PERFORMANCE FUNDING IN PUBLIC HIGHER EDUCATION: DETERMINANTS OF POLICY SHIFTS

By

Alexander V. Gorbunov

Dissertation

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements for

the degree of

DOCTOR OF PHILOSOPHY

in

Leadership and Policy Studies

August, 2013

Nashville, Tennessee

Approved:

Professor William R. Doyle

Professor Christopher P. Loss

Professor Stella M. Flores

Professor James C. Hearn

ACKNOWLEDGEMENTS

I am greatly indebted to my advisor, Professor William Doyle, for his guidance, support, encouragement, and friendship.

I wish to thank all the other members of my committee, Professors Stella Flores, James Hearn, and Christopher Loss, for their thoughtful feedback and helpful comments. I would also like to thank Professor Michael McLendon for his valuable contribution to this research. I am indebted to Dr. Brenda Albright for helping me hone my key definitions.

I am grateful to the administration, faculty, and staff of the Leadership, Policy, and Organizations department of Vanderbilt University and to the leadership of the Tennessee Higher Education Commission for accommodating my personal situation and providing conditions for professional growth.

The Professional Development Fund generously offered by the Peabody College of Education has been instrumental in completing this dissertation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

In 1996, the state of South Carolina launched a new comprehensive funding policy for its public higher education, which drew a lot of attention. The state legislature passed Bill 1195, Act 359, mandating that all funding for public higher education institutions be based solely on performance. The policy was to be phased-in over three years so that 100 percent of state appropriations would be determined by institutional performance by the year 2000. To assess performance of public colleges and universities, the South Carolina General Assembly prescribed 37 indicators grouped in nine categories. Although the concept of performance funding in higher education was not new at that time, the goals, scope, and speed of implementation of South Carolina's policy were unprecedented (Burke, 2002d; China, 1998; Fore, 1998; Phillips, 2002). Both advocates and opponents of performance funding held their breath watching the development of this policy experiment.

Although the state legislature mandated the policy and prescribed performance indicators, the specific details of the program implementation were left to the discretion of the South Carolina Commission on Higher Education (SCCHE). Facing both time constraints and institutional opposition, the SCCHE did it best to comply with the legislative requirements. However, higher education institutions found many of the policy goals to be unattainable and unrealistic (Phillips, 2002; Fore, 1998). In response, instead of changing the policy core, South Carolina attempted to adjust the controls;

nevertheless, the policy continued to flounder (Burke, 2002d). The drastic changes came in 1999: The number of indicators was reduced and the scoring system and benchmarking guidelines were altered (Phillips, 2002). Most important, the state abandoned the idea of 100 percent performance-based funding.

In 2003, a budget proviso redirected performance funds to the Experimental Program to Stimulate Competitive Research funding. In 2006, institutional scoring was discontinued. The policy continued to exist legally but was not funded. The budget included an item titled "Performance Funding"; however, that money was not related to institutional performance. Thus, the policy failed to deliver on its stated goals and was defunded; its failure probably deterred other states from policy experimentation in this area. At present, South Carolina is considering a new approach to outcomes-based funding under a new name to avoid any association with the failed policy experiment.

Performance funding evolution in South Carolina poses a host of intriguing questions: Was the original policy a fiasco because its original goals were never attained and the program was eventually abandoned? Was it a partial success—even if for a short time—because it reportedly altered institutional behavior in accord with its intent and objectives? What factors determined the policy emergence, development, and failure? Did these factors have to do mostly with forces external or internal to state higher education? How is South Carolina's experience similar to, or different from, that of other states? Could it be considered an existing policy when the mandate persisted but its funding was suspended? How do we know when performance funding has operational or nonoperational status and what criteria are useful for drawing this distinction?

Although unprecedented in scope, South Carolina's experience is by no means unique. By 2009, 27 states had experimented with performance funding in higher education. Some policies have persisted until today, some have been terminated or defunded, and others have experienced several transitions between failure and readoption. All these policies have had setbacks and changes in scope, faced implementation and funding issues, and failed to completely meet all their stated goals—especially in terms of altering institutional behavior and improving college performance and outcomes (Burke & Associates, 2002; Dougherty & Hong, 2006; Dougherty & Reddy, 2011; Sanford & Hunter, 2011). This gap between policy intent and policy effects makes the task of defining and measuring policy success and failure extremely difficult and, to some extent, subjective in nature (Bovens, 't Hart, & Peters, 2001). Therefore, the above questions about performance funding in South Carolina are also applicable to this policy development in other states.

Examining performance funding evolution in public higher education, the key issue is to explain what accounts for different trajectories that this policy has taken across states and over time. In other words, an analyst must understand what factors have influenced the policy lifecycle of performance funding and gather empirical evidence of this influence.

Thus, I pose the following research question for this study: What are the specific antecedents of performance funding policy shifts across states?

Linking allocations to achieved results and organizational and individual responses to this policy have long been of keen interest to researchers in organizational and governmental studies (Anders, 2001; Balmaceda, 2008; Forsythe, 2001; Iversen,

2004; Jordan & Hackbart, 1999; Mehrotra, Damberg, Sorbero, & Teleki, 2009; Meyer, 1975; Prendergast, 2002). Due to the *Reinventing Government* movement (Osborne & Gaebler, 1992; Thompson & Riccucci, 1998), performance and accountability of government actors, performance assessment, and performance-based budgeting moved to the center of attention of political scientists. This shift in academic interests reflected a growing adoption of management-for-results practices and an increasing use of performance-based funding schemes in government operations (Anders, 2001; Ingraham & Moynihan, 2001; Klein, 2005; Willoughby & Melkers, 2001).

In higher education, performance funding denotes specified allocations provided to public institutions for demonstrable results and measurable changes in their behavior. Specifically, it means tying "specified state funding *directly* and *tightly* to the performance of public campuses on individual indicators" (Burke & Minassians, 2003, p. 3, emphasis in the original).

Analytical interest in performance funding in higher education arena emerged in the 1990s, when many states adopted this policy for their public institutions (Burke & Associates, 2002). The rising popularity of performance accountability programs required theoretical conceptualization of employed approaches and processes. In response to this demand, researchers conducted case studies of state performance funding programs, mostly based on surveys of key policy actors and qualitative investigations (Bell, 2005; Bridges, 1999; Burke, 1998a; Burke & Minassians, 2001; Burke & Modarresi, 2000, 2001; Coulson-Clark, 1999; Dougherty & Hong, 2006; Noland, Johnson, & Skolits, 2004; Serban, 1997a; China, 1998; Tanner, 2005; Williams, 2005). In addition, a number of studies examined the impacts of performance funding on various

outcomes (Belfield, 2012; Dougherty & Reddy, 2011; Doyle & Noland, 2006; Ehlert, 1998; Fryar, 2011; Garrick, 1998; Huang, 2010; Polatajko, 2011; Rabovsky, 2012; Sanford & Hunter, 2011; Shin, 2010; Shin & Milton, 2004; Strawn, 2003; Woodley, 2005; Yancey, 2002).

Individual researchers investigated why and how performance funding emerged and spread across the states. Usually, this question is considered within the context of the general Accountability Movement and other socio-political changes in the environment (Burke & Associates, 2002, 2005). Both qualitatively and quantitatively, analysts examined the issues of performance funding adoption and failure. They identified general and state-specific factors that provided for these policy changes (Burke & Associates, 2002; Burke & Serban, 1998a; Dougherty, Natow, & Vega, 2012; McLendon, Hearn, & Deaton, 2006). However, the knowledge of the common determinants of policy adoption is currently limited to the results of one study, which empirically tested several propositions concerning the enactment of performance accountability policies in higher education (McLendon et al., 2006).

Burke and associates from the Rockefeller Institute of Government and Dougherty and colleagues of Columbia University have significantly contributed to our understanding of the forces behind performance funding evolution (Burke & Associates, 2002; Burke & Minassians, 2003; Burke & Modarresi, 2001; Burke & Serban, 1998a, 1998c; Dougherty & Hong, 2005, 2006; Dougherty, Natow, Hare, Jones, & Vega, 2011; Dougherty et al., 2012; Natow & Dougherty, 2008). Due to their input, the research community has a good understanding of the forces that shaped this policy development in specific states. Their thorough investigations identified determinants of performance

funding policy changes in different contexts. However, this line of research is rooted almost exclusively in direct observation, archival work, interviews, and surveys; it is generally unknown whether their research assumptions and conclusions hold for other states. Thus, the assertions and findings of the above studies need to be validated with a quantitative empirical test on a larger scale.

There are two major gaps in the existing literature on performance funding development and policy changes in higher education in general. The first gap concerns the common forces that affect emergence, development, and failure of performance funding. Performance funding has been a volatile policy: Many states have adopted, modified, shrank, defunded, supplanted, terminated, and readopted it at different times (Burke & Associates, 2002). What factors drive states to experiment with this policy in such an erratic way remains largely unclear. The issue of frequent mortality and resurrection of performance funding is especially intriguing; however, it remains understudied. To the best of my knowledge, no research has systematically and comprehensively examined the entire performance funding policy lifecycle. In other words, no one has yet considered determinants of all policy shifts regarding performance funding across all states and over a sufficiently long period.

The second gap concerns the nature and drivers of policy changes in higher education, especially of policy failures. I argue that the phenomenon of policy failure in higher education has been poorly studied and is inadequately understood. The literature includes isolated case studies of failed policies, including abandoned performance funding programs (Dougherty et al., 2011; Dougherty et al., 2012; Dougherty & Natow, 2009; Burke, 2002b), and the seminal Birnbaum's (2000a, 2000b) study of the rise and

fall of academic management fads at the institutional level. However, these investigations do not allow for the conceptualization of state-level policy failure.

It is imperative that researchers bridge these gaps in knowledge and understanding of higher education policy dynamics.

In brief, although there is a modest literature on higher education policy enactment (Doyle, 2006; Doyle, McLendon, & Hearn, 2005; Hearn, McLendon, & Mokher, 2008; McLendon, Deaton, & Hearn, 2007; McLendon, Heller, & Young, 2005; McLendon et al., 2006; Mokher & McLendon, 2007), the knowledge of why states adopt, terminate, and revive these policies remains limited. Thus, the overarching research problem is rooted in the need to better understand the antecedents of policy changes, in general, and in higher education, in particular.

Investigation of this problem has both theoretical and practical importance. From the theoretical perspective, analysts need to examine and explain various intrastate and interstate influences that drive states to adopt, maintain, modify, discontinue, and readopt public policies. From the practical perspective, a better understanding of these driving forces and actors could help policymakers design more effective and sustainable policies and make revisions to their planning and implementation. Thus, policy relevance and topicality of this research stem from the following needs: to fill in the gaps in theory and knowledge, offer explanations of states' policy behavior, predict trajectories of policy development under the given conditions, and design more efficient policies based on an understanding of policy dynamics and experiences of earlier policy adopters.

To address the above problem, I study the determinants of adoption and failure of performance funding policy systems in public higher education. The purpose of this

investigation is to understand the influences that shape the policy lifecycle of performance accountability policies. The ultimate objective is to empirically test hypotheses aiming to identify factors that determine performance funding evolution. The subject of inquiry is the process of policy evolution, including its emergence, development, and demise. The specific research focus is on the antecedents of performance funding adoption and failure. Specifically, this investigation intends to answer the following questions: Why do performance funding policies emerge and die at a specific time? What factors account for their adoption and failure? What theoretical frames are better suited to explaining policy cycles in higher education arena? I believe that my theoretical frames, methods, findings, and conclusions can be useful in studying other higher education policies.

The key challenges and limitations of the study include the following. First, competing explanations for policy adoption and failure complicate identification of reasons for these changes. Second, I need to identify and account for multiple types of policy adoption and failure. Third, states spend different amounts of time in different conditions, that is, before they transition from one status relative to performance funding to another. Fourth, policy adoption, failure, and readoption are chronologically dependent on each other: A state cannot reach the next "destination" until it has gone through the previous stage. Next, the observation period is limited to 30 years due to data availability at the time of the analysis; as a result, some states are likely to have policy changes after its expiration. Sixth, on many occasions, states adopt or terminate their policies in the same period, which complicates statistical analyses. Finally, limitations to

the estimation capacity of employed models necessitate selecting predictors based on their conceptual and statistical significance.

