to “definitely true” (p. 550). Expectancy 1 (E1) was revealed when the authors conducted a factor analysis of the instrument. The study found that 2/3rds of the variance in work motivation can be explained by goal content and commitment.

Designing an Assessment of the Impact of Organizational Goals

This section includes a summary of important factors from the goals literature. I identify the different measures used to study goals and present my method for

measurement. The following factors have a demonstrated impact on performance:

1. Measure of Activist Tone
2. Measure of Clarity
3. Measure of Goal Difficulty
4. Measure of Goal Commitment
5. Measure of Focus (Adapted)

Methods for Measure Development

Organizational mission statements include the information necessary to study three elements of stated organizational goals: tone, clarity, and focus. The mission statements of many public organizations are available on the organization web page, which may be accessed via the internet. While mission statements must be still be coded it is currently much easier to view the mission of public organizations.

Activist Tone

I suggest the same measure developed by Weiss and Piderit (1999).

Activist tone is measured by assessing three factors:

1. Future Tense
2. Whether it is written in first person i.e. (we will...).
3. Whether statements are active or passive i.e. we will teach students advanced mathematics as opposed to student at our school are taught advanced math.

Statements are assessed for future tense because the authors believe that it is important that mission statements express a continual movement toward excellence. Statements are evaluated to determine if they are written in the first person because of the belief that employees will identify with the mission of the organization when goals are

made personal. Finally, the language of each mission statement is evaluated to determine whether it is written as an active or passive statement. Active statements are posited to be more effective at motivating employees.

Target Clarity

Target Clarity can be measured by using the Gunning Fog Index which measures the readability of each statement. “The GFI is an established indicator for evaluating the degree of “fog” in a written passage. The GFI has predicted the extent to which a piece of writing would be easily understood by readers” (Rainey and Chun 2005, 532). Prior studies have used GFI as a gauge of mission statement intelligibility (e.g., Weiss and Piderit 1999). The greater the GFI score, the more difficult the written section is to understand (Gunning 1968). “The GFI scores showed reasonable convergent validity with an independent rating of the transparency of the performance reports.” (Rainey and Chun 2005, 532).

Focus

I suggest the same measure of focus that was used in Weiss and Piderit (1999). Weiss and Piderit (1999) gauged focus by adding the number of important content themes discussed in an individual mission statement and subtracting that number from the total amount of substantive themes identified by the authors in all of the mission statements. “School mission statements in the sample ranged in the number of themes they covered from 1-10; therefore focus ranged from 10 (very focused on one content theme) to 1 (included 10 different content themes)” (p. 201). Thus mission statements with fewer themes are said to be more focused than mission statements with a plethora of themes.

Goal Difficulty

Boyne and Chen (2006) were the first to empirically study goal difficulty. However, as of yet no clear method of measuring and testing goal difficulty is established in the literature. The major impediment is that goal difficulty is very subjective. Certain goals may be difficult for one organization and easy for another. A reevaluation of the concept may be in order to remedy the challenge of measurement. While addressing the role of difficulty is important, the current study will not seek to measure this factor.

Goal Commitment

Goal commitment does not present the same type of measurement challenge as goal difficulty. The challenge with measuring goal commitment is more logistical than conceptual. The difficulty of assessing the goal commitment of employees lies in the number of organizations and organizational members that would have to be surveyed to make the study generalizable. While goal commitment is an important factor, I will measure it in a later study due to time and resource constraints.

Section Summary

The hypotheses for each of the above-mentioned factors assert that when there is intensification in the factor organizational performance increases. Thus if an organization can produce increases in any of the categories of activist tone, goal clarity, goal difficulty, goal focus or goal commitment its performance outcomes should improve. However, there is no empirical evidence to support goal difficulty as having an impact on performance, and this may be because only one empirical study (Boyne and Chen 2006) has tested its impact. Similarly, the evidence has shown that the number of targets does not negatively influence outcomes. This may be related to the fact that none of the

organizations under study had an excessive number of targets. Thus, I have adapted the hypotheses on focus. Another way to study this issue is to examine whether there is a greater impact for a target when there are fewer other targets in a mission statement. For example if two districts both want to improve reading scores and District A has 4 total targets and District B have 8 total targets, District A will perform better than district B.

Human Relations

Huselid (1995) measures high performance work practices in order to empirically test their impact on organizational performance. The work of Delaney, Lewin, and Ichniowski (1989) played a major role in Huselid's scale development. Their work identified 10 HR practices in the areas of personnel selection, performance appraisal, incentive compensation, job design grievance procedures, information sharing, attitude assessment and labor management. Huselid added three: the intensity of recruiting, the average amount of training hours for employees per year and the promotion criterion of the organization. From analyzing these 13 items, Huselid came up with two factors. He called the first "employee skills and organizational structures" the second factor he names employee motivation. The first factor is related to improving the skills and knowledge of employees. The second factor is related to practices, which identify and support exceptional employee behavior. Huselid identified two ways to measure how much firm's value investing in their employees. One is "the ratio of human resources staff to total employees" he argues that this "is a proxy for the importance a firm places on its human resources" (p. 647). He found a correlation between the two factors to be .19 ($p < .001$). Firms with high levels of HR invest in their staff. The second way that Huselid examined a company's commitment to human resources management is by examining the

organizations public statements which emphasize the importance of the issue. Huselid argues that firms who believe in HR will communicate it to external audiences, he content analyzed the annual reports of firms for references to the importance of HR. "The employee skills and organizational structures score of firms citing the importance of human resources was significantly higher than that of those making no such comments." (p.654).

Bartel (2004) examines employer's return on investments (ROI) in training. She notes that measuring ROI is done two ways in the literature. One method is using large samples from firms and comparing the firms that invest in training to those that do not. The second method that is used is the case study. Additionally, Bartel seeks to determine new directions for research "to improve the accuracy and reliability of the measured rates of return" (p.504).

Analysis of Large Samples of Firms

A number of authors address the issue of studying human resources management in the large firm. Inchniowski (1997) used open-ended interviews to gain information. He conceptualized HR policies as located in one of four domains varying from extremely innovative to highly conventional. The data demonstrated that moving from the most traditional to the most innovative HR policies improves production. "To summarize, the econometric case study approach overcomes two of the problems of the large sample econometric studies, namely, heterogeneous production processes and lack of cost data" (p. 514).

Bartel notes that past studies using large samples from heterogeneous organizations have been "unable to calculate the rate of return on investing in training

because of the absence of reliable data on costs of training" please note that this is not a problem with Texas school districts. Bartel summarizes her analysis of econometric studies noting that they do not provide much information on how training influences ROI. She gives three reasons:

- (1) Data for cost of training are not usually available in the datasets.
- (2) The studies may not be correctly modeling diverse production processes because of the use of heterogeneous firms.
- (3) It is difficult to determine whether results are biased by endogenous variables.

Bartel found convincing evidence that assignment to training was biased on the individual's in the organization. "Calculation of the company's ROI relies on the assumption that the magnitude of the wage gains is a good proxy for the magnitude of productivity gains" (p. 513). Bartel notes three conclusions which she asserts will improve the study of human resources management. First, Bartel argues that large samples using mail and phone survey were not effective because training cost data was usually not available. Second, Bartel posits that using case studies make up for the first two limitations of large samples. Finally Bartel asserts that company-sponsored studies would make up for the deficiencies of both large sample and case studies but few organizations use this strategy and most of those that do engage in company-sponsored studies use bad methodology. A solution not listed in this conclusion is to conduct large survey data and supplement it with an additional data collected on the organizations in question. For example, Texas school district superintendents have been surveyed about their managerial activities and this data can be supplemented by additional data from the

Texas Education Agency.

Wright, Dunford and Snell (2001) examine how the resource based view of the firm is used to empirically study strategic human resource management. The authors note an important debate in the literature originating in two 1994 articles. First Wright, McMahan and McWilliams (1994) emphasized the difference between a company's HR resources and their HR practices. HR resources refer to human talent and skill within an organization. They argued, "HR practices could not form the basis for sustainable competitive advantage since an individual HR practice could be easily copied by competitors" (p.703). At the same time, Lado and Wilson (1994) argued that a company's HR practices could provide a basis for maintaining a viable advantage over competitors. Boxall (1996) argued that human resource advantage consists of two major components: (1) advantage in the ability to recruit and (2) the capacity to develop superior processes like learning, teamwork and inventiveness.

Three major aspects are believed to create advantages within the literature: (1) superior recruitment of employees, (2) adequate investment in training organizational members and (3) work design or people management systems. People management systems include more than HR systems; it also includes an understanding of organizational culture and work design, etc. Thus, the authors argue that sustained competitive advantage is not just a function of single or isolated components, but also rather a combination of human capital elements such as the development of stocks of skills, strategically relevant behaviors and supporting people management systems. The authors note the evolution in models: Huselid (1995) note a relationship between HR practices and organizational outcomes such as "turnover and gross rate of returns on

assets" (p.207). Koch and McGrath (1996) found a nexus between "HR planning, recruitment and staffing practices and labor productivity" (p.707).

Measuring Human Relations: Recruitment

Determining the recruitment ability of management is complex. There are a number of factors which may influence the quality of employees in a public organization including but not limited to: salary, past success of the organization, geography, etc. The literature does not suggest any clear methods of measuring the recruitment component of relations.

Training

Investment in training will be measured by examining the percentage of the budget that each school district spends on training its employees. Bartel criticized large N studies on human resources and argued that case studies were the best way to assess the impact of human relations on performance. However, large N studies have never been an impediment to studying human relations, only a lack of data. In this study, I will use budget data from the Texas Education Agency to determine the percentage of budget used for training. This will be the measure used in the study.

Work Design/ Innovation

Finally, work design is discussed but not measured in this study. The data that I use in this study does not provide information on non-administrative personnel. In order to properly study work design/innovation either a case study or an expansive survey of an organization employees would be necessary because of the detailed analysis necessary to determine how managers design work. Due to the fact that the data necessary to conduct this research is not available in my dataset, work design will not be empirically tested in

this dissertation.

Structure

Whisler, Meyer, Baum and Soresen (1967) evaluate three measures of centralization of organizational control:

- (1) individual compensation,
- (2) perceptions of interpersonal affect noted on a questionnaire,
- (3) the reach of control in the formal organization.

The individual compensation measure is based on a concept of an individual ability to affect outcomes. The second measure of control is based on the concept of control that is based in one employee's ability to influence another individual. Span of control refers to the decision making power in an organization, reducing the span of control means centralization, and increasing the span of control means decentralization. The concept of control discussed in the paper refers to formal authority based on roles in a structured hierarchy.

Measuring Control

- (1) The author suggests that compensation through financial rewards is a way to measure an individual influence in an organization.
- (2) The measure for each members influence on others is derived from survey reports that ask individuals to identify the most influential persons at the various levels of the hierarchy
- (3) We may measure span of control by examining how broadly decision-making power is distributed in an organization.

Findings

The authors note that while the three measures are related to “three different constructs” they are “closely related under certain specifiable conditions” (p. 23). Whisler, Meyer, Baum and Sorensen (1967) state that when organizations have tasks that are highly correlated, the different constructs represented in the measures will have a high correlation.

Dalton et al., claim that the relationship between structure and organizational performance may be the most significant dependent variable in either the private or the public sector. The authors cite Campbell, Bownas, Peterson, and Dunnette (1974) who posit that organizational structure may be divided into two components: “structuring” and structural. “The structural qualities of an organizational are its physical characteristics, such as size, span of control and flat/tall hierarchy” (p.51). Structuring refers to policies and activities taking place inside the organization that stipulates or confines the conduct of organization affiliates. The authors arrange the dimensions of structure under these two categories. Structural dimensions include size, span of control, height of hierarchy and administrative intensity. Structuring consists of specialization, formalization, and centralization. Organizational size may be measured in a number of ways. One way is to count the number of clients another way is to count the number of employees however these strategies are not interchangeable.

King (2005) looks at new ways to conceptualize hierarchy in police departments. The author notes the work of Kaufman & Seidman (1970) who discuss the vertical and horizontal dimensions of complex organizations. “The horizontal dimension referred to such characteristics as the number and composition of special units and the allocation of

tasks among organizational members” (p.98). The author discusses five different types of hierarchy. The first hierarchy discussed is a hierarchy of skills. A skills hierarchy does not have to be formal but may be informally recognized by members of the organization. The author posits that a qualitative researcher involved in determining the skills of an individual faces two tasks: (1) determining the skill level of the individual and (2) comparing the skill level of the individual to the rest of the organization. The author suggests two qualitative ways to measure the employees’ skills: the first way is to observe the workers in action and a second way is to ask workers to evaluate each other.

A second type of hierarchy is a rewards hierarchy. “This rewards hierarchy consists of tangible official rewards such as differences in uniform allowances, overtime pay, medals and commendations” (p.99). King (2005) notes that the rewards hierarchy is not necessarily aligned with the skills of organizations employees. However, it may be related to official rank and structure. This may be measured by looking at the salaries and financial rewards that employees receive (if the information is available).

The third type of hierarchy is a seniority hierarchy. The author talks about the prestige that members often gain with extended tenures in an organization. This prestige may come regardless of whether the organization formally recognizes tenure. Seniority in an organization may be quantified by years of service.

Status hierarchy is the fourth type of hierarchy discussed in the article. It is argued that diffuse “characteristics” such as race and gender have an impact of status hierarchy. This type of hierarchy may be measured by examining which employees are most influential in the organization; this may be accomplished by administering surveys to employees. The fifth and final type of hierarchy discussed in this paper is authority

hierarchy. This type of hierarchy deals with the formal rank structure and is probably the type of hierarchy most commonly discussed in the literature.

King (2005) lists five indicators of rank structure. The first way that rank structure may be measured is through measuring the number of superiors in each level of an organizations formal structure; this is also referred to as vertical height. Another important aspect of rank structure is span of control. "Span of control refers to the ratio of supervisors (at one level) to the number of workers (at the next lower level)" (p.102). Thus, the definition of span of control includes the strategy for management. A third indicator of rank structure is supervisory intensity. "Supervisory intensity can be represented as the percent of supervisory employees in a police organization, or as a ratio of front line supervisors (sergeants) to production staff (line officers)" (p.103).

King (2005) labels centralization as the fourth kind of element in an authority hierarchy. This measure assesses how decision-making power is delegated in an organization. The author suggests two ways that the centralization of decision-making is measured in the literature. Tannebaum (1968) and Tannenbaum and Georgepoulos (1968) used a Likert scale ranging from "no say at all" to "a great deal of say" to determine the extent to which employees were involved in organizational decision-making. Another measurement strategy was to inquire about the rank level at which specific decisions were made. Procedural due process is the fifth and final indicator of authority hierarchy. This component focuses on how grievances are dealt with. A measure of due process would need to demonstrate how the grievance process influences the distribution in power.

Measuring Structure

The components of organizational structure may be divided into two categories:

- (1) Span of control
- (2) Structuring and *Span of Control*

Span of control may be used as an indicator of structural management. This may be measured by the size of central staff.

Structuring

When measuring centralization, it seems that the best method would be to use survey items which measure the delegation levels of managers. Such items should specify the level to which central administration in the organization has control over the day to day operations. Developing and locating datasets with such items appear to be the best method for measuring delegation as it should be a more time efficient measure than elite interviews or participant observation.

Technology

Measuring the amount of technology that an organization is using is an important task. However, traditional methods of measuring internal management may not be applicable in the case of technology. For example, participant observation attempting to assess the amount of technology in an organization would be a monumental task. Another possible measure of technological use in organization would be self-reports. Self-reports of technological use in an organizational can be administered in at least two ways. The first way to measure technological use would be to survey managers in an organization about the use of technology in their unit.

Another way to measure the use of technology in an organization would be to

survey the individual employees of an organization. This method while more accurate in its detailing of the extent that technology is used by street level bureaucrats, would be extremely costly and time consuming. A third approach to measuring technological use in an organization is using budget information.

Dividing the amount of money that an organization spends on technology by the total amount of money that the organization spends could create a budget measure of technology. We can use this as a measure of technological use based on the belief that: (1) organizations that care more about technology will spend more on it and (2) organization that invest more of their finances in technology will use it more.

Budget Efficiency

Developing a measure on budget efficiency may be the most challenging prospect for researchers seeking to assess the role of budgeting on organizational outcomes. The primary challenge is that there is much less research on budgeting impact on performance than other aspects on internal management. Thus the measure that I will use is developed not from the literature but from discussions with my committee members and fellow graduate students. I will create a measure of budget efficiency which gages the distance between the percentage of funds allocated to programs and the percentage of funds actually spent. The measure will be able to gage whether a public or private view of efficiency is useful for studying public organizations. The private sector emphasizes a cost efficiency perspective which proposes that organizations are more effective when they find ways to cut the cost of production. A public sector view on efficiency emphasizes the importance of maximizing the budget by reducing slack. Slack refers to extra funds that bureaucrats build into budgets for personal or organization benefit.

Because my measure of efficiency is the distance between the proposed budget and actual expenditures it measures both the public and private concept simultaneously. Thus, I will compare the performance of organizations with low levels of slack (budget maximizers) with that of those that operate on the principle of cost efficiency.

Chapter Summary

This chapter takes a straightforward approach to the measurement of internal management. Literature on the components of internal management were reviewed and concepts and indicators of management were identified. After I consolidated the concepts of internal management in each section, I identified ways to measure the concepts. The measures that I use for goals, structure, and human relations are supported by discussion in the literature and empirical testing. The measures used to appraise the role of technology and budgeting are relatively new and untested they are based on common sense understandings of the literature and scientific method. Although I only empirically test the impact of two measures of internal management in this study, this chapter is important for a few reasons. First this chapter reviews several studies which validate each of the five components of internal management as measurable. Second this chapter presents both challenges and innovations in measuring internal management. Finally, this chapter establishes a foundation to study goal setting, structure and technology in future studies.

The following list is from the the Performance Expectancy (E1) Items by P.M. Wright et al. (2001):

3. Doing things as well as I am capable results in completing my job on time.
4. Doing things as well as I am capable leads to high quality work.
7. Working as hard as I can leads to high quality work.
8. Doing things as well as I am capable leads to a high quantity of work.
9. The people I work with respect me more when I produce a high quantity of work.
10. Working as hard as I can leads to completing my work on time.
11. Getting my job done on time leads to the experience of accomplishment.
17. Working as hard as I can leads to a high quantity of work.
28. Putting forth as much energy as possible results in completing my work on time.

CHAPTER IV

HUMAN RESOUCCE MANAGEMENT

In this study I empirically examine the role that inside management (management focusing on personnel, budgeting and delegation, etc.) plays in the performance of public organizations. While public administrators have worked arduously to demonstrate that management matters, it is my hope that those outside of the field of public administration will come to appreciate the management matters agenda as more than just a neat caveat in the larger field of political science but ultimately about making real the promises of democracy. Management matters not just because we can improve the quality of outputs and outcomes but because we know that the performance of public institutions impacts trust and trust is critical to democracy. In this chapter I will empirically test the impact of human resources management on the performance of public organizations. However, my first objective is to establish the importance of high performance public institutions in a democracy.

Performance and Democracy

Several authors have noted (Brody and Sniderman 1977, Musgrave and Musgrave 1973, and Browning and Browning 1983) that there are a number of situations where the policy performance of government should affect political support. While policy influences public support or trust for government there are conditions that must exist for policy performance to be attributable to “system support”. Weatherford (1987) lists four reasons why a policy shortfall would be relevant: 1) it can’t be attributed to outside forces (factors outside of government), 2) it is not related to ideological differences between

parties, 3) the problem has existed for an extended period of time and at least two sets of leadership have been unable to fix the problem, and finally whether the shortfall creates distinct patterns of disparities across groups. While this set of criterion was in reference to economic policy it can easily apply to criminal justice or education policy.

Weatherford provides evidence that public support is a complex phenomenon composed of three primary causes: 1) whether or not citizens believe a regime to be legitimate, 2) reactions to performance by 'current or recent' leadership, and 3) beliefs about the success of current policy. While beliefs about regime legitimacy are highly resistant to change, reaction to leadership performance are specific to particular politicians. It is the third type of support or trust that is related to feelings about the quality of policy. Weatherford finds that an important segment of government support is based on the public's critique of government policy success.

When public organizations perform poorly it can lead to public distrust and it can hurt the future policy goals of government. According to Hetherington (2005) the decline in public trust has played a major role in preventing the success of progressive policy in the United States of America. He states that while some authors claim that the growth of conservative policy is a reflection of an increasingly conservative populace, there is no evidence to support the claim. He notes that most Americans support social security, highways, education and other big government programs that are perceived as benefiting all citizens. Hetherington claims that where opposition lies is to policies that ask majorities to make sacrifices on behalf of minorities; he attributes this opposition primarily to trust. "People need to trust the government when they pay the costs but do not receive the benefits, which is exactly what antipoverty and race targeted programs

require of most Americans” (p.4). There are other consequences of public mistrust; Scholz and Lubell (1998) find that when people mistrust government they are less likely to obey the law. Thus there is a body of evidence which suggests that performance not only has impacts for specific policy areas but on trust and thus support for and cooperation with other government policy.

There are some scholars who question whether performance impacts trust and thus democracy. Walle and Bouckaert (2003) question the causal link between performance and trust, they ask “do citizens have a negative perception of government because its services do not work properly, or do citizens evaluate government administration and their performance in a negative way because their image of government in general is a negative one?” In their two most powerful criticisms they note that: 1) there are several preconditions that must be met before policy performance will have an influence on trust and 2) that we cannot be sure about the causal link between trust and performance. Their first criticism was addressed almost entirely by Weatherford, when he noted the circumstances in which policy performance should impact trust. Similarly, the authors’ second criticism falls short in damaging the performance/trust hypothesis. Whereas some scholars view performance as influencing trust, Walle and Bouckaert (2003) say that people may start off with a negative view and then evaluate government performance. While it is true that we do not know which comes first trust or performance it is unlikely that a government that performs well on the criterion of: 1) good policy, 2) accountable elected officials and 3) reliable institutions will continue to get bad reviews from the public. They argue that many people express distrust simply it is in fashion to distrust government. They even note Fenno’s paradox

that people approve of their congressional member but not congress itself. However, Fenno's paradox is no paradox at all, Weatherford clearly illustrates that citizens critique their representatives and the institutions they work in separately. Even with their major criticisms, Walle and Bouckaert (2003) conclude that "increasing government legitimacy by modernizing public services is" at least a "partial strategy". Both proponents and critics of the performance/trust hypothesis find evidence supporting the importance of performance in improving public trust and thus democracy. Having established the importance of public organization performance, I will examine strategies that public administrators can use to improve outputs and outcomes.

Human Resources Management

In the previous chapters of this study I presented literature on internal management. Additionally, I presented hypotheses for each of the five components of internal management and strategies for measuring the components. In this chapter I will: 1) revisit the literature on human relations, 2) test the hypotheses for the human resources component of M₁ and 3) discuss the implications of the results.

The literature on human relations argues that increasing human resource management leads to better overall performance. McGregor (1960) emphasized the importance of administrators understanding and addressing the needs of their employees. Bailey (1993) notes the common belief in the HR literature that many organizations are under-performing because of a lack of understanding (on the part of management) on how to maximize the talent of employees. Until recently the most damaging critique of human resources literature was that it lacked empirical support (Perrow 1970). More recent scholarship (Huselid 1995, Bartel 2000) has subjected the human resources

management to empirical tests. However, the lack of reliable data has led to the use of proxy measures that undermine the external validity of empirical research on human resources. Huselid (1995) used the ratio of HR employees to the overall staff as a measure of the emphasis that an organization puts on HR. As an alternative to proxy measures developed by Huselid (1995) and other scholars Bartel (2000) suggests using large samples from firms and comparing firms that invest in human resources to those that don't. However, Bartel (2000) names three factors that inhibit most large-n investigations of human resources management: 1) data on training budgets are usually not available, 2) most studies use heterogeneous firms so we may not be correctly modeling diverse production processes and 3) the difficulty of determining whether results are biased by endogenous variables.

Each of the major concerns of Bartel (2000) are addressed in this study. I address the issue of data availability by selecting a large-n dataset of public organizations, where the data on the HR training budget is available. I have addressed the problem of heterogeneous firms by selecting homogeneous organizations (Texas school districts) as the source of my investigation. Finally Bartel (2000) was concerned with endogenous variables; specifically she was concerned that assignment to training was arbitrary. This issue is addressed by using two human resources variables that are defined by the Texas Education Agency and are specifically designed for certain employees in the organizations. Having addressed many of the major concerns of the literature it is my hope that this investigation will bring light to the impact and importance of human resources management.

Measures and Data

My measure of human relations is the percent of the annual budget spent on training or development. My measure constitutes a small segment of human relations management which includes motivation and other factors. While there are a variety of ways to study the impact of human relations management, I will examine how increasing financial support for employee training programs improves the overall performance of an organization. That is I will examine how money invested in human relations management impacts organizational performance. I will test the following hypothesis: Increases in the level of human relations management leads to improved organizational performance.

The dataset that I am using in this study was created by compiling three datasets: 1) the 2000-2005 Texas school district dataset, 2) the 2000-2007 TEA Budget dataset and 3) the 2000-2007 TEA Expenditure dataset. The Texas School dataset includes information on the personnel of the district, the pass rates of students and information on the economic and racial classification of students. The budget data was collected from the Texas Education Agency. The budget data includes budget information on each Texas School district. The budget information is organized by program, function and object. Thus it is possible to get three different views of how school districts plan to use their financial resources. The expenditure data was also acquired from the TEA. This data catalogs how school districts actually spend their resources. The data is at the program and function level. While the expenditure data does not include information at the object level the information is specific enough to make comparisons with the budget data.

Models

I will use two measures of human relations management in this study: 1) the percentage of money that a school district spends on instructional leadership (training) and the percentage of money that the district spends on school leadership (training). Both instructional leadership and school leadership refer to expenditure classifications determined by the Texas Education Agency. Instructional leadership refers to financial investments that are connected with the leadership, management, or direction of those that engage in instruction or activities that are connected with instruction. Expenditures under the aegis of instructional leadership are spent on training instructional supervisors, special population or education program coordinators and assistant superintendents for instruction. Those excluded in this category are principals, assistant principals and superintendents for curriculum. Thus instructional leadership refers to professional training aimed at improving the quality of classroom instruction and decision making by teachers. The TEA claims that there is evidence that better instructional leader's help students achieve better organizational gains. The percent instructional leadership variable in the TEA's dataset refers to the percent of a districts budget spent on the professional development of its teachers. I use the percent instructional leadership variable as a measure of human relations management because the variable represents the level to which school districts invest in training teachers how to instruct and interact with students.

Another important variable that is included in this study as an independent variable is school leadership. Financial resources invested in school leadership refer to finances spent on equipping principals, assistant principals and their assistants. The

evaluation of staff as well as staff activities related to maintaining student records are included under the classification of school leadership. The measure that I use for the school leadership program is the percentage of the budget that districts spend on school leadership. I selected school leadership because it is a measure of how dedicated a district is to improving the management skills of its principals and assistant principals. I will test both of these measures in a joint model. In the first model the overall pass rate of students in the district will serve as the dependent variable, in the second model SAT scores will serve as the dependent variable. The overall pass rate (APASS) represents the overall pass rate of students taking the TAAS¹ exam (until 2002) and the TAKS² exam (2003 to present). The SAT³ variable is a measure of the average score of students in a particular district taking the SAT. I selected the TAKS and SAT exams as dependent variables in this study because they are two highly visible indicators of school district performance in Texas.

Controls

There is a large literature focused on the elements which lead to the success of educational organizations (Burtless 1996; Smith 1995; Hanushek 1986; 1989; 1996). The literature focusing on the features of educational success is known as the education production function. In the production function, the performance of students is posited to

¹ The TAAS exam was a standardized exam administered in the state of Texas from 1990-2002. The Test emphasized academic skills and was originally administered to grades 3, 5, 7, 9, and 11. The exam was later expanded to grades 3-8 and the 10th grade.

² This examination replaced the TAAS exam. Students in the 3rd, 5th and 8th grade are required to excel on the TAKS before being promoted to the next education level. Students in the 11th grade must successfully complete the exam as one of the requirements for receiving a high school exam.

³ There is an inherent selection bias as not all students that are eligible will take this examination.

be a result of educational inputs. A 2004 TEEP⁴ Report divides the production function variables into four categories: 1) the policies of the school district, 2) environmental constraints, 3) teacher quality, and 4) financial resources.

School Policy

Three variables compose the category labeled as school policy: student attendance, class size and the percentage of students in gifted classes. Class size should have a negative impact on student performance while higher student attendance and a higher percentage of students in gifted classes should lead to better student performance.

Environment

The environmental constraints category is composed of factors that limit the performance of students. The environmental factors in this model are the percentage of poor students, the percentage of African American students and the percentage of Latino students in a district. Traditionally children who belong to ethnic groups which have been politically marginalized have not been as academically successful as those who have not. Thus I include the percentage of black and Latino students in a district as a control. Additionally, students from economically impoverished backgrounds tend to be less successful as those that come from economically affluent upbringings. Thus the percentage of low income students is used as a control.

Teacher Quality and Financial Resources

Teacher quality is composed of two factors: teacher experience, and the number of teachers with permits. More experience on the part of a teacher, should lead to higher student scores. However, the higher the percentage of teachers with temporary

⁴ The Texas Educational Excellence Project at Texas A&M University under the direction of Dr. Kenneth Meier

instructional permits, we should expect lower student scores. The category financial resources is composed of instructional funds per student, teacher salary and state aid. All of the relationships in this category are expected to be in the positive direction.

Results

In this section of the paper, I analyze the results from two models that examine the impact of internal management on performance. Both models use the variables instructional and school leadership as the independent variables. The controls in the models are derived from the literature on education production function and represent the areas of: school policy, environment, teacher quality and financial resources. The only difference in the two models is their dependent variables. In the first model the measure of student performance is the over all pass rates of students on the TAKS exam, whereas the dependent variable in the second model is the pass rate for the SAT exam. In addition to the two models that have been specified, I will include additional analysis based on the findings from the two original models.

In the first model school leadership has a positive and statistically significant impact on the overall pass rates of students taking the TAKS exam, with a t-score of 2.17, see Table 1. A one unit change in school leadership leads to a .20 change in the slope of the dependent variable. Instructional leaderships' impact on overall pass rates is in the same direction as school leadership, however the impact is statistically insignificant at the .47 level. Two of the control variables, the percentage of Hispanic students in a school district and state aid did not perform as predicted although only state aid was statistically significant. One explanation for the performance state aid may be

Table 1
Impact of HR on APASS

APASS Model One			
Independent Variables	Slope	t-score	
Instructional Leadership	.14	0.71	0.47
School Leadership	.20	2.17	0.03
Controls			
Past Performance	.62	43.57	0.00
% Black Students	-.04	-3.11	0.00
% Hispanic Students	.00	0.08	0.93
% Low Income Students	-.10	-8.47	0.00
Teacher Salary	-.00	-3.64	0.00
Teachers with Permits	-.01	-0.69	0.49
Teacher Experience	0.18	2.59	0.01
State Aid	-2.21e-08	-2.26	0.00
Expenditures	3.14e-09	1.77	0.07
Class Size	-.01	-0.21	0.83
Attend	2.81	1.57	0.00
Gifted	0.16	4.25	0.00
Intercept	-72.36	-3.95	0.00

R squared

.59

F

357.32

N

3440

*p<.1

** p<.05

***P<.01

Table 2
Impact of HR on SAT

SAT Model Two	
Independent Variables	Slope t-score
Instructional Leadership	4.89 2.97 0.00
School Leadership	-1.79 -1.53 0.12
Controls	
Past Performance	.60 35.32 0.00
% Black Students	-.17 -1.66 0.09
% Hispanic Students	-0.09 -1.12 0.26
% Low Income Students	-.77 -6.88 0.00
Teacher Salary	-.00 -1.61 0.10
Teachers with Permits	-.79 -3.36 0.00
Teacher Experience	2.25 3.70 0.00
State Aid	8.42e-10 0.02 0.98
Expenditures	1.67e-08 1.47 0.14
Class Size	.31 .43 0.67
Attend	2.95 1.87 0.06
Gifted	1.40 4.17 0.00
Intercept	135.29 0.87 0.38
<hr/>	
R squared	.60
F	243.71
N	2235

*p<.1
** p<.05
***P<.01

that state aid is an indicator of poverty in the district. There may be a time lag between an increase in state aid and improvement in student performance.

Table 2 shows that institutional leadership has a strong impact on SAT scores. Instructional leadership has a t-score of 2.97; a one unit change in this variable leads to a 4.89 shift in the slope of SAT scores and is significant at the .00 level. School leadership has a negative -1.79 but statistically insignificant impact on the dependent variable with a t-score of -1.53. Thus it appears that each of the independent variables have distinct impacts on the dependent variables of the two models, neither variable has a positive and statistically significant impact in both models.

Although the TEA defines some of the activities involved with instructional and school leadership further research is necessary to determine how and why the two independent variables have their respective impacts. It may be the case that school leadership has a strong positive impact on overall pass rates because it allows principals to construct and organize policies that positively impact the whole campus. School leadership's lack of influence on SAT scores may result from the fact that the SAT is more exclusive, making it necessary for good instructional leadership to fill in the gaps where school leadership is not effective. This is mere conjecture. However, if these assertions are true then we should see the relationships of the independent variables hold in similar situations.

If the results on human relations have a real meaning and are not just incidental we should see identical patterns for instructional leadership and school leadership in dependent variables similar to those already tested. One such dependent variable is the college readiness variable. The TEA uses the score of 1110 on the SAT and above as a

measure of college readiness⁵. We should expect to see instructional leadership have a strong impact on college readiness while school leadership should not have a positive impact on this form of performance. Secondly, if the initial findings in this study represent an authentic phenomenon then the two independent variables should have some impact on turnover. Based on the findings which indicate that school leadership seems to be a tool that only enhances administrative capabilities while instructional leadership seems to greatly improve the impact of instructors I posit the following: 1) Investments in Instructional leadership lead to reduced turnover rates and 2) Investment in school leadership will not have an impact on turnover rates. In the next section of the chapter I will explore the impact of human relations management on college readiness and turnover.

College Readiness and Turnover

In the college readiness model the variable instructional leadership is in the predicted direction. Although the variable does not a statistically significant impact on college readiness, it is approaching significance at .14, where a one unit change in instructional leadership leads to a .36 change in the slope of college readiness, see table 3. The variable school leadership has a statistically significant impact on readiness in the opposite direction. A one unit change in school leadership leads to a -.32 change in the slope of college readiness and it is significant at the .04 level. Three of the controls did not perform as expected. The percentage of Hispanic students did not have a negative

⁵ In a section labeled Academic Excellence Indicators on their web site, the TEA identifies the score of 1110 on the SAT as the criterion score for college admission.

Table 3
Impact of HR on College Readiness
College Readiness Model Three

Independent Variables	Slope	t-score	
Instructional Leadership	0.36	1.45	0.14
School Leadership	-0.32	-2.00	0.04
Controls			
Past Performance	0.39	-23.99	0.00
% Black Students	-.00	-0.03	0.97
% Hispanic Students	-.00	-0.01	0.99
% Low Income Students	-.20	-11.71	0.00
Teacher Salary	.00	2.62	0.00
Teachers with Permits	-.03	-0.88	0.37
Teacher Experience	0.19	2.12	0.03
State Aid	-1.01e-08	-1.09	0.27
Expenditures	7.64e-09	3.75	0.00
Class Size	.20	2.01	0.04
Attend	0.89	3.77	0.00
Gifted	0.18	3.65	0.00
Intercept	-76.96	-3.27	0.00
R squared	0.45		
F	178.60		
N	3020		

*p<.1
** p<.05
***P<.01

Table 4
Impact of HR on Turnover

Turnover Model Four			
Independent Variables	Slope	t-score	p-value
Instructional Leadership	-.83	-4.39	0.00
School Leadership	.42	5.08	0.00
Controls			
% Black Students	.10	8.31	0.00
% Hispanic Students	.03	4.02	0.00
% Low Income Students	-.01	-1.75	0.08
Teacher Salary	-.00	-3.76	0.00
Teachers with Permits	-.11	-4.63	0.00
Teacher Experience	-.97	-15.12	0.00
State Aid	-1.33e-08	-1.78	0.07
Expenditures	3.80e-09	-2.36	0.01
Class Size	-.42	-6.31	0.00
Attend	-1.07	-6.57	0.00
Gifted	.03	1.04	0.29
Intercept	142.35	8.80	0.00
<hr/>			
R squared		.19	
F		62.69	
N		3442	

*p<.1
** p<.05
***P<.01

Table 5
Impact of HR on SAT/Turnover
SAT/Turnover Model Five

Independent Variables	Slope	t-score	
Instructional Leadership	4.69	2.84	0.00
School Leadership	-1.58	-1.34	0.18
Turnover	-0.40	-2.04	0.04
Controls			
Past Performance	.60	35.05	0.00
% Black Students	-.13	-1.27	0.20
% Hispanic Students	-.08	-1.00	0.31
% Low Income Students	-.79	-7.01	0.00
Teacher Salary	-.00	-1.78	0.07
Teachers with Permits	-.71	-3.01	0.00
Teacher Experience	1.83	2.85	0.00
State Aid	-3.78e-09	-0.07	0.94
Expenditures	1.52e-08	1.34	0.18
Class Size	.20	.28	0.78
Attend	2.68	1.70	0.09
Gifted	1.40	4.19	0.00
Intercept	179.43	1.14	0.25
R squared			.60
F			228.06
N			2235

*p<.1
** p<.05
***P<.01

Table 6
Impact of HR on APASS/Turnover

APASS/Turnover Model Six			
Independent Variables	Slope	t-score	
Instructional Leadership	.11	0.53	0.59
School Leadership	.22	2.41	0.01
Turnover	-.04	-2.44	0.15
Controls			
Past Performance	.62	43.29	0.00
% Black Students	-.03	-2.78	0.00
% Hispanic Students	.00	.24	0.81
% Low Income Students	-.10	-8.58	0.00
Teacher Salary	-.00	-3.78	0.00
Teachers with Permits	-.01	-0.51	0.61
Teacher Experience	.13	1.92	0.05
State Aid	-2.31e-08	-2.75	0.00
Expenditures	3.00e-09	1.69	0.09
Class Size	-.03	-.46	0.64
Attend	1.11	5.90	0.00
Gifted	.16	4.31	0.00
Intercept	-66.64	-3.61	0.00
<hr/>			
R squared		.59	
F		334.38	
N		3440	

*p<.1
** p<.05
***P<.01

impact but the impact of this variable was statistically insignificant. State Aid was also in the positive direction but its impact was not significant.

However, class size was positive and significant at the .04 level where a one unit change in the variable college readiness led to a .20 change in the slope of the dependent variable.

The results for the turnover model were consistent with expectations. The impact of instructional leadership on reducing turnover is profound. Table 4 shows that one unit change in instructional leadership leads to a -.83 change in the slope of turnover, this reduction in turnover is significant at the .00 level. The impact that school leadership has on turnover is significant as well but in the opposite direction. A one unit change in school leadership leads to a .42 change in the slope of turnover; this is significant at the .00 level. While both variables are statistically significant in opposite directions the benefits of instructional leadership seem to outweigh any negative effects caused by the school leadership variable. Another interesting finding among the results was the fact that the percentage of low-income students in a district actually reduced the amount of turnover. A one unit change in low income students led to a -.019 shift in the dependent variable, this was significant at the .08 level. The variable with the most profound impact on reducing turnover was teacher experience which had a t-score of -15.12. A one unit change in teacher experience lead to a -.97 change in the slope of turnover, this was significant at the .00 level.

Turnover in the Original Models

The fifth human resources model includes school and instructional leadership as well as turnover. Even with turnover included as an independent variable instructional

leadership is significant at the .00 level, a one unit change in instructional leadership leads to a 4.69 change in the slope of SAT scores, see table 5. Both school leadership and turnover worked in the opposite direction of instructional leadership. While the impact of school leadership was significant a one unit change in turnover led to a -.40 change in SAT scores, this was significant at the .04 level. All controls were in the predicted direction with the exception of teacher salary and state aid.

The sixth model of this study is analogous to the fifth model with the exception of the dependent variable which is in this case the overall pass rate of students taking the TAKS exam. In this model both instructional leadership and school leadership work in a positive direction. However, only school leadership is statistically significant .01 with a t-score of 2.41, a one unit change in school leadership leads to a .22 change in the overall pass rates, see table 6. In the final model three of the control variables, the percentage of Hispanic students in the district, teacher salary and state aid did not perform as predicted by the education production function.

Conclusion

In this chapter I tested 6 models investigating the impact of human relations management on Texas school district outcomes. In models one and two I examined the impact of instructional and school leadership where the dependent variables are the overall pass rates of the students taking the TAKS and the SAT respectively school leadership was found to have a strong impact on the overall pass rates while instructional leadership was found to have a strong impact on SAT scores.

In the third model I examined the impact of instructional and school leadership on college readiness. Although instructional leadership was not statistically significant in

this model the independent variable demonstrated patterns similar to those found in the first two models. The fourth model in this chapter examines the impact of instructional and school leadership on reducing turnover. Investments in instructional leadership lead to reductions in turnover while school leadership had the opposite effect.

Finally, the fifth and sixth models reexamined the original SAT and APASS models with turnover included as an independent variable. This was done to determine if the positive effects of instructional and school leadership were actually working through turnover. Models 5 and 6 reconfirmed the findings of model 1 and 2 (including turnover in the model did not diminish the impact of the two independent variables).

The results of the study have at least three implications for the management matters literature. The first and most important findings of the research are that investments in human relations management have a significant impact on organizational performance. While past studies have examined HR by looking at the rate of return on investments, no study to my knowledge has examined such a large sample of homogeneous organizations using budget data on training. The second important finding of the study is that different forms of HR management have different impacts on different types of performance. This is clearly demonstrated by the diverse impacts of instructional leadership and school leadership. Finally, the results from the turnover model lend strong support to arguments that HR management reduces organizational turnover. More specifically the evidence seems to indicate that it is investments in street level bureaucrats that lead to reduced turnover.

What Do the Results Mean Specifically for Education?

While it is clear from the findings that investing in human resources has an impact on outcomes, the impacts of instructional and school leadership created an interesting puzzle. In this study instructional leadership or rather investment in teacher had a significant impact on students take the SAT but not the TAKS exam, the inverse relationship was found for school leadership which focuses on training principles and vice principals. The most obvious factor involved in the scenario is the differences in the dependent variables.

The TAKS exam is administered primarily to pre-high school students in grade 3-8, while the SAT is an exam taken exclusively by high school students. The results seem to indicate that in pre-high school students the policies of school administrators have the biggest impact on the success of students while the actions and strategies of instructor are most important to the success of high school student taking standardized exams. This is however just an observation based on examining the results and will be subjected to empirical testing in the future.

Implications for Future Research

It has been clearly established in this research that different forms of human resources training exist and that the distinct methods of training have distinct impacts on performance. While instructional leadership and school leadership were the focus of this study in a broader sense we must view these aspects of human resources management as associate and administrative training respectively. Associate training refers to the HR procedures aimed at developing the skills of non-managerial employees in an organization while administrative training is at management in the organization. Future

investigations should determine whether the finding of this study hold true in other organization environments. For example the findings from this study suggest that associate training will be the source of reducing turnover not administrative training. In addition I must determine performance indicators in non-educational settings that are conceptually analogous to dependent variables in this study. This will help in understanding where and why associate and administrative trainings have unique impacts.

In addition to investigating the impact of human resources management in other organizational fields, research on other forms of human resources management is necessary. This investigation only examines one aspect of HR management, investment in training. Future studies must examine the recruitment and work design strategies of managers and develop the theoretical framework to evaluate their impact on performance.

CHAPTER V

BUDGETING AND PERFORMANCE

Budgets serve a multifaceted role in public organizations; they touch every aspect of an organization's decision-making and practices. However, budgets are more than a representation of the financial resources of an organization. By analyzing budgets we have an opportunity to view the priorities of administrators. The budget priorities and preferences of public administrators determine which policies will and will not be adopted. Additionally, examining the budgets and expenditures of a public organization can provide an avenue to keep public officials accountable to their constituents. While the importance of budgeting has been recognized by both practitioners and scholars, there is still a gap between normative budget theory and its application in government.

Rubin (1990) notes that a great deal of the evaluations that have been conducted about normative theories (Management by objectives, PPB and ZBB) are negative. However, Rubin argues that the success of normative theory has been understated. One reason that negative views may persist about normative theories of budgeting is that many evaluations come from the analysis of the Federal government. "Historically, state and local governments have often innovated first and successfully and then the innovation has spread to the federal government. That such innovation should be judged essentially by what happens in the federal government seems unjustifiable" (Rubin 1990, p.181). Another reason that evaluations of normative budgeting theory have not been positive is that researchers have looked for results before the programs have had the time to affect change. The moderate success of budgeting programs has been highlighted in evaluations that span longer time periods. Rubin emphasizes that budget reform is

gradual and that cities often do not have the staff and other resources to immediately implement complete budgeting reforms. The number of local and state governments using more complex budgeting systems has continued to increase over the years. “In short, contemporary budgeting at the state and local levels reflects many of the practices recommended by budget theory, and it continues to evolve” (Rubin 1990, p.183). Rubin (1990) offers a number of suggestions to improve the fusion of budget theory and practice: 1) focusing more research on understanding the potential and the limitations of budget reform, 2) evaluating the meaning and the manner of achieving accountability; 3) developing indicators to evaluate the success of budgeting systems and 4) determining and developing a useful balance between oversight and autonomy with regards to budgeting systems.

In this paper I will examine how budgets and budgeting theory have impacted public administration and examine how organizational structure/managerial practices impact budgeting and thus performance. I will attempt to bridge the divide between theory and practice, using the following tactics: 1) using organizations at the local level as the focus of my study, 2) creating new indicators to study unexamined aspects of public administration and 3) using the research in this study to make recommendations about the best management practices in regards to budgeting. In the first section of this paper, I will discuss varying views on budget efficiency, followed by a section in which I examine Niskanen’s theory of budget maximization and its influence on the practice of public administration. Next, I will examine the literature which focuses on how managerial practices impact performance. After examining the literature on budgeting, I will develop hypotheses which seek to illuminate the determinants and role of efficient

budgeting in public organizations, and present my methodology. Finally, I will test my hypotheses and present my results.

What Is Budget Efficiency?

It is appropriate to begin this research with a discussion on the definition of budget efficiency. The meaning can vary depending on whether one is looking from the perspective of the private or public sector. In the world of private enterprise, budget efficiency usually refers to cost efficiency, operating at the lowest financial cost possible in order to obtain maximum financial gains. In the world of public organizations, budget efficiency means using the budget to maximize organizational performance for citizens. Whereas a private manager with a budget surplus may be viewed as efficient, a public manager in a similar condition may be viewed as having underserved his or her constituents.

For the purposes of this paper, I will use two terms to distinguish between efficiency in both the public and private sense. When referring to a private perspective I will use the term cost efficiency, a perspective which emphasizes producing a good in a manner that maximizes profit and minimizes expenditures. I will use the term slack reduction when referring to a public perspective of budget efficiency. Slack refers to space between a budget and the actual expenditures. Thus a slack reduction perspective emphasizes maximizing expenditures in order to supply clients with the best quality product. It is these two concepts that will be the focus of this study.

Niskanen and the Problem of Budget Misuse

Niskanen (1971) is one of the most important studies to highlight the power of budgets in public organizations. Miller and Moe (1983) call Niskanen's work the most

influential work which posits that bureaus are responsible for growth of government. Niskanen's model has two basic premises: 1) that public managers maximize the size of their budgets and 2) that because public managers are in a position of monopoly they can impose their policy preference on elected officials (Breton and Wintrobe 1975). Miller and Moe (1983) also note that under Niskanen's model public managers would have the incentives and the information to be the dominant player in the buyer-seller relationship. Breton and Wintrobe say that Niskanen's model provides two motivational explanations for the proposed behavior of the public managers: the prestige/power that comes with larger budgets and survival.

Niskanen's (1971) provocative claim highlights an issue which scholars of public administration have been wrestling with for some time, the conflict between democracy and bureaucracy. This work highlights the importance of the budget in the public organization. In addition Miller and Moe (1983) note that Niskanen's proposition that bureau's are wasteful has led some to argue for competition as well as privatization. While Niskanen's work has been influential and sparked innovation in the field of public administration, it is not without many criticisms.

Criticisms

Breton and Wintrobe (1975) argue that the major weakness of the Niskanen's model is that it assumes or implies that politicians are passive. They argue that the power of a bureaucratic agency does not originate from its position as a sole service provider but rather from its information. They also note that there are several means that a sponsor can use to monitor an agency. "If control devices are so costly that it does not pay to use them, then our results coincide with Niskanen's and the bureau appropriates the entire

consumers' surplus for itself" (p.201). They conclude that the theory of budget maximization is not explanatory of a general condition, but that it may apply to some specific situations.

Margolis (1975) has a number of criticisms for Niskanen :1) the executive branch is not present in Niskanen's model, 2) consumer satisfaction is not the only goal of government, and 3) expanding government is a worldwide phenomenon, thus a model only using U.S. institutions is not sufficient. Margolis says that Niskanen only lists two components of a bureau heads utility function: income and prerequisites. These components are functions of an agency's outputs and budget. Margolis notes that several career moves are common among those in public service, while remaining with one company was a more successful path for those in the private sector. The author argues that because agents move from bureau to bureau they may not be interested in the budget of the agency they are currently in. He argues that the biggest payoffs come to bureau heads that perform the best not those that expand the budgets.

Miller and Moe (1983) argue that the biggest flaw of Niskanen's model is that it does not integrate the legislature in a proper manner. They say that the assertions of his oversimplified model "threaten to generate inappropriate conclusions about the nature and determinants of decisional outcomes" (Miller and Moe 1983, p.298). The authors claim that when the legislature is included in a model accessing the growth of government, it appears to be more liable than the bureaucracy.

The Niskanen Legacy

In spite of, and because of, the criticisms that Niskanen's model has received, it remains one of the most important works on public administration in general and

specifically on the issue of controlling the bureaucracy. First, critiques of Niskanen (1971) lead to productive assessments on how to prevent exploitation by public managers. Breton and Wintrobe (1975) note that Niskanen's work highlights two ways in which agencies may exploit the budget: providing more output than needed or charging higher cost than needed. From this logic the authors conclude that effective control devices must have the ability to curb both forms of inefficiency.

Another area of public administration where Niskanen's work has been influential is in the debate on privatization. Niskanen's claim that the bureaucracy is wasteful and irresponsible led some scholars to promote the idea of privatization as a solution to government inefficiency. Other scholars such as Miller and Moe (1983) have been provoked to defend the bureaucratic system and demonstrate its superiority over privatized means of supply. There is no definitive evidence supporting the singularized superiority of privatization or bureaucratic supply. However, other studies have examined the utility of both mechanisms in detail in part because of Niskanen's contribution.

While Niskanen's work is relevant because of its contribution to the literature on political control and privatization, it is integral to this study in particular because of the way that it highlights the importance of budget efficiency. Niskanen's work underscores two major ways in which budgets are important. First, budgets are major sources of power in public organizations, and in order to be most effective all participants must work together and negotiate the terms of the budget. Second, if used in an inefficient manner, budgets will jeopardize the quality of output/outcomes. These two themes, networking for information and budget efficiency for performance, are reoccurring themes in the public organization literature.

Literature Review

In this section I will examine research which focuses on how managerial practices/organizational infrastructure can impact budgeting efficiency. I will use my assessments of these findings to formulate testable hypotheses. The literature on budgeting is replete with several different ways to examine budgeting. It is my aim to fuse the various aspects of the budgeting literature so that we can ascertain a more coherent perspective on budgeting within the confines of public administration.

Dunk (1992) examines how the inclusion of subordinates in the budget process affects budget outcomes. Dunk notes Williamson (1964) who believed that incorporating subordinates into the budgeting process would create slack. He examines the budget literature, and the two variables that are said to facilitate the link between participation and slack: “superiors’ budget emphasis in their evaluation of subordinate performance, and the degree of information asymmetry between superiors and subordinates” (Dunk 1992, p.400). The author says that the state of information asymmetry exists when a manager has less information about their environment than the individuals that are under their supervision. Including non-management employees in the budget process is designed to give managers more information about their local environment. However, some scholars (Christensen 1982; Merchant 1985b; Pope 1984; Young 1985) believe that this process may lead to more slack in budgets. “If subordinates perceive their rewards as dependent on budget attainment, they may try to build slack into their budgets through the participation process” (Dunk 1992, p.401). He used surveys from 79 managers to access information about the budgeting process. Dunk used survey data to create measures of both budgetary slack and information asymmetry. “It appears that slack is

low when participation, information asymmetry, and budget emphasis are all high. This finding runs contrary to the expectation of the previous literature”. Thus the study finds that budget emphasis and information asymmetry facilitate the relationship between participation and slack but in the opposite direction of previous literature. The study’s findings suggest that the only situation when slack is not reduced is when emphasis is low.

Fisher, Maines, Pfeffer and Sprinkle (2002) examine how using budgets for performance evaluation leads to a reduction in budgeting slack. The authors conducted this study using experimental research to determine how employees behave in two separate states: 1) where budgets are used for the allocation of resources and 2) where they are not. There is a strong held belief in the budgetary literature that including non-management employees in the budgeting process leads to the inclusion of slack in the budget. The authors examine whether providing employees with information about their co-workers or using budgets to allocate scarce resources reduces slack. The authors posit that such measures will promote an internal competition that leads to better performance and a reduction in slack. “Our results suggest that using budgets to allocate resources as well as to evaluate performance provides complementary incentives that lead subordinates to reveal their private information more truthfully and increase their effort and task performance” (Fisher, Maines, Pfeffer and Sprinkle 2002, p.849). The authors propose that traditional budgets lead to slack for two reasons: 1) the salary of individuals usually increases when their financial resources do, and 2) when proposals are the basis of financial distribution there is typically an overstatement of production costs. The study finds that when managers use budgets to distribute resources and when they use them to

evaluate the performance of their employees, slack is reduced and performance is improved. When employees were aware of the budgets proposed by their counterparts, the performance of other employees and the counteroffers that were made, they provided higher budget proposals including less slack than the proposals provided by individuals that did not have access to this information.

Wang (2000) examines the extent of performance budgeting in public organizations and examines the factors that influence the use of performance indicators in budgeting. The primary function of these performance indicators is to provide mechanisms to measure efficiency and effectiveness. Wang reports that government agencies tend to develop their own indicators of performance and then report those results to central management. While many researchers and practitioners have promoted performance measurement in budgeting for resource allocation, Wang reports that most of the governments that use performance indicators do so as a means of communication. “This finding indicates that some governments are facing political resistance to the use of performance measurement in making resource allocation decisions” (Wang 2000, p.107). Wang posits that using performance measurement is useless unless an organization has the financial and staff infrastructure to access it. Not only is it important to have the technical and financial support, but political support from administrators and politicians is absolutely necessary. This is necessary because “some legislators have concerns that the technocracy of using performance measurement may “squeeze” them out of management” (Wang 2000, p.114). Wang reports four major findings: 1) that performance measurement is used in many different stages of management, 2) it is important that governments have the infrastructure to facilitate the performance

measurement of budgeting, 3) political support is important for measurement to be used effectively and 4) there is a strong belief that performance measurement actually helps the performance of the organization.

Hypotheses

A review of the literature reveals important findings that help us gain a more complete perspective of the impact of budgeting. Dunk (1992) finds that including subordinates in the decision-making process reduces slack in budgets. Fisher, Maines, Peffer and Sprinkle (2002) examine how using budgets for performance evaluation leads to a reduction in budgeting slack. Wang (2000) discusses how organizational infrastructure and political support are necessary for performance budgeting to succeed. From this research I have developed three testable hypotheses:

H1. When managers interact with their employees to gain information about their local environment it leads to a reduction in budget slack (Dunk 1992 and Fisher et al.).

Both Dunk (1992) and Fisher et al. (2002) discuss employee interaction with employees as a strategy for reducing slack in budgets. These authors take the position that when managers lack information about their local environment it leads to slack in the budget. Both authors argue and provide support for the position that when managers use their employees as a source of information about their environment they reduce slack.

H2. Organizations with more institutional capacity are more efficient in budgeting (Wang 2000).

The second hypothesis of this study is based on the idea that institutional resources improve an organizations ability to budget efficiently. Wang (2000) alludes to this when he argues that public organizations need to have an adequate institutional

infrastructure in order for budgeting programs to work. Willoughby and Finn (1994) rate public organizations with more staff and access to technology as more professional. The premise of hypothesis two is that institutional capacity is based on the strength of its central administration and that this resource enables organizations to budget efficiently.

H3. Slack reduction leads to increased organizational performance.

One of the major issues that scholars of public administration have sought to reconcile is efficiency versus responsiveness. “On the one hand, there is the hope that public and nonprofit organizations will operate in the most efficient way possible, getting things done quickly and at the least cost to taxpayers and donors. On the other hand, public managers must be constantly attentive to the demands of the citizenry” (Denhardt and Denhardt p. 19). Operating at the minimal costs represents one view of efficiency, however, other scholars such as Dunk (1992) and Wang (2000) focus on reducing slack. While some public managers attempt to maximize the size of the budget, those maximizing slack overstate the price of production to gain extra financial resources without requesting an exuberant amount in the budget. I will examine whether reducing slack increases performance.

Methodology

The dataset that I am using in this study was created by compiling three datasets: 1) the 2000-2002 Texas school district dataset, 2) the 2000-2002 TEA Budget dataset and 3) the 2000-2002 TEA Expenditure dataset. The Texas School dataset includes information on the personnel of the district, the pass rates of students and information on the economic and racial classification of students. The budget data was collected from the Texas Education Agency. The budget data includes budget information on each Texas

School district. The budget information is organized by program, function and object. Thus it is possible to get three different views of how school districts plan to use their financial resources. The expenditure data was also acquired from the TEA. These data catalog how school districts actually spend their resources. The data are at the program and function level. While the expenditure data do not include information at the object level, the information is specific enough to make comparisons with the budget data.

Measures

In this section I will discuss the measures that I use to test the three hypotheses of this study. The first hypothesis of this study examines whether managers that interact with their employees on a regular basis are more successful at reducing slack than those who do not. In order to test this hypothesis we need a measure of employee interaction or networking. I created such a measure in a previous study. In my paper “The Dynamics of Environmental Management”, I examined two ways that manager’s network: mandatory networking and voluntary. Voluntary networking is defined as networking with organizations or individuals that are considered superior in a hierarchical organizational setting. However, voluntary networking occurs when a manager networks with individuals or groups that are considered to be subordinates in a hierarchical structure or with professional or social peers. The PERG superintendent survey contains an item which measures how frequently managers interact with certain organizations. These organizations may be divided into those which are connected to the superintendent in a supervisory sense and those groups that managers are not officially required to network with. I will use this measure in place of employee networking.

The second hypothesis of this study asserts that organizations with more institutional capacity will budget more efficiently. The 2005 dataset contains three variables which measure the infrastructure of a district: percent central administrators, percent campus administrators and percent support personnel. Organizations operating with a higher percentage in each of these categories are considered as having more infrastructure than those organizations below the mean, and are thus expected to budget more efficiently.

The third hypothesis of this study asserts that organizations which budget efficiently are more successful in other areas of performance. To create a measure of budget efficiency, I will take the Euclidian distance between the total budget and the total expenditures of a district. The formula for the Euclidian distance is the following:

$$\text{Euclidian Distance} = \sqrt{(\text{budget \%} - \text{expenditure \%})^2}$$

Using the distance between each district's budget and its total expenditures allows us to determine the slack in each district's budget and thus how efficiently they are budgeting.

Models

I will use three models to test the two hypotheses of this study. In the first model I will investigate the determinants of budget efficiency. To measure the impact that information gathering by managers has on slack reduction, I created a variable which I have labeled voluntary networking. This variable measures the extent that managers network with individuals or organizations that they are not legally required to. While this is not exactly the same as employee networking, I believe it to be capturing similar

concepts. The measure includes networking with teacher association⁶ (employees) and parent groups (clients). Thus this measure captures employee networking as well as additional information. I will test H1 with the independent variable voluntary networking. The first model will also include the independent variable institutional capacity. There is evidence in the literature that the administrative and staff capacities of an organization impacts its ability to implement effective budget strategies. The PERG Texas school data includes 3 variables which fit the description of measuring institutional capacity: percent central administrators, percent campus administrators and percent support personnel.

In the second model, I will test H3 in order to determine if slack reduction leads to enhanced organizational performance. My measure of slack reduction will be the distance between the budget and actual expenditures.

Controls

There is a large literature focused on the elements which lead to the success of educational organizations (Burtless 1996; Smith 1995; Hanushek 1986; 1989; 1996). The literature focusing on the features of educational success is known as the education production function. In the production function, the performance of students is posited to be a result of educational inputs. A 2004 TEEP⁷ Report divides the production function variables into four categories: 1) the policies of the school district, 2) environmental constraints, 3) teacher quality, and 4) financial resources. The variables in the education production function will serve as the controls for all three models. In each section, I will indicate the impact that the variables should have on each dependent variable. In addition

⁶ While the teachers association does not answer to the superintendent, the teachers in the organization are subordinates to the superintendent.

⁷ The Texas Educational Excellence Project at Texas A&M University under the direction of Dr. Kenneth Meier

to the standard controls of the education production function, I will include a section on variables unique to model one.

School Policy

Three variables compose the category labeled as school policy: student attendance, class size and the percentage of students in gifted classes. Class size should have a negative impact on student performance while higher student attendance and a higher percentage of students in gifted classes should lead to better student performance. All three of these variables should lead to increased spending.

Environment

The environmental constraints' category is composed of factors that limit the performance of students. The environmental factors in this model are the percentage of poor students, the percentage of African American students and the percentage of Latino students in a district. Traditionally children who belong to ethnic groups which have been politically marginalized have not been as academically successful as those who have not. Thus I include the percentage of black and Latino students in a district as a control. Additionally, students from economically impoverished backgrounds tend to be less successful as those that come from economically affluent upbringings. Thus the percentage of low income students is used as a control.

While the percentage of Latino, black and impoverished students in a district may spell challenges for test scores, the recognition of these challenges should lead to more spending on the part of a school district. If, indeed it is true, those environmental factors have a negative relation to slack reduction; it could explain in part, the poor performances of the above mentions groups.

Teacher Quality and Financial Resources

Teacher quality is composed of two factors: teacher experience, and the number of teachers with permits. More experience on the part of a teacher, should lead to higher student scores. However, the higher the percentage of teachers with temporary instructional permits, we should expect lower student scores. The category financial resource is composed of instructional funds per student, teacher salary and state aid.

Teacher experience should lead to a reduction in slack because more experienced teachers may demand higher salaries and command a greater knowledge of information that is deemed important by administrators. Teachers with temporary permits could have either a positive or a negative impact on budget slack. The turnover and training expenses for teachers with permits could boost spending. However, teachers with temporary permits may not be as knowledgeable as experienced teachers on the needs of students in the district. I predict that both teachers with experience and those with permits will boost spending although for different reasons.

Unique Controls for Model One

Two major themes dominate the literature on slack reduction: information and institutional capacity. Managers with more information about their local environment and institutional capacity are predicted to do a better job of reducing slack in budgets. However, there are a number of other factors that should also lead to a reduction in slack; these factors will be disguised in this section.

Managerial Experience/Quality

Two variables which should have an impact on the managers' information are time as a manager, time as a manager in that particular organization. I will use the

variables time as a superintendent and time as a superintendent in the district as my measures. I expect both of these variables to be positively correlated to slack reduction.

Results

In this section of the paper I will examine the results of three empirical models. Model one attempts to identify the factors that lead public organizations, in this case school districts, to reduce budget slack. The second and third models, which I discuss in this section, seek to explain the impact of slack reduction on organizational performance. All models are aimed at the larger goal of determining the role that budgets play in public organizations.

In the first model, I examine two factors predicted to lead to a reduction in slack. The literature predicts that managers who network more are able to reduce slack in the budgets. The variable networking was not statistically significant and was in the opposite direction than predicted. Thus, this study does not provide any evidence that the information from networking leads to a reduction in slack. Further investigation should be conducted to verify these results. It is still possible that managerial networking to gain information on specific issues will lead to information on more efficient and cost effective ways to do the job. While networking may lead to new discoveries about the needs of constituents it may also supply managers with the information allowing them to operate at a lower financial cost and to cut unneeded programs. Information which improves the cost effectiveness of managers may explain the insignificant results for networking.

Table 7
Institutional Capacity and Slack Reduction

Model One	
Independent Variables	Slope t-score
% Central Admin.	-.01 -1.90 0.05
% Campus Admin.	.05 4.42 0.00
Controls	
Management Quality	-.01 -1.43 .155
PSUPP	-.02 -5.27 0.00
HLD	.00 .58 .56
Suphere	.00 2.00 .04
Empsupe	-.00 -2.18 0.03
% Black Students	-.00 -2.26 0.02
% Hispanic Students	-.00 -3.80 0.00
% Low Income Students	-.00 3.05 0.00
Teacher Salary	-.00 -4.38 0.00
Teachers with Permits	-.00 -0.77 0.44
Teacher Experience	0.02 2.68 0.00
State Aid	0.00 1.53 0.12
Expenditures	-6.25e-10 -2.73 0.00
Class Size	-.07 -10.13 0.00
Attend	.08 4.92 0.00
Gifted	0.00 0.69 0.49
Intercept	-5.61 -3.25 0.00
<hr/>	
R squared	.56
F	49.52
N	694.00

*p<.1
** p<.05
***P<.01

The literature predicts that organizations with more institutional capacity/infrastructure are better at reducing budget slack. The two variables included in model one as measures of institutional capacity are: the percentage of central administrators in each district and the percent of campus administrators in each district. According to Table 7, the percent of central administrators had a negative and statistically insignificant effect on the reduction of slack, with a t-score of -1.39. A one unit change in the percentage of central administrators leads to a .01 change in slack reduction. However, the percentage of campus administrators in a district has a dynamic impact on slack reduction. The relationship is positive with a t-score of 6.16. The impact of the variable is statistically significant 0.00, where a one unit change in the percentage of campus administrators leads to a .05 change in slack reduction. Experience as a superintendent in any district has a negative and statistically significant impact on slack reduction. While the time as the superintendent in one's current district has a positive and statistically significant impact on slack reduction. The results reveal a difference in managerial philosophy among administrators based on their position in the organization. Central administrators within the organization appear to be focused on cost efficiency in the business sense; while campus administrators and superintendents appear to be seeking to reduce slack. The differences between central and campus administrators can be easily explained by their proximity to constituents. Campus administrators work more closely with clients and thus are likely to know their needs, promoting more spending. Central administrators are more concerned with the overall financial status of the organization and may seek to build slack in anticipation of environmental shocks.

How Does Slack Reduction Impact Performance?

In the second and third models of this paper, I examine the impact of slack reduction on the performance measures: the overall pass rate of a school district and SAT scores respectively. Reducing slack is a major theme in the literature. A number of authors argue that slack in the budget has a negative impact on organizational performance. Table 8 shows that reducing budget slack has a negative impact on the overall pass rate of students. A unit change in slack reduction results in a .18 change in the overall pass rate, however the impact is statistically insignificant with a t-score of -0.88.

SAT scores are the dependent variable in the third performance model. The results show that reducing slack does not have a statistically significant impact .70 on SAT scores, see Table 9. With a t-score of -.38, a one unit change in slack reductions leads to a 1.2 change in overall SAT scores. These results, especially those demonstrating the impact of general spending increases on SAT scores, highlight the need for strategy when using budgets. In both cases spending more money does not improve performance on these two major performance areas for school districts. We know from our analysis in Chapter IV that investing in school leadership and instructional leadership has positive impacts on overall pass rates and SAT scores respectively. Indeed the results from this chapter and Chapter IV paint a perfectly clear picture of how budgets can be used effectively. This chapter demonstrates that the most successful organizations spend less money than those which are failing. When examined by itself one could argue that the failing organizations are only spending more money because they are playing catch up

Table 8
Slack Reduction and Performance

		Model Two		
Independent Variables		Slope	t-score	
Slack Reduction		-.27	-0.88	0.37
Controls				
Past Performance		.66	45.31	0.00
% Black Students		-.03	-3.66	0.00
% Hispanic Students		-.01	-1.46	0.14
% Low Income Students		-.03	-4.17	0.00
Teacher Salary		.00	3.66	0.00
Teachers with Permits		-.01	-0.76	0.44
Teacher Experience		-0.01	-0.23	0.81
State Aid		-.00	-0.26	0.79
Expenditures	2.47e-10	-.19		0.85
Class Size		-.14	-2.60	0.00
Attend		.59	4.14	0.00
Gifted		0.44	1.71	0.08
Intercept		-30.62	-2.24	57.48
R squared				.72
F				391.20
N				1976

*p<.1
** p<.05
***P<.01

Table 9
Slack Reduction and Performance 2
Model Three

Independent Variables	Slope t-score		
Slack Reduction	-9.45	-2.27	0.02
Controls			
Past Performance	.60	25.62	.00
% Black Students	-.29	-1.99	0.04
% Hispanic Students	-.16	-1.46	0.14
% Low Income Students	-.55	-3.40	0.00
Teacher Salary	-.00	-0.87	0.38
Teachers with Permits	-.44	-1.33	0.18
Teacher Experience	2.29	2.65	0.00
State Aid	-.001	-1.82	0.06
Expenditures	9.05e-09	0.57	0.56
Class Size	-.94	-0.90	0.37
Attend	3.82	1.73	0.08
Gifted	1.28	3.00	0.00
Intercept	63.52	.30	0.76

R squared	.58
F	138.46
N	1295

*p<.1
** p<.05
***P<.01

with well performing organizations. That is, the problem (failing) is causing reaction (large spending).

However, the evidence from Chapter IV reveals that successful organizations spend more money on training employees. Even if the problem of failing schools is causing some public organizations to spend more money, the original problem stemmed from failure to invest in the appropriate avenues, not lack of spending. Thus scholars should cease to suggest vague policy solutions i.e. more or less spending and investigate and advise politicians and bureaucrats specifically where they should spend. Taken together we have a picture of the most successful public organizations as those that spend less of their total budget than failing organizations because they wisely invest it in their organizations greatest resource people. While the findings in this chapter need to be replicated to build support, these findings should serve as a caution for those who seek general increases in spending across the board as a policy solution to failing programs.

Conclusion

Budgeting serves a central role in government as well as in private organizations. Financial resources determine the extent and choice of policies selected, as well as those which are not. Traditional scholars have argued that reducing slack is an integral part of success for public organizations. However, the empirical results of this study challenge the traditional view of slack.

There is nothing illogical about the belief that spending more financial resources will lead to improved performance by public organizations. Anthony Downs (1957) argued that government was suffering from small budgets “The electorate is chronically ignorant of the costs and benefits of ...government policies. It is my belief that this

ignorance causes government to enact budgets smaller than the ones they would enact if the electorate possessed complete information” (p. 541). Downs viewed the small government budget as a symptom of public organizations that are unaware of their clients needs. However, a large government budget in no way implies or indicates responsiveness to the needs of constituents. Budgets only matter if used and evaluated strategically. We cannot simply look at the amount of money spent by a public organization and predict performance outcomes.

The total expenditures for a public organization may be large for any number of reasons, namely: 1) administrators are educated on the needs of their clients and invest in the programs and policies that are needed, 2) administrators don't know what their clients need so they spend money attempting to find “solutions that do not work and 3) administrators purposely misuse funds for their own benefit. Conversely, low expenditures in and of themselves do not signal the quality of the manager that is directing a public organization. Spending in a public organization may be low for more than one reason: 1) managers do not know what goods to purchase; 2) they are seeking to maximize slack and 3) they are directed by good managers that know how to save money.

Our research on budgets should lead us to identify those areas where it is most beneficial for managers to invest financial resources. It should not be focused simply on the amount of the budget being spent. Human resources have already been identified as a key area where organization should invest. Additional areas of budget investment need to be investigated. Further research should be conducted to determine whether successful public organizations consistently operate at lower costs than failing organizations.

CHAPTER VI

SUMMARY: FUTURE DIRECTIONS IN THE STUDY OF M_1

In the previous chapters of this dissertation, I studied the impact of internal management on organizational performance. In this chapter, I will recap the goals of this research project and the overall findings of this study. Finally, I will discuss the implications of this study for public administration in general and articulate the next steps in my research agenda.

At the outset of this study, I mapped out a 4 pronged strategy to advance the management matters agenda. I argued that the first step in advancing this research agenda was to identify components of internal management and ways to measure them. The next step in this process was to identify and establish standardized categories of performance indicators. The third step of the research project was to test the impact of M_1 on performance. The fourth and final component of my research is to discuss the implications of my findings and discuss future directions in research. In the following sections, I will discuss each of the first three components of my research, which were conducted in the first five chapters of this dissertation. In the final section of this chapter, I will discuss the implications of this study and the future of my research agenda.

Components of M_1

Determining ways to conceptualize and measure internal management was the most important task of the project. I conducted a review of the public administration/public management literature to identify the components of internal

management. I identified five components of M₁: goal setting, budget efficiency, technology, structure and human relations management.

My review of the literature revealed that there were 5 components to the goals set by managers: 1) goal clarity, 2) goal difficulty, 3) the activist tone, 4) the goal commitment and 5) goal focus. Organizational mission statements include the information necessary to study four elements of stated organizational goals: tone, clarity, difficulty and focus. The mission statements of many public organizations are available on the organization's web page, which may be accessed via the internet. While mission statements must be still be coded it is currently much easier to view the mission of public organizations.

The literature review revealed several components of structure. Rainey (2003) identified 4 dimensions of structure: centralization, formalization, red tape and complexity. While there are multiple components of structure controlled by public managers, centralization in an organization was identified as a component that managers may manipulate through their power to delegate. Thus centralization is the form of structure identified as a component of M₁ in this study.

The other components of M₁, technology, budgeting efficiency and human relations management, may all be measured using the financial data of an organization. The priority that an organization places on technology may be measured by examining the percentage that an organization spends acquiring information technology divided by the total budget. Human relations management can be divided into at least 3 categories: recruitment, training and work design. While recruitment is obviously an important component of HR management, it is not always easy to measure. It would be necessary to

examine the recruitment policies of the organization as well as determine the techniques used by those recruiting for the organization. Additionally, the work design/innovation of managers would be equally difficult to gage. However, we can at least gage how important training employees are to an organization by looking at the percentage of their budget that they spend on training.

Finally, budgeting efficiency may obviously be measured using financial data. However, definitions of budget efficiency may not always be clear. In this dissertation the difference between the business and a public administration view of the term budget efficiency is distinguished. In the private sector, budget efficiency usually refers to cost efficiency, operating at the lowest financial cost possible in order to obtain maximum financial gains. In the public arena, budget efficiency means using the budget to maximize organizational performance for citizens, which is often associated with more spending. Whereas a private manager with a budget surplus may be viewed as efficient, a public manager in a similar condition may be viewed as having underserved his or her constituents.

I used two terms to distinguish between efficiency in both the public and private sense. When referring to a private perspective I used the term cost efficiency, a perspective which emphasizes producing a good in a manner that maximizes profit and minimizes expenditures. I used the term slack reduction when referring to a public perspective of budget efficiency. Slack refers to space between a budget and the actual expenditures. The slack reduction perspective emphasizes maximizing expenditures in order to supply clients with the best quality product.

Performance Indicators

The second step of this research project was to identify a set of standardized performance indicators which may be used to study the impact of management across multiple fields. Boyne (2002) identified 5 performance areas: outputs, responsiveness, efficiency, service outcomes and democratic outcomes. I argued that the five performance indicators identified by Boyne should serve as the standard performance indicators used in studies of public administration. However, I noted that because of the time it takes to see outcomes of policies the three standard performance indicators, which may be more readily examined are outputs, responsiveness and efficiency.

Data

The data which I used in this study were Texas school data. The Texas School district management surveys conducted by Ken Meier and PERG at Texas A&M University provide a wealth of information on the management practices of Texas superintendents. These surveys inquire information about: networking, management style, education (of the manager), goals and time allocation. I used the measure of networking (M₂) that Meier and O'Toole developed from these surveys in my study.

Specifically, Meier and O'Toole asked superintendents "how frequently they interacted with five key environmental actors-school boards members, local business leaders, state legislators, other superintendents, and the state education agency-on a 6-point scale from daily to never" (Meier and O'Toole 2005, p. 528). The authors subsequently factor analyzed these frequency ratings to create a single measure of network management. The measure of M₂ created by Meier and O'Toole is positively correlated with improvement on statewide standardized test scores in Texas. Because of

time and data constraints, I was only able to examine two of the components of M_1 in this study, human relations management and budgeting efficiency.

Results

The results from the human relations management chapter confirmed my hypothesis from Chapter I. My study found that the more that the more a public organization invested in human relations the better the students performed. What is interesting about the results is that specific forms of human relations management were effective on improving specific forms of performance. In the first model school leadership has a positive and statistically significant impact on the overall pass rates of students taking the TAKS exam, with a t-score of 2.17. A one unit change in school leadership leads to a .20 change in the slope of the dependent variable, while instructional leadership has a strong impact on SAT scores. Instructional leadership has a t-score of 2.97; a one unit change in this variable leads to a 4.89 shift in the slope of SAT scores and is significant at the .00 level. I argued that school leadership has a strong positive impact on overall pass rates because it allows principals to construct and organize policies that positively impact the whole campus. School leadership's lack of influence on SAT scores may result from the fact that the SAT is more exclusive, making it necessary for good instructional leadership to fill in the gaps where school leadership is not effective.

In addition to demonstrating that human resources management improves performance, I also showed that investing in HR management reduces turnover. Instructional leadership had a profound impact on reducing turnover is profound. A one

unit change in instructional leadership leads to a -.83 change in the slope of turnover, this reduction in turnover is significant at the .00 level.

In Chapter V of the dissertation, I examined the impact that budget efficiency has on performance. The results in Chapter V were in the opposite direction, than I predicted. While many scholars of public administration argue that reducing budget slack leads to better performance, my results did not reflect this. My measure of budget efficiency was created by creating a variable that captures the distance between what a public organization budgets and their actual expenditures. I then divided my sample into two groups based on their level of spending. All groups at or above the mean were those that reduced slack by maximizing their budget. Organizations below the mean are those that had higher levels of slack. I then compared the two groups to see how budgeting impacted their performance. It was organizations with higher levels of slack, less spending, which had higher levels of performance.

Thus, the two major findings of my study are that the most successful organizations are those who invest the higher percentage of their budgets in training their employees and that these organizations spend less money overall than those which are failing. In addition, structure played a role in shaping budgeting. The evidence from Chapter V suggests that Organizations which have more staff in central administration spend less money. Organizations which placed more staff in campus administration tended to reduce slack by spending more of their budget.

Future Areas of Research

While the findings in this study are important, only two components of M_1 were studied in depth in this project. Future research on M_1 must focus on the goal setting,

structure and technology components of internal management. In order to effectively study goal setting, it will be necessary to create a dataset comprised of the mission statements of public organizations. These mission statements will have to be coded in order to identify the tone, difficulty, clarity and number of goals. In order to study structure it will be necessary to either find or develop a survey, which identifies the types and percentage of work that manager's delegate, in order to determine the impact of centralization. Technology may be studied by looking at the percent of the budget that organizations spend on technology. I was not able to evaluate how organizations prioritize technology in this study because technology and curriculum expenditures were merged in the data.

Study of Performance Indicators

In addition to studying all components of internal management, the objective of this research agenda will not be completely achieved until the impact of all 5 components of M₁ have been studied on at least the three major standard performance indicators: outputs, responsiveness and efficiency. This study focused on outputs. Future studies must examine the impact that internal management has on responsiveness and efficiency.

The Study of responsiveness in future research projects must focus on how each of the five components of M₁ impact responsiveness. Methods for measuring how responsive public organizations are to citizens should focus on levels of citizen satisfaction with the organizations, as well as public support for the programs of the organization. Studies on responsiveness should also examine bureaucratic responsiveness to political principals as well as the decision making process bureaucrats engage in when there is a major conflict between the policy preferences of the public and their political

principals. This study briefly discussed some of the determinants of efficiency. Future studies should examine how all five components of internal management impact efficiency. In addition future research should continue to compare and contrast public and private concepts of efficiency.

Future Fields of Study

In order to make general statements about effective management it is not enough to simply predict how management works in one area of public administration. Thus it will be necessary to test the hypotheses of this study in areas outside of education. In this section of the paper, I will discuss how the hypotheses of this study may be tested in other fields of public administration. I will specifically focus on how this study may be replicated in criminal justice. Although the current dissertation project will not include data from research on criminal justice, I believe that it is important to establish avenues for future research.

Criminal justice represents an area of public administration that is equally important and widespread as the education system. Studying the management of police departments creates the opportunity to gain information about public administration that is still under the purview of local government. Although it is obvious that police departments and school districts have different performance indicators, this does not mean that generalizable findings about public administration cannot be derived from a comparative study of these institutions managers. Thus testing the role of internal and external management on various issue categories in education and subsequently in criminal justice will help the development of strong generalizable statements about how specific management tactics impact outcomes.

Retesting the hypotheses of this study in the area of criminal justice will consist of a substantial amount of work. The first step to retesting the hypotheses of this study is by finding ways to measure management practices for criminal justice that is similar to the way this current research, which focuses on managers in the education system. However, there will be obvious differences, the network nodes in the criminal justice survey will include other criminal justice organizations such as the (ATF) and the Federal Bureau of Bureau of Alcohol, Tobacco, Firearms, and Explosives Investigation (FBI), as opposed to the education agencies used as nodes on the superintendent surveys. Besides such obvious differences, the criminal justice and education managers should be dealing with many similar management issues.

Collection of performance indicators is fairly straightforward. Law enforcement performance data may be collected from two sources: the Bureau of Justice Statistics, and the FBI Uniform Crime Statistics. Obtaining data on the management practices of law enforcement administrators will probably present the greatest challenge; however there are avenues to achieve this. Sam Houston State University is home to LEMIT, the Law Enforcement Management Institute of Texas. This institute conducts management training for Texas law enforcement officials; Texas police chiefs are trained at this institute. I will seek permission from the institute to conduct police surveys.

Research at LEMIT will necessitate the creation of a management survey, similar to the one administered by Ken Meier and PERG, but geared toward managers in the field of criminal justice. Additionally, any project examining the performance of law enforcement agencies must deal with the challenge of defining outputs. That is determining what outputs really mean for a law enforcement organization. For example,

does an increase in arrests mean that police are doing a better job at apprehending criminals or a poor job at reducing crime? This issue must be addressed in management research focusing on the field of criminal justice.

Another area where the five components of M₁ can be used to test the Meier/O'Toole model is political campaigns. Surveying campaign managers may be used as a method of five components of M₁. For example, questions on structure could assess how much discretion field organizers are given to establish programs/events in their regions, while human relations survey items would be structured to determine, the amount of time and money invested into training employees.

This project attempts to move beyond single measures of management and performance. The goal is not only to develop multiple measures of management and performance, but also to predict how these different management actions will impact each performance indicator. The use of data from multiple fields of public administrators will allow for the development of statements about management that may be generalized to more than one field of public administration. Such a development may have a profound impact on the way public administration is practiced.

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APPENDIX

This dissertation project focused on the impact of internal management activities. In this project I began a quest to identify the management activities that lead to improved performances on the part of public organizations. The study used the Meier/O'Toole model to structure the research. The Meier/O'Toole model presents performance as a product of stability, internal management, past performance, resources, networking and the error term. The model presents M₁ and past performance as components that work together to create performance outcomes.

In Chapters IV and V of this dissertation, I presented 9 models, four of these models focus directly on the performance of Texas school districts, where SAT scores and the overall pass rates of students on TASS and TAKS are used as measures of performance. I used the literature to identify the variables that impact the performance of education organizations. While the correct variables are included in the models, I used the past performance of school districts as a control variable rather than in conjunction with the measures identified as M₁ or internal management in this study. In this Appendix I will retest four models from the dissertation. I will add interaction variables (M₁* past performance) in each of these models to more accurately test the Meier/O'Toole management model.

The Four Original Models

Each of the three performance based models in Chapter IV were joint models that is they included two measures of M₁ in the model. Chapter IV focused on human resource management, I used two measures of HR management in these models, the

percentage of the budget that an organization spends on training administration (school leadership) and the percentage of the budget that the organization invests in training instructors. The first model investigated the impact of these two measures of HR on the overall pass rates of students, the results indicated that investing in administrators has an impact on overall pass rates while investing in instructors did not appear to impact this form of performance. The second model used the same two measures of HR to study the impact on SAT scores. The results were the inverse of the first model with instructional training having an impact on SAT scores but administrative training appearing to be insignificant. The third performance model of Chapter IV tested the impact of HR management on College Readiness (a score of 1110 on the SAT or higher). The results were similar to those in model two. Finally, the model in Chapter V tested the impact of slack reduction of SAT scores; the result indicated that spending more money did lead to any improvement in organizational performance.

New Models

I will retest each of the four performance models of the study adding interaction variables to each model to more accurately test the Meier/O'Toole Model. In the first revised models I will introduce the variable M1school (a interaction variable) which was created by using school leadership and past TASS/TAKS performance and the variable M1instruct created by using instructional leadership and TASS/TAKS past performance. This same format was used in each of the models, the original measure of M1 was combined with the "past performance" variable to create an interaction variable which was subsequently included in the model(s) and tested.

Table 10
HR and APASS

APASS Model One	
Independent Variables	Slope t-score
M1school1	-.02 -3.63 0.00
M1instruct1	.01 1.32 0.18
Instructional Leadership	-1.25 -1.15 0.25
School Leadership	2.35 3.93 0.00
Controls	
Past Performance	.75 17.66 0.00
% Black Students	-.04 -3.43 0.00
% Hispanic Students	.00 0.11 0.91
% Low Income Students	-.10 -8.40 0.00
Teacher Salary	-.00 -3.61 0.00
Teachers with Permits	-.01 -0.75 0.45
Teacher Experience	0.18 2.66 0.00
State Aid	-1.86e-08 -2.17 0.03
Expenditures	2.67e-09 1.50 0.13
Class Size	-.01 -0.19 0.85
Attend	1.13 6.03 0.00
Gifted	0.16 4.26 0.00
Intercept	-81.22 -4.40 0.00
R squared .59	
F	314.93
N	3440

*p<.1
** p<.05
***P<.01

Table 11
HR on SAT

SAT Model Two			
Independent Variables	Slope	t-score	
m1instruct2	.10	6.22	0.00
m1school2	.04	0.29	0.76
Instructional Leadership	-92.97	-5.88	0.00
School Leadership	-5.35	-0.41	0.68
Controls			
Past Performance	.49	6.37	0.00
% Black Students	-.16	-1.52	0.12
% Hispanic Students	-0.09	-1.12	0.26
% Low Income Students	-.72	-6.50	0.00
Teacher Salary	-.00	-1.82	0.06
Teachers with Permits	-.81	-3.46	0.00
Teacher Experience	2.52	4.17	0.00
State Aid	1.71e-08	0.34	0.73
Expenditures	1.17e-08	1.04	0.29
Class Size	.54	.75	0.45
Attend	3.05	1.95	0.05
Gifted	1.28	3.85	0.00
Intercept	225.64	1.32	0.18
R squared			.61
F			219.18
N			2235

*p<.1
** p<.05
***P<.01

Table 12
HR and College Readiness

College Readiness Model Three			
Independent Variables	Slope	t-score	
M1school3	-.00	-0.01	.99
M1instruct3	0.16	9.37	0.00
Instructional Leadership	-3.04	-6.87	0.00
School Leadership	-0.35	-1.25	0.21
Controls			
Past Performance	0.29	4.33	0.00
% Black Students	-.00	-0.05	0.96
% Hispanic Students	.00	0.81	0.41
% Low Income Students	-.18	-10.68	0.00
Teacher Salary	.00	2.06	0.04
Teachers with Permits	-.03	-0.92	0.36
Teacher Experience	0.23	2.61	0.00
State Aid	-4.97e-09	-0.54	0.59
Expenditures	5.51e-09	2.72	0.00
Class Size	.26	2.60	0.00
Attend	0.96	4.08	0.00
Gifted	0.15	2.97	0.00
Intercept	-81.08	-3.48	0.00
<hr/>			
R squared		0.46	
F		166.23	
N		3020	

*p<.1
** p<.05
***P<.01

Additional Model

In Chapter V of the dissertation I test the impact of slack reduction on SAT exam performance; however I did not test the impact of slack reduction on the overall pass rates for the TASS/TAKS exam. I gave no justification for this decision and should have tested both the SAT scores and Overall pass rates, as both represent valid performance measures. Thus I will test a performance model to determine the impact of slack reduction on overall pass rates. This model will use an interaction variable which combines the slack reduction variable and the lagged overall pass rate variable, to create the independent variable.

Results

In the original Chapter IV models, school leadership has a positive and statistically significant impact on overall pass rates. However, the interaction variable was negative with a t-score of -3.63 and is statistically significant at the 0.00 level, see Table 10. This finding indicates that the better past performance is, the smaller the impact of HR management. The interaction variable for instructional leadership is positive but statistically insignificant.

In the SAT model in the appendix the interaction variable is in the same direction as the original model. The instructional leadership interaction variable is positive with a t-score of 6.22 and is significant at the 0.00 level, see Table 11. The results seem to indicate that when past performance is not a major factor the impact of instructional leadership is strong. The school leadership interaction variable is positive and statistically insignificant in this model (.76).

Table 13
Slack Reduction and SAT Performance
Model Four

Independent Variables	Slope	t-score	
M1slackreduce1	0.18	4.73	0.00
Slack Reduction	-173.17	-4.45	0.00
Controls			
Past Performance	.54	19.98	.00
% Black Students	-.29	-2.01	0.04
% Hispanic Students	-.17	-1.54	0.12
% Low Income Students	-.44	-2.73	0.00
Teacher Salary	-.00	-0.89	0.37
Teachers with Permits	-.49	-1.51	0.13
Teacher Experience	2.53	2.94	0.00
State Aid	-.001	-1.25	0.21
Expenditures	9.25e-09	0.59	0.55
Class Size	-.44	-0.43	0.66
Attend	4.09	1.87	0.06
Gifted	1.05	2.48	0.01
Intercept	76.67	0.36	0.71
R squared			.59
F			132.38
N			1295

*p<.1
** p<.05
***P<.01

Table 14
Slack Reduction and APASS Performance
Model Five

Independent Variables	Slope	t-score	
M1slackreduce2	0.08	3.01	0.00
Slack Reduction	-6.61	-2.85	0.00
Controls			
Past Performance	.64	43.13	.00
% Black Students	-.03	-3.36	0.00
% Hispanic Students	-.00	-1.38	0.16
% Low Income Students	-.03	-3.84	0.00
Teacher Salary	.00	3.39	0.00
Teachers with Permits	-.01	-0.64	0.52
Teacher Experience	0.00	0.00	1.00
State Aid	-6.24e-06	-1.10	0.91
Expenditures	2.61e-10	0.19	0.84
Class Size	-.13	-2.44	0.01
Attend	0.59	4.17	0.00
Gifted	-30.14	-2.20	0.02
Intercept	63.52	.30	0.76
R squared			.72
F			365.55
N			1976

*p<.1
** p<.05
***P<.01

The third model is the college preparedness performance model. Table 12 shows that the instructional leadership interaction variable in this model is positive with a t-score of 9.37 and is statistically significant at the 0.00 level. This finding again demonstrates that the HR management strategy of investing resources into training instructors can have a strong impact on SAT exam success.

I test a revised version of the model in Chapter V. In this model the interaction variable combines the original measure of slack reduction with the lagged performance on SAT exams in the district. The results show that not reducing budget slack has a positive and statistically significant impact on SAT performance, see Table 13. This finding once again supports the position that the amount of money which an organization spends is not necessarily the most important factor contributing to the organizations success. The final model in this appendix examines the impact of slack reduction on overall pass rates. The results of this model are very similar to the modified SAT model of Chapter V. Again being a lower spending organization had a positive and statistically significant impact on overall pass rates with a t-score of 3.01, being statistically significant at the 0.00 level, see Table 14. This finding indicates that not reducing slack has the same impact on overall pass rates of the TASS and TAKS as on the SAT examinations.

This appendix presents four modified versions of the models found in the original dissertation chapters. Three of the four models had result very similar to the original models. However, the greatest contribution of this appendix is to provide a more accurate presentation of the Meier/Toole management model. The modification of the model used

in the appendix will serve as the prototype to study the impact of internal management in future studies.

VITA

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