ESSAYS IN PUBLIC AND NONPROFIT FINANCIAL MANAGEMENT

A Dissertation

by

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

DOCTOR OF PHILOSOPHY

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December 2015

Major Subject: Political Science

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ABSTRACT

There are three primary goals of financial management: to help a firm weather environmental turbulence, to allow a firm to grow, and to make safe revenue choices to keep a firm operational. What is often disregarded in this discussion is organizational context. In this dissertation, I argue that we cannot manage finances in all organizations the same way.

Organizational context matters for money management. Specifically, by organizational context I mean if a firm is a public, for-profit, or nonprofit entity. Organizational context shapes the winners and losers in resource distribution and hence fundamentally alters key expectations from various financial management tools and techniques. To demonstrate this, I address three questions related to each aspect of financial management. First, can fiscal slack help buffer budget shocks in public organizations? Second, does financial performance motivate risk taking in nonprofit, for innovation and growth? Finally, can revenue sourcing strategies affect key outcomes in decentralized public organizations?

I use twenty years of data from over a thousand public school districts in Texas. I use ordinary least squares regression models with year fixed effects. First, I empirically demonstrate that fiscal slack alone cannot fully counterbalance the negative impact of 10 percent or greater budget shocks on aggregate district standardized test performance. However, districts with approximately 31.53 percent fund balance (unabsorbed fiscal slack) can reduce the negative impact of budget shocks more effectively than districts with minimum, or just 0.05 percent, fund balance. But the distinction of slack as an effective buffer in for-profits, in much less pronounced in public firms.

Second, I offer a theoretical discussion of how an increase in financial performance may induce nonprofits to take more risks. This is in sharp contrast to their for-profit coun-

terparts. Decline in financial performance is the key motivation for for-profit firms to innovate and take risks. But given the nondistribution constraint and the lack of profit motivation, when nonprofits are financially secure they would be induced to take more risk.

Finally, I empirically investigate achievement gap based on income, a key outcome, in the highly decentralized US K-12 education system. Decentralization is expected to offer welfare enhancing opportunities, by allowing school policies to be tailored to small homogeneous student groups. I find that when more revenue is generated locally, more administrative decentralization can increase income-based achievement gap. Revenue source is less important in private organizations that actively seek to diversify revenue bases.

These three separate conclusions together substantiate the key thesis that organizational context fundamentally alters outcomes and expectations from various money management choices in firms.

DEDICATION

To my parents, Ma and Baba

ACKNOWLEDGEMENTS

Thanks to my committee chair Dr. Ken Meier. He has helped me in more ways than I can list here. I cherish most the priceless gift of his intellectual support. Without him this dissertation would not have been written.

Thanks to my committee members, Dr. Maria Escobar-Lemmon, Dr. Mannny Teodoro, and Dr. Lori Taylor for their guidance and support throughout the course of this research. Each of them have always welcomed me with open doors and I am grateful for that.

A special thanks to Dr. Laurie Paarlberg and Dr. Justin Marlowe, for their generous guidance throughout the course of this research. Both of them have gone out of their ways to support my work and I appreciate it more than I can say.

Thanks also go to my friends, colleagues, and all faculty and staff, at the Political Science Department for making my time at Texas A&M University an enriching experience.

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1. INTRODUCTION

1.1   Introduction

Organizations are living breathing systems that bring together various actors, both internal and external, who work towards a common goal. Alternatively, as Cyert and March (1963) argue, organizations are coalition of actors, and aggregated goals of coalition members manifest as organizational goals (Cyert and March 1963). Either way, if an organization fails to achieve its purported goals, it runs the risk of decline, failure, and demise.[1] With a multiplicity of actors, and their numerous, often conflicting interests, arise the potential for discord and conflict. Effective management of such a system, then, involves ironing out challenges that may arise in the process of inducing actors in this coalition to act cohesively to achieve organizational goals. Since actors respond to incentives, the key function of organizational leadership, then, is to ensure that actors are incentivized appropriately and that these incentives align them with the goals of the organization. To incentivize actors, organizations harness internal and external resources. In this regard, money is a critical organizational resource.

Financial decisions impact every aspect of an organization. Furthermore, money is finite and fungible. In other words, every organization has a limited supply of this key resource and money designated for one purpose may in essence be used for another purpose. These two features create some unique challenges for financial managers. Allocation of finite fiscal resources in an organization creates winners and losers. Thus, a lot is revealed through the study of financial management practices of an organization. A rich and growing body of literature explores this complex incentive structure that fiscal bargaining

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[1]The population ecology view of organizations, such as the one proposed in the seminal work of Hannan and Freeman (1977), offers a slightly different explanation for the birth, growth, and decay trajectory of organizations. But it is compatible with the key premise of organizational development here.

creates in organizations and that impacts the outputs of private or for-profit firms. But the same cannot be said for other organizational types.

In modern societies, majority of goods and services are produced by "formalized entities." (Jegers 2008, 5) [2] These entities, in turn, may be owned by either governments or private entities. [3] Organizations run by a government entity is a public organization. Private ownership of organizations can be further divided into two categories. First, organizations that allow owners to increase their financial wealth using their earned profits and those that operate under a non-distribution of profit constraint (Jegers 2008, 6-7). For-profits fall in the first category and are essentially motivated by wealth maximization for their owners. Nonprofits fall in the second category. Public and nonprofit organizations provide goods and services that for-profit firms are unwilling or unable to provide (Mikesell 2013). The list of goods and services provided by public and nonprofit organizations is long, and includes healthcare, education, and public safety, to name just a few.

Despite the importance of the services provided by the government and the third sector, the majority of our knowledge about financial management in organizations is built around our understanding of for-profit firms. If we look at the shelves of a book store (or an online version of it), we will see that for every text book on public financial management or nonprofit financial management, there are at least ten text books on corporate finance. This means that we do not have enough resources out there to train the next generations of public and nonprofit managers, who can fully appreciate the unique challenges of their organizations. The premise of this problem is the assumption that we can extend our understanding of financial management policies and practices in private organizations, with some adjustments, to further our knowledge of how best to manage finances in public

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[2]These goods and services may include the "promotion of ideas, ideologies, or religions." (Jegers 2008, 5)

[3]There are also cross sectoral partnerships, such as public-private partnerships that is a fairly common phenomenon today. But for the purpose of this dissertation, I consider only pure public, for-profit, and nonprofit organizations.

or non-profit organizations.

Jegers (2008, 110) argues that once we have accounted for the nondistribution constraint, nonprofit financial management will not be remarkably different from for-profit financial management. The new public management revolution also attempted to extrapolate practices and paradigms of for-profit management to public organizations. But if financial management is about aligning fiscal resources within an organization to incentivise actors in the organizational coalition, then the context of organization, that is if it is for-profit, nonprofit, or public, should fundamentally change what financial management practices look like in each of these organization types. This is because, organizational context sets the organizational goals, rules of the game, the incentives for actors, and, the winners and losers in the group bargaining process that determines the way the fiscal pie is shared within an organizational coalition. While all organizations can be managed, how we manage them and how management choices will impact organizational outcomes will be conditioned by the context. The three essays in this dissertation attempt to demonstrate how our efforts to effectively harness financial resource to meet organizational goals, which is the primary concern of financial management research, is highly restricted unless we account for the unique challenges and opportunities that *publicness* or *nonprofitness* of an organization creates. In other words, organizational context matters in the study of financial management.

1.2   Overview

Finances are the fuel that runs an organization. Financial management scholars study how we generate and use money effectively, to meet organizational goals. In this regard, we can think of three key financial management goals: to stay in operation, to grow, to weather environmental turbulence. To stay operational any organization must

generate revenue. Organizations must ideally have a revenue source that is sustainable and diversified, such that it is not dependent on a single revenue base.[4] Once, an organization has charted a clear path to sustain itself, it may then focus on growth, through innovation and risk-taking. Sometimes growth is a choice, but most often than not it is a means to stay relevant in a constantly changing environment. Finally, organizations constantly face environmental turbulence that they must protect themselves from. Organizations allocate resources to create a safety net around itself to weather turbulence. In three separate essays, I demonstrate how each of these organizational goals translate to financial management challenges and, most importantly, how dealing with these challenges is highly context dependent.

I begin by addressing the issue of organizational turbulence in the second chapter. Organizations of all shapes, forms, and sizes, have to worry about vicissitudes of the environment. An example of environmental turbulence, would be a fiscal turbulence, such as a negative budget shock due to unforeseen changes in revenue stream. Since these unforeseen circumstances are inevitable, organizations make contingency arrangements. Slack resources within an organization are supposed to offer a protective shield around organizations at times of such turbulence. Fiscal slack reserve is supposed to help deflect the negative impact of a budget shock on organizational performance. But for-profit literature leads us to believe that not all slack resources are the same. While some slack reserves are positively linked to organizational performance, thus act as an effective organizational buffer, other slack resources may be merely a manifestation of organizational inefficiency. This literature has identified the first as unabsorbed slack and the latter as absorbed slack. The notion of absorbed and unabsorbed slack in public organizations is a useful addition. But, most importantly, the implication of this concept varies remarkably from slack studied in for-profit firms. Unabsorbed slack is undesignated excess resources that for-profit

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[4]For-profits establish multiple product lines to accomplish this goal.

managers can re-allocate easily. In public organizations, excess slack resources creates political pressures, say for tax cuts (Rose and Smith 2011). The wider political context matters to for-profit managers to the extent that it gets in the way of them catering to the shareholder interest. But for managers in public organizations, it is their stock in trade, as they serve a wider society and cater to major public needs. Public managers cannot easily create unabsorbed fund reserves as designated excess resource, without political repercussions. Even when they do create unabsorbed slack reserves, such as unreserved fund balance, it is unclear if they can use these monies effectively to completely deflect the negative impact of downward budgetary shocks on performance. Additionally, performance for public organizations is not straightforward, say maximizing return on investments, but a more complex set of goals, such as providing K-12 education or primary healthcare to as many individuals in the society as possible. Thus, this essay hopes to start a dialogue about how various organizational safety nets should be effectively managed, while accounting for the organizational context.

The third chapter continues to demonstrate how context matters in the study of financial management, by wrestling with the another financial management challenge: fostering organizational growth and innovation through risk-taking. Decline in financial performance is the key motivation for for-profit firms to innovate and take risks, so that they may reach, or exceed, pre-decline levels of financial performance (Bromiley 1991; Singh 1986). Thus, there is usually a negative relationship between financial performance and risk taking in for-profit organizations. But risk taking is also context dependent (Shapira 1995, 25). This chapter demonstrates that when we move the performance-risk discussion to the context of nonprofit organizations, the key assumptions and expectations about this relationship changes. Like public organizations, nonprofits cater to a much wider set of clientele. As (Adelino, Lewellen, and Sundaram 2015, 1583) argue, a nonprofit may serve donors who fund it, the community in which it operates, and the society at large- often-

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times all of them simultaneously. The list of different actors involved in nonprofits, then, is remarkably greater than even a major corporation with a large number of share-holders. Nonprofits are generally risk averse (Hull and Lio 2006). Unlike for-profits, when financially vulnerable, a nonprofit will stay away from choices that involve risk and innovation. But with robust finances, a nonprofit would take more risks and try to serve a larger constituency than before. This is a new theoretical addition to the performance-risk link, that hinges upon the argument that organizational context alters goals and challenges associated with financial management in fundamental ways.

The fourth chapter, offers the final piece of evidence to support the claim that organizational context is crucial in the study of financial management. Studies of private organizations, both for-profits and nonprofits, have demonstrated that revenue diversification is beneficial for organizations. It harkens back to the adage of *not putting all eggs in one basket.* But the strings that come attached with revenue sources may have major ramifications for public organizations, than what we would see in for-profits or even nonprofits. In this essay, I look at the context of the most dominant public organization systems in the US, public schools and one of their key goals, which is to reduce achievement gaps between student groups. In a heavily decentralized US public school system, it is believed that administrative decentralization will enhance equity and reduce achievement gaps. But placing more administrators on school campuses may increase the achievement gap between low-income students and their peers. While a battery of factors may contribute to this problem, I argue they all stem primarily from "elite capture." (Bardhan and Mookherjee 2005) This argument is best demonstrated by looking at the impact of school district revenue sources. When school districts source a higher percentage of their revenue locally, they are beholden to the interests of the local revenue base. Decentralization in this case would increase income-based achievement gap. Thus, revenue diversification studied from the perspective of public organizations must account for the political realities within

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which they operate. Like all organizations, public organizations may want to maximize their revenue base. But when we factor in their unique organizational context, we see that their financing choices have major impact on their key organizational outcomes.

1.3   Data and Methodology

The scientific study of organizations is incomplete without rich and reliable data. Chapters two and four are empirical in nature and use data from publicly available online database of the Texas Education Agency (TEA). I use almost two decades worth of panel data of over thousand Texas public school districts, which are independent local governments. Even though some data points are lost due to missing values and model adjustments, I still have a large sample. Texas contains 8 percent of all US school districts (Meier and O'Toole 2011). These independent local governments are highly professionalized organizations with their own taxing power, and are diverse entities that encompass urban to rural, rich to poor, and homogeneous to heterogeneous districts (Meier and O'Toole 2011). Majority of their revenue comes from the state and from local sales and property tax. These school districts often face major funding shocks, have clear performance measures, and demonstrate variation in the levels of slack reserves, decentralization, and revenue generated through local sources, and have a variety of financial and administrative indicators.

In chapter two, all reported models were estimated using ordinary least squares regression. Pooled diagnostic tests were performed to address common concerns regarding violations of key assumptions of classical linear regression. Breusch-Pagan/Cook-Weisberg tests showed traces of heteroscedasticity in estimated models. Thus, all models are report with robust standard errors clustered by the school districts. In addition, Wooldridge test for autocorrelation in panel data (Drukker et al. 2003) shows presence of serial correlation (Drukker et al. 2003). Thus, equations were adjusted with individual year

dummies. Incorporation of year fixed effects give us within year variation in these models. In chapter four, I estimate the district level production functions that give us the gross effect of the educational output of interest (Brewer 1996). To allay usual concerns with times-series data, a Fisher-type unit root test was conducted to check for stationarity and none was found in the variables included. Preliminary analysis, using ordinary least squares (OLS) regression, show violations of some classical linear regression assumptions and the models were modified accordingly. Traces of heteroscedasticity were revealed by the Breusch-Pagan/Cook-Weisberg test. Like in chapter two, all OLS models were reported with robust standard errors clustered by individual school districts. Again, Wooldridge test for autocorrelation in panel data revealed serial correlation in the models (Drukker et al. 2003). Therefore, as in chapter two, all models were estimated with individual year dummies. Educational outcomes are autoregressive. Hence, performance on standardized tests in year t does not usually change dramatically from year $t - 1$. Therefore, models are reported with and without lagged dependent variables. For additional support of the theory, models in chapter four are estimated using Autoregressive Random Effects (AR r.e.) modeling strategy and reported, with year fixed effects and district random effects.

1.4 Conclusion

This dissertation sets out to demonstrate that organizational context matters in the study of financial management through three distinct essays. Each essay deals with a separate organizational issue: revenue sourcing choice, risk taking, and environmental buffering. Each of these topics draws in one way or another from the for-profit management and finance literature. The argument here is not that be must disregard the rich and vast body of research dedicated to the study of money management in for-profit firms. Instead, there is a clear need to investigate standard topics of financial management through the prism of public and nonprofit firms. In addition, there are issues unique to public and nonprofit

organizations that needs special attention, such as fund raising and financing of marketing in nonprofit firms.

In this regard, the body of work on public financial management has made greater strides than the body of research on nonprofit financial management. Public financial management scholars have investigated a variety of topics related to running the finances effectively and efficiently in public organizations, such as "governmental accounting and auditing, debt policy and management, revenue forecasting, tax administration, public procurement," and so forth (Kioko et al. 2011, i113). Specialized topical expertise have evolved, such as education finance and municipal finance. But this body of research has faced a two-fold challenge. First, there is limited cross-pollination of ideas among various specializations and sub-fields. Second, this body of work has paid little attention to the "political, organizational, and institutional contexts," within which all of these money management issues mushroom (Kioko et al. 2011, i113). Again, as is the key argument here, it is the political, organizational, and institutional contexts of public and nonprofit organizations, that makes, say revenue forecasting, look different in for-profit versus public or nonprofit firms. It is not enough for us to understand how the technical details of financial management may be different in public and nonprofit organizations from their for-profit counterparts. A better approach is to think theoretically, while addressing technical issues faced by public managers across sectors.

Besides demonstrating the importance of organizational context in financial management, the essays in this dissertation makes a concerted attempt to marry the "technocratic" dialect of public financial management with the theoretical approach of public administration, which is deemed the new horizon in this line of work (Kioko et al. 2011). The larger discipline can certainly benefit from inviting sub-fields, that have spoken past each until now, to the same table and share valuable knowledge that they have garnered. The essays here are an example of what research would look like if we were to consis-

tently integrate technical questions that relate to money management, but study it keeping the larger organizational context in mind that shapes the goals of organizations and the incentives of actors within them.

2. FISCAL SLACK, BUDGET SHOCKS, AND PERFORMANCE IN PUBLIC ORGANIZATIONS

2.1   Introduction

The pool of resources required in an organization that is in excess of the minimum needed to generate a specific level of output is slack (Hendrick 2006). Studies have yielded mixed results on the usefulness of slack. Within the context of public organizations the public choice line of research argues that slack is synonymous with inefficiency and budget-maximizing bureaucrats accumulate slack for personal gains. Management scholars by and large take the opposite stand and argue that slack is an essential cushion within an organization and serves a host of purposes, one of which is to buffer the organization from external turbulence. Empirical evidence on fiscal slack, especially as a potential buffer against fiscal stress, in public finance has further added to this confusion, suggesting it works sometimes and is useful to some extent. I argue that the key piece in this puzzle is to classify slack into two categories: absorbed and unabsorbed slack. This categorization has received limited attention, but can help us make sense of the inconsistent results and evidences on slack thus far, specifically within public sector organizations.

In addition, while most studies have used various financial proxies as an outcome of interest, a clearly defined performance measure that can be linked to fiscal slack has been largely missing. School districts offer an excellent testing ground for such broader issues in public administration (Raffle 2007). These are one of the most widespread local governments in the US, have rich data, and clearly defined performance goals. Furthermore, these local governments constantly weather fiscal stress (Davis 2008; Trussel and Patrick 2012). For instance, the 82nd Texas Legislature that convened in early 2011, faced

a $7.8 billion shortfall in public education budget (Legislative Budget Board Fiscal Size Up 2012-2013 Biennium). The loss of onetime federal funds, increased enrollment growth in Texas schools, settle up costs in school districts, and declining values of local properties in Texas caused this shortfall. Law makers opted to balance the budget primarily through a $4 billion cut from public school funds, besides a $1.5 billion infusion from the General Revenue Fund and $2.3 billion in deferred payments to school districts. Thus, over the following biennium the state portion of public education funding was reduced by 6 percent, with a 3.3 percent overall cut in the fiscal year 2011-2012. However, overall cuts, primarily tied to enrollment, faced by some districts were as high as 8 to 9 percent.

An impact assessment shows that Texas school districts made a concerted effort to prevent the 2011 funding shocks from affecting core instructional expenses and to protect student learning (Goff and Robert 2013). Among the sampled schools, 31 percent dipped into their fund balance in the 2011-2012 fiscal year (Goff and Robert 2013). While the amount varied, many expressed concerns about the unsustainability of depleting these reserves to cover funding shortfalls. Districts reported that their top three cost containment measures were in non-instructional categories. Specifically, districts deferred technological upgrades, deferred maintenance, and froze administrative salaries, to protect instructional expenses (Goff and Robert 2013). As these local governments run leaner operations during times of fiscal stress, the question arises if built in fiscal slack is these organizations can successfully buffer the detrimental effects of negative funding shocks on their key deliverable: student performance.

I ask if public school districts, when faced with externally imposed funding cutbacks, can mobilize internal fiscal slack to buffer student performance. This addresses the broader question about the efficacy of fiscal slack resources as a buffering tool against environmental turbulence in public organizations that deliver key public services, such as education, healthcare, and public safety. As we know, these organizations in the US and

around the world in recent years have been forced to cut costs and trim down. With pressures to become more efficient, the question arises if they are getting leaner at the expense of declining performance. Using a sample of over 1000 public school districts in Texas from 1994 to 2010 I show that the distinction between absorbed and unabsorbed fiscal slack is important when we discuss slack as a potential buffer. Fiscal slack alone cannot entirely balance the negative impact of environmental turbulence on performance, specifically when there is a negative 10 percent or greater budget shock. However, districts with higher thresholds of unabsorbed slack, with around 31.53 percent fund balance, can reduce the negative impact of these shocks more effectively than districts with minimum, of just 0.05 percent, fund balance. This is opposite in the case of absorbed slack. These finding help clarify the mixed results that have inundated this line of research.

2.2   Slack

According to economic theory organizational slack should equal zero (Cyert and March 1963). But complete elimination of slack can only happen if an organization is able to leverage its internal and external environment to fully optimize its resources (Bourgeois 1981), which is both risky and improbable. Additionally, slack is often considered an inadvertent and inevitable outcome of group bargaining and decision making process in any organization (Cyert and March 1963). Too much slack is undesirable, is equated with inefficiency, and is considered a cause of organizational decline (Bourgeois 1981). Thus, public managers face constant pressure to minimize or give up slack resources, or risk their organizations being stigmatized as wasteful (Boyne and Walker 2004; Stanbury and Thompson 1995; Salge 2011).

There is a rich literature that specifically explores slack in public organizations (Busch 2002; Busch and Gustafsson 2002, see). The inherent suspicion of the utility and

accumulation of slack in public organizations has a long tradition of support in the public choice canon (Niskanen 1974; Moe 1997; Milgrom and Roberts 1992, see). The argument is based on the concept of budget maximizing bureaucrats, as developed by Niskanen (1974). These budget maximizing bureaucrats are expected to value slack in their organizations "for political gain and can accumulate it when they possess more information about production costs relative to superiors, or when bureaucratic autonomy over budgetary matters is relatively high." (Hendrick 2006, 16) This suspicion is further buttressed by studies on local government finances that demonstrate that slack in municipal governments often far exceeds recommended amounts (Gianakis and Snow 2007; Stewart 2009; Marlowe 2005; Gore 2009). There is no evidence to make a case for large slack reserves as a key contributor to performance in these local governments (Marlowe 2011).

However, the general consensus among organization theorists is that the benefits of organizational slack far outweigh its costs. Slack offers inducement to members of an organization to remain in the organizational coalition, it works as a resource for conflict resolution, it facilitates strategic behavior in an organization, it allows organizational risk taking and innovation, and it works as a buffer against environmental turbulence (Cyert and March 1963; Thompson 1967; Sharfman et al. 1988). As an organizational buffer, slack resources have been linked to credit quality maintenance in municipal governments (Marlowe 2011). Slack fiscal resources, specifically different fund balance categories, have been demonstrated to have important stabilization effects on current expenditures for municipalities, especially at the margins (Marlowe 2005). In the case of independent school districts, one of the most widespread local governments in the US, fiscal slack has been regarded as a key predictor in the analysis of financial stress, measured by decline in instructional spending (Trussel and Patrick 2012).

The public finance literature has spent considerable effort in assessing various aspects of slack, such as the optimal amount (Marlowe 2011), its purpose in local govern-

ments (Hendrick 2006), and its counter-cyclical stabilization effects on key expenditure variables. Various financial indicators and bond ratings have been used in majority of these studies as the outcomes of interest, often as proxies for performance. But they do not tell us how slack may impact the key deliverables for these organization. For instance, downgrading in bond ratings of a school district, a proxy for failure in public service delivery, offers only a partial picture of decline in performance. This is because bonds are usually insured against the risk of downgrade (Trussel and Patrick 2012; Denison 2003; Greenwald 2010; Nanda and Singh 2004). The present study attempts to fill this lacuna by directly linking slack to key performance indicator in K-12 educational setting.

2.3   Theory and Hypotheses

The vast literature on slack has generated conflicting results and expectations. Organization theorists argue that slack is an indispensable organizational resource and will positively contribute to performance. While public choice theorists argue that budget maximizing bureaucrats store slack for personal gains. The mixed results in local government finance has only exacerbate this confusion. I argue that the missing link is a distinction between two types of slack. Slack can exist in an organization in the form of absorbed and unabsorbed resources (Tan and Peng 2003; Su, Xie, and Li 2009). Unabsorbed slack shows up as uncommitted resources, while absorbed slack is tied to current operations and is often hard to redeploy effectively. Tan and Peng (2003) demonstrate that in private organizations unabsorbed slack by and large has a positive association with performance, and absorbed slack just the opposite. I extend this distinction to slack in public organizations.

Unabsorbed slack, such as various fund balances, are usually accumulated in a separate designated accounts that are closely monitored by senior management and external auditors. These highly visible slack resources in local governments may also trigger pub-

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lic scrutiny in the form of "political pressure for tax cuts and spending increases" (Rose and Smith 2011, 187). Furthermore, given the red tapes involved with accumulating and spending these resources, public managers have to jump hoops before they can use these resources. However, unabsorbed fiscal slack is also easy to redeploy. Mangers often have more discretion over its usage since they are not tied to a specific purpose or spending categories, though this discretion comes at a price. For instance, Marlowe (2011, 93) shows that with "some" unabsorbed fiscal slack, as opposed none, US local governments have a 5 to 9 percent improvement in credit ratings- a key performance indicator. This leads to my first hypothesis,

H_1 : Unabsorbed fiscal slack will positively impact overall student performance in public school districts.

This is not the case for absorbed fiscal slack. Since these are tied to current operations, absorbed fiscal slack is harder to observe and also redeploy. These often appear in discretionary spending categories, such as non-instructional expenses in public schools. Some scholars have argued that non-instructional spending, tied to current operations, is often excessive and is negatively linked to performance (see, Brewer 1996). The limited visibility of these absorbed slack resources also make them less open to public and managerial scrutiny. If bureaucrats are budget maximizers, then they would be inclined to build excessive absorbed slack in these less-visible categories. Alternatively, if public managers are not budget maximizers, they still have an incentive to build in absorbed slack. For example, they can have two employees to do the job of one, which is not counter-intuitive given phrases such as lazy bureaucrats that pervades public and academic discourse (see, Walsh 2011, 2012). In either cases absorbed slack then can be linked to inefficiencies in public organizations, which in turn will hurt performance. Therefore,

H_2 : Absorbed fiscal slack will negatively impact overall student performance in public school districts.

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Few studies have looked at the interactive effect of funding shocks and slack on aggregate performance in public organizations. Those that have argue that public schools can overcome the negative impact of a single major budget shock. Specifically, public schools with 10 percent or greater budget shock can activate "(partial) slack in the managerial resources" in the short run and buffer performance from budget shocks (O'Toole Jr and Meier 2010, 345). This partial slack, measured by the percentage of school district central office administrators, interacts with substantial budget shocks and dissipates the impact of these shocks on student performance. I argue that the distinction between absorbed and unabsorbed slack is crucial in the assessment of fiscal slack as an effective buffer.

Since mangers have more discretion over unabsorbed fiscal slack, during times of crisis they can quickly redeploy these resources. As we see in the introductory case of Texas schools post 2011 funding cuts, several districts dipped into their fund balances. This was possible because during such crisis public scrutiny, red tape, and regulatory bottlenecks restricting the usage of these funds in Texas were quickly relaxed, and the core goal of salvaging student performance took center stage (Goff and Robert 2013). This leads to my next hypothesis,

H_3 : Unabsorbed fiscal slack will be successful in buffering the impact of a single major negative budget shock on performance in public school districts.

In case of absorbed slack, I argue the opposite. If public managers are budget maximizers, they will not accumulate slack into the operation of the organization that will serve any purpose, besides their own. Post-2011 Texas funding cuts the majority of school districts curtailed their spending on non-instructional categories, one of which was administrative overheads (Goff and Robert 2013). In these districts a hierarchical administrative system controls the flow of resources and coordinates key activities (Brewer 1996). When districts freeze spending on these categories in the aftermath of funding cutbacks, they do two things. First, districts demonstrate inherent inefficiencies in allocations of these

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resources. Second, they put an additional jolt to their organizational operations, which is already suffering from a budget shock. Ideally, districts would smoothly transition to a more optimal usage of these and other non-instructional resources. In sum, absorbed slack tied to current operations will be an ineffective buffering against performance drops after negative funding shocks. Organizations with more absorbed slack may have a harder time coping with such shocks, because either they are more sluggish or they put additional stress on their organizations by attempting to reallocate resources as a crisis management measure. This leads to my final hypothesis,

H_4 : Absorbed fiscal slack will be unsuccessful in buffering the impact of a single major negative budget shock on performance in public school districts.

2.4   Model and Data

A variation of the OToole and Meier organizational performance model is used here (Meier and O'Toole 2009, for an overview see). Briefly stated, the model suggests:

$$Performance_{it} = f(Slack_{it} + BudgetShock_{it} + Slack_{it} * BudgeShock_{it} + Controls) \quad (2.1)$$

Where "Performance" is any organizational performance metric, "Slack" is any measure of financial slack within public organizations, and "Shock" is a negative budget shock. Fiscal slack interacts with downward budget shocks and the expectation is that slack would be able to cushion the overall negative impact of budget shocks on the performance indicator.

2.5   Variables

2.5.1   Slack

Slack is the key predictor and conditional factor in the proposed interactive theory. I argue that two separate forms of fiscal slack have dissimilar effects as a performance buffer.

Unabsorbed slack is measured by the amount of surplus fund balance expressed as a percent of the total budgeted expenditures (for the general fund) for the current year in a school district. As the financial guidelines of districts clearly state, fund balances are not rainy day funds. Instead, these are unreserved, undesignated surplus fund balance from the end of the previous school year. In most districts, this amount is equivalent to the fund balance at the beginning of the current school year. There has been an increasing tendency by districts to use these funds to meet shortages caused by budget cuts (Goff and Robert 2013). Besides the theoretical importance of the fund balance expressed as a percent of the total budgeted expenditures, it is also recently targeted by popular commentators as an unused resource for school districts and as a justification for funding cuts during economic downturns.

Absorbed financial slack is measured with non-instructional dollars scaled by enrollment in a school district. This expenditure category covers expenses for administrative support, instructional support, and non-academic programs (Trussel and Patrick 2012). Thus, relative to total expenditures, the monies spent on non-instructional functions are discretionary (Tuckman and Chang 1991).

2.5.2 *Performance*

The dependent variable is the percentage of students in a district who passed all (reading, writing and math) sections of the TAAS or TAKS. Texas school districts administered Texas Assessment of Knowledge and Skills (TAKS) from 2003 -2010 and Texas Assessment of Academic Skills (TAAS) from 1993-2002 as the key performance measure. TAAS was replaced by TAKS in 2003. These are both standardized criterion-based tests that are required of all students in grades 3 through 8, and grade 11. In addition, TAKS required students in 9th and 10th grade to take the test. While the two exams are slightly different, for the purposes of the present analysis they offer a good consistent measure for a standardized performance metric over time. This is a key metric that managers at various levels of the Texas school system care about and policy makers pay attention to.

2.5.3 *Budget Shock*

To measure budget shocks I first regress total school district revenues per pupil (logged) in the present year on the previous years school district revenue per pupil (logged) and consumer price index values. This captures what the revenues of school districts, scaled by enrollment, would be if past trends continued, while also accounting for inflation. Any year-to-year reductions in school district budgets that exceed 10 percent of revenues are designated as a negative shock dummy (coded 1 for a shock). A 10 percent or more decrease in year to year school district revenue is a big loss school districts and close to the amount lost by some Texas school districts in 2011 (Meier and O'Toole 2009; O'Toole Jr and Meier 2010). Furthermore, the shock equation also takes into account enrollment trends. Revenue growth that is disproportionate with respect to enrollment helps us get at unanticipated dimension of these budgetary shocks. And since the model already

controls for various expenditures, the coefficients of the shock variable estimate the impact of the shock, given the controls.

The 10 percent shock threshold is a solid, but nevertheless an arbitrary benchmark for a major downward budget shock. It is hard to tell if a 9.5 percent or a 10.5 percent shock threshold will cause meaningful differences in the key findings. However, there is some precedence of using the 10 percent threshold as a major budget shock in public school districts (Meier and O'Toole 2009; O'Toole Jr and Meier 2010), which is the key reason for using this threshold here. Besides the 10 percent threshold, analyses were conducted with downward shocks of 5, 15, and 18 percent. There were no statistically significant findings for 5 percent and 18 percent categories in any of the models presented below. This is perhaps because 5 percent shocks were too common and not powerful enough to perturb district performance outcomes and 18 percent shocks were rare and impacted only a minority of the cases. An alternative to this binary shock measure, is a continuous revenue volatility measure that is also considered. The residuals from the growth model used to estimate the 10 percent budget shock, is used as to capture revenue volatility. But this predictor does not yield any meaningful results in the subsequent models, and is therefore not pursued further.

2.5.4   Controls

The vast literature on education production function offers some additional factors that may impact standardized test performance (Todd and Wolpin 2003, for an overview see). A higher percentages of African American, Hispanic, and low-income students in a school district is expected to negatively impact TAAS/TAKS passing rate students. Higher average teacher salary (in 1,000 dollars), higher per student instructional spending (in 1,000 dollars), and lower class size (number of students per teacher) should all positively

contribute to TAAS/TAKS passing rate. Students in districts with more experienced teach-
ers and lower percentage of non-certified teachers are also expected to fare better on stan-
dardized tests. Furthermore, wealthier districts with higher property value per pupil should
also fare better than poorer districts on standardized exams. The logged value of standard-
ized total (post exemptions) of the tax property value of a school district per pupil is used.
There is some debate on the impact of location on test performance (Butters, Asarta, and
Thompson 2013). However, there is evidence of significant variation in achievement based
on location. Thus, all models includes rural and metropolitan dummies, using micropoli-
tan as the base category. Logged enrollment is included as a measure of district size, which
is expected to negatively impact performance. Finally, while this study focuses on nega-
tive budget shocks, positive shocks can counterbalance the negative impact of a downward
shock. Thus, key models (with the negative shock dummies) also include a 10 percent or
greater positive shock (extracted from the residuals) of the aforementioned shock equa-
tion. Table 2.1 shows the summary statistics for all variables.

2.6   Findings

Does unabsorbed fiscal slack resources have a positive impact on performance? As
we see in Table 2.2, the coefficient of percent fund balance is in the expected direction,
though the impact is not major.[1] On average, this unabsorbed slack measure contributes to
approximately .03 percentage point improvement in TAAS/TAKS passing rate, holding all
other variables constant. Thus, unabsorbed fiscal slack has a minor, but positive, impact
on overall student performance in school districts and I find limited support for H_1. The

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[1]In Table 2.2, Table 2.3, and Table 2.4 robust standard errors clustered by districts are reported in paren-
thesis. A two-tailed tests of significance is used where * p<0.05, ** p<0.01, and *** p<0.001. Also, in
these tables, the controls and year dummies are not reported. In Table 2.3 non-instructional expenses per
pupil is not reported. In Table 2.4 fund balance is not reported.

Table 2.1: Summary statistics for slack, shock, and test performance

Variable	Mean	Std. Dev.	Min	Max
All student TAAS/TAKS passing rate	72.67	13.13	14	100
Year end fund balance (percent)	25.47	18.98	-41.2	185
Non-instructional expenses per pupil (000s)	3.96	2.80	0.79	26.98
Instructional expenses per pupil (000s)	3.76	1.09	0.88	15.84
Average teacher experience (years)	12.03	2.34	0	28.4
Non-certified teachers (percentage)	2.47	4.52	0	93.33
Student teacher ratio	12.73	2.47	3.3	57.40
Average teacher salary ('000s)	35.68	5.84	19.59	72.39
African american student (percent)	8.11	12.02	0	87
Hispanic student (percent)	29.83	26.95	0	100
Low-income student (percent)	49.75	19.22	0	100
Log_enrollment	6.99	1.50	2.56	12.26
Log_tax property value per pupil	12.18	0.76	9.19	15.05
	0	1		
Negative 10% + budget shock	15803	1085		
Positive 10% + budget shock	13948	2940		
Metropolitan	8990	7898		
Micropolitan*	13870	3018		
Rural	10916	5972		

*Note: *Base, excluded from models*

Table 2.2: Fiscal slack, budget shock and performance
DV: Overall TAAS/TAKS exam pass (percent)

Year end fund balance (percent)	0.026**
	(0.01)
Non-instructional expenses per pupil ('000s)	0.066
	(0.07)
Negative budget shock	-0.694*
	(0.28)
Lagged negative budget shock	-0.612*
	(0.28)
constant	53.184***
	(4.57)
R-Squared	0.635
N	17049

coefficients of the absorbed slack measure is also positive, contrary to what was hypothesized. However, the impact is not statistically significant at the standard thresholds. Thus, we cannot arrive at a conclusion about H_2. A ten percent or greater negative budget shock in the current year and the past year causes a little over one-half point decline in performance. The impact of shock in the past year on performance, is slightly weaker than that in the current year.

As we see in Table 2.2, most of the controls impact the outcome variable in the expected direction. An anomalous finding, besides the negative but statistically non-significant finding for instructional expenses, is that of the impact of a 10 percent or greater positive budget shock on performance. One would expect that a positive shock would impact performance favorably. However, the negative coefficients of the positive shock variable in all the subsequent models (Table 2.3 and Table 2.4) tell a different story. These results suggest that budgetary stability is positively linked with performance in public organizations. Shock variables (both negative and positive) pick up the instability component

Table 2.3: Can unabsorbed slack buffer a major budget shock?
DV: All student standardized test pass rate (percent)

Year end fund balance (percent)	0.021*
	(0.01)
Negative budget shock	-1.716***
	(0.45)
Lagged negative budget shock	-1.255**
	(0.43)
Fund balance*Negative budget shock	0.034**
	(0.01)
Fund balance*Lagged negative budget shock	0.024
	(0.01)
constant	53.551***
	(4.57)
R-Squared	0.635
N	16888

that is detrimental to, and thus negatively associated with, performance on standardized tests. Since this is not the focus of this paper, I do not pursue this further here. Next, I address the first of the two key questions in this study: when a 10 percent or greater negative budget shock hits school districts in the current year, can unabsorbed fiscal slack resources in Texas school districts buffer aggregate student passing rate on TAAS/TAKS?

Table 2.3 shows with no impact of unabsorbed slack and holding all other variables constant, a negative budget shock in the current year and past year can cause over a percentage point drop in test passing rate. The coefficient of the interaction terms are also statistically significant and in the expected positive direction. To understand the interactive effect of negative budget shock and unabsorbed fiscal slack better, Table 2.3 is used to generate a marginal plot.[2]

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[2]Figure 2.1, Figure 2.2, Figure 2.3, and Figure 2.4 were created using the strategy laid out by Berry, Golder, and Milton (2012).

The vertical axis on the left of Figure 2.1 gives us the marginal impact of a neg-

Figure 2.1: Marginal effect of 10%+ budget shock(t) on performance at various levels of unabsorbed slack

DV: All TAAS/TAKS Pass Rate
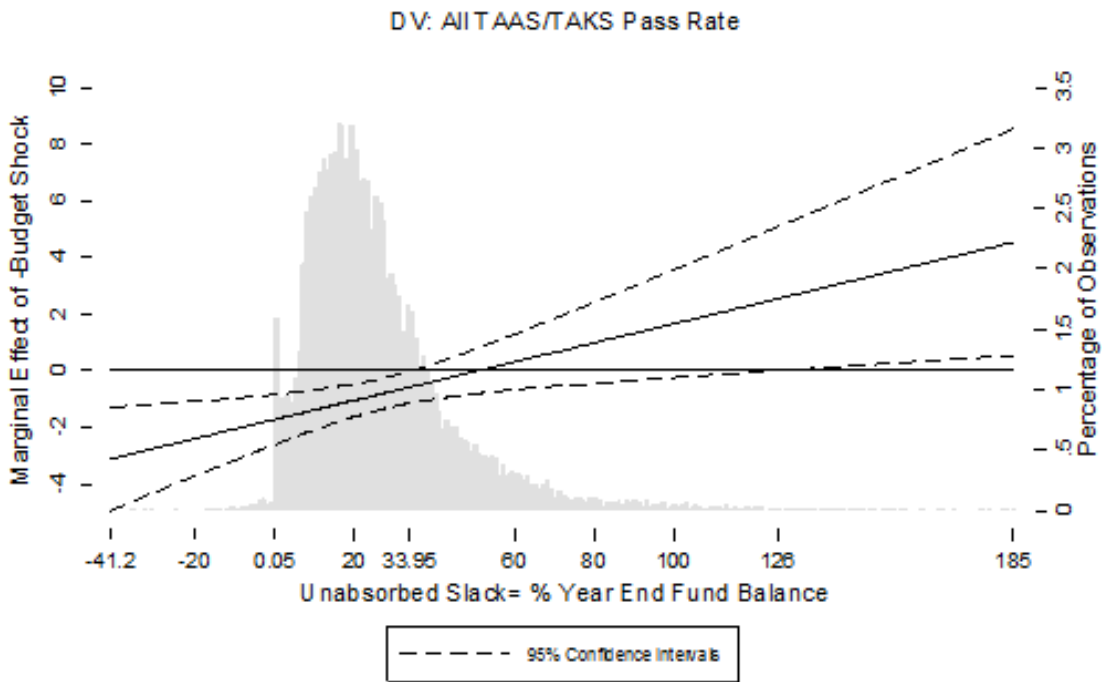
ative 10 percent or greater budget shock in the current year on performance at various levels of the modifying variable. The vertical axis on the right gives us the percentage of observations. The horizontal axis in Figure 2.1 captures the entire range of the modifying variable, percent year-end fund balance, in the sample. The values range from a negative 41.2 percent of fund balance reserves expressed as a percent of the total budgeted expenditures for the current year to a surplus fund balance of 185 percent. However, as the overlaid histograms show us, majority of school districts in the sample have fund balance ranging from a 0.05 percent to about 60 percent. Furthermore, for the purposes of the interactive theory, the range within which the moderating effect of fund balance is statis-

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tically significant is between 0.05 percent and 33.95 percent. This also happens to be the range within which we have the bulk of districts, as evidenced by the histogram, and thus is of substantive importance.

It is clear that throughout this effective range the impact of a 10 percent or greater budget shock continues to be negative on TAAS/TAKS pass rate. Meaning unabsorbed slack, as measured by percent year-end fund balance, cannot turn the negative impact of a budget shock into positive impact. Funding cuts impact performance no matter what, unless districts have surplus fund balance that is over 128 percent of projected expenses. These districts are an anomaly and can be disregarded for general theory building purposes. As we move from districts that have a 0.05 percent fund balance to those that have close to a little over 33 percent fund balance, the negative impact of the downward shock reduces. For instance, at 0.05 percent fund balance, on average budget shocks drop standardized test pass rate by 1.71 percent points. At 25.47 percent, or mean fund balance, this downward impact reduces to a drop of .86 percentage points. Finally, at 33.95 percent of fund balance the negative impact of budget shock on student passing rate drops to .57 percent points. A similar analysis is carried out with a lagged downward budget shock.

Figure 2.2 varies from Figure 2.1 in that it plots the interaction of the lagged budget shock with percent fund balance from Table 2.3. It shows that as unabsorbed slack reserves increase in a district the negative impact of lagged downward budget shock on performance is reduced, as in the previous case. At 0.05 performance drops by 1.25 points, which reduces to a 0.57 point drop at a 29.1 percent fund balance level. The improvements in performance, as seen in Figure 2.2 and Figure 2.3, are minimal. However, these findings validate the argument that districts with more unabsorbed slack can buffer some of the negative impact of budget shocks on their core performance goals (H_3). How about absorbed slack?

I argue that absorbed slack is ineffective in buffering a negative budget shock

Figure 2.2: Marginal effect of 10%+ budget shock(t-1) on performance at various levels of unabsorbed slack

DV: All TAAS/TAKS Pass Rate
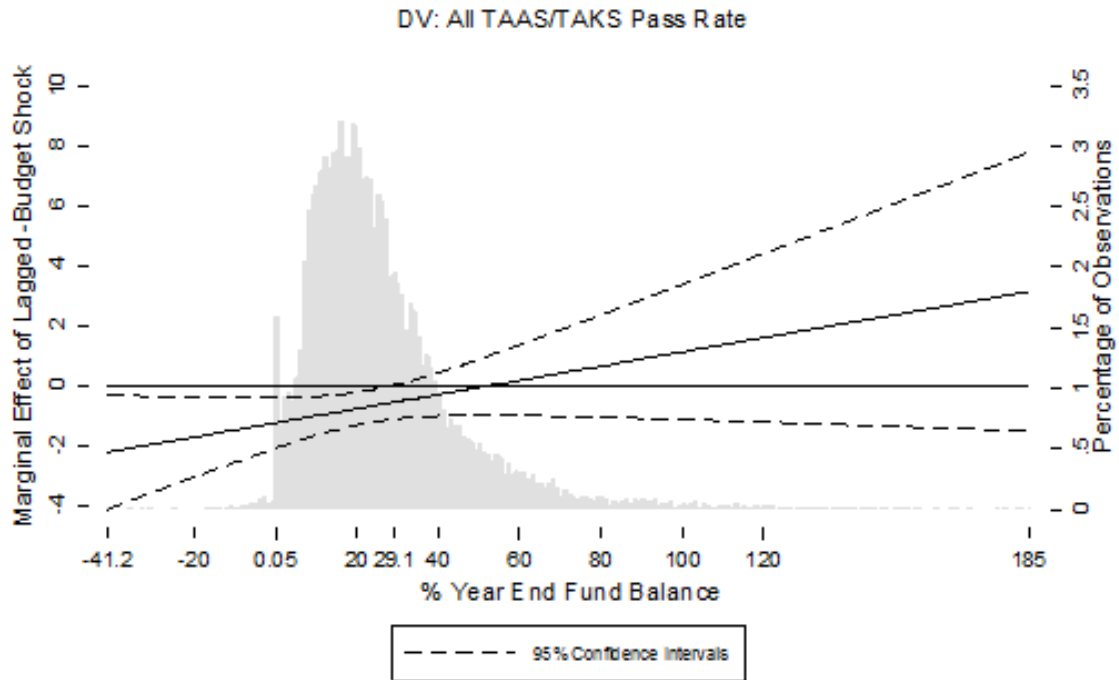
Table 2.4: Can absorbed slack buffer a major budget shock?
DV: All student standardized test pass rate (percent)

Non-instructional expenses per pupil (000s)	0.069
	(0.07)
Negative budget shock	-0.575
	(0.52)
Lagged negative budget shock	-0.529
	(0.60)
Non-instructional expenses*Negative budget shock	-0.028
	(0.11)
Non-instructional expenses*Lagged negative budget shock	-0.020
	(0.14)
constant	53.551***
	(4.57)
R-Squared	0.635
N	16888

(H_4.) The interaction terms, between shock and non-instruction expenditures and lagged shock and non-instruction expenditures in Table 2.4 suggests that is indeed the case. While these models do not produce statistically significant results, it is still useful to look at the marginal plots.

Figure 2.3: Marginal effect of 10%+ budget shock(t) on performance at various levels of absorbed slack
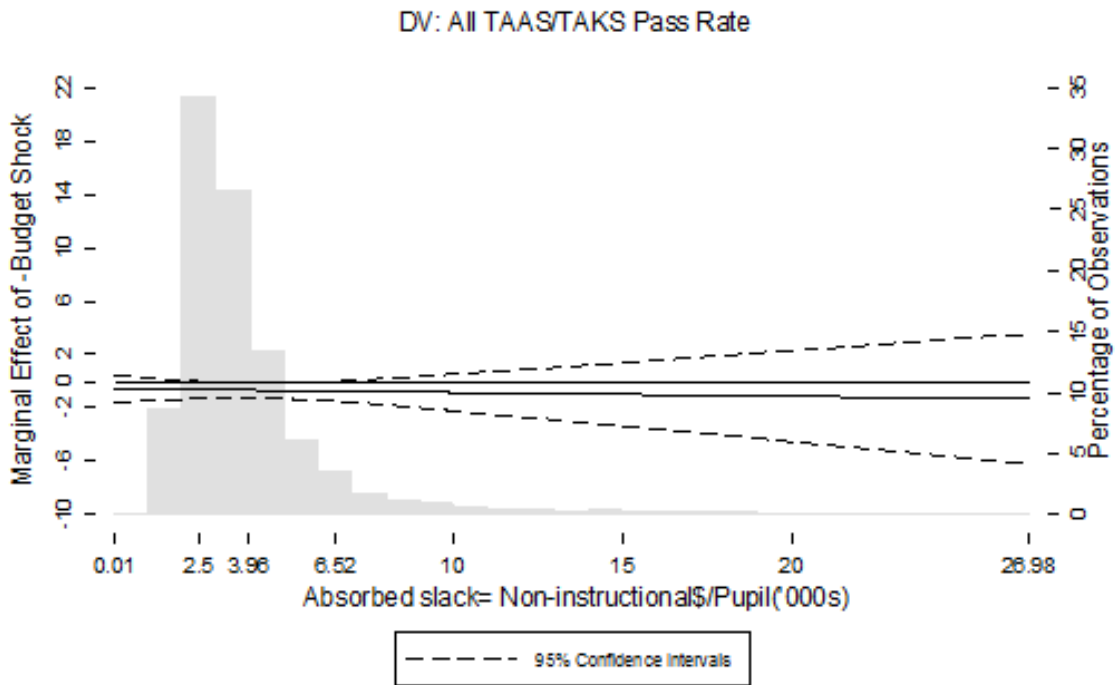
The interaction between the absorbed slack measure and a negative budget shock from Table 2.4 is captured in Figure 2.3. The interaction between the absorbed slack measure and a lagged negative budget shock from Table 2.4 is captured in Figure 2.4. A statistically and substantively significant range of impact of the non-instruction expenditures emerges in both the figures. In Figure 2.4, this range is between districts that spend $2,500

Figure 2.4: Marginal effect of 10%+ budget shock(t-1) on performance at various levels of absorbed slack

DV: All TAAS/TAKS Pass Rate
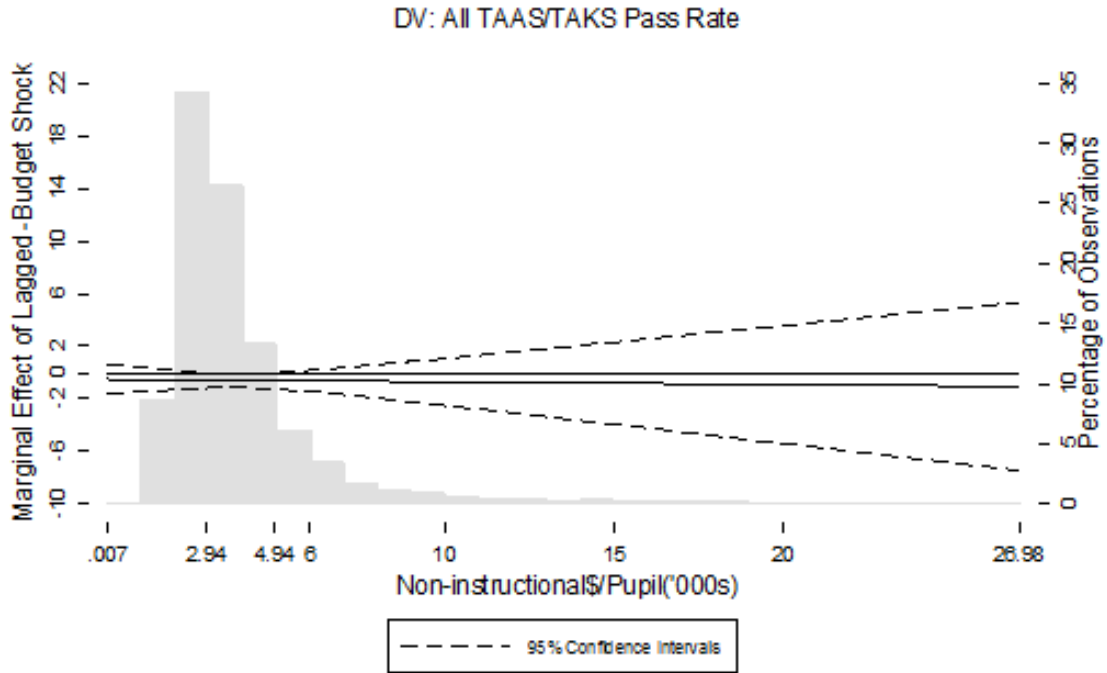
dollars on non-instructional expenses per pupil to those that spend $6,520. In Figure 2.4 this range is between districts that spend $2,940 dollars on non-instructional expenses per pupil to those that spend $4,940. In both the cases, we can see that when a negative budget shock hits, in the current year or past year, with increasing amounts of non-instructional spending overall standardized test passing rate drops. For instance, in Figure 3 at $2,500 dollars on non-instructional expenses, the average passing rate is reduced by .64 point when a negative shock hits. At $6,520 non-instructional expenses the average passing rate reduction bumps up to .76. While this change is minor, the detrimental impact of absorbed slack is evident (H_4).

A series of additional sensitivity analysis were performed. First, all models were split into rural and urban districts. The findings remain largely unaltered for urban dis-

tricts, but were washed way for rural districts. I attribute this to the high concentration of urban school districts in the sample. Second, there were no statistically significant findings to suggest that the two slack measures selected in this study, when squared, had a non-linear impact on TAAS/TAKS passing rate. Also, at 15 percent shock thresholds the findings for the unabsorbed fiscal slack measure remain largely unchanged, suggesting that as fund balance reserves increased districts were better able to cushion negative 15 percent or greater budget shocks. There were no statistically significant findings for absorbed slack measure after altering the budget shock threshold.

2.7   Conclusion

I argue that each type of slack will have dissimilar buffering potency. But if by buffering we mean fiscal slack variables when interacted with shock will turn the negative coefficients positive, we do not see that here. As the introductory case suggested, districts can rarely work in an environment of turbulence, in this case withstand funding shocks, and not have their performance impacted. These findings suggest that the distinction between absorbed and unabsorbed fiscal slack in public organizations in general and as an organizational buffer in particular is still important. I show that districts with higher unabsorbed slack, measured by percent fund balance, will be able to cushion the negative impact of a downward funding shock, better than those that do not have adequate unabsorbed slack built in. Districts with higher thresholds of unabsorbed slack, with around 31.53 percent fund balance, can reduce the negative impact of these shocks more effectively than districts with minimum, of just 0.05 percent, fund balance. This is opposite in the case of absorbed slack. These finding resolve to some extent the mixed results that have inundated research on slack as a buffer.

What is the general make up of districts that fall within the minimum 0.05 percent

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and below 31.53 percent range? There are 12,345 or around 73 percent of cases (district, years) within this range in the overall sample. Around 30 percent of these districts were rural and on an average enrolled approximately 5,200 students. These districts catered to on average 9 percent African American, 30 percent Hispanic, and 49 percent low-income students. About 6 percent (670 cases) of these 12,345 cases faced a negative 10 percent or greater budget shock. As we saw earlier, districts most successful in buffering funding shocks had between the 25.47 percent (mean) and 31.53 percent range of fund balance. There are about 2,130 (of the 12,345 cases), or about 17 percent, cases within this higher fund balance range. Of these 2,130 cases around 7 percent (155 cases) faced a 10 percent or greater negative budget shock. This means that majority of the 670 negative budget shocks, or around 77 percent, were faced by districts that had fund balance below the mean, and just above the minimum 0.05 percent threshold. These were also districts that enroll on average around 5,800 students. While districts with fund balance above the mean and below 31.53 point threshold, had only around 2,800 average enrollment. Thus, districts with below average unabsorbed slack and a greater share of students were the ones hit with most number of negative funding shocks. Thus, districts that could benefit from more unabsorbed slack did not have enough of it.

In the case of absorbed slack, on average the range within which we have statistically and substantively significant findings across the current and past year shocks is from a minimum of \$2,730 to a maximum of \$5,730 per pupil non-instructional allocations. There are around 9,370 cases (district, years) or a little below 56 percent of overall cases in this range. Around 38 percent of these districts were rural and on an average enrolled approximately 3,000 students. On average, these districts enrolled around 8 percent African American, 32 percent Hispanic, and 52 percent low-income students. Approximately 7 percent (644 cases) of these cases faced a negative 10 percent or greater budget shock. We saw earlier that the lower the amount of absorbed slack in a district the better

its chances of cushioning the negative impact of a downward budget shock. Then what is the percentage of downward shocks faced by districts that have non-instructional spending below the mean value of $3,960, but above $2,730? There were 379 negative budget shocks in these districts, thus making up for 59 percent of the 644 budget shocks. The remaining 41 percent of downward major budget shocks were tackled by districts with a higher non-instructional spending per pupil (between $3,960 and $5,730). Thus, there is a clear need for concerted, and not post crisis, efforts in finding allocative efficiencies within these latter districts such that they can use their absorbed slack resources better.

Meier and O'Toole (2009) observe that in the short run since public managers can often handle environmental shocks, such as major budget shocks, they may motivate political interest and leadership to put more stress on these organizations. There might be less incentive for budget recovery initiatives if managers can reallocate resources to cushion funding shocks from hurting performance. The present study demonstrates that in the long run public managers cannot cushion their organizations from a drop in performance when hit by funding shocks. In addition, the most vulnerable school districts do not have adequate slack resources that can actually help in cushioning downward funding shocks. The slack they have tied to operations is not helpful in counterbalancing shocks.

While these findings are within the context of public schools, they have clear implication for public organizations in general. Public organizations must think carefully about what types of slack resources they must store. Clearly the more visible and highly scrutinized unabsorbed slack is a better buffer. Therefore, public managers need to find ways to legitimize storing these resources in their organizations. Perhaps a part of the task is to educate higher authorities, political interests, and clients about the benefits of these resources. Future research can build upon various unexplored aspects of this study, such as the impact of various alternative measures of absorbed and unabsorbed fiscal slack in schools and other public organizations, possible impact of repeated shocks, and also alter-

native shock and outcome measures.

3. FINANCIAL PERFORMANCE AND RISK IN NONPROFIT ORGANIZATIONS: A THEORETICAL PERSPECTIVE

3.1 Introduction

Financial performance is a key predictor of organizational risk taking in for-profit firms (Bromiley 1991; Singh 1986). As the nonprofit sector grows in importance, both by virtue of its scale and services offered, it becomes important to understand if and how this relationship might play out in nonprofit firms. After all, organizational risk taking is tied to organizational innovation. Nonprofit firms fulfill myriad needs in todays society, ranging from bringing art and music to a community, to "fighting homelessness, disease, emergencies, disaster, and other community needs" (McDonald 2007, 258). Stagnation in the nonprofit sector would mean that an important societal need might go unfulfilled or unattended. Thus, we would want nonprofits to innovate and take risks, just like for-profits. But the incentives of profit and wealth accumulation that underlie various theoretical models of risk and performance in for-profit firms, is not be helpful for understanding nonprofit behavior. According to Helmig, Ingerfurth, and Pinz (2014), the notion of organizational failure as understood in the for-profit context may not transfer seamlessly to nonprofits. The authors argue that "poor financial performance and resource scarcity" may not necessarily reflect organizational failure in nonprofits, instead the "degree of mission accomplishment" should be a better benchmark for failure in such organizations (Helmig, Ingerfurth, and Pinz 2014, 1513).

Nonprofits are expected to be motivated by mission or a societal need, instead of the bottom line. But nonprofits that fail to acquire financial resources to run operations, pay employees and creditors, save for a rainy day, and continue business will also fail to

fulfill their organizational objectives and cease operations (Helmig, Ingerfurth, and Pinz 2014). This study proposes that the expectation of better financial performance leading to lower risk taking in for-profits, will be essentially reversed in nonprofits. As a nonprofit firm becomes more fiscally secure, we should expect it to take more risks to serve an expanded constituency or add to its extant mission goals. In the following sections, this idea is developed through a discussion of the relevant literature, followed by an exposition of the proposed theory. A set of hypotheses from these arguments is derived and a testable model is proposed, before closing remarks.

3.2   Literature

This section introduces the relevant literature on financial performance and risk taking in nonprofit organizations.

3.2.1   Financial Performance

Nonprofits manage finances to meet mission objectives (Hackler and Saxton 2007; Sontag-Padilla, Staplefoote, and Gonzalez Morganti 2012). To attract funds in a competitive donor marketplace, nonprofits must demonstrate accountability, performance, effectiveness, efficiency and "good financial stewardship" (Eckerd 2015, 438). Dolgoff and Feldstein (2012) offer a nice discussion of donor contribution trends in US nonprofits in the early 2000s. The authors note that in 2005 total contributions to US nonprofits was 260.3 billion dollars. Contributions had an upward swing and rose by fourteen percent since 2000. Only twenty seven percent of the 2005 contributions was from foundations and corporations. The major chunk of 2005 figure was contributions from individual donors. On average donors gave 36 percent to religious organizations, 15 percent to educational orga-

nizations, 10 percent to human services, and 9 percent to health care organizations in that period (Dolgoff and Feldstein 2012, 281-282). But the great recession heavily impacted donor and government munificence. Mission is not the only priority for most nonprofits today. Due to reduction in government subsidies and donations over the years, good financial performance has become an important standalone concern for nonprofits today (Hager et al. 1996; Helmig, Spraul, and Tremp 2011; Helmig, Ingerfurth, and Pinz 2014). Most nonprofits struggle to strike a balance between mission and financial sustainability (Sontag-Padilla, Staplefoote, and Gonzalez Morganti 2012, vi), which is the foundation of nonprofit financial performance.

Tuckman and Chang (1991) have done seminal work in the assessment of nonprofit financial performance, focusing on ascertaining financial vulnerability. For Tuckman and Chang (1991, 445), if a nonprofit cuts back services immediately after it experiences a fiscal shock, it is financially vulnerable. They identified four indicators of such vulnerability: inadequate equity balance, revenue concentration, low administrative costs, and low operating margins. First, equity is the difference between nonprofit asset and liabilities (Tuckman and Chang 1991, 451). A large equity base can allow a nonprofit to successfully buffer a downward revenue shock. Therefore, inadequate equity balance is a financial red flag. Second, if a nonprofit has only a limited set of revenue sources, it suffers from revenue concentration. As the number of revenue sources rises, a nonprofit has a better chance of business continuity in case a few of those sources run out. Third, nonprofits with high administrative cost may be able to sustain itself by cutting administrative costs at times of fiscal austerity. Firms with already low costs will have little opportunity to add cost savings. Building on the work of Tuckman and Chang (1991), Greenlee and Trussel (2000, 203) adds another dimension of sophistication by suggesting that a financially vulnerable nonprofit is one that decreases its program service expenditures, scaled by total revenue, in three consecutive years. Finally, Tuckman and Chang (1991) suggest looking

at a firms operating margins, which is the difference between a nonprofits revenues and expenditures divided by revenues. The larger this revenue surplus is, the more secure a nonprofit will be during times of downward fiscal shocks.

In fact, some scholars argue that revenue surplus can offer competitive advantage to any firm in todays competitive nonprofit marketplace (Bryson, Gibbons, and Shaye 2001; Weerawardena, McDonald, and Mort 2010; Helmig, Ingerfurth, and Pinz 2014). But revenue surplus leads to wealth accumulation over time, which may prove to be a double edged sword.[1] As Calabrese (2011) notes, studies have demonstrated that nonprofits with excess cash and short-term investments, may face agency problems. Core, Guay, and Verdi (2006, 307) demonstrate that nonprofits with large cash reserves "do not exhibit higher growth in program expenses or investments," which the authors attribute to agency problem. Calabrese (2011) examines the influence of a firms accumulated wealth on individual charitable contributions. The author finds that for an average nonprofit, less than two years worth of expenses may positively impact contributions, while excessive wealth (defined as greater than five years of expenses) crowds out contributions (Calabrese 2011, 867). The author concludes that perhaps modest accumulated available wealth signals financial health to current and prospective donors.

Measurement and analyses are subjected to reliable data. Over the years nonprofits have gotten better at making financial information available. In recent times, IRS 990 tax return forms filed by a majority of nonprofits is considered a prominent and reliable source of financial data on these organizations (Froelich, Knoepfle, and Pollak 2000). With increasing transparency, the consumers of nonprofit financial information has also burgeoned. The primary consumer would be donors, who review various financial information, and perhaps a few of the indicators of financial sustainability measures discussed

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[1]Though, accumulated wealth is not always readily available for use in a nonprofit, since endowments often come with strings attached, such as various spending restrictions and pre-determined spending timelines (Calabrese 2011).

above, to make donative decisions (Calabrese 2011). The literature on this topic suggests that more efficient nonprofits tend to attract donors. Efficiency is assessed in a variety of ways, such as lower overhead costs, lower price of donation, and various administrative ratios (for a discussion see, Calabrese 2011). The goal of the current paper is to determine if these various financial benchmarks may help to predict the propensity of a nonprofit to take more or less risk.

3.2.2 *Organizational Risk-Taking*

In standard classical decision theory, risk is the variation in "distribution of possible outcomes, their likelihoods, and their subjective values" (Shapira 1995, 22). Individuals hazard a risky choice, despite significant likelihood of unfavorable outcome, if they value the possible benefit of the favorable outcome enough to not be dissuaded by potential loss (from the unfavorable outcome) (Chen and Bozeman 2012; Fischhoff, Watson, and Hope 1984). The nature of risk is context dependent (Lumpkin and Dess 1996). In other words, strategic risks in an organization may manifest as "venturing into the unknown," or "borrowing heavily," or "committing" a relatively large portion of assets" (Baird and Thomas 1985, 231-232). Previous studies of risk-return relations have defined risk as the unpredictability of a firm's income stream (for an overview, see Bromiley 1991). The focus of the present study is organizational risk that is a combination of the first and last categories, where in an organization commits a large portion of its resource to a new venture. For nonprofits, this would translate to investing in a new mission or a new partnership.

The private sector has been the focus of majority of studies of organizational risk taking. A small group of scholars have investigated risk taking attitudes among government and private organizations (Chen and Bozeman 2012). The general consensus is that nonprofits on an average are more inclined to take risks than their public counterparts,

but both governments and nonprofits are more risk averse than for-profit firms (Chen and Bozeman 2012).

Given the inherent possibility of unfavorable outcomes, is taking risk taking bad? Organizations in general are risk-averse, and will take risk only when they foresee the prospect of a high return (Singh 1986). As Chen and Bozeman (2012, 393) notes, "risk is not a value to be pursued without limit." Notwithstanding, organizations need to innovate and change to adapt to the vicissitudes of internal and external environment. Innovation is a key activity for any organization (McDonald 2007). Dynamic theories of competition in the private sector, "point to the central role of innovation in the process of striving for competitive advantage, which leads to superior financial performance." (McDonald 2007, 258). As Lumpkin and Dess (1996, 142) points out, a firms innovativeness reflects its propensity to support and adopt new ideas, depart from existing practices, and break from the status quo. In other words, take risk.

Evidence from the for-profit literature has demonstrated that organizations need to innovate to stay relevant, and to innovate they must take risk (Covin and Slevin 1998; Miller 1983). In fact, risk taking is considered a path to achieving financial success in for-profit firms. But the outcome of risk taking and change is always uncertain, with a possibility of organizational decline or, in extreme cases, organizational demise.

Shapira (1995, 26) notes that classical decision theory has debunked two fallacies in the body of work on risk-taking. First, that people are risk averse. They are not. Second, that there is always a positive correlation between risk and return. Risk and return correlation, which has been largely studied from the perspective of the behavior of actors in financial markets, does not always hold up (Shapira 1995, 26). Risk, however calculated, does not guarantee positive returns. Also, we cannot generalize an individual's risk attitudes from one context to another (Shapira 1995). An actor who is risk averse in one context may welcome some risk in another. But we know nothing about risk taking in

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nonprofit organizations.

3.3   Theory and Hypotheses

The specific question we wrestle with here is if increase in its financial performance will induce a nonprofit to take more risk? Bromiley (1991) offers an excellent overview of the vast body of research that has investigated the direct link between organizational performance and corporate risk taking. Starting with the seminal work of Bowman (1982), the focus of this line of research has been the private sector. For-profit organizations are, as their name suggests, motivated by profit maximization (Helmig, Ingerfurth, and Pinz 2014). This body of work has largely used financial performance, as a proxy for the broader concept of organizational performance, to develop theory and offer empirical evidence for for-profit risk taking behavior.

Decline in financial performance is the key motivation for for-profit firms to innovate and take risks, so that they may reach, or exceed, pre-decline levels of financial performance (Bromiley 1991; Singh 1986). Thus, there is a negative relationship between financial performance and risk taking in for-profit organizations. Singh (1986, 565) argues that the underlying factor in risk-performance relationship is the concept of "satisficing levels of organizational performance," that the author derives from the seminal work of March and Simon (1958). When organizational performance falls below satisficing levels, a for-profit firm would be highly likely to take risks and vice-versa (Singh 1986, 565).[2] These claims have resonated elsewhere. Building on the work of Fisher and Hall (1969), Bromiley (1991) argue that performance of for-profit firms negatively affect their propensity to take risks. Indeed, when a firm is doing well, as reflected in strong financial stand-

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[2] Singh (1986) substantiates his argument with empirical support from a sample of 64 medium to large US and Canadian corporations, which span several different industries such as airlines, railroads, pharmaceutical manufacturers, mining, and so forth (Singh 1986, 571).

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ing, they see no reason to rock the proverbial boat. If for-profit firms do take risks in such scenarios, they will do so only if compensated by possibility of high returns (Bromiley 1991, 42). Bowman (1982, 24) calls this the "risk-return paradox."

Risk taking is context dependent (Shapira 1995, 25). The unique context of a nonprofit will impact the relationship between a firms financial performance and its risk taking behavior. This is because, the foundation of this link is based on the incentives of actors in firms, and in this regard nonprofits differ from their for-profit counterparts, and to a large extent reflect those of public organizations. Nonprofits differ from for-profits organizations in three respect: vision, strategic constraint, and financial constraint (Hull and Lio 2006, 54). Like public organizations, nonprofits are not motivated by profit or bottom line. Nonprofits are driven by mission (Hackler and Saxton 2007). These organizations are dependent on external revenue sources, such as donors, grants, and in some cases revenue to sustain themselves. As Hull and Lio (2006, 5) argues, non-profits "must" prioritize social change over revenue or profit maximization.

Organizations vary in their overall level of risk aversion (Chen and Bozeman 2012, 380). Thus, we can expect variation in the affinity for risky choices and innovation across nonprofit firms. Risk associated with innovation leads to competitive advantage in for-profit firms, which may not look the same in nonprofits. Like for-profits, nonprofit organizations sometimes compete for customers and revenue (Chetkovich and Frumkin 2003). But, as McDonald (2007) points out, competition for nonprofit organizations have a different meaning and, unlike for-profits, nonprofit financial sustainability is a means to meet the goal of serving its mission and constituents.

Risk taking behavior of all firms, irrespective of their specialization or service focus, will be impacted by their financial standing. But the standard expectations about financial performance and risk taking, as developed in the for-profit literature, will not hold for nonprofits. In private sector firms, poor financial performance will push top man-

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agement to take risks to salvage the firm from demise. When balance sheet looks promising again, the firm will stop taking risks. Nonprofits are generally risk averse (Hull and Lio 2006). Chen and Bozeman (2012) discusses the various similarities in the incentive structures of public and nonprofit firms. Salge (2011) finds that in English public hospitals, an increase in a variation of the quick ratio leads to more innovative search.[3] Unlike for-profits, nonprofits irrespective of sector operates on the brink of solvency (Calabrese 2011). Calabrese (2011, 867) demonstrates that, despite concerns in popular discourse, the average nonprofit does not suffer from too much accumulated wealth, but from too little. Both quick ratio and accumulated wealth assessment fall under a suite of financial metrics used to assess the financial standing of an organization. When a nonprofit is financially vulnerable, it will stay away from choices that involve risk and innovation. But robust finances would allow it to take more risks and serve a larger constituent than before.

H_1 : Increase in financial performance will lead to more risk taking in a nonprofit.

Salge (2011) tests for a curvilinear relationship between slack and innovative search. There is no reason to believe that financial status of a firm will have a linear impact on risk taking behavior. Calabrese (2011) argues that most nonprofits operate on the brink of financial solvency. Thus, at lower levels of financial solvency, but above levels of financial vulnerability, a nonprofit will be more concerned about securing its future operations and thus may not be inclined to take risks. Only when it is performing above average on various financial metrics, will it have the necessary confidence to take additional risk. This additional dimension modifies the first two hypotheses:

H_2 : At low levels of financial performance a nonprofit will take minimum or no risk. The propensity to take risk will sharply rise, as fiscal performance crosses average levels.

Finally, a nonprofit does not operate in a vacuum. The state of the economy impacts

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[3]Salge (2011, 195) uses the ratio of public hospital quick assets, or the sum of its cash and marketable securities, to public hospital liabilities to measure financial slack.

the level of confidence in all firms. There is no reason to believe that this will be different for a nonprofit. Most nonprofits receive funds from a variety of sources (such as private donors, government, and foundations) and streams (such as membership fees, grants, and contracts) (Sontag-Padilla, Staplefoote, and Gonzalez Morganti 2012, vi). Each of these funding sources and streams are effected by the larger economy. Even if a nonprofit is demonstrating robust finances, in an austere economy it would take less risk in comparison to times of economic prosperity. Thus, the above expectations will be conditioned by ups and downs in the local economy.

H_{3a} : The linear relationship between financial performance and nonprofit risk taking will be conditioned by the state of the local economy.

H_{3a} : The curvilinear relationship between financial performance and nonprofit risk taking will be conditioned by the state of the local economy.

3.4   Model

I propose a simple model to test the above hypotheses:

$$RISK = f(FINC + Controls) \tag{3.1}$$

Where *RISK* is the dependent variable and any measure of risk taking in nonprofit organizations. *FINC* is any measure of financial performance in nonprofit organizations. The *Controls* are other factors besides financial performance that impact nonprofit risk taking. This model can be further modified to address the possibility of a curvilinear relationship:

$$RISK = f(FINC + +FINC^2 + Controls) \tag{3.2}$$

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Where the squared $FINC^2$ helps us measure a possible nonlinear relationship between nonprofit financial performance and nonprofit risk taking. We can further modify this model into a multiplicative-interaction model to test the conditional effect of local economy on our key predictors.

$$RISK = f(FINC + FINC^2 + ECON + FINC * ECON + FINC^2 * ECON + Controls)$$

(3.3)

Where $ECON$ captures the state of the local economy in which the nonprofit firm operates.

3.5   Conclusion

Once we have made a concession for the nondistribution constraint, argues Jegers (2008, 110), a discussion of nonprofit financial management will not be remarkably different from for-profit finance or corporate finance. This study hopes to demonstrate that a key facet of for-profit finance differs from nonprofit finance. Specifically, organizational risk and financial performance has a long history in the for-profit literature. The study proposes a theory of a reverse relationship as seen in for-profits, where better financial performance would induce a nonprofit to take more risks. Of course, organizational risk looks different in nonprofit and for-profit. While a for-profit may innovate and take risk by adding a new product line to expand market share, a nonprofit may stretch its limits by expanding, say a soup kitchen facility or an additional free health clinic. The next step in this study is to acquire data to test the proposed theory and hypotheses. A panel of comparable nonprofits over several years would be the ideal testing ground for the proposed model.

4. DOES DECENTRALIZATION HURT LOW-INCOME STUDENTS?
ADMINISTRATIVE DECENTRALIZATION, LOCAL REVENUE, AND
INCOME-BASED ACHIEVEMENT GAP IN PUBLIC SCHOOL DISTRICTS

4.1 Introduction

Deficiencies that start in school have lifetime consequences for disadvantaged students. Gaps in educational attainment of poor kids and their peers is a serious education policy concern. Scholars have argued that achievement gaps limit opportunities of marginalized children in higher education, employment, and earnings (Jencks 1992; Murnane and Levy 1996; Ogbu 1994). Reducing and eliminating these gaps is seen to contribute positively in promoting broader social equality, with respect to health, crime and family structure (Jencks 1992). While racial and ethnic disparities in education have drawn extensive attention from policy makers and scholars, the plight of poor students within the present education system has been somewhat neglected. The present study pushes us to reconsider if education policy in the US, based on "the principles of local financing and local control," (Card and Payne 2002) is structured in a way that is conducive to reducing achievement gap between low-income students and their peers, referred to as the income-based achievement gap in the rest of this study.

Centralization versus decentralization has been a long standing debate in US education policy (Ferris 1992). Local school districts in the US have been given considerable latitude in financing, staffing, and in making various other key administrative decisions (Brimley, Garfield, and Verstegen 2005). In addition, they generate a substantial portion of their revenue through local tax efforts, besides compensatory intergovernmental transfers, which gives them further control over key policy outcomes. School districts decide on the level

and the extent of centralization and decentralization of various administrative and financial functions within their constituent schools. The logic of this highly decentralized bureaucratic system is fairly simple. As proposed by Oates et al. (1972); Oates (1999), the basic decentralization theorem is about delivering services closer to its beneficiaries or recipients. Local governments are better informed about the social and economic conditions of the locality they serve (Hayek 1945). Therefore, decentralization gives local policy makers, in this case public school districts, the opportunity to create a system within which the unique educational needs of a target population is better addressed. Some recent cases have shown that decentralized school districts have been successful in reducing achievements gaps (for an overview see, Leithwood 2010).

There is in fact mixed evidence to substantiate the argument that decentralization can help meet key education policy outcomes. Here I ask if decentralization, specifically administrative decentralization, as a policy tool implemented by school districts can enhance equity and reduce the income-based achievement gap. While case studies and anecdotal success stories abound, rigorous empirical analysis backed by theory on this topic have been missing. I leverage the variation in the degrees of administrative decentralization adopted in Texas public school districts to test these expectations. In a sample of over 1000 Texas public school districts over 18 years, I demonstrate that placing more administrators on school campuses instead of in central offices may increase the achievement gap between low-income students and their peers. While a battery of factors may contribute to this problem, I argue they all stem primarily from "elite capture" that happens within heavily decentralized systems. To push this argument further, I introduce local revenue as a conditional factor. I show that when school districts source a higher percentage of their revenue from local resources, an increase in administrative decentralization, on average, increases the income-based achievement gap in Texas public school districts.

4.2 Achievement Gaps in Education

Achievement gaps across student groups are among the most pressing education policy challenges in the US and one with a long standing history (Ladson-Billings 2006; Hanushek 2010). The landmark *Brown v. Board of Education* (1954) ruling of the US Supreme Court initiated some of the earliest discussions and policies to reduce racial disparities in educational outcomes and reversed legal segregation in public schools (Ladson-Billings 2006).[1] The influential Coleman report looked at the gap in student performance across grades and made a further case against racial concentration in schools (Coleman et al. 1966). Subsequently, gaps in Black-White and Hispanic-White achievement narrowed in the 1970s and 1980s but widened again starting in the 1990s even though income differences between racial groups narrowed during this time (Lee 2002). In light of these persistent achievement differences, it is no surprise that the 2001 No Child Left Behind (NCLB) Act explicitly required that demographic subgroups make adequate progress on yearly state exams.

Has education policy been successful in reducing achievement gaps? Hanushek and Rivkin (2009) argue that several concurrent policy innovations and economic, demographic, and social changes went hand in hand with efforts to curb racial achievement gaps, thus it is hard to tell if specific policies worked. Studies that made that attempt (Cook et al. 1984; Schofield 1989; Crain and Mahard 1978) suffer from small sample size, omitted variable bias, and lack of statistical power in explaining key educational outcomes (Hanushek and Rivkin 2009). Jencks (1992) argues that income inequality, differences in family structure, and school spending, among other standard explanations for the Black-White achievement gaps, lack explanatory power. Furthermore, Black-White and Hispanic-White achievement gaps have followed separate trends, which limit generalizations (Lee 2002). How-

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[1] *Brown v. Board of Education*, 347 US 483 (1954).

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ever, the presence and persistence of the gaps in educational outcomes is hard to ignore (Hanushek 2010). The initial narrowing of the Black-White achievement gap sparked extensive research (see, Grissmer, Flanagan, and Williamson 1998; Smith and O'Day 1991) and scholars have offered myriad factors that they argue affect racial and ethnic achievement gaps. These factors include: socioeconomic and family conditions, such as educational attainment, family income, poverty, and single household; youth culture and student behaviors, such as motivation and effort for learning, alcohol and illicit drug usage, and crime; and finally, schooling conditions and practices, such as instructional resources, teachers, course taking, dropout rate, and segregation (Lee 2002).

In recent times scholars and commentators have argued in favor of studying gaps in the achievements of students based on income, as opposed to just racial and ethnic differences (for an overview see, Ladson-Billings 2006). Compensatory funding programs, such as Title I, and remedial programs, such as Head Start for improving school readiness of low-income children, have been key policy initiatives to address the challenges of raising performance of low-income students. However, the performance of disadvantaged students has not improved and, as some scholars argue, compensatory programs gave rise to the concentration of high-poverty schools (Alberger et al. 2009), which eventually prompted some initiatives on income-based school integration (Grant 2009; Kahlenberg 2003, 2007).

In the era of racial desegregation, policy focus was on making additional resources available to every child, to ensure everyone had an equal shot at a quality education (Alberger et al. 2009).[2] Unfortunately, channeling resources toward high poverty schools has yielded limited results in improving equity and has somewhat dampened the enthusiasm for implementing such programs (Hanushek 2010). Various National Center for Education Statistics reports, such as those published in 2007 and 2009, paint a bleak picture.

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[2]Alberger et al. (2009) offer a nice discussion of income-based achievement gaps in US schools.

According to a 2007 report of the National Assessment for Educational Progress (NAEP), there is a 24 and 26 points difference in reading and math scores respectively, between 8th graders eligible for free- and reduced-price meals and their more affluent peers (National Center for Education Statistics 2007). According to the report, this trend of low-income students lagging behind remains fairly unaltered since 1996.

The Coleman report shifted focus away from the classroom and to the role that family and peers play in driving academic performance (Coleman et al. 1966). In fact, it proposed that family and peers have a far stronger impact on student performance than schools, a theme that had substantial impact on subsequent policy formulation. Hanushek (2010) notes that despite the impact of outside school factors on student performance, one of the key policy tools to deal with income-based achievement gaps lies in altering the operations of schools. Thus, we need to take a fresh look at some of the core features of the education system, crafted through policy deliberations, and the incentives that it creates to see if it aligns with the goal of reducing income-based achievement gaps. In this regard, I study decentralization policy, which has received some attention as a means of reducing achievement gaps in schools.

4.3   Decentralization in Schools

As, Card and Payne (2002) note, the foundation of the public education system in the US are "the principles of local financing and local control" or decentralization. In a multi-tiered government system, decentralization refers to the removal of core resources from top to lower levels of the government (Bolleyer and Thorlakson 2012). These resources may be fiscal, jurisdictional, or administrative. Decentralization efforts within school may refer to a large number of different approaches and scholars call for caution when comparing them (Ouchi 2006). School decentralization can be from central to state governments

(Fiske and Ladd 2001; Walberg et al. 2000; Van Langen and Dekkers 2001), from state governments to local school districts (Corcoran and Christman 2002; O'Day 2002), and from local school districts to school campuses. I study this last form of decentralization.

While federal and state actors play important roles in setting the tenor of US education policy, local school districts are the dominant local governance structures for the US school systems. They are key institutional actors in systemic education policy implementation and reforms, especially those related to instructional leadership, organizational reorientation, and equity (Rorrer, Skrla, and Scheurich 2008; Brimley, Garfield, and Verstegen 2005). Local school districts raise a large chunk of their own revenues, primarily through property taxes, and also receive additional funds from the center and state through intergovernmental transfers (Wenglinsky 1997). They control the flow of resources and co-ordinate the activities of public school systems, spearheaded by superintendents and their assistants at the district level (Brewer 1996). Districts have departments dedicated to various functions. Decisions made by these departments directly impact the subordinate schools. At the school level, principals, assistant principals, and departmental heads oversee the day-to-day administration of schools (Brewer 1996). They receive assistance from professional/"paraprofessiona" support staff, such as psychologists and teaching aides, and "nonprofessional" staff, such as secretarial staff, transportation personnel, and building maintenance workers (Brewer 1996, 112). In sum, administrators play a key role within this system.

To ascertain if school districts are more or less decentralized, we can compare the extent to which administrators are moved down to school campuses or concentrated in district headquarters. While these choices should be ideally guided by their impacts on educational outcomes, these decentralized bureaucracies take a bad rap for being excessively centralized in general and face pressures to continuously decentralize. For instance, some argue that teachers have little freedom over "what to teach and how to teach it" and

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principals have insufficient personnel authority (Brewer 1996). Not surprisingly, much of education policy reforms in the latter half of the 1980s were predominated by "decentralization, professionalization, and bottom-up change as key concepts, as reformers focus on the change process and active involvement of those closest to instructions" (Smith and O'Day 1991). School districts are increasingly "decentralizing administrative control from school board to individual schools, and granting site-level autonomy over budgeting, personnel, curriculum, and instruction" (Garda Jr and Doty 2013, 22). In fact, in the extensive work of Hanushek (1986, 1989, 1994) it is seen that increased spending on school resources have limited positive impact on overall student achievement. The policy recommendation is to increase administrative decentralization in school systems, specifically, give principals more power over mentoring, hiring, and firing teachers (Rivkin, Hanushek, and Kain 2005).

4.4   School Decentralization and Educational Outcome

Wallis and Oates (1988) discuss the economic welfare increasing opportunity that decentralization provides in the public sector, by tailoring levels of consumption to local needs and bringing decisions closer to service recipients. While centralized systems tend to produce a common level of public service for all jurisdictions, local systems can tailor the output of a given public service to the preferences of smaller, more homogeneous local groups (Oates et al. 1972). Thus, local providers of public service can overcome the problem of information asymmetries that arise from heterogeneous preferences among large group of service recipients. Recipients in turn, if dissatisfied, can move to a more preferred jurisdiction or vote with their feet (Tiebout 1956).

Galiani, Gertler, and Schargrodsky (2008) offer a summary of the key extensions of this basic argument. In some instances, gains from economies of scale attained through

centralized provisioning of a public good are outweighed by the match that can be attained between local government outputs and preferences of local recipients (Oates et al. 1972). Inefficiencies may be created due to "cost-sharing, strategic precommitment, and lack of responsiveness to regional benefits in the choice of projects resulting from a centralized legislative process" (Lockwood 2002; Besley and Coate 2003). Furthermore, it is difficult to monitor centralized delivery systems and therefore they are prone to bureaucratic corruption (Bardhan and Mookherjee 2005). Each of these arguments make a case for decentralization.

How might decentralization impact educational performance? A small body of empirical work, primarily cross national, points toward the general "policy closer to the people" argument and its benefits (Galiani, Gertler, and Schargrodsky 2008, 2107). The key arguments in favor of educational decentralization are: local governments have superior knowledge of idiosyncratic local educational preferences (Faguet 2004); household decisions and policy to decentralize are complementary goods (Behrman and King 2001); apparent correlation is observed between school autonomy and improvement in primary school performance (Eskeland and Filmer 2002); decentralization increases participation of parents in school decision-making, which in turn positively impacts performance (Jimenez and Sawada 1999); decentralization causes an overall improvement in school performance (Galiani, Gertler, and Schargrodsky 2008); school districts that devote more resources to central administrators, versus those that invest more in campus administrators, have inferior educational outputs (Brewer 1996). The key argument in the school-based decision making literature is that principals and other key administrators on the school site have far superior information, of the schools clientele and environment not available at the district level, to improve educational outcomes (For an overview of school-based decision making see, Ferris 1992).

Grosskopf and Moutray (2001) analyzed the changes in public high school perfor-

mance in Chicago, between 1989 and 1994, after the introduction of site-based management in 1988. The goal with this policy intervention was to render real local control" in Chicago schools, by enabling teachers and parents that was expected to improve educational outcomes. However, Grosskopf and Moutray (2001) show that half of the schools in their sample had an improvement in performance, offset by the other half that did not. In summarizing success stories of school districts that have been effective in reducing achievement gaps, Leithwood (2010) show several of them were highly decentralized districts. For instance, in Florian, Hange, and Copeland (2000)s study, 11 out of 15 districts "implemented site-based decision making teams responsible for such functions as staff development, action research, data-driven decision making, and team facilitation" and reduced achievement gaps. A similar trend of site-based decision making, was also seen in four Texas school districts in a study by, Skrla, Scheurich, and Johnson (2000) and Skrla and Scheurich (2004). Cawelti (2001) discuss how six districts pushed for more school-based management, including responsibilities for budgeting, and saw a reduction in achievement gaps.

4.5 A Theory of School Decentralization and Income-Based Achievement Gap

Can decentralization reduce the income-based achievement gap? This question remains unanswered by extant research.[3] I argue that decentralization will increase income-based achievement gaps within school districts. Bardhan and Mookherjee (2005) offer a theoretical model which demonstrates that within a highly decentralized system, there is

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[3]Various authors have suggested that decentralization may reduce regional inequality (for an overview see, Ezcurra and Pascual 2008). However, Prud'Homme (1995) argues that decentralization can actually increase disparities between regions. Within the US context, Peterson (1995) suggests that in the US federal system, local jurisdictions are only capable of fostering economic development and are ill-equipped to attend to the needs of the underprivileged. Each of these arguments are about disparities caused by decentralization between regions, not within as is the case in this study.

a greater possibility of elite capture of public resources. Money renders power and political clout. I argue that local elites, that is non-low-income groups, would have a greater sway on the preferred use of public school resources and key program decisions, which will influence on-site administrators to allocate resources and set policy priorities in accordance with their preferences. Thus, when choosing between investing school resources in remedial programs or advance placement programs, within a decentralized system, key decision makers will be swayed by the needs of the local elites who we would expect will prefer the latter. The needs of the poor non-elites, who start far behind their non-poor counterparts, will likely go unfulfilled.

Poor children are usually racial and ethnic minorities, hailing from poor families that are often unstable and single parent households. They have less time, money, encouragement, and other "outside-school" factors that contribute to success in educational performance. For instance, we know parent involvement in education improves performance. Parents from low-income households are less likely to be involved and invested in the educational performance of their children, attend parent-teacher meetings, and in general fail to have a strong influence on various school policies that can positively impact their children.[4] Since within a decentralized system key decisions on resource allocation and policy priorities are site based, the needs and demands of advantaged students, and their more involved and vocal non-low-income parents, will take central focus. A confluence of such factors, based on the elite-capture argument, will cause an increase in income-based achievement gaps with increasing levels of decentralization among public school districts. This leads to my first hypothesis:

H_1: The income-based achievement gap is increased by administrative decentralization in

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[4] Sarason (1995) argues that more involvement by parents alters distribution of power in education policy and this is harmful for disadvantaged students. Posey (2012) demonstrates that greater involvement of middle- and upper middle-class parents in public schools tend to generate more community support for issues relevant to the children of these parents and in turn exacerbate inequality in school districts outcomes based on race, class, and residence.

public school districts.

My basic argument about the detrimental impact of administrative decentralization on income-based achievement gap can be further refined. Prud'Homme (1995) argues that when decentralization is combined with redistributive policies, and tax dollars from the rich are used to disproportionately benefit the poor, two things happen: the rich may leave for more lightly taxed areas and the poor may move in from areas that offer lower benefits-both of which make the policy unsustainable in the generous jurisdiction.

School districts in the US have three sources of revenue, federal, state, and, most importantly, local. As Baker and Corcoran (2012) discuss, the level at which a school district generates revenue from local sources is a function of its ability to raise tax dollars for its schools. Thus, wealthier districts generate more local revenue than poorer districts. Compensatory funding programs, such as Title I, are in place to even out funding gaps between rich and poor districts. Extending the elite-capture argument, as the proportion of revenue generated from local sources increases, school administrators will be more inclined to set program priorities for advantaged students in those districts. Districts where local revenue is not a significant funding source, the policy of decentralized decision making will be more successful in reducing the income-based achievement gap. Thus, I argue that the impact of administrative decentralization on the income-based achievement gap will be conditioned by local revenue. This leads to my second hypothesis:

H_2 : The marginal effect of administrative decentralization on the income-based achievement gap is positive and increases with greater reliance on local revenue in a school district.

Interactive theories are symmetric. Therefore, the marginal effect of reliance on local revenue on the income-based achievement gap is positive and increases with greater degree of administrative decentralization in school districts.

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4.6   Model and Data

My empirical strategy is to first explore the impact of varying levels of administrative decentralization on the income-based achievement gap and then the interaction of administrative decentralization and local revenue on this gap. Therefore, I test two separate models:

$$I\_Gap_{it} = f(D\_Admin_{it} + Controls) \tag{4.1}$$

$$I\_Gap_{it} = f(D\_Admin_{it} + L\_Rev_{it} + D\_Admin_{it} * L\_Rev_{it} + Controls) \tag{4.2}$$

Where, I_Gap_{it} is the achievement gap between low-income students and their peers, D_Admin_{it} is the measure of administrative decentralization, L_Rev_{it}, is the measure of proportion of revenue of a school district generated by local sources, and $Admin_{it} * L\_Rev_{it}$ signifies the proposed interactive theory between administrative decentralization and local revenue. In addition, the vector of factors that may impact educational outcomes is captured by a list of Controls. While the first model tells us the effect of decentralization on the income-based achievement gap, the second model tells us how this gap is impacted by the interaction of administrative decentralization and local revenue.

I use a panel of over 1000 public school districts in Texas from 1993 through 2010, obtained from the Texas Education Agency. Some data points are lost due to missing values. Texas contains 8% of all US school districts (Meier and O'Toole 2011). These independent local governments are diverse entities that encompass urban to rural, rich to poor, and homogeneous to heterogeneous districts with taxing authority (Meier and O'Toole 2011). Furthermore, for the present analysis these districts demonstrate variation in the level of administrative decentralization and revenue generated through local sources and therefore,

offer an ideal testing ground for the proposed theory and hypotheses.

4.7   Variables

Scholars have used average score differences between overall student groups on standardized tests and ratio of the scores of student groups to measure achievement gaps (Lee 2002). Others have used standardized test performance of students of different racial groups within the same grade (Coleman et al. 1966). I measure income-based achievement gaps with the difference in the weighted TAAS/TAKS passing rate of low-income students from the weighted TAAS/TAKS passing of their non-low income counterparts.[5] TAAS or the Texas Assessment of Academic Skills was the standardized test in Texas schools from 1991-2002. This changed to TAKS or Texas Assessment of Knowledge and

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[5]Income-based achievement gap is computed as follows: PO is the proportion of all students in a school district, which equals 1. O is the overall standardized exam pass rate in percentages for students in each school district. PL is the proportion of low income students and is measured as by the percentage of students in a school district who are eligible for free or reduced-price school lunch . Since the data gives the percentage of low income students, PL is derived by dividing the low income students percentage by hundred. Thus, $0PL1$. The low income student TAKS pass rate is denoted by L. And N is the TAKS pass rate of non-low income students. PN is the proportion of non-low income students, which is everyone not categorized as low income or $(1-PL)$. G is required measure of performance gap" in percentage. Thus,

$$(O*PO) = (L*PL) + (N*PN)$$

Or overall TAKS pass rate multiplied by the proportion of the overall student is the sum of Low income students TAKS pass rate, multiplied with the proportion of low income students, and non-low income students TAKS pass rate, multiplied by the proportion of non-low income students. Next, since $PO = 1$ and $PN = (1-PL)$,

$$O = (L*PL) + N*(1-PL)$$

Furthermore, by subtracting both sides of the equation with $(L*PL)$, we obtain,

$$O(L*PL) = \{N*(1-PL)\}$$

Next, dividing both sides of the equation by $(1-PL)$, we obtain

$$N = \{O(L*PL)\}/(1-PL)$$

With this value of N we can now compute the difference between the low income and non-low income students as, $G = NL$ Correlation coefficient between G and PL is 0.05, which suggests that this measure of income-based achievement gap captures a phenomenon distinct from the low income category in general.

Skills in 2003. Both were key performance benchmarks for students, teachers, and administrators in the state and informed much of the education policy debates.

The key independent variable is administrative decentralization, measured by the percentage of administrators on school campus out of all administrators in a school district.On average the percentage of administrators appointed to school campuses, out of all administrators, in Texas school districts have been increasing. In addition, this measure of administrative decentralization has a negligible positive correlation with enrollment (r=.195; p= 0.000), suggesting that a higher level of administrative decentralization is a district policy choice, separate from those motivated by increasing size of constituent schools.

The second independent variable of interest, especially in the conditional theory, is the proportion of revenue generated through local sources. As Baker and Corcoran (2012) discuss, 55 percent of combined local and state revenues in Texas are generated from local sources and property taxes make up 86 percent of local revenue in Texas. This variable is driven largely by local property values, which in turn in affected by district wealth. It is fair to be concerned that the correlation between percentage of low income students and the percentage of local revenue might be equal to or close to negative unity. However, in reality there is a modest negative correlation (r= -0.316, p=0.000) between these variables, as is also evident in the plot in Figure 4.1. Thus, in the sample we have a substantial number of low income students in wealthier districts to allow testing of the proposed theory.

Achievement gaps are a measure of educational outcome. Thus, I incorporate the usual controls for educational production function. The percentages of students who are African American, Hispanic, and low-income are incorporated as measures of task difficulty. It is important to note here that low-income students throughout this study are defined as students eligible for free and reduced price lunch programs. To be eligible for this program, in 2009, the annual income for a family of four was between $28,665 and $40,793. Each of these variables are expected to negatively affect or increase income-

Figure 4.1: Texas school district revenue generated locally (1993-2010)
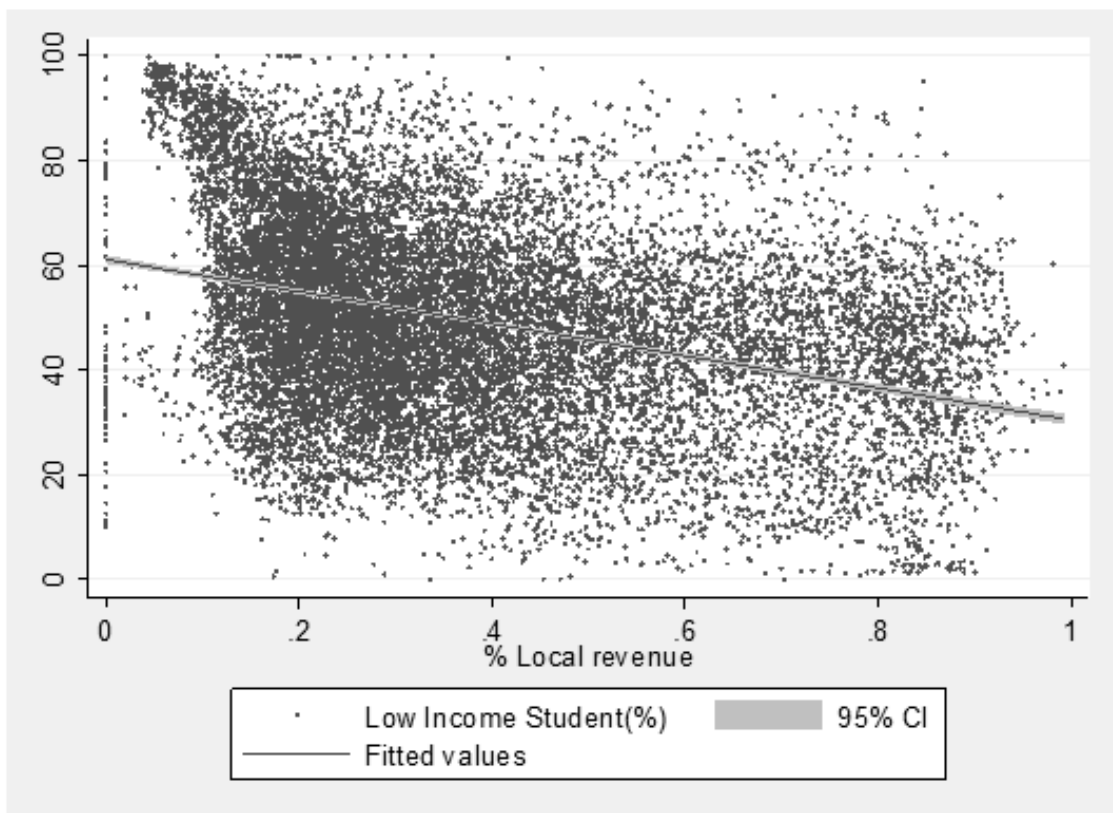
based achievement gaps. The average teacher salary (in 1,000 dollars), class size (number of students per teacher), average teacher experience, percentage of non-certified teachers, and per student instructional spending (in 1,000 dollars) are all measures of program resources. Each of these variables, expect percentage of non-certified teachers, are expected to reduce income-based achievement gaps. With more non-certified teachers the gaps are expected to increase. Table 4.1 gives us the summary statistics.

Table 4.1: Summary statistics for decentralization, revenue, and achievement-gap

Variables	Mean	S.D.	Min	Max
Overall TAAS/TAKS passing rate (percent)	72.60	13.05	5	100
Low-income TAAS/TAKS passing rate (percent)	63.18	15.70	0	100
Income-based achievement gap (percent)	18.67	14.42	-57	92.9
%(Campus Administrators/Total Administrators)	.64	.13	.03	.98
% Local revenue	.37	.22	0	.99
Average teacher salary ('000s)	35.81	5.89	20.18	70.72
Student to teacher ratio	12.75	2.40	2.63	57.4
Average teacher experience in years	12.07	2.29	1.7	21
% Non-certified teachers	2.44	4.46	0	93.33
Instructional expenses per pupil ('000s)	3.76	1.11	.88	20.65
Black Student (percent)	8.23	12.04	0	87
Hispanic Student (percent)	29.68	26.74	0	100
Low Income Student (percent)	49.65	18.85	0	100

(N=15,915)

4.8 Findings

Table 4.2 address the first key question in the study: does decentralization, specifically, administrative decentralization, increase the income-based achievement gap? In Model 1 we see that ceteris paribus with a unit increase in the number of campus administrators, there is a 4.67 percentage point increase in income based achievement gaps. If we account for the autoregressive term, as seen in Model 2, then the impact comes down to 2.42 percentage points, but still remains statistically and substantially significant. The AR r.e. model or Model 3 also confirms that holding everything else constant moving more administrators to school campuses in an average school district-year increases income-based achievement gaps by 2.30 percent points. Thus, we have strong support for H_1.

In Table 4.2 Model 1, we see that as expected most of our measures of program resources that is more average teacher salary (in 1,000 dollars), lower class size or students teacher ratio, and greater per student instructional spending (in 1,000 dollars) reduce the income-based achievement gap. Each of these variables are significant at standard statistical thresholds. When we incorporate the autoregressive term, the positive impact of a smaller class size is significant within the 90th percent confidence interval (Model 2) and not significant in the AR r.e. model (Model 3). However, average teacher experience has a statistically significant positive impact on income-based achievement gap across all the three specifications. This indicates that while experienced teachers may improve overall student performance, as demonstrated in the wider literature, as far as the achievement gap between low-income students and their peers go, it seems to have the opposite impact. This could be because, either experienced teachers give disproportionately more importance to overall student performance or disproportionately less attention to disadvantage students. This is an interesting finding, but not explored here. Another finding that is contrary to expectations, though only statistically above the 90th percent threshold in the base model

Table 4.2: Impact of administrative decentralization on income-based achievement gap

	1	2	3
DV: Income-based achievement gap (percent)			
Campus Administrators (proportion)	4.673***	2.424**	2.305**
	(0.13)	(0.75)	(0.72)
Lagged dependent variable		0.411***	
		(0.01)	
Controls			
Average teacher salary ('000s)	-0.351***	-0.205***	-0.139**
	(0.07)	(0.04)	(0.05)
Student teacher ratio	-0.298*	-0.133	-0.055
	(0.13)	(0.08)	(0.08)
Average teacher experience	0.417***	0.253***	0.253***
	(0.07)	(0.05)	(0.05)
Non-Certified Teachers (percent)	-0.058	-0.017	-0.009
	(0.03)	(0.03)	(0.02)
Instructional expenses per pupil	-0.948*	-0.618*	-0.803***
	(0.39)	(0.26)	(0.19)
Black student (percent)	0.201***	0.109***	0.131***
	(0.02)	(0.02)	(0.02)
Hispanic student(percent)	-0.088***	-0.090***	-0.090***
	(0.03)	(0.02)	(0.02)
Low income student (percent)	-0.065***	-0.028**	0.035***
	(0.01)	(0.01)	(0.01)
constant	28.886***	16.487***	15.826***
	(2.84)	(1.94)	(2.27)
R-Squared	0.572	0.657	0.565
N	15915	15861	15915

Robust standard errors in parenthesis
Year fixed effect included
*Two-tailed tests of significance * p¡0.05, ** p¡0.01, *** p¡0.001*

(Model 1) and not significant in the remaining specifications, is the impact of non-certified teachers on income-based achievement gaps. An increased proportion of African American and Hispanic students does push up some of the income-based gap, as expected. The impact of increasing the proportion of low-income students is, however, mixed. In the AR r.e. specification it does increase income-based gaps in student achievement. I attribute the opposite finding in the OLS specifications to the lack of districts effects in those models. Next I discuss Table 4.3 and the core argument presented in this study.

Does the marginal effect of administrative decentralization on income-based achieve-

Table 4.3: Administrative decentralization, local-revenue, and income-based achievement gap

	1	2	3
DV: Income-based achievement gap (percent)			
Campus Administrators (proportion)	0.857	0.475	1.887
	(2.08)	(1.40)	(1.35)
Local revenue (percent)	-2.826	-1.091	3.425
	(3.19)	(2.10)	(2.00)
Campus Administrators * Local revenue	11.155*	5.872	1.408
	(4.76)	(3.14)	(3.03)
Lagged dependent variable		0.407***	
		(0.01)	
constant	31.835***	18.221***	16251***
	(3.08)	(2.12)	(2.38)
R-Squared	0.575	0.658	0.568
N	15915	15861	15915

Controls not reported
Robust standard errors in parenthesis; Year fixed effect included
*Models 1 & 2 OLS; Models 3 & 4 AR r.e.(district)*
*Two-tailed tests of significance * p¡0.05, ** p¡0.01, *** p¡0.001*

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ment gaps increase with an increase in the proportion of local funding in school districts? All the three specifications, suggest that it is the case. To understand the impact better, I use the OLS Model 2 to create marginal plot in Figure 4.2.

Figure 4.2 gives us the marginal effect of the measure of administrative decentraliza-

Figure 4.2: Marginal effect of administrative decentralization on income-based achievement gap using OLS model with year fixed effects and lagged dependent variable
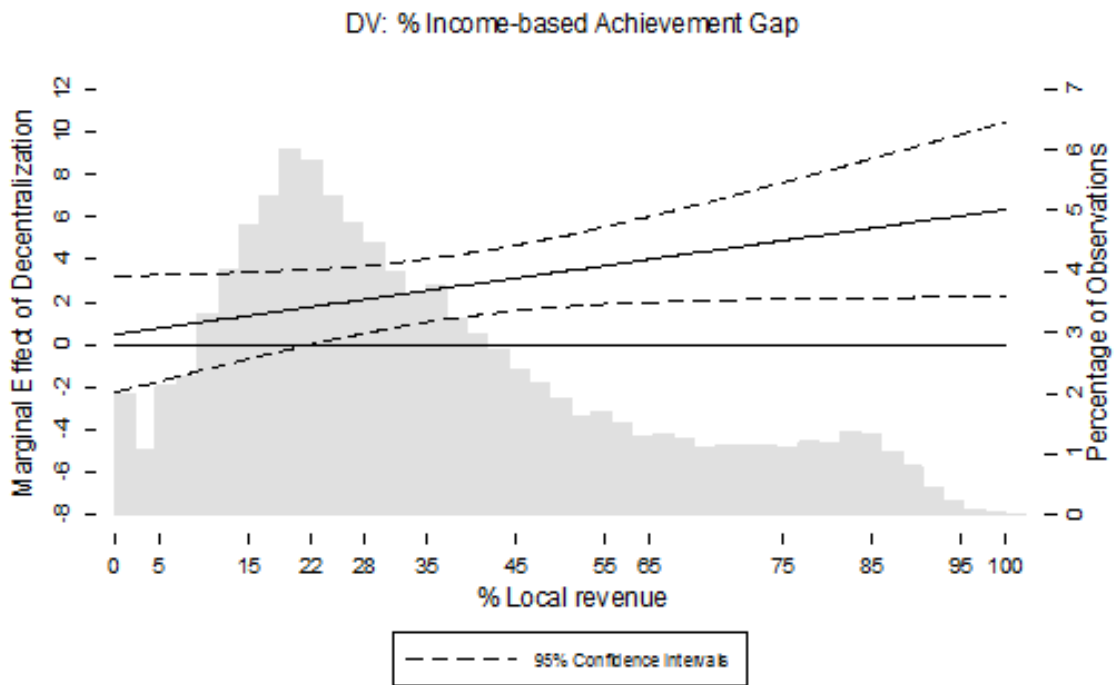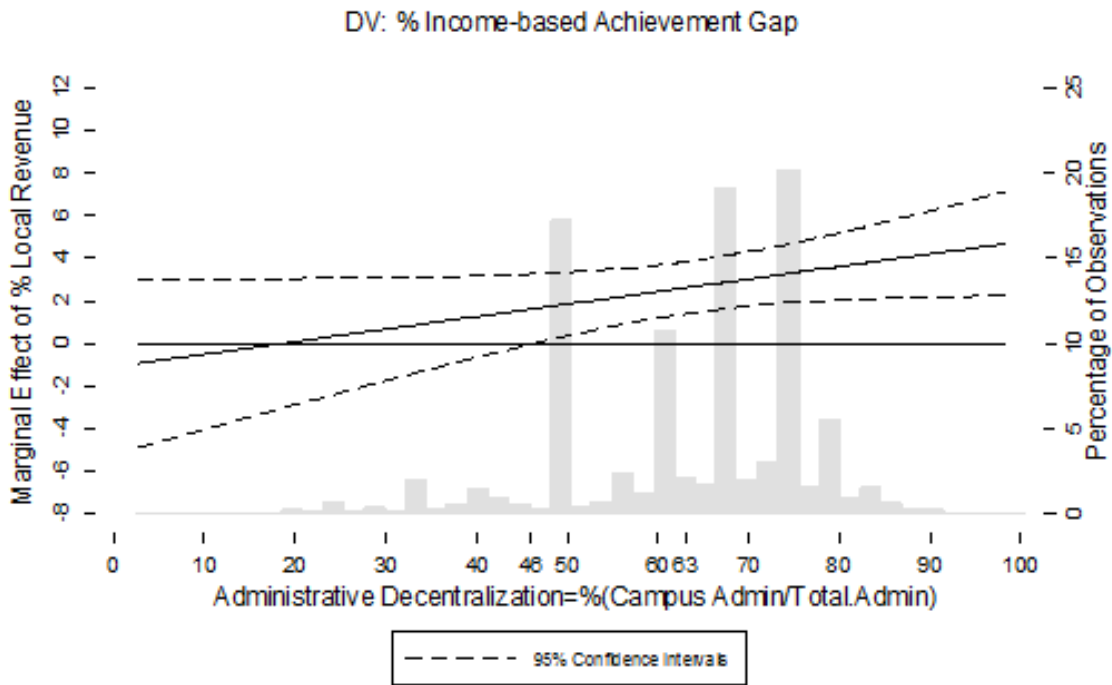

tion on the income-based achievement gap at each level of the conditional variable percent local revenue. The horizontal axis captures the entire range of the percentage of revenue generated from local sources in Texas school districts, which runs from 0 to 100 percent with a mean of 35.28 percent. The vertical axis on the right gives us the percentage of observations and one on the left the marginal effect of decentralization on the dependent variable. The interactive effect is significantly different from zero beyond local revenue

of 22 percent or more. While most of the observations lie within around 50 percent of

local revenue, we see that with an increase in the percent of local revenue, administrative

decentralization in these school districts does increase income based achievement gaps.

This impact is lowest when local revenue is in the lower range, or close to 22 percent, and

highest when it is near 100 percent. Most of the impact is observed within the 22 to 50

percentage range given the concentration of observations there. Thus, I find support of

H_2. How about the impact of local revenue on income-based gap, conditioned by percent

campus administrators?

    Figure 4.3 gives us the marginal effect of an increasing proportion of local revenue

Figure 4.3: Marginal effect of local revenue on income-based achievement gap using OLS
model with year fixed effects and lagged dependent variable

DV: % Income-based Achievement Gap

on the average income-based achievement gap, contingent upon administrative decentral-

ization. The horizontal axis captures the complete range of administrative decentralization starting at as low as 2.53 percent and going all the way up to 98.31 percent, though most of the observations fall within 50 to 80 percent range. The vertical axis on the right gives us the percentage of observations and one on the left the marginal effect of local revenue on the dependent variable. We can see a statistically significant relationship that suggests when 46 percent or greater administrators are based on school campuses an increase in local revenue increases income-based achievement gap. Thus, we find support for the symmetrical argument that emanates from H_2. Does this relationship hold when we alter the model specification?

The AR r.e. model from Table 4.3 is used to plot Figure 4.4 and Figure 4.5. We see

Figure 4.4: Marginal effect of administrative decentralization on income-based achievement gap using AR model with year fixed effects and district random effects
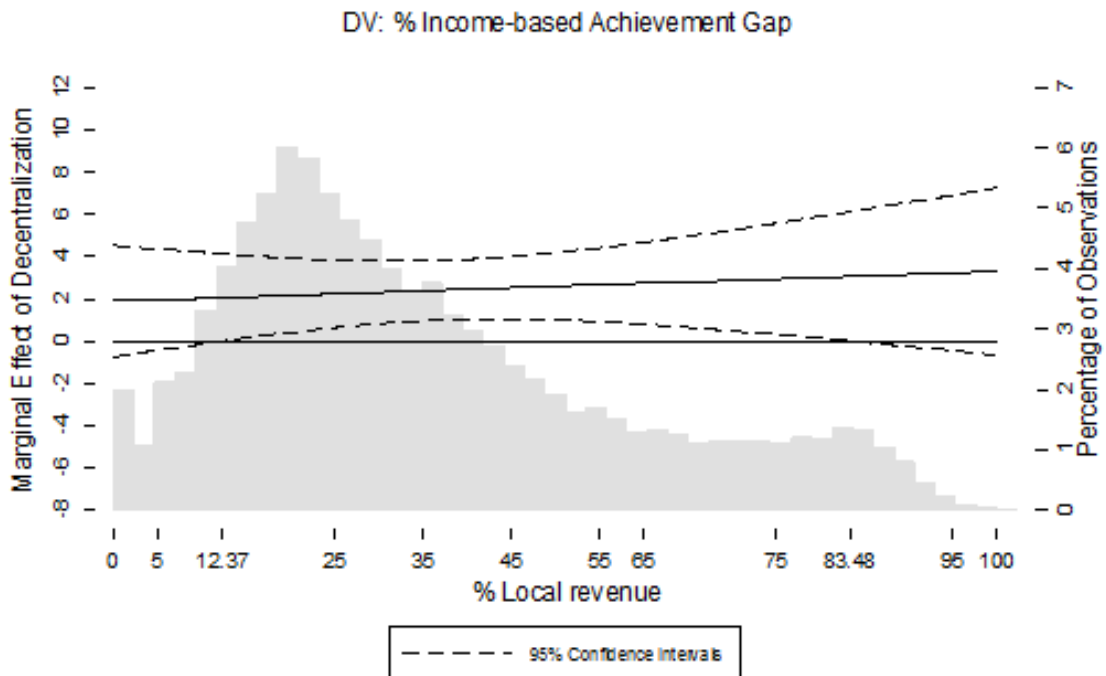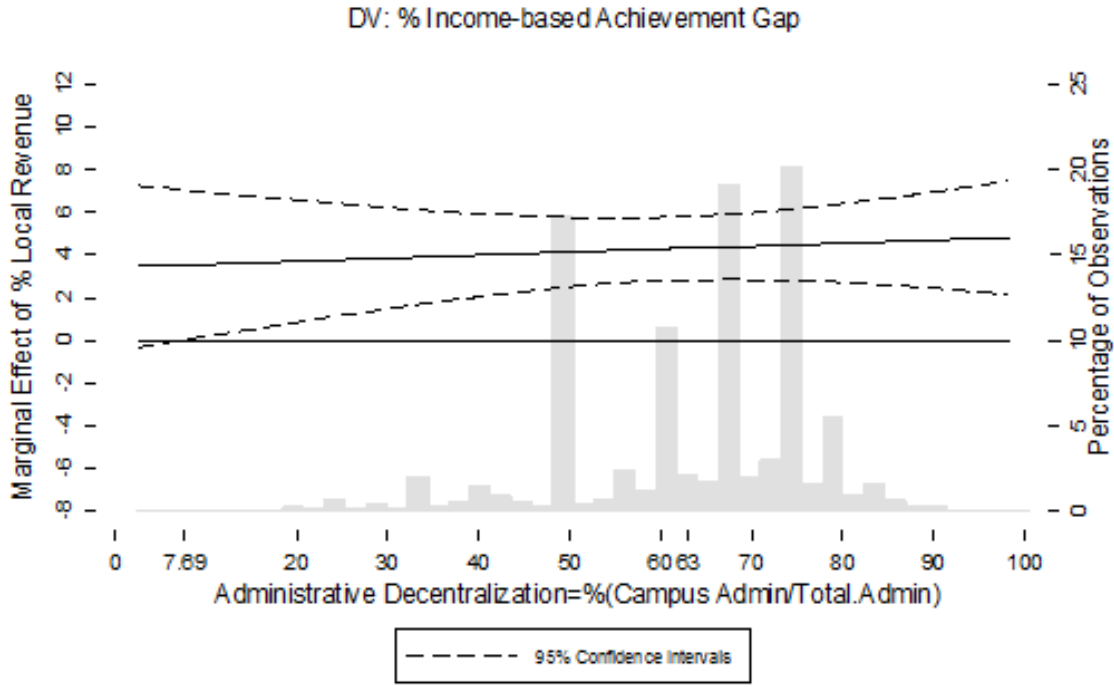
Figure 4.5: Marginal effect of local revenue on income-based achievement gap using AR model with year fixed effects and district random effects

DV: % Income-based Achievement Gap

that the tenor of findings hold with this different model specification as well, that is when we include random effects for school districts. While the marginal corves are flatter in these plots, as opposed to their OLS counterparts in Figure 4.2 and Figure 4.3, the general trend remains unchanged.

All these models, together, offer clear support for the assertion that the marginal effect of administrative decentralization on income-based achievement gap is positive and increase with an increase in funding sources from local revenue in a school district (H_2). Furthermore, the detrimental marginal effect of administrative decentralization on the income-based achievement gap will be highest when funding sources from local revenue is highest in a school district. In addition, leveraging the symmetric nature of interactive theory, I conclude that the marginal effect of percent local revenue on the income-based achievement gap will be positive and increase with the increase in the level of administrative decentralization in a school district. Also, the detrimental marginal effect of the proportion of local revenue on income-based achievement gap will be highest when the level of administrative decentralization is the highest in a school district.

4.9   Conclusion

The income-based achievement gap has received limited attention within the highly decentralized US education system. While there is mixed evidence on the ability of schools to significantly reduce achievement gaps, following Hanushek (2010)s argument, I contend that there is a difference between having the capacity to lessen existing gaps and having an institutional structure and set of policies that can target this problem. Thus, I take a fresh look at how the policy to decentralize and push administrators, who make key decisions, to school campuses impact the income-based achievement gap.

The findings, from a sample of over 1000 Texas public school districts over 18 years,

support my contention that when moved down to school campuses, administrators face pressure from "local non-poors" to divert school resources to meet the needs and interests of the children of the local elites. The needs of the disadvantaged low-income students take a backseat and this, I argue, causes the income-based achievement gap to widen. The elite capture argument is further substantiated when I introduce local revenue as a conditional factor. Local revenue is a function of local property values in Texas school districts and thus signifies the political clout and power derived from money. I show that when school districts draw a higher percentage of their revenue locally, an increase in administrative decentralization on average increases income-based achievement gap. To reduce this gap, school districts are better off centralizing their administrative cadre, especially when they have abundant local resources. Administrators based in school campuses, with more money at their disposal, seem to be ineffective in reducing the achievement gap between low-income students and their peers.

The obvious, and simplistic, policy recommendation from these findings will be to have more administrators based on district central offices. But we also know that centralization, just like decentralization, is not a panacea. "Administrative blob" and its associated problems has already received much attention. Thus, further study is needed for us to fully understand the mechanism through which administrative decentralization leads to elite capture in education and thus to widening of the income-based gap. In addition, my findings show that more experienced teachers seem to increase the income-based achievement gap, which is interesting in itself and calls for further study of how key players in the delivery of education, such as teachers, impact this gap.

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5.   CONCLUSION

5.1   Introduction

Financial incentive is the glue that holds an organizational coalition together. Without effective money management any organization will quickly disintegrate. But just like we cannot manage all organizations similarly, we also cannot manage finances in all organizations the same way. For public and nonprofit organizations it is critical that resources are managed carefully. Failure to do so can lead to organizational decline, which in turn will contribute to failure in the delivery of key public goods and services. This dissertation demonstrates that when it comes to money management, the organizational context matters. The three essays theoretically and empirically argue that be it revenue management, innovation management, or cutback management, all financial management solutions must take into account the "political, organizational, and institutional contexts." (Kioko et al. 2011, i113)

What are the key findings? In the first essay (chapter two), we see that slack may have dissimilar buffering potency. But if by buffering we mean fiscal slack will positively impact performance at times of organizational stability or that it will completely deflect any negative impact of a downward budget shock, we do not see evidence of that in public organizations. We must not think of fiscal slack as a unified concept, but as an umbrella term that subsumes a variety of slack resources. Each type of slack is unique and, therefore, will have different impact as a buffer. This impact will depend on the context of the organization. Also, in the public sector, organizations that need fiscal slack reserves the most, often do not have enough of it. In the second essay (chapter three), the key message is simple and straightforward. Organizational performance and risk taking relationship is

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altered by the sector. The performance-risk link in for-profit firms are reversed in non-profits, where risk and performance may have a positive association. In the final essay (chapter four), we tackle with a specific organizational goal of public schools districts: reducing the gap in educational achievement of students from two income groups. We see that revenue choices in these heavily decentralized organizations may accentuate achievement gap. Decentralized organizations that push for more horizontal decision making may be ideal for the for-profit structure, motivated by wealth maximization. But public organizations that tackle with more complex goals of equity may often see remarkably different outcomes as in this instance. In each of these three essays, context reigns supreme. These studies also offer starting points for future work.

5.2 Future Directions

Starting with the second chapter, an obvious next step would be to dig deeper into the concept of slack within public and nonprofit firms. There are several possibilities in this regard. Bourgeois (1981) proposes several ways we can measure slack in an organization. For instance, he talks about excess capacity in manufacturing firms, such as capacity built into latter stages of a production process. He uses the example of how a major oil corporation subsidiary may maintain approximately 6 percent excess refining capacity to meet sudden changes in market demand. He proposes changes in administrative intensity as another possible indicator for changes in slack. This is because, Bourgeois (1981) argues, staff functions often serve to buffer technical cores within firms. Public and nonprofit firms usually cannot accumulate fallow resources without raising eyebrow or having these excess resources taken away. Thus, storing slack in less obvious places, such as staff functions, seems a natural choice. During times of turbulence and organizational stress, managers can free up these resources and channel them to where it is most needed.

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Besides the bifurcation between absorbed and unabsorbed slack, as discussed in the first essay, slack can also be may be considered operational or financial (Salge 2011). Operational slack, as the name suggests pertains to excess physical capacity, such as production facility and human resource. Financial slack indicates excess savings, pool of financial resource, or even rainy day funds that managers may use on a discretionary basis. Combining this categorization with absorbed and unabsorbed slack measures, we can develop a more nuanced understanding of slack in organizations. Thus, we can think of slack as not two, but four distinct categories as depicted in Table 5.1. Thus, an organization can have absorbed operational slack, absorbed financial slack, unabsorbed operational slack, and unabsorbed financial operational slack. This study does not look at the categories in the first column of Table 5.1, in other words absorbed operational slack and unabsorbed operational slack. It will be useful to understand if operational slack demonstrates the same characteristics as financial slack.

Furthermore, within the context of K-12 education finance, there is a need for a

Table 5.1: Organizational Slack

	Operational slack	Financial slack
Absorbed slack	Absorbed operational slack	Absorbed financial slack
Unabsorbed slack	Unabsorbed operational slack	Unabsorbed financial slack

better theoretical and technical understanding of fund balances. We often hear politicians and popular media attack the tendency of school districts to accumulate huge fund balance reserves. The presence of such reserves is often used as a justification for funding cuts. Studies of US local governments, such as municipalities, have revealed that various fund balance categories can successfully predict better credit ratings. While credit rating is an alternative and less direct measure of performance than the one used in this essay, it is

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useful to understand if fund balances in school districts serve the same purpose as those in other local governments. There is evidence to suggest that fund balances may be used for counter-cyclical stabilization of expenditures in municipal finance (Marlowe 2005). The concept of counter-cyclical stabilization is not different from the idea of positive and negative shocks used in this essay. So it would be useful to see if fund balances do have stabilization impact on expenditures in schools. Again, there is some discussion on the optimal level of slack in local governments. Specifically, scholars and practitioners have argued that maintaining a 5 percent fund balance, of projected expenditure, is a good financial management practice (Marlowe 2011). We need to understand if such thresholds exists for school districts.

Continuing with the discussion of school finance, there are several possibilities for further exploration in the third essay (chapter four). First, this essay only looks at the gap in TAAS/TAKS or standardized test score for school students in Texas. There are several other parameters that we can consider in this regard, such as college preparedness and dropout rates. It will be useful to understand if the elite capture argument pans out for these alternative measures of performance in Texas schools and also if we see similar trends in other US states. Finally, anecdotal evidence and personal conversations with various school district administrators suggests that students who suffer from the negative impact of funding cuts the most, or any environmental turbulence for that matter, are poor students in rich districts. This is a topic that stands at the intersection of the second and fourth chapter. It will be beneficial to explore this topic further through a case study method.

The second essay (chapter three) offers the opportunity for extensive future explorations. The first task is to choose an empirical framework to test the proposed theory in this study. This empirical context must have a clear measure of organizational risk, financial performance, and a vector of factors that may induce risk taking- all within the non-

profit context. The federated grant making system United Way (UW) in the US offers one such possibility. Paarlberg, Van Puyvelde, and Ghosh Moulick (2015) offer an overview of the UW system. The authors note that by virtue of around 4 billion dollars of annual contributions, UW is the largest community philanthropic organization in the US. They point out that it is also the single largest recipient of private donations in the nation. UW is a federated fundraising channel for local health and human service organizations, with an emphasis on the *local* aspect, since the UW outfits raise and distribute resources within a given geographic boundary or community(Paarlberg, Van Puyvelde, and Ghosh Moulick 2015). But, the authors note, over the last thirty years many UW outfits have experienced decreased campaign yields and major losses in charitable marketshare, due to austerity in the local community economy and competition from other fundraising campaigns. To deal with the changing environment many UW outfits have altered their partner choices, which is organizational risk-taking. This is because partnerships are built over time and is a major source of UW's credibility in the donative marketplace. Donors contribute to UW because of their attachment to certain causes that UW supports. By building new partnerships and severing old ties, various UW outfits are risking their donor base. There is a variation among UW system organizations in their propensity to add or drop partners. Some add and drop partners more aggressively than others. Is this choice, or risk appetite, predicted by the financial standing of UW organizations? The answer to this, and other related questions, will give us new insights about financial performance-risk relationship in the nonprofit sector.

The next aspect that can benefit from further investigation is the concept of risk in nonprofit organizations. Risk can manifest in strategic management decisions, such as the aforementioned example, or in financial choices. In fact, the finance literature has focused to a large extent on risk pertaining to a firm's investment (Bromiley 1991). It would be beneficial to extend our understanding of investment risks in nonprofits. Very few stud-

ies have looked at investment or investment risks in nonprofits. Adelino, Lewellen, and Sundaram (2015) is one of the few studies that looks at investment decisions in nonprofit healthcare organizations. They conclude, among other things, that hospital investment is sensitive to its cash flow. This cash flow sensitivity captures a partial risk, and as the authors argue, demonstrates a trend similar to for-profit firms. But given the sample selection in this study, a preponderance of hospitals with large asset bases, it is unclear if we can generalize these findings to other nonprofits, such as an advocacy organization or a religious outfit. Also, hospitals often have a steady revenue base, which may set them apart from most nonprofits. Thus, the verdict on financial risk taking in nonprofits is still out. Similarly, we do not know much about risk taking in public organizations, another key organization type that this study deals with. Kioko et al. (2011, i118) notes that public administrators and government officials often do not share the same view on risk and return. In such organizations, we often see a trade-off between political and financial risk. The authors cite recent cases of such trade-offs in the San Diego pension crisis and derivatives-based crisis in Jefferson county, Alabama (Kioko et al. 2011). A better understanding of risk in both nonprofits and public organizations is therefore the need of the day.

Continuing with the research strategy adopted in this dissertation, a key step forward would be to frame the performance-risk question within a major theoretical framework. The resource dependence theory (RDT) will be particularly conducive in this regard. As Malatesta and Smith (2011, 609) note, all organization face the potential (or power) for dependencies. Malatesta and Smith (2011, 608) have successfully used RDT to study how "joint-dependencies, supplier dependencies, and government dependencies" impact the design of contracts between the Environmental Protection Agency and its suppliers. Paarlberg, Van Puyvelde, and Ghosh Moulick (2015) have used RDT within a multi-theoretical perspective to study UW grantmaking.

Kellermann (2014) discuss the new environment of fiscal austerity within which

public and nonprofit managers operate today. In such an environment organizations from alliances "to find resources despite the risks of loss of power and autonomy." (Kellermann 2014, 25) RDT has implications for the performance-risk discussion in federated community based nonprofits. Perhaps these organizations take risks and join new alliances under duress, as proposed by Kellermann (2014). Or perhaps the merits of an organization's financial performance is conditioned by resource dependencies (in addition to local economy), in predicting the organization's risk attitude. Either way, it will be useful to understand if it is financial performance or resource dependence that has the most impact in risk-taking behavior of nonprofit organizations.

5.3 Conclusion

This dissertation highlights three specific issues faced by public and nonprofit firms to demonstrate that organizational context matters in the study of financial management. Furthering the collective body of knowledge in public administration, was the express goal of this research. But the questions raised here stem from important challenges faced by mangers around the US, such as educating children in a low-income community, running a soup kitchen, or offering free HIV-testing, while working around the fiscal constraints of their organizations. Throughout the course of this research I have kept an open ear and eye for issues on the ground, to understand the problems I address here from the perspective of these managers. Thus, a theoretical approach to practical problems, is an accurate way to describe the flavor of these studies. But I have not looked beyond the boundaries of the US. Geography is the final frontier for scholars who are trying to better understand the importance of context in financial management. So it is apropos to conclude by suggesting that for a more sophisticated understanding of each questions raised here, we must transport them to foreign lands. Perhaps what works in the US, may not work in Norway, Romania,

Kyrgyzstan, New Zealand, Bangladesh, or Thailand. But it is the knowledge of what does not work sometimes and in some cases, that will fill the loop holes in our understanding of the living breathing systems we call *organizations*, and help the discipline surge ahead.

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