My modeling strategy, which aims to overcome these limitations, combines different approaches. To operationalize the policy shifts of interest, I propose strict definitions of operational performance funding, policy adoption, and policy failure. To test competing explanations for performance funding adoption and failure, I advance four theoretical frames, propose specific hypotheses in each frame, and identify variables for testing these hypotheses. To examine the entire policy lifecycle of performance funding, I adopt a multiple-event perspective and employ a set of cumulative-risk models with repeated events.

This strategy is based on three major assumptions. The first one asserts that, as political and social processes, policy adoption and policy failure are alike in terms of their intrastate and interstate determinants. In other words, the same types of processes and actors drive states to adopt, terminate, and readopt a policy. The second assumption is that each event of interest (adoption, failure, and readoption) is a negation of the prior condition. This assumption builds on Volden's (2007) suggestion that policy adoption is, in effect, an abandonment of the "no policy" policy or termination of failed policies and on Bardach (1976) and Hogwood and Peters's (1982) arguments that policy termination (or succession) is a special case of policy adoption. Expanding on these ideas, I argue that if a state does not have a policy after its invention elsewhere, it has chosen not to have it; that is, it is not a mere inaction, it is an action that a state chose not to pursue. Thus, having no policy is treated as a specific type of policy. Another critical assumption

is that the policy changes of interest can only occur in succession: Adoption always precedes failure and failure precedes readoption.

My proposed theoretical approach is integrative in nature. In contrast to previous research on performance funding, this study intends to examine drivers of policy adoption, failure, and readoption simultaneously. As explained above, I treat performance funding enactment, termination, and revival as kindred political and social processes. In other words, I view the proposed state and policy characteristics as factors affecting all relevant policy changes. This assumption allows for an integrated examination of policy adoption and failure, and each proposed theoretical frame applies to all policy shifts of interest. Integration is also evident in combining the four theoretical frames. In addition to using them separately, I test hypotheses generated under these conceptual lenses simultaneously, within one final model. Finally, some uncovered relationships may have alternative causal mechanisms. This possibility may require convergence of the employed theoretical frameworks, with distinct frames offering different causal explanations for the relationships.

The novelty of the proposed approach involves the following: (a) refining definitions of performance funding, policy adoption, and policy failure; (b) using an advanced survival analysis technique in a study of policy evolution; (c) testing different theoretical frames simultaneously within one model; and (d) making use of all relevant policy changes that are dispersed in space and time. Application of a powerful statistical technique, event history analysis, allows me to identify the determinants of multiple policy shifts across states and over time. This task requires a longitudinal dataset on 47

states, including non-adopters of performance funding and excluding three outliers, for 30 years since the enactment of the first policy.

The theoretical contributions of the study include insights into the inadequately understood phenomenon of policy development. This research conceptualizes the policy cycle as a more complex phenomenon than has been done previously in quantitative studies of policy changes. Employing four distinct theoretical traditions, it adds conceptual clarity to the discussion of antecedents of policy changes. This study examines the entire policy lifecycle, simultaneously analyzing determinants of policy adoption, failure, and readoption. It tests a new theoretical perspective for understanding policy adoption and failure and suggests refined definitions of these processes. This investigation proposes four sets of theory-driven hypotheses explaining policy shifts, empirically tests assertions about performance funding evolution suggested in the literature and in this investigation, and examines significance of individual factors. Due to these contributions, I hope that this research represents a step toward building an integral theory of policy development.

The overall structure of the dissertation is as follows. Chapter 2 reviews the relevant literature. After a general overview, I consider and propose definitions of the key terms. Next, I examine the general context of performance funding evolution with a special focus on the accountability movement in higher education. I then identify precursors of performance funding in four distinct areas. Next, I examine four theoretical frameworks used in this study—the electoral connection, political environment, policy diffusion, and principal-agent frames. I conclude by reviewing the literature on budgetary constraints and policy failure.

Chapter 3 establishes the conceptual framework for the study. It describes the general integrative approach to the investigation, reviews the four theoretical frames, and suggests the respective sets of hypotheses. Next, the chapter considers other critical influences on the policy lifecycle. It concludes by outlining the key relationships in the conceptual framework and the general model specification.

Chapter 4 describes the data and the analytical method. First, it describes the dataset compiled for the study, the operationalization of the dependent and independent variables, and the data on all variables. Second, it presents the event history analysis as the primary method for the study, specifications of the model, and the model estimation. Finally, the chapter addresses the remaining issues of model estimation.

Chapter 5 reviews my analytical approach and presents the study findings. Chapter 6 discusses the implications of the results, outlines the contributions and limitations of the study, and suggests directions for future research.

CHAPTER II

LITERATURE REVIEW

Background and Overview

Over the last three decades, public higher education has experienced mounting pressures to become accountable for institutional performance and results. This period has witnessed greater engagement of the general public and external agencies with the issues of quality and performance in higher education and greater focus on improving educational outcomes and increasing government interference (Alexander, 2000; Bogue, 1997; Zumeta, 2001). As a result, the precarious balance between external accountability and institutional autonomy has gradually shifted toward justifying public support and demonstrating value for money. Leading policy analysts concur that this change toward performance accountability is irreversible (Burke, 2005b; Burke & Modarresi, 2000; Ewell, 2003; Gaither, 1995). Burke and Modarresi (2000) note, "Accountability is a challenge, not a choice, for state colleges and universities. The real question with accountability for public higher education is not whether, but for what and how" (p. 433).

Two trends paradoxically characterize this accountability movement: While states have increased pressures for accountability, they have also been disinvesting in higher education. States governments have wanted higher education institutions to become more accountable for fewer resources available to them (Alexander, 2004), proving that "taxpayer support and public demands are seldom in sync" (Burke, 2005b, p. 9). The

need to balance external accountability with institutional improvement and state needs with academic goals has required new policy solutions (Burke & Associates, 2002).

One policy tool used to resolve these dilemmas is linking institutional budgets to performance. Performance funding policy has emerged to offer incentives for measureable achievements and tangible institutional improvements (Bogue & Hall, 2003). Many states have allocated a portion of appropriations based on institutional performance on state priorities. However, performance funding has turned out a volatile policy: Most adopting states have continually revised, shrunk, defunded, terminated, and readopted their programs (Burke & Associates, 2002).

This study intends to identify the driving factors behind the emergence and demise of performance funding policy systems in public higher education in the United States. It investigates why states adopt and abandon performance funding policies at a certain time. To explain the policy lifecycle dynamics, the study employs several theoretical frames. Focusing on the antecedents of policy adoption and failure, it aims to further our understanding of higher education policy development. This intention determines the approach to reviewing prior research and existing literature.

The following questions guide the literature review: What key definitions are applicable to this study? What has been the general context for performance funding emergence? What factors have determined the accountability movement in higher education? What are the key aspects and main precursors of performance funding? What theoretical frameworks are appropriate for studying determinants of this policy adoption and failure? What evidence regarding performance funding does the literature provide for these frames? What are the main gaps in knowledge about this policy evolution?

Key Definitions

This section defines the following critical concepts: accountability systems, performance accountability policies, state policy, performance funding policy, operational policy, policy adoption, and policy failure. I also consider the notion of policy failure in the respective section of the dissertation.

The general concept of *accountability* defies comprehensive definition; as a result, "[a]ccountability is the most advocated and least analyzed word in higher education" (Burke, 2005b, p. 1). In the past, this term referred to the issues of centralized state regulation and governance arrangements, economy and resource inputs; however, it has gradually acquired a new meaning, shifting the focus to state priorities and the outcomes of institutional activities (Burke, 2005b; McLendon et al., 2006). Important aspects of higher education accountability include specifying requirements and actions to meet them (Neal, 1995). State governments are mostly interested in higher education quality and cost-effectiveness (Ewell, 1997). Therefore, a working definition of accountability should consider all these aspects of the general concept.

In this study, I focus specifically on accountability systems designed to ensure higher education responsiveness to state needs and answerability for the results achieved with public funds. As a starting point, I rely on the following definition of accountability systems offered by Wellman (2001): "Accountability systems are state-level indicators of institutional performance, designed to reach public audiences, using quantitative and qualitative measures that allow comparisons among institutions. These systems […] are geared to legislative and gubernatorial audiences rather than individual governing boards" (p. 48).

I define a state *accountability system* as an arrangement of funding and publicity incentives intended to alter institutional behavior in ways that are consistent with public needs and state priorities. These incentives run the gamut from financial awards and regulatory sanctions to increased autonomy to changes in reputation and rankings. The unifying feature of these systems is a structure of built-in impetuses and constraints that aim to align institutional responses with external expectations and goals.

Performance accountability policies include three main types: performance reporting, performance funding, and performance budgeting (Burke & Minassians, 2002, 2003; McLendon et al., 2006). *Performance reporting* involves assessing statewide goals and reporting of institutional results on pre-determined indicators (Burke & Minassians, 2003; Wellman, 2001). This policy relies on information and publicity to encourage institutions to improve their performance. As a result, performance reporting is the least controversial accountability policy (Burke & Minassians, 2002).

Linking budget allocations to institutional performance takes two distinct forms: performance funding and performance budgeting. *Performance funding* ties a portion of the budget to the degree to which institutions meet or exceed preestablished criteria (Bogue & Aper, 2000). In other words, it links budget allocations to prescribed levels of college achievement on designated indicators. This process of tying government funds to institutional performance is direct and formulaic. Performance funding focuses on the process of budget distribution (Burke, 2001a; Burke, 2003; Burke & Modarresi, 2000; Burke & Serban, 1998; Schmidtlein, 1999; Zumeta, 2001).

Performance budgeting considers institutional achievement as merely one factor in determining total institutional budgets. Performance information is used as a general

context, but funds are not tied directly to it. Thus, the link between performance and funding is indirect, loose, and discretionary. Performance budgeting focuses on budget preparation but ignores distribution (Burke, 2001a; Burke, 2003; Burke & Serban, 1998).

To focus on the antecedents of policy adoption and failure, I must know exactly when a policy comes into existence and when it fails. It is thus critical to define a state policy and identify the markers of its operational status. These markers are determined by the definitions of a policy and the respective policy shifts.

Political scientists and policy analysts have struggled with definitions of public policy and state policy, without reaching a definitive consensus (Birkland, 2001; Cochran, Mayer, Carr, & Cayer, 1999; Cochran & Malone, 1995; Dougherty & Reid, 2007; Dye, 1998; Kerr, 1976; Kraft & Furlong, 2007; Kroll, 1962; Peters, 1999; McLendon et al., 2006; Schneider & Ingram, 1993).

Birkland (2001) derives the following features of a public policy:

- The policy is made in the "public's" name.
- Policy is generally made or initiated by government.
- Policy is interpreted and implemented by public and private actors.
- Policy is what the government intends to do.
- Policy is what the government chooses *not* to do (p. 20, emphasis in the original).

There are two camps in defining a policy. The first camp focuses on government's intentions and actions. Kraft and Furlong's (2007) definition exemplifies this approach: "Public policy is what public officials within government, and by extension the citizens they represent, choose to do or not to do about public problems" (p. 4). Following this logic, a policy comes into existence when the government makes a

decision—through a legislative mandate, executive order, or agency initiative—to adopt it. Likewise, policies are abandoned by the government's decisions and actions.

Acknowledging the government's role, the second camp emphasizes the role of the agents in policy implementation (Schneider & Ingram, 1993). Kerr's (1976) formal policy conditions and conditions for policy success are the epitome of this approach to defining a public policy. Kerr underscores the need to distinguish between a policy and a promise, that is, a simple declaration of intention. In the words of Birkland (2001):

> [P]olicies are not just contained in laws and regulations; once a law or rule is made, policies continue to be made as the people who *implement* policies—that is, those who put policies into effect—make decisions about who will benefit from policies and who will shoulder burdens as a result. (p. 20, emphasis in the original)

From this camp's perspective, it is not sufficient to enact a policy; this decision must be supported through policy implementation, and the agents must be aware of its operation. This is the perspective that I choose for this study. Extending the same logic, I argue that policies do not fully exist until the agents notice them and are poised to respond. In this interpretation, policies with a legal mandate that are not implemented or funded are in effect policy failures.

For the purposes of this study, I propose the notion of an *operational policy*. I rely on Dougherty and Reid's (2007) definition of a state policy as "an authoritative action by state government" (p. 2) but refine it with the addition of a critical condition. The advantage of the above definition is that it does not restrict policies to only legislative actions and is thus appropriate for performance funding, which may be initiated by governors, state higher education agencies, and individual institutional

systems. However, it does not take into account whether the policy has an operational status, that is, whether performance funds are allocated to institutions.

For performance funding to become operational, a policy authorization decision (declaration of intent) must be followed by an appropriation decision. The latter makes it a "policy with teeth" (Burke & Associates, 2002), a powerful tool with real implications for the agents. Performance funding aims to induce desired changes in institutional behavior through provision of financial incentives. However, no declaration of intent can alter institutional behavior unless there are financial strings attached to it. Institutions become aware of the policy and begin to respond only when funding is allocated.

Combining the above definitions, I define *performance funding policy* as an authoritative action by the state government to provide funds to public higher education institutions based on multiple output-oriented indicators in exchange for desired changes in their behavior that is followed by actual funding.

This definition is consistent with the refined conceptualization of policy failure as introduced later in this section and in the section *The Concept of Policy Failure*. In brief, similar to removing the mandate or substituting a policy with a different program, policy failures also include various scenarios when funding is not provided. The rationale for treating defunding as failure is that, in the absence of funding, institutions have no incentives to alter their behavior. Therefore, the intent of the policy is not realized and it ceases to be an operational policy; the policy status changes from adoption to failure.

Regarding performance funding, I equate policy enactment with adoption (operational status) just for the year in which it takes place. To maintain the operational status in subsequent years, the policy must receive funding. The rationale for exempting

the adoption year from the constraints of my definition is that policymakers need time to ensure financial support for the policy and funding generally does not begin the same year as policy authorization. At the same time, institutions are made aware that the new policy requires altering their behavior. If however, the policy is not funded after the initial year, it is considered a failure. The unfunded policy maintains its nonoperational status until funding is provided.

Three criteria define performance funding as an operational policy: (a) authorizing the policy (adoption), (b) providing financial incentives aimed at changing institutional behavior (appropriation), and (c) using multiple, output-oriented indicators (complexity). The first action is not a strong enough incentive to trigger a response from institutions; however, coupled with the second component, it powerfully declares what the state values and what goals must be pursued. The third criterion ensures policy complexity and distinguishes "true" performance funding policies from matching funding schemes and similar input-oriented programs, which often use a single indicator.

As the centerpieces of its conceptual framework, this study uses two major terms, policy adoption and policy failure. The notion of policy adoption is much better understood and conceptualized in the literature (Bardach, 1976; Berry & Berry, 1990, 1992; Doyle, 2006; Gray, 1973; Hearn & Griswold, 1994; Hearn et al., 2008; McLendon et al, 2006; Mintrom, 1997; Walker, 1969). Policy adoption is a lengthy political process that culminates in policy enactment by a state legislative mandate or an executive order. It is "essentially an effort by a nuclear group of proponents to assemble, out of a diverse array of social and political interests, a supporting coalition weighty enough to secure

authoritative approval of their proposal" (Bardach, 1976, p. 126). The focus of this study is on the outcome of this process, that is, on the actual policy enactment.

In this study, *policy adoption* is defined as the following actions of the state government or its agency that bring about an operational status of a policy: enacting a policy with a legislative act or an executive order, introducing a policy by a higher education board's decision, or initiating it via an appropriation act or a budget proviso. A special case of adoption, policy readoption, may take the following forms: reenactment after a prior termination or succession with another policy, provision of funding with more than a year's delay after the original adoption, resumption of funding after a prior suspension, and upgrading the policy to meet the above criterion of sufficient complexity.

For the purposes of this research, I define *policy failure* as the state government's actions that make performance funding lose its operational status (achieve a latent status). These scenarios may include failing to fund an adopted policy (*false start*), withdrawing or not renewing the policy mandate (*termination*), suspending or removing funding (*starving* or *defunding*), substituting the policy with another policy (*succession*), and failing to meet the sufficient complexity criterion (*inadequacy*). However, because of their inherent subjectivity and ambiguity, the following scenarios are not considered policy failures: failing to adopt a policy (*proposal failure*), failing to meet the policy objectives (*policy ineffectiveness*), and scaling down of the policy from its original scope (*policy shrinking*). The general concept of policy failure is considered in the respective section at the end of Chapter 2, and Chapter 4 provides its detailed operationalization.

Historical Background of Performance Funding Evolution

Changing Context of Higher Education

Tennessee was the first state to adopt performance funding in 1979; it was followed by Ohio and Connecticut in 1985, although the latter two do not meet the above definition of a "true" performance funding policy with sufficient complexity. The other 24 adopting states enacted this policy for the first time in the period from 1990 to 2000. However, many of these initiatives turned out to be short-lived experiments and policy failures. The second round of performance funding adoptions—dubbed *Performance Funding 2.0* (Lederman, 2008)—started in the new millennium (Dougherty et al., 2012; Dougherty & Reddy, 2011). These dynamics demonstrate that the antecedents of these policy changes should be identified in the past two decades.

A number of environmental factors and events have shaped American higher education during this period. These external forces have included economic, political, ideological, social, and attitudinal changes in the society. These contextual factors operated both at the national and state levels. Environmental pressures and new trends required relevant policy responses from state higher education systems.

Economic, political, and ideological changes in the nation have had the greatest effect on higher education, especially on its relationships with state governments. According to Wellman (2001), "an external economic and political climate is forcing fundamental structural changes in the relationship between higher education and government" (p. 48). A key change in these relationships concerned the need to justify continued public support and become accountable for results on the part of colleges.

During the period of interest (1979–2009), the national economy experienced three periods of growth and four major recessions—in the early 1980s, early 1990s, and early and late 2000s. During recessions, competition for state resources between public sector priorities intensified, leading to calls for greater efficiency in resource allocation and, importantly, to diminishing budgets of public higher education.

Similarly, this period witnessed significant political and ideological changes in the country. A major political development with critical economic repercussions was the 1970s voters' tax revolt. This movement was driven by people who did not trust legislatures and were concerned about government growth and increasing budget deficits. Its strategy involved imposing limits on state tax revenues and spending growth, downsizing government, and curtailing the social support system. The tax revolt produced legislation that altered taxing and spending policies in many states, thereby reducing public financing for state-supported services and sectors, including public education (Archibald & Feldman, 2006; Baker, 2003; Merrifield, 1998).

This period saw five presidential terms by a Republican president and three terms by a Democratic president. In 1994, the Republicans became the majority party in both houses of the U.S. Congress for the first time in 40 years. They controlled Congress until 2007 and managed to create and partially implement the Contract with America, a conservative reform agenda. The dominant ideology during that period was a complex of ideas that called, among other things, for a smaller and more performance-oriented government.

Rich (2004) identifies two broad political developments in the 1970s. First, three distinct groups became politically mobilized: the business and corporate world, neo-

conservatives, and fundamentalist Christians. Second, higher education institutions and major policy actors became more accepting of neoclassical economic theories. In the late 1970s and 1980s, the promarket ideology was largely out of favor in the US; however, it began to gain popularity in the 1990s. Over the last three decades, neoliberalism came to dominate the modern ideological field and became the "defining political economic paradigm of our time" (McChesney, 1999, p. 7). The consequence of this change was the ascendancy of the corporate and market cultures in all aspects of life in the USA, including education (Giroux, 2002).

In the early 1990s, the public's attitude toward government institutions began to change and voters started to express concerns about costs, efficiency, and results. Policymakers responded to these concerns by adopting corporate management practices (Ruppert, 1995). A major change in public management was due to the emergence of the *Reinventing Government* movement at the federal level (Osborne & Gaebler, 1992; Thompson & Riccucci, 1998). This initiative shifted public management from a regulatory controls paradigm to a results paradigm (Burke & Serban, 1997). Using benchmarks to measure performance and implement changes, it aimed at achieving greater results with fewer resources. Due to this reform, the notions of accountability, performance, and results began to permeate governmental agencies (Osborne & Gaebler, 1992). Aiming to enhance government performance and increase accountability of public agencies regarding quality, efficiency, and effectiveness, state governments introduced management for results and performance-based funding schemes (Ingraham & Moynihan, 2001; Klein, 2005; Willoughby & Melkers, 2001).

These developments at the national level have brought about changes in state contexts. The state-level factors are crucial because public higher education is the managerial and financial responsibility of the states. States provide the bulk of funds for public institutions through appropriations and an appreciable portion of student aid, payable directly to students (Heller, 2001a).

Regarding demographic trends, demand for higher education has been on the rise. Enrollment kept growing throughout the 1990s, despite constantly rising tuition fees (Heller, 1999). The number of nontraditional and historically underrepresented students has rapidly increased, changing the demographic landscape of higher education. Accommodating increasing numbers of students, the physical and fiscal capacity of higher education institutions has been put to the test.

The demographic pressures were aggravated by an unstable fiscal context. In accord with fluctuations in the national economy, financial support of higher education has had its ups and downs, with important consequences for the structure of higher education finance. State financial support for higher education is crucial because "[e]ven today, with budgets emerging from crisis, the states provide over four dollars of support for higher education expenses for every dollar of federal subsidy" (Archibald & Feldman, 2006, p. 618) and all economic downturns in state economies have affected higher education. The 1989-90 state fiscal crisis produced especially long-lasting consequences.

Findings of various studies suggest two opposite trends: State support has recently declined and, alternatively, state support has recently increased. To illustrate, Archibald and Feldman (2006) contend that since the late 1970s, the aggregate state effort has dropped by 30 percent; Mortenson (2004) finds that state appropriations for higher

education have dropped by 40 percent since 1978. In contrast, Ruppert (1995) asserts that the 1980s were a time of abundance, with annual increases in appropriations often exceeding 10 percent; it was "a period of slowed enrollment growth and an expanding resource base" (p. 16). After a recession in the early 1990s, there was a temporary decline in state support; however, later in the decade, there were increases in state appropriations due to the recovery of the national economy.

The Grapevine database, an annual compilation of state tax support of higher education, shows that the overall fiscal support has significantly increased. State investment in the enterprise grew, incrementally, from about $7 billion in 1970 to about $77.5 billion in 2008. However, starting with FY02 and FY03, state support for higher education began to decline for the first time and annual increases in appropriations significantly slowed down (Grapevine, n.d.). Toutkoushian (2006) resolves these conflicting findings by suggesting that the often-cited decline in state support is relative to the growth in other state government priorities and it does not reflect the direct level of state funding.

To explain these conflicting findings, Trostel and Ronca (2007) propose a unified measure of state support for higher education. They find that state support for higher education was almost constant between 1980 and 1984, grew rapidly between 1984 and 1987, grew slowly between 1987 and 1995 (with a drop in FY 1992), was constant from 1995 through 2002, and started to decline significantly from 2002 through 2005. The critical change began with the slowdown of the national economy in the early 2000s.

The above-mentioned tax revolt also led to a retreat of public support for higher education. This development was exacerbated by rising costs—a combination which

presented severe financial problems for public higher education (Archibald & Feldman, 2006). Competition for scarce state resources began to intensify in the early 1990s due to an economic recession (Serban, 1998). As a discretionary item on state budgets, in direct competition with K-12 education, corrections, health care, and public assistance, higher education has begun to lose its share of the total state budget (Ruppert, 1995; Toutkoushian (2006).

The consequences of declining state financial support (in relative and absolute terms) involved rising tuition, reducing financial aid, increasing attrition, changing enrollment patterns, and decreasing faculty salaries (Ehrenberg, 2006). To compensate for declining state appropriations, institutions had to rely more heavily on tuition and fees for revenue. As a result, tuition and fees began to rise rapidly (College Board, 2004). In the 1990s, tuition paid by students started to surpass state appropriations for the first time, bringing about a fundamental structural change in higher education finance (Breneman & Finney, 1997). This shift of responsibility for higher education costs from governments to consumers is referred to as cost-sharing (Johnstone & Preeti, 2000).

Finally, the above political and ideological changes, in combination with the fiscal pressures, led to changes in the ideological context of higher education. Some policy analysts argue that the increasingly powerful ideology of market capitalism (neoliberalism) pushed for marketization, privatization, and corporatization of higher education (Ayers, 2005; Baez, 2007; Giroux, 2002; Jones, 2009; Olssen & Peters, 2005; Saunders, 2010; Slaughter & Leslie, 1997). Due to this influence and in response to declining state support, higher education institutions have adopted nontraditional,

entrepreneurial practices to ensure their survival and to gain an edge over competition (Hearn, 2003; Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004).

However, despite frequent references to the creeping influence of neoliberalism, little systematic evidence supports this assertion. Such conclusions are often made on the basis of discourse analysis of texts relating to higher education (Baez, 2007; Jones, 2009) or anecdotal evidence (Giroux, 2002; Slaughter & Leslie, 1997). However, it is possible that other ideological stories could explain the same data differently. According to Saunders (2010), "most literature on colleges and universities still fails to connect changes in the dominant socio-economic policy to changes within colleges and universities" (pp. 66-67). Thus, the argument that market capitalism has affected higher education remains to be empirically tested.

In public education, there emerged a common political and policy agenda, focusing on accountability, efficiency, productivity, and improvement (Wellman, 2001). Several factors shaped this new agenda for higher education. Globally, the World Bank-promoted reform agenda, which is based on the principles of neoliberal economics, puts a high premium on higher education privatization, marketization, and deregulation (Johnstone, Arora, & Experton, 1998). Also, although higher education is deemed indispensable for serving state needs and ensuring social mobility, it is increasingly becoming less accessible due to rapidly increasing tuition fees (Ruppert, 1995). Finally, due to tuition spikes and perceived inefficiency of higher education, public and legislative discontent with higher education has been on the rise and these concerns have required urgent policy responses (Serban, 1998).

Accountability Movement in Higher Education

Accountability is not a new thing in higher education, and in various forms it can be traced back almost to colonial times (Bogue & Aper, 2000). However, the era of intense governmental and public scrutiny of higher education started in the past several decades (Burke, 2001a, 2005a, 2005b, 2005c; Burke & Minassians, 2002). Accountability became an extensively discussed topic in the 1970s, and the movement gained momentum in the early 1990s (Burke, 2005a). Based on the main concerns of each period, Burke (2005b) identifies four phases in the accountability movement: (a) 1970s: focus on economy and centralized state regulations; (b) 1980s: concern with quality outcomes in student learning, campus processes, and institutional improvement; (c) 1990s: focus on state priorities, performance production, and results; and (d) 2000s: greater reliance on private market forces with less emphasis on public priorities.

Over the past decades, states' priorities have shifted from ensuring access to higher education to demanding greater accountability (Burke, 2005b; Levine, 1997). Because of this shift, "[g]overnmental authorities are no longer as receptive to the traditional self-regulatory processes that have dominated university development for centuries" (Alexander, 2000, p. 411). The stakeholders have focused attention on higher education productivity and efficiency and demanded "value for money," that is, better outcomes of using public resources. As a result, public higher education often found itself in a position when it had to demonstrate that "colleges and universities are neither privileged havens of waste nor institutions so out of touch with reality that they are on the verge of losing their relevance" (Massy & Zemsky, 1994, p. 1).

The paradigm shift in accountability occurred in the 1990s when its goals changed from accounting for expenditures and complying with rules to accounting for outcomes and producing results (Burke, 2005c). This change was driven by a growing perception that traditional measures of performance, peer review and market choice, no longer were adequate indicators of value (Alexander, 2000). The concept of accountability began to denote demonstrating return on state investment in higher education (Alexander, 2000; Ewell, 1994). This new focus on performance produced a variety of performance accountability policies (McLendon et al., 2006; Ruppert, 1995). During that time, budget allocations began to be linked to performance on accountability measures (Zumeta, 2001). By 2003, nearly three-quarters of the states had adopted programs relating performance to budgeting (Burke, 2003).

The above change in the nature of accountability was caused by several factors. Most important, "[p]ublic higher education had become too important and too costly to states to ignore campus results" (Burke, 2001a p. 2). On the one hand, higher education is increasingly viewed as investment in human development and as a means of raising economic competitiveness of states and nations (Alexander, 2000; Blondal, Field, & Girouard, 2002). Governments now expect higher education to play a key role in creating highly performing economies. As a result, the economic motivation of states has grown stronger, and governments started to demand greater efficiency in using public resources from institutions (Alexander, 2000).

On the other hand, growing financial pressures on state governments led to limitations of public expenditures. A squeeze on public spending has intensified competition for public resources and deprioritized higher education on the governments'

agendas; this situation was aggravated by a massive expansion of higher education (McLendon et al., 2006; Zumeta, 2001). Many policymakers believed that the reduction of institutional funding would cause higher education to become more efficient in the use of public resources and accountable to state demands (Alexander, 2000). Some policy analysts argue that the hope to cut higher education expenditures was the real motive for the increased push for accountability (Burke & Associates, 2002).

Mounting public criticism of higher education has been fueled by two major factors: concerns about access to, and affordability of, higher education and perception that higher education as a necessary source for individual and state success (Burke, 2005a; Heller, 2001b). It has led to growing public pressures for greater productivity and efficiency of institutions. Facing limited funding while trying to maintain quality, higher education institutions had to charge students more for their services. As a result, "[i]n return for growing fiscal reliance on student user fees, governments are demanding more stringent and informative accountability requirements" (Alexander, 2000, p. 419). A greater reliance on user fees has contributed to public insistence on accountability.

The executive and legislative branches of state governments have been critical of higher education; the main objects of criticism are skyrocketing institutional costs, unresponsiveness of higher education to societal and economic demands, and inadequate self-regulation on the part on institutions (Alexander, 2000). The legislative and executive mistrust in higher education has been a major driving force behind the assessment and accountability movements in higher education (Astin, 1990; Burke & Associates, 2002).

The business community has played an active role in the emergence of accountability policies in higher education. In the words of Zumeta (2001), "business leaders have applied pressures to universities, directly and through the political process, to 'streamline their production processes' as they themselves have done" (p. 157). The business community called for greater efficiency and quality of the enterprise, lower costs, and better workforce preparation; it has often advocated or supported specific accountability policies (Burke & Associates, 2002; Dougherty et al., 2011). Recent structural changes in the national economy have intensified this pressure (McLendon et al., 2006). Experiences of individual states demonstrate that business community could greatly affect policy evolution (Natow & Dougherty, 2008; Dougherty et al., 2011).

Recent reforms in K-12 education have contributed to increasing accountability pressure across the entire public education system (McLendon et al., 2006). Wellman (2001) argues that accountability systems in higher education are rooted in the standards movement in secondary education. Some specific techniques, for instance, the report card format, were directly borrowed from the K-12 accountability reform (Serban, 1998).

Public institutions have been generally unwilling to focus on results; this campus opposition has produced increased criticism from state governments, the business community, and the public (Burke, 2001a). Astin (1990) maintains that colleges were not ready to answer questions about quality, student assessment, and resource use; "the institutions themselves have played perhaps the biggest part in laying the groundwork for state-sponsored assessment initiatives" (p. 35). Alexander (2000) comments that "[e]arlier attempts by states to measure institutional efficiency and performance have generally been met with passive resistance or benign neglect in academic circles" (p.

411). Thus, passivity of institutions has also been a key factor in the growth of government interference in the higher education arena.

Performance funding has been an offspring of the general accountability movement. It emerged as part of "the contemporary movement to hold public higher education to rigorous accountability standards devised by state policymakers and increasingly tied to budget allocations" (Zumeta, 2001, p. 188). This policy intended to balance external accountability with institutional improvement and state priorities with academic goals. Also, it has been a policy response to external pressures to demonstrate the effective use of public funds (Burke & Associates, 2002; Burke & Modarresi, 2000). However, in its first reincarnation, performance funding has often proved controversial in nature, difficult in implementation, and weak in effects on institutional performance. As a result, many programs adopted by states in different years ended up as policy failures.

Aspects and Precursors of Performance Funding

The concept and implementation of performance funding have departed from traditional higher education practices in the following areas: outcomes assessment and accountability, institutional improvement and quality enhancement, resource allocation and budgeting, and state and market relationships in higher education reform. Thus, four perspectives are useful for understanding this policy holistically: performance funding as (a) an accountability tool, (b) a means of institutional improvement and quality enhancement, (c) a budgetary and resource allocation tool, and (d) an expression of higher education privatization and corporatization. In each of these areas, performance funding had specific precursors, which it came to supplant or supplement.

Precursors of Performance Funding as an Accountability Tool

The accountability movement has progressed through three main stages: outcomes assessment, performance reporting, and performance funding (Burke & Modarresi, 2000**)**. Thus, performance funding had two precursors in the area of higher education accountability: outcomes assessment and performance reporting. These policies were the most popular state accountability systems in the 1980s. Neither outcomes assessment nor performance reporting has gone completely away with the advent of performance funding: Many states have implemented these policies concomitantly. In some periods, performance reporting has been more popular than performance funding and performance budgeting (Burke & Minassians, 2002, 2003).

Outcomes assessment. A growing popularity of the concept of higher education accountability was the key factor behind the assessment movement (Astin, 1990). In the 1980s, the issues of quality and accountability dominated the public discussions (Freeman, 2000). State legislatures were concerned with assessment of educational performance, development of accountability measures, improvement of productivity, and reallocation of resources (Bogue, Creech, & Folger, 1993). Such pervasive push for accountability led to development of performance and outcomes measures aimed at evaluating institutional effectiveness. As a result, in the last half of the 1980s, outcomes assessment began to dominate accountability (Ewell, 1996; Layzell, 2001).

Although statewide assessment systems spread swiftly across the country, their overall impact on institutions was insignificant and mostly disappointing to policymakers (Burke, 2001a). Outcome assessments did not provide credible and comparable evidence of institutional performance that officials desired (Ewell, 1996). Serban (1998) suggests

that outcomes assessment was abandoned due to its inability to meet the accountability demands of state policymakers and because of the 1989-1990 state fiscal crisis. According to Burke (2001a), "[t]he failure of assessment to achieve accountability led states to adopt performance policies with teeth" (p. 4). Thus, in the late 1980s and early 1990s, many states turned to performance reporting (Ruppert, 1994).

Performance reporting. In the 1990s, the thrust of the accountability movement switched to performance indicators (Bogue & Hall, 2003). "[O]utcomes indicators have emerged as an instrumental economic rationality devised to improve institutional efficiency and effectiveness" (Alexander, 2000, p. 419). During that time, the major emphasis was placed on information, that is, reporting data on institutional performance and results to state legislatures, state agencies, and the public (Zumeta, 2000).

Performance reporting focused on undergraduate education and pursued the following goals: demonstrating accountability; improving institutional performance; meeting state needs, especially ones pertaining to economic development; and increasing state funding for institutions, which was the tacit goal of campus leaders (Burke, 2001a). In contrast to institution-based and internally focused assessment, performance reporting used comparable metrics among institutions.

By 2000, 30 states introduced performance reporting (Burke, 2001a). However, despite this widespread policy adoption, the extent to which policymakers used its results and its effects on campuses were unclear. Performance reporting was information-driven but it did not offer any financial incentives. "The lack of fiscal consequences helps to explain the neglect of the performance reports by state and campus policy makers. Policies not connected to budgets get little attention in state capitals or on college

campuses" (Burke, 2001a, p. 7). Policymakers started to doubt that performance reporting can hold institutions fully accountable and attempted to link funding to measured performance on specific indicators (Zumeta, 2001). Thus, moving from performance reporting to performance funding seemed a logical step to state officials (Burke & Modarresi, 2000).

This paradigm shift in accountability took place in the 1990s: The focus switched from assessment to linking funding and performance (Burke & Serban, 1998a). "Budgeting has shifted from what states should do for their campuses to what campuses should do for their states" (Burke & Serban, 1997, p. 1). Unlike mostly voluntary systems of the 1980s, new accountability policies became mandatory for institutions (Layzell, 1999). Performance funding drew on the experiences of assessment and performance reporting; however, it had similar shortcomings (Burke & Modarresi, 2000).

Precursors of Performance Funding as a Quality Enhancement Tool

Performance funding has departed from traditional methods of quality assurance in higher education, such as accreditation, academic program review and audit, licensure and certification, follow-up studies of client satisfaction, outcomes assessment, and college rankings and ratings (Bogue & Hall, 2003). It has also been different from quality enhancement methods imported from the for-profit sector. Performance funding has not been intended to replace the traditional quality assurance methods; on the contrary, it aimed to strengthen all institutional efforts to enhance educational quality.

Accreditation. Accreditation is defined as "a process by which an institution of postsecondary education evaluates its educational activities, in whole or in part, and seeks

an independent judgment to confirm that it is substantially achieving its objectives and is generally equal in quality to comparable institutions of postsecondary education" (Young, Chambers, Kells, & Associates, 1983, p. xi). This evaluative method conducted by regional agencies has been traditionally used to ensure higher education quality. The most fundamental purposes of accreditation, which make it kindred to performance accountability policies, are ensuring quality and aiding in institutional and programmatic improvement (Bogue & Hall, 2003). At the same time, its key difference from performance accountability systems is that accreditation focuses on individual institutional reports and avoids interinstitutional comparison (Wellman, 2001).

Total Quality Management (TQM). TQM originated in the for-profit sector and made its way into higher education as part of quality enhancement initiatives (Seymour, 1992, 1995; Bogue & Hall, 2003). Thus, quality management cannot be considered a traditional approach to quality assurance in higher education.

According to TQM, the primary purpose of an organization is to stay in business and it should do by meeting customer needs through continuous quality improvement, process analysis, and performance measurement (Deming, 1986; Hackman & Wageman, 1995; Ishikawa, 1985; Juran, 1974; Marchese, 1993; Oakland, 2003; Ross, 1993; Seymour, 1992). As Hackman and Wageman (1995) put it, "A fundamental premise of TQM is that the costs of poor quality […] are far greater than the costs of developing processes that produce high-quality products and services" (p. 310). Thus, organizational survival directly depends on producing quality products and services (Deming, 1993).

These concepts are important to performance funding, too; however, analysts diverge on the role of TQM in ensuring quality in higher education. Some observers

argue that TQM has been another "management fad": It arrived with a great promise, had only a modest impact—mostly on the administrative side, and quietly departed from campuses due to implementation difficulties and a lack of a consensus regarding higher education quality (Birnbaum, 2000; Bogue & Hall, 2003; Marchese, 1996). However, others assert that strategic quality management is still a better way to manage higher education in the era of consumerism (Seymour, 1992, 1995). As Owlia and Aspinwall (1997) note, "The problems that exist with TQM in higher education, however, should not overshadow the necessity for change in this area" (p. 540) and "there appears to be no apparent reason for rejecting the applicability of TQM as a 'general philosophy'" (p. 541).

Outcomes assessment. Student Outcomes Assessment of the 1980s was also a tool of institutional improvement. Assessment was mostly campus-based: Institutions were held responsible for designing and implementing internal programs of institutional assessment (Ruppert, 1995). According to Neal (1995), "assessment strategies were internally focused, institutionally developed, and largely voluntary in nature" (p. 6). Thus, the major focus of the movement was on institutional improvement, and accountability was more of a "by-product when institutions provided qualitative evidence of assessment activities" (Ruppert, 1995, p. 16). The major contribution of assessment was that it "promoted a new notion of institutional quality based on results not resources, on performance not prestige" **(**Burke, 2001a, p. 4); this notion was later borrowed by performance reporting and performance funding.

Precursors of Performance Funding as a Budgetary Tool

Linking fiscal resources to demonstrable results represents a departure from traditional budgeting approaches—formula, incremental, and initiative budgeting—which focus on inputs and processes and do not consider performance in resource allocation (Burke & Associates, 2002). Performance funding was rooted in popular budgetary reforms of the 1960s, 1970s, and 1980s (Anders, 2001; Burke & Serban, 1998a; Hager, Hobson, & Wilson, 2001); and it came to supplement, and not to replace, the traditional resource allocation practices. Prior to performance funding, annual performance reporting and resource allocation indicators had been used in the following budgetary approaches: Program Budgeting (PB), Program Planning Budgeting Systems (PPBS), and Zero-Base Budgeting (ZBB) (Pyhrr, 1977; Schick, 1977, 1979). As a concept, Performance-Based Budgeting (PBB) preceded these approaches, but it was not widely adopted until later.

Program Budgeting and **Program Planning Budgeting Systems**. PB and PPBS, which emerged in the 1950s and 1960s, were the first approaches that considered performance in the budgeting process (Schick, 1966). These budgeting methods emphasized a link to program objectives and planning, related quantifiable objectives to activities, and assigned costs and benefits to programs and not to units. The underlying idea was directly related to performance: Output categories should be considered in budgetary decisions together with input categories and performance should be improved through allocating funds to the most effective means for attaining program goals (Anders, 2001; Downs & Larkey, 1986; Pilegge, 1992). Also, "[a]n advantage of program

budgeting is that the grouping of similar alternatives into a program may encourage competition among them to meet the program's objectives" (Hager et al., 2001, p. 8).

Zero-Base Budgeting. ZBB "was implemented by some governments in the 1970s as a way to prioritize among different programs and to increase accountability" (Hager et al., 2001, p. 9). ZBB gained popularity in the 1970s: It was adopted by the federal government and by roughly half the states by end of the decade (Schick, 1979). However, it was never widely used because of its cumbersomeness (Hager et al., 2001).

This budgeting method requires evaluating all programs and activities and appraising performance and costs (Anders, 2001, p. 19). This method identifies measurable objectives and rank-orders "decision packages" of programs and activities, based on their current, reduced, and increased levels of funding. In other words, budgeting units propose what they would be able to accomplish at different funding levels, and decision makers select the most effective package from a group of possible choices (Hager et al., 2001; Pyhrr, 1977; Schick, 1979). Thus, ZBB prioritizes all programs and activities and examines each budgeting unit starting from zero in each budgeting period (Hager et al., 2001). ZBB uses the following performance-based component: Each program and activity has to justify its existence and continued support. Also, "officials are accountable for the performance of their entire program, not just for proposed changes" (Hager et al., 2001, p. 9).

Performance-Based Budgeting. PBB, or simply, performance budgeting, holds public agencies accountable for achieved results and links state appropriations to outcomes of individual programs; its focus on the outcomes is more pronounced than in any prior budgetary method (Hager et al., 2001). As a concept, performance budgeting

originated in the 1950s due to the Hoover Commission's work and was later used by the federal and state governments with varying success (Jordan & Hackbart, 1999). The interest in PBB was renewed by the 1993 Government Performance and Results Act and the passage of performance budgeting state legislation in the early 1990s. Eventually, higher education borrowed performance budgeting from other government-supported services. Burke and Minassians (2003) report that there were 16 states with performance budgeting in the higher education sector in 1997, 28 states in 2000, and 21 states in 2003. The focus of performance budgeting on outcomes, accountability, and efficiency increased the visibility of performance accountability policies and encouraged consideration of all approaches by state policymakers.

The above methods and approaches were attempts to rationalize budgeting. However, in higher education, these budgeting methods were limited to the institutional level and turned out to be short-lived. Higher education generally adopted these management and budgetary practices at a time when the government and corporate worlds were already giving up on them and eventually abandoned them as well (Birnbaum, 2000; Bogue & Hall, 2003). According to Serban (1998):

> [T]hese budgetary reforms created the basis for the reforms of the 1990s through the attempts made to use performance indicators in the state budgetary process for public higher education and, in several instances, linking part of the funding for public colleges and universities to performance indicators. (p. 18)

Reinventing government. A political development, the Reinventing Government movement, was instrumental in dissemination of performance-based budgeting and similar approaches. It aimed to make governments more responsive to citizens by using the corporate customer service model and focusing on results and

competition (Hollings, 1996; Osborne & Gaebler, 1992). "[I]n government, the most important lever—the system that drives behavior most powerfully—is the budget" (Osborne & Gaebler, 1992, p. 161); therefore, resource allocation was deemed to be a way to alter agencies' behavior. Such ideas were not particularly new: "Budgeting based on results got a big push from the popularity of Osborne and Gaebler's 1992 book *Reinventing Government*, but the logic behind performance budgeting was already well known" (Hager et al., 2001, p. 10). Nevertheless, this movement contributed to the emergence and spread of performance-based resource allocation methods.

The most recent budgetary reform effort in the higher education arena, performance funding, has shifted the focus from institutional needs to results in policy areas important to the states (Serban, 1998). At the same time, performance funding was intended not to replace the core funding methods but to supplement them.

Precursors of Performance Funding as a Corporatization and Privatization Tool

An often-cited driving force behind performance accountability is raising institutional productivity and efficiency through redefining the relationships between higher education and state government, between higher education and the corporate world, and among institutions. From this perspective, performance funding introduction is an effort to bring market forces into higher education and make higher education more businesslike. These goals are consistent with neoliberal ideology and practices and with ideas of higher education corporatization (Barrow, 1990; Green, 2003; Johnstone et al., 1998; Saunders, 2010).

Performance funding introduces "quasi-markets," which create competition among institutions and encourage them to adopt practices and norms typical of the private business sector. Aiming to steer institutions in the desired direction, this policy provides financial incentives and creates "a 'market' interaction between the regulator and the regulated" (Soo, 2003, p. 2). Institutions have to justify public support and, in some cases, compete for additional money or a portion of the base funding. This marketlike competition is intended to improve institutional performance.

Adoption of business practices can be an indicator of the drift toward higher education corporatization. Using performance benchmarks and linking results to financial incentives have clear corporate origins, and the higher education community was often loath to go in that direction. Frequent campus opposition to the advent of performance funding has stemmed from the clash between corporate and academic values (Birnbaum, 2000; Burke & Associates, 2002; Natow & Dougherty, 2008).

The precursors of performance funding in this area are various approaches, which are aimed at "creating more market-driven college and university decision systems and services" (Gose, 2002). These practices include two main groups: (a) Incentive funding methods—namely, initiative funding, categorical funding, and block grants—which provide grants in advance to encourage desired activities (Serban, 1998); and (b) Efficiency enhancement methods: Management by Objectives (identifying units' objectives according to the organizational goals and measuring progress toward them), the use of benchmarks (performance indicators) and institutional audits (Birnbaum, 2000; Wellman, 2001). The first group of initiatives creates quasi-markets, meant to stimulate

compliance with state agendas and instigate adoption of the private sector operational norms; the second group introduces performance assessment systems.

The 1993 book *Reengineering the Corporation* (Hammer & Champy, 1993) inspired a discussion about applying Business Process Reengineering to higher education in order to transform institutions into effective sets of business processes and practices (Birnbaum, 2000; Green, 2003). These developments took place around the same time as performance funding and, thus, cannot be considered its precursors. Nevertheless, the Reengineering Movement was rather instrumental in states' consideration and adoption of performance funding and other accountability systems (Burke & Associates, 2002).

To conclude this section, performance funding has emerged as a result of the convergence of multiple forces and factors that coexisted in different areas and at different levels. It became a policy response to a variety of influences, stimuli, concerns, and issues. As a result, it has evolved into a multifaceted policy with a checkered history of implementation, which requires a comprehensive analysis from multiple perspectives.

Conceptual Frameworks for Policy Adoption and Failure

This study focuses on two key events in the performance funding policy lifecycle: adoption and failure. I am interested in how long states maintain a specific status regarding the policy—preoperational, operational, or nonoperational status—before they make the respective policy changes (adoption, failure, or readoption). Of primary interest are (a) the factors that determine the occurrence of events, or transition into a new status, and (b) the length of time in a particular condition. In this study, I propose the following theoretical lenses for explaining the emergence and demise of performance funding

policy systems: the electoral connection frame, the political environment frame, the policy diffusion frame, and the principal-agent frame. In the subsequent sections, I apply these theoretical frames to the analysis of performance funding adoption and failure. I also consider each conceptual lens at length in Chapter 3.

Prior Research on Performance Funding Adoption

Before discussing the proposed frames, I examine the contribution of a study that is of special importance to this research. This importance stems from a partial similarity in research questions and methods and the significance of this study's findings. To date, McLendon, Hearn, and Deaton (2006) have conducted the only analysis that quantitatively examined the antecedents of performance accountability policies across the states and over time. Their findings, frequently referred to in this dissertation, are critical to the understanding of performance funding evolution and my hypotheses.

McLendon et al. (2006) examined state-level factors that determined adoption of three accountability policies: performance funding, performance budgeting, and performance reporting. To this end, the researchers employed a policy innovation and diffusion framework (Berry & Berry, 1990, 1992) and the analytical technique of event history analysis. By testing ten hypotheses regarding adoption of performance accountability policies, they examined the role of the states' internal characteristics and interstate policy diffusion. Their predictors included states' educational attainment, change in gross state product, legislative professionalism, percentage of Republicans in the legislature, gubernatorial power, Republican gubernatorial control, change in tuition at state flagship universities, change in public higher education enrollment, the presence

of consolidated governing boards, and the percent of bordering states with similar policies (pp. 8-9). The findings relating to performance funding are discussed in the respective sections; these findings supported the researchers' hypotheses only in part.

There are some similarities between this research and McLendon et al.'s (2006) study: Both investigations address the determinants of performance funding adoption (although the latter also examines adoption of two other policies) and both use event history analysis as the primary analytical method. However, this study is different from McLendon et al.'s (2006) research in several respects. First, while focusing on just performance funding, I study the entire policy lifecycle. In other words, I simultaneously analyze the determinants of policy adoption, failure, and readoption. This approach allows me to model performance funding evolution more precisely and in greater detail. It also requires using a more sophisticated form of event history analysis than has been used previously in the policy adoption and diffusion literature.

Second, I propose a different interpretation of an operational state policy. I steep it in the discussion of institutions' reaction to performance funding and directly relate policy existence to the government's decision to fund it. This approach marks a sharp distinction from McLendon et al. (2006), who employed the initial government's decision to adopt a policy as the single criterion for its existence. This discrepancy in the policy conceptualization provides for different findings and their interpretations.

Finally, McLendon et al. (2006) used the policy innovation and diffusion frame (Berry & Berry, 1990, 1992), while I employ four distinct theoretical frames—each with its own set of hypotheses—to investigate the factors influencing performance funding

evolution. This approach ensures greater conceptual clarity of policy development and allows using more predictors.

The Electoral Connection Frame: Introduction

The fundamental idea of the electoral connection theory is straightforward. It postulates that when considering a policy shift, politicians reckon with voters' opinions and wishes. However, this simple idea has consequential theoretical ramifications, which may rapidly become involved. This section considers key developments of the electoral connection theory.

The basic assumptions of this frame are as follows: Voters and policymakers are rational actors trying to maximize their own utility and anticipating each other's preferences. Constituents vote based on their preferences and are aware of the incumbents' policy positions. Rational voters decide which party will benefit them most and whether it has any chances of winning. The public evaluates candidates for office based on how their platforms align with its ideological preferences, votes for politicians whose policy positions are closest to its preferences, and withdraws support of politicians who do not align with its preferences. Constituents expect incumbents to adopt policies in response to their concerns, crises, or inadequate state performance. In turn, rational policymakers are driven by their desire to be elected and adopt or abandon policies based on voter preferences. Responsiveness to voter preferences makes parties in power converge around the preferences of the median voter and enact policies that are aligned with these preferences (Ahmed & Green, 2000; Bergstrom & Goodman, 1973; Borcherding & Deacon, 1972; Bowen, 1943; Craw, 2008; Downs, 1957; Erikson, Wright,

McIver, 1989; Farnham, 1987; Fenno, 1978; Mayhew, 2002, 2004; Robers, 1977; Romer & Rosenthal, 1984; Shafritz, Layne, & Borick, 2005; Stevens, 1993).

One central assumption of this theory is the rationality of the actors' behavior. Rationality assumes that the decision-making process aims to produce outcomes that maximize the values of decision makers (Birnbaum, 1988). Allison and Zelikow (1999), note, "to choose rationally is to select the most efficient alternative, that is, the alternative that maximizes output for a given input or minimizes input for a given output" (p. 17).

This frame also assumes that voters are knowledgeable about incumbents' policy positions and can influence policy development through their influence on elected officials via the voting mechanism. In the situation when incumbents have more knowledge about policies than voters, elections become the main tool of citizens' control over government and voting is the primary incentive to discipline politicians (Besley & Case, 1995; Rogoff, 1990; Weissberg, 1976).

The above assumptions include key features of the following ramifications of the electoral connection theory: the median voter theorem, the political business cycle, the yardstick competition, and the issue attention cycle. If one accepts the above assumptions, these developments of the electoral connection theory lend themselves to empirical testing.

Median voter theorem. The median voter theorem has been widely employed in economic and political research. The works by Hotelling (1929), Bowen (1943), Downs (1957), Black (1958), Roberts (1977), and Meltzer and Richard (1981) laid the foundation for this theory. Some subsequent studies provided evidence supporting its assumptions (Husted & Kenny, 1997; Lindert, 1994, 1996; Mueller, 1989; Mueller &

Stratmann, 2003), while other studies refuted them or supported them only partially (Bernstein, 1989; Fiorina, 1974; Romer & Rosenthal, 1979; Rosen, 1988).

The median voter is the enfranchised citizen situated in the middle of a distribution of single-peaked preferences along a single evaluative dimension. In other words, there are equal numbers of voters below her, with preferences for less, and above her, with preferences for more (Black, 1958; Doyle, 2007b; Stevens, 1993). The theory showed that the median voter is always the winner: Her vote becomes decisive and her utility is maximized. However, for this to happen, the following conditions must be met: (a) preferences are single-peaked and there is one unifying dimension, (b) there is universal suffrage and majority rule and everyone votes, and (c) there is repeated voting (Black, 1958; Meltzer & Richard, 1981; Roberts, 1977; Stevens, 1993).

The first condition may seem unattainable in the real world. However, Downs (1957) and later Romer and Rosenthal (1984) suggested ideology—that is, political preferences along the liberal-conservative continuum—as a single dimension in which voter preferences are single-peaked. Such a unifying ideological dimension provides for greater stability in the political process (Romer & Rosenthal, 1984). The median voter is thus situated in the middle of a distribution of political preferences. On a liberal-conservative spectrum and under universal franchise and majority rule, the median voter prevails (Downs, 1957; Romer & Rosenthal, 1984; Stevens, 1993).

Alternatively, the median voter can be conceptualized as a voter with the median income; median income is often used as a proxy for the median voter in economic studies (Bergstrom & Goodman, 1973; Inman, 1978; Kearns, 1994; Meltzer & Richard, 1981; Romer & Rosenthal, 1982). In the words of Kearns (1994), “Since the median voter is

not definable, a convenient proxy has often been used—the voter with the median income level" (p. 345). Certainly, in this conceptualization, the median voter is also the winner. Meltzer and Richard (1981) demonstrate that under universal franchise and majority rule, the voter with the median income is decisive in single-issue elections (pp. 920-923).

In addition to the majority rule, the second condition requires that everyone vote, which also happens rarely. Voting abstentions provide for the emergence of a new median voter, the pivotal voter, among those who participate in voting. The pivotal voter is different from the true median voter, and this difference depends on the extent of non-voting (Stevens, 1993). According to the third condition, the median voter maximizes her utility only if a series of votes is taken. In theory, the median voter can reach her position if there is voting without limit.

To summarize, the median voter is decisive and prevails under majority rule, universal franchise, and repeated voting; in other words, her utility is maximized if all the above conditions are met (Meltzer & Richard, 1981). Responding to voter preferences, incumbent politicians act cautiously so as not to be seen as taking positions. As a result, parties in power converge on the preferences of the median voter and move to the center of the political spectrum (Downs, 1957; Fenno, 1978; Mayhew, 1974, 2002; 2004). As Mayhew (2002) notes, "To the extent that parties and candidates seek election victories above all else, they will tend to converge at the voter median and bring on close elections" (p. 148).

Political business cycle. The second theoretical offshoot of the electoral connection frame is the notion of the political business cycle or the "politically induced cycles" (Nordhaus, 1975, p. 181). This concept places emphasis on the importance of the

electoral cycle and the electoral considerations of politicians. It focuses on two major factors: proximity of elections and electoral competition. This perspective states that the responsiveness of elected officials to voter preferences is cyclical and is moderated by the timing and intensity of elections. To ensure electoral advantage, politicians use policymaking strategically and pragmatically in order to please constituents closer to the election time. Thus, this concept—analogous to business cycles in the private sector—focuses on the role that the electoral cycle plays in making policy shifts (Nordhaus, 1975; Rogoff, 1990; Tufte, 1978).

The political business cycle is based on the following assumptions: Rational incumbents and voters anticipate elections to maximize their utility. Policymakers and parties seek electoral advantage through manipulating policies in a systematic manner. Voters have a short (decaying) memory of past events; thus, recent performance of candidates for office has a great effect on voters' expectations of their postelection performance. If officials' recent performance pleases voters and meets their preferences, constituents reward incumbents with votes. In turn, politicians also anticipate voters to pay closer attention to their positions and performance as the election draws near. To enhance their reelection prospects, incumbents seek to please constituents closer to the election time. Thus, policymakers are more likely to adopt popular policies with high immediate visibility closer to elections. Electoral timing and electoral competitiveness affect various policy outcomes (Besley & Case, 1995, 2002; Lindbeck, 1976; Nelson, 2000; Nordhaus, 1975; Rogoff, 1990; Tufte, 1978).

Two key factors constitute the functioning of the political business cycle: (a) rational anticipation of voter myopia (decay of voter memories) on the part of incumbents

and (b) strategic manipulation of government policies by policymakers aimed at obtaining electoral advantage. As Rogoff (1990) puts it, "[a]ny incumbent politician, regardless of his ideological stripes, wants to convince voters that he is doing an efficient job running the government" (p. 21). Politicians take advantage of the supposition that "[o]n election day, the memory of recent events is probably more poignant than that of ancient ills" (Nordhaus, 1975, p. 182). Parties act strategically to pursue the goals of reelection and policy enactment (Barrilleaux, Holbrook, & Langer, 2002). Therefore, the pursuit of this optimal partisan policy produces a political business cycle, which is characterized by a predictable policy pattern (Nordhaus, 1975). This pattern involves adopting more austere policies early in the term and more voter-pleasing policies closer to elections. Adopting voter-pleasing policies in the election year increases the incumbents' chances of reelection. In contrast, the least popular policies are more likely to be enacted immediately after the elections: Officials would like to adopt them early in the term in the hope that voters' attention will be drawn to other things by the time of the next election (Nelson, 2000; Nordhaus, 1975; Rogoff, 1990).

The concept of the political business cycle may be deemed as antithetical to the Downs's model in that "[r]ather than converging at the median, parties and candidates engage in a variety of activities designed to win votes" (Barrilleaux et al., 2002, p. 419); in other words, parties strategically adapt their policymaking to electoral circumstances.

The original formulation of the political business cycle by Nordhaus (1975) has been criticized on theoretical grounds (Alesina, Cohen, & Roubini, 1992; Nelson, 2000). However, the subsequent studies also showed the importance of accounting for electoral circumstances and politicians' responses to them (Barrilleaux, 1997; Barrilleaux et al.,

2002; Besley & Case, 2002; Doyle et al., 2010). Thus, the role of electoral timing and electoral competitiveness in making public policy shifts deserve more analytical attention and empirical testing.

Yardstick competition. Another theoretical development of the electoral connection frame is the concept of yardstick competition. Its basic idea that the performance of others is used as a benchmark for evaluation was adapted by Besley and Case (1995) from the studies of firms (Shleifer, 1985). This perspective suggests that voters appraise relative performance of incumbents (i.e., against the performance of their counterparts in neighboring states) and base their voting decisions upon such evaluations. "From the media or other sources, voters can gain access to information about what other incumbents are doing, which serves as a benchmark for their own jurisdiction" (Besley & Case, 1995, p. 30). As a result, reelection results depend both on the internal policy features and policy characteristics of nearby states. Consequently, yardstick competition is an influential factor in the political business cycle, and voters' comparative evaluation of incumbent performance becomes a major driving force for policy competition between governments at different levels (Besley & Case, 1995; Rincke, 2004).

Besley and Case (1995) offer an illustration of states' tax-setting behavior:

> In a world in which voters make comparisons between states, incumbents may look to other states' taxing behavior before changing taxes at home. This would give rise to a kind of (yardstick) competition between jurisdictions, each caring about what the other is doing. (p. 25)

The key assumptions of this perspective include the following. There is information asymmetry between rational and utility-maximizing politicians and their constituents; the former are better informed about the policy process and its prospects,

thus, the latter have to rely on comparative performance evaluation. To evaluate performance of their elected officials, voters look to neighboring states for information and use them as benchmarks for assessing performance of their own state. The public expects policymakers to make a policy change if they believe that their state is not keeping up with its neighbors. Responding to voter preferences, incumbents enact policies similar to the ones in the nearby states. Thus, policy shifts may occur if constituents perceive that their state is behind its neighbors in some respects. Because voters do not want to be too different from what they observe in other states, states attempt to get in line with each other. Thus, relative evaluation of incumbents' performance by voters may lead to strategic interaction between governments in adoption of policy innovations (Besley & Case, 1995; Rincke, 2003, 2004; Rork, 2009).

Examining political consequences of tax increases, Besley and Case (1995) find support for the idea of yardstick competition: "The results […] suggest that voters are sensitive to the tax changes they face, relative to those observed in neighboring states, and that this sensitivity translates into votes against an incumbent whose tax changes are high by regional standards" (p. 36).

Several follow-up studies investigated and discovered various effects of yardstick competition among states and local districts both in this country and abroad (Allers & Elhorst, 2005; Brueckner, 2003; Edmark & Agren, 2008; Rincke, 2003, 2004; 2009; Rork, 2009). However, it is important to test the role of yardstick competition in adoption and failure of other state public policies, including higher education policies.

Issue attention cycle. Another major outgrowth of the electoral connection theory is the concept of the issue attention cycle; this notion is based on the cyclical view

of policy shifts in agenda-setting (Downs, 1972). According to this perspective, public perception of existing problems "reflects the operation of a systematic cycle of heightening public interest and then increasing boredom with major issues" (p. 39). In other words, the public attention to an issue is piqued initially; however, at later stages of policy evolution, it gradually declines. Importantly, the objective status of the issue may be unrelated to the rise and decline of the popular interest and is determined more by the dynamics of the issue-attention cycle itself.

The cycle includes five stages: the pre-problem stage, alarmed discovery and euphoric enthusiasm, realizing the cost of significant progress, gradual decline of intense public interest, and the post-problem stage, or moving of the issue into "prolonged limbo" (Downs, 1972). This perspective is important because it offers rationale for the emergence and abandonment of public policies in various policy domains. When public attention to the issue is piqued, politicians are more likely to adopt respective policies; when it declines, policymakers are more likely to discontinue policies that are too costly or difficult to implement. Thus, the first two stages explain the rise of the issue on the policy agenda, while the dynamics of the last three stages could provide for a policy failure, especially if the policy faces significant implementation problems. The specific operation of the cycle and duration of each stage depend on the issue and respective policies (Cram, 2001; Downs, 1972; Hall, 2002; Peters & Hogwood, 1985; Wrobel & Connelly, 2002, 2004). To be sure, the natural evolution of the median voter's preferences and respective policy shifts may also lead to the policy's demise.

The above ramifications of the electoral connection theory have been empirically tested in various contexts and demonstrated that electoral politics is of utmost

importance. First, studies of federal and state legislators showed that reelection concerns underlie all actions of elected officials, who seek to increase their voters' trust and support and ensure electoral advantage (Fenno, 1978; King, 2001; Mayhew, 1974, 2004). Also, responsiveness of political parties to state public opinion was found to determine their electoral advantage and success, and electoral circumstances were found to affect government strength of political parties (Barrilleaux et al., 2002; Erikson et al., 1989).

Second, the functioning of the political business cycle was tested in multiple studies with mixed empirical support for this concept (Alesina, 1988; Barrilleaux et al., 2002; Besley & Case, 1995; Bizer & Durlaf, 1990; Mikesell, 1978; Nelson, 2000).

Third, the median voter models were mostly used in the studies of government spending and state budgets (Ahmed & Greene, 2000; Bergstrom & Goodman, 1973; Craw, 2008; Husted & Kenny, 1997; Inman, 1978; Kearns, 1994; Lindert, 1994, 1996; Mueller & Stratmann, 2003; Romer & Rosenthal, 1982) and electoral competition (Barrilleaux et al., 2002; Fiorina, 1974).

Finally, several studies tested the concept of the issue attention cycle (Downs, 1972) in various policy domains and national contexts and found it applicable to particular policy issues (Cram, 2001; Hall, 2002; Henry & Gordon, 2001; Peters & Hogwood, 1985; Wrobel & Connelly, 2002, 2004; 2006).

To summarize, when considering a policy change, incumbents keep voter preferences in mind. At the same time, voters are unlikely to control the agenda because they lack incentives to do so and are generally politically inactive (Stevens, 1993). Unlike policymakers who have incentives to form coalitions, voters yield agenda control to state legislatures and government agencies. Stevens (1993) explains this point:

> A voter who has intense preferences [...] might agree with other voters that they should support a particular course of action, but ironically, the secrecy of the voting booth may cause the costs of monitoring each other's actions to be infinitely high. [...]. This difference in incentives suggests that legislators will be politically active but that voters will be politically inactive. (p. 293)

For the purposes of this study, the electoral connection frame emphasizes the role of voters in performance funding policy changes and is based on the notion of rational, utility-maximizing behavior on the part of both voters and elected officials.

Performance Funding Through the Electoral Connection Lens

From the electoral connection perspective, elected officials are responsive to voter preferences because they are driven by the desire to get reelected into office (Fenno, 1978; Mayhew, 1973, 2004). This research examines whether such motivation of legislators, coupled with their assumed rationality in making decisions and changes in voter preferences, can affect performance funding policy shifts. If one assumes that accountability policies, including performance funding, enjoy public support, then one could expect elected officials to adopt these policies rationally and strategically in order to please their constituencies and respond to their concerns regarding higher education.

There have been significant changes in voter preferences and legislative concerns over time. In the era of higher education expansion, the policy focus was on access and equity; both the public and legislators were concerned with ensuring access to higher education for growing student populations and with equitable resource distribution among sectors and institutions. However, since the advent of the accountability movement, the focus has shifted to making colleges responsible for the effective use of public support and the production of the desired outcomes (Burke & Associates, 2002).

Through elected officials, taxpayers control one of the two main revenue sources for higher education—general fund state appropriations (Deaton, 2006). "Linking performance to appropriations gives policy makers and customers a clearer sense of how the public's investment in education is being used" (Carnevale, Johnson, & Edwards, 1998, p. B7). In the present context, accountability has acquired a distinct financial character: There is a "growing demand that colleges do a better job of accounting for how they spend tax dollars" (Carnevale et al., p. B6).

Due to the emergence of the results paradigm (Burke & Serban, 1997), both the public and politicians have become interested in getting "more bang for the buck," demanding greater output for the public resources provided. It has become unacceptable to taxpayers and elected officials to fund resource inputs but ignore performance results (Burke, 2002c). "Taxpayers are not likely to accept the concept that results count in every endeavor except government budgeting" (Burke & Serban, 1997, p. 5). This shift in legislative and voter preferences led to adoption of performance-based policy reforms, which are results-focused, market-oriented, and information-driven. From this position, the accountability reforms have been implemented in response to increasing public call for accountability (Burke, 2005a; Carnevale et al., 1998; Ewell, 2003).

This general explanation, commonly offered in the literature, identifies key factors that could have caused the emergence of the accountability movement and adoption of performance accountability policies. However, it does not explain why, in their pursuit of higher education accountability, certain states opted for performance funding out of several available alternatives. If one assumes that voter preferences had been the primary driver of performance funding emergence, this assumption begs the

question, Why would voters push for performance funding, given the buffet of other policy options, some of which may already exist in the state? Within the electoral connection framework, it remains largely unclear whether state officials respond to voter pressure for a specific policy or they exercise discretion in responding to general and vague public calls for higher education accountability and efficiency.

A partial answer to this question is offered by the above idea of yardstick competition (Besley & Case, 1995). According to this perspective, voters pressure officials to adopt policies similar to the ones that they perceive as effective and advantageous in neighboring states. Thus, in certain contexts, performance funding could have been adopted as a result of yardstick competition among states, that is due to voter pressure to enact this policy because of its visibility and perceived effectiveness in contiguous states. The chronology of performance funding adoption across states demonstrates distinct regional patterns in the policy spread: States generally seem to have borrowed this policy from its neighbors. Thus, it would seem that yardstick competition is a valid explanation of performance funding migration among states. However, a different causal mechanism—diffusion of policy innovation among states due to mutual social learning (Walker, 1969; Berry & Berry, 1999)—may have created the same chronology and policy spread. I consider the concept of policy diffusion later in this chapter and in Chapter 3.

The electoral connection frame explains the policy demise by changes in voter preferences, dynamics of the political business cycle, negative examples of other states, and policy evolution through the issue attention cycle. However, these models cannot fully explain differences in performance funding longevity, offer little understanding of

differences in policy failure determinants among states, and do not account for various types of policy failure.

McLendon et al.'s (2006) study was the first comprehensive empirical investigation of the factors affecting adoption of performance accountability policies. Some of their hypotheses are relevant to the electoral connection frame. For example, they hypothesized that (a) "pressures on public higher education to demonstrate its performance will be greatest in those states where levels of educational attainment are lowest" (p. 5); (b) "states with poorer economic climates will have heightened incentives for ensuring that public agencies are making wise use of limited public resources" (p. 5); and (c) states experiencing rapid growth in undergraduate tuition levels will be more likely to adopt performance policies. The researchers relate the last factor to the role of state officials, which is more in line with the political environment frame. However, it is possible to reconceptualize this factor in terms of voter pressure to hold institutions accountable in the times of escalating higher education costs. It is important that McLendon et al.'s (2006) find no empirical support for these hypotheses.

I conclude that the electoral connection frame can explain some factors and dynamics of the accountability movement and performance funding policy shifts. However, it fails to explain why states choose performance funding out of several alternatives and what other factors—besides changing voter preferences, electoral timing, and waning public interest in the issue—may contribute to policy failure. Another shortcoming of this frame is that it disregards the independent role of state policymakers in affecting policy adoption and failure. The electoral connection frame also fails to consider the influence of various interest groups, for instance, organized business

interests, that influence policy outcomes. Most important, this frame does not fully explain the mechanisms by which general voter preferences are translated into specific policies through the political process of policymaking.

The Political Environment Frame: Introduction

The political environment frame embraces partisan and ideological forces that affect the policy lifecycle. Unlike the electoral connection theory, this perspective argues that policymakers do not merely follow voters; on the contrary, state officials exercise much discretion, initiate and propose their own policy solutions, and attempt to get voters to accept these ideas. This frame presumes the leadership role of political parties in promoting policy agendas. To convince the public about the right way to run the country, political parties promote and advocate different policy scenarios and make these arguments both to themselves and to voters. Parties and politicians exercise leadership, set the policy agenda, and engage in strategies to get the public to go along with them. When in power, they adopt policies with specific ideological positions; in other words, ideologies determine the proposed policy solutions. From the policy development perspective, it is important that party representation in government and party views have a cyclical pattern. Therefore, their effects on policy evolution vary with time. In brief, partisan and ideological factors are critical to all stages of policy development—agenda setting, policy adoption, and policy failure (Berry, Ringquist, Fording, & Hanson, 1998; Klingman & Lammers, 1984; Wright, Erikson, & McIver, 1987).

Examining partisan and ideological factors of policy evolution, the political environment frame focuses on key state policymakers, legislators and governors. These

elected officials play an important role in policy development, including higher education policies. According to Wellman (2001), "[s]tate legislatures and governors have long played a critical role in higher education policy, through the power of the budget and their influence on the agendas and membership of public governing boards" (p. 49). Therefore, both party membership and the ideological positions of state policymakers are critical determinants of all policy changes.

Partisanship. The literature shows that partisan strength influences policy outcomes at the state level (Alt & Lowry, 2000; Berry & Berry, 1990). In the words of McLendon et al. (2006), "party control of government institutions may help explain the policy behaviors of states" (p. 6). If one party has unified control over the state legislature, it has fewer obstacles in enacting desired legislation (Squire & Hamm, 2005).

Partisanship matters because it has come to be aligned—together with ideological positions—with specific policy objectives (Doyle, 2007a). Members of the Republican party are deemed to be more oriented toward accountability, choice, efficiency, and the promotion of business interests in government programs and to be more suspicious of public bureaucracy. In contrast, Democrats are more concerned with issues of equity and strengthening of financial support for welfare and education programs (Alt & Lowry, 2000; Doyle, 2007a; McLendon et al., 2006).

In public higher education, Republicans tend to emphasize efficiency and choice through the education market; Democrats focus more on the opportunity to participate in higher education (Doyle, 2007a; Lyall & Sell, 2005; McLendon et al., 2005). Also, "Republicans seem to be much more concerned about holding institutions accountable for their use of resources. Democrats seem to be much more concerned about the effect of

tuition increases on the opportunity of different groups to attend higher education" (Doyle, 2007a, p. 370). Partisan differences also greatly determine legislative responses to higher education funding needs and requests. On the majority of issues at the national level, congressional Democrats generally have been more responsive and sympathetic to such requests than Republicans (Cook, 1998). At the state level, Democratic officials also tend to allocate more resources to public higher education than Republicans (Archibald & Feldman, 2006; McLendon et al., 2007; Okunade, 2004).

At the same time, Doyle (2007a) finds that Democrats and Republicans in Congress do not differ significantly on the issue of efficiency. One can assume that this finding holds true for the parties' representatives in the state legislatures. The current financial crisis in higher education, and bleak prospects for the future of public support, can partially explain this lack of difference in the parties' views regarding higher education efficiency. Wellman (2001) explains this point:

> [I]t is a widely held belief that state funds for higher education will not grow enough to accommodate future demand if resources are used in the same way as they have been thus far. […] As a result, state decision-makers are keenly interested in promoting efficiency and productivity in higher education. (p. 49)

Ideology. Ideology was generally defined as "a verbal image of the good society and of the chief means of constructing such a society" (Downs, 1957, p. 96). The prevailing ideology of state citizens and political leaders is a crucial determining factor in state-level policymaking and is quite distinct from partisanship (Berry et al., 1998; Doyle, 2004, 2006; Erikson, McIver, & Wright, 1987). Researchers found that state political ideology affects the content of policy, the avowed ideological positions of state parties, the actions of state policymakers, and the process of policy adoption, diffusion, and

termination (Berry et al., 1998; Erikson et al., 1989; Grogan, 1994; Grossback, Nicholson-Crotty, & Peterson, 2004; Hearn et al., 2008; Klingman & Lammers, 1984; Volden, 2007; Wright et al., 1987).

Grossback et al. (2004) and Volden (2007) demonstrate that ideological preferences of state governments that have made a particular policy shift affect the probability of ideologically proximate states following suit. Thus, ideological similarity among states may become a crucial determinant of policy adoption or failure. From the research perspective, ideological proximity of policy lending and policy borrowing states may shed more light on the process whereby states learn from each other's experiences.

Partisanship overlaps with ideology only partially. In the words of Doyle (2006), "[w]hereas many liberals are Democrats and conservatives are Republicans, the concepts of ideology and partisanship are not identical. […] [p]artisan identification may be quite different than ideological position" (p. 267). Besides, in many respects, parties behave in a like manner; this means that, in some contexts, partisanship-driven behavior of elected officials may run contrary to the avowed ideological positions.

Bardach (1976) provides the following illustration:

> The American political system, like most others, rewards novelty and innovation. Even Republicans prefer to talk of cutting back government in generalities only. When it comes to specifics, Republicans resemble Democrats in drawing the electorate's attention to "positive" contributions, that is, new programs and policy initiatives. (p. 129)

Therefore, to analyze the determinants of policy emergence and demise, one must take into consideration state-specific partisan and ideological factors and their changes over time.

Performance Funding Through the Political Environment Lens

As a theoretical concept and public policy, performance funding is rooted in a particular ideology and has a specific partisan bias.

In broad-brush terms, liberal ideology supports active government interventions to ensure equity, while conservative ideology promotes a limited government role and market-based approaches using incentives to steer public institutions in a desired direction (Doyle, 2006; Klingman & Lammers, 1984). Therefore, performance funding, which introduces rewards for enhanced institutional performance and elements of marketlike competition, gravitates toward the conservative ideology and departs from the liberal end of the ideological scale. By adopting these policy systems, state policymakers send the following message to higher education: "Public higher education is essential to state interests but it should become more efficient and more effective in meeting student and state needs" (Burke & Serban, 1998b, p. 1).

Generally, performance funding pursues the following goals: (a) holding institutions accountable for results and performance; (b) enhancing institutional quality and efficiency; and (c) meeting state needs, especially economic needs. These goals reflect some of the most pressing issues in public higher education—accountability, quality, productivity, and responsiveness. Therefore, partisan differences associated with the exigency of these issues are expected to exert influence on this policy evolution. At the same time, some authors express skepticism about the actual effect of partisan differences on adoption of performance accountability systems (Burke & Associates, 2002).

The finding that congressional Republicans and Democrats do not differ significantly on the issue of efficiency (Doyle, 2007) may aid in understanding why performance funding has frequently survived drastic changes in state political leadership. The same objectives pursued by legislators of different partisan and ideological identification—enhancing higher education accountability, searching for effective methods of resource allocation, and, occasionally, cutting budgets (Shin & Milton, 2004)—undergirded the trend of performance funding adoption in the 1990s.

McLendon et al. (2006) examine the antecedents of performance accountability policies. This study provides an empirical proof of the importance of legislative party strength for performance funding adoption. The researchers find that a larger Republican presence in state legislatures is significantly related to performance funding adoption whereas a smaller percentage of Republican legislators is associated with adoption of a rival program, performance budgeting. The authors offer two possible explanations for their findings. The first one resorts to ideological differences between the parties regarding government accountability: "Republicans may favor performance-funding policies because these initiatives offer elected officials the strongest leverage for ratcheting up accountability pressures within the large public bureaucracy of higher education" (p. 18). The second explanation focuses on changes in partisan oversight of higher education bureaucracy; when Republicans win over legislatures, as they did in the 1990s, they start to oversee the bureaucracy put in place by their Democratic predecessors. Also, McLendon et al. (2006) fail to find support for the hypotheses that legislative professionalism, gubernatorial strength, or gubernatorial partisanship determine performance funding adoption.

Ideological factors have also contributed to the advent of performance funding. Most states adopted their first performance funding policies in the 1990s, with the trend being most salient in the mid-nineties. After the Republican takeover of Congress in 1994, they proposed and partly implemented the Contract with America, the conservative agenda for national renewal. During that decade, there emerged an idea of a smaller, performance-oriented government, which is interested in outcomes-based funding. Therefore, the advent of performance funding could be a symptom of the times when conservative ideology was becoming predominant in the United States. The new programs of performance-based accountability followed the overall trend of deregulation and decentralization in state governments, in line with the *Reinventing Government* movement (Burke & Serban, 1998b; Osborne & Gaebler, 1992).

However, the role of ideological factors in performance funding policy shifts remains largely undisclosed and warrants special attention in this and future research.

Focusing on changes in political leadership, prevailing ideology, and state priorities, the political environment frame, however, slights other critical reasons for performance funding policy changes. For instance, despite the above findings and insights, this frame fails to offer adequate and full explanations of performance funding failures. As state vignettes demonstrate, policy abandonment is usually due to a combination of political and implementation issues and changes in the budgetary priorities (Burke & Associates, 2002; Burke & Serban, 1998c; Natow & Dougherty, 2008; Dougherty et al., 2011; Serban & Burke, 1998); thus, these issues include, but are not limited to, partisan and ideological changes in state leadership. The upcoming discussion of the rational bureaucratic frame delves into the issue of implementation.

Electoral Connection vis-à-vis Political Environment

The first two theoretical frameworks represent two opposite approaches to analyzing the relationships between the main actors in the political process. Both frames are necessary for understanding the dynamics of political decision-making and the formation of policymakers' positions. Doyle (2007) explains the applicability of these conceptual lenses to examining policy positions of elected officials:

> A pure Downsian model of political decision-making would suggest that positions should only reflect the policy preferences of a majority of voters (Downs, 1957). A purely ideological model would posit that policy positions reflect only the ideal policy favored by an individual policymaker. Real policies are formed in between these two extremes. While it is true that politicians do indeed take into account the desires of their constituents when forming policy positions, it is also the case that they have their own preferences over policy positions. (p. 386)

Therefore, the electoral connection and the political environment frames converge when researchers dissect the entire political decision-making process. Also, research and practice demonstrate that partisan and ideological distinctions are often blurred by the political parties' dependence on state public opinion and voter pressures. Thus, according to Erikson et al. (1989), these theoretical frames converge in the following:

> At the state level, the Democratic and Republican parties offer an ideological choice but also respond to state opinion. How well they respond helps to determine their electoral success at the legislative level and also the content of state policy. State politics […] does matter. (p. 743)

These two frames fall within the internal determinants model, according to which internal political, economic, and social characteristics of the state are the key factors of policy innovation. An alternative approach relies on the diffusion models that assert that states emulate earlier policy adoptions by other states (Berry, 1994).

The Policy Diffusion Frame: Introduction

In contrast to the electoral connection and political environment explanations of policy change, the policy diffusion frame shifts attention from the internal, intrastate, determinants of policy changes to the interstate influences that may facilitate policy migration. The basic idea of this theory is that states learn from each other's experiences; state policymakers emulate effective policies and supposedly avoid failed programs or hard-to-implement innovations. In other words, states are deemed to engage in the process of social learning: Officials learn what policies work and do not work in other states and emulate the former. Therefore, to modify a policy to fit their needs better, states can learn from earlier adoptions and, by extension, from prior failures (Balla, 2001; Berry & Berry, 1990, 1992, 1999; Boehmke & Witmer, 2004; Karch, 2007; Mintrom, 1997; Mintrom & Vergari, 1998). According to Berry and Berry (1999), the "*diffusion models* are inherently intergovernmental; they view state adoptions of policies as emulations of previous adoptions by other states" (p. 170, emphasis in the original). An observed policy shift in one state may cause a "ripple effect" (Natow & Dougherty, 2008) in another state. This effect can refer to both policy adoption and policy failure.

The policy diffusion frame postulates that policy innovations diffuse across states in a systematic manner (Balla, 2001). Berry and Berry (1999) identify three major reasons for borrowing policies: (a) social learning, i.e., adopting policy innovations that proved successful and effective elsewhere; (b) interstate economic competition, i.e., gaining an edge over competitor states and avoiding being disadvantaged; and (c) public pressure on elected officials. The researchers comment on the last point: "[P]ublic officials can experience public pressure from their own citizens to adopt policies initiated

in other states" (Berry & Berry, 1999, p. 172). Thus, the policy diffusion frame and the electoral connection frame, in its yardstick competition interpretation (Besley & Case, 1995), converge in the last potential reason for policy migration.

Traditional policy diffusion studies focused on geographic proximity of lending and borrowing states, assuming that diffusion factors are regional in nature (Berry & Berry, 1990, 1992; Doyle et al., 2010; McLendon et al., 2006; Mintrom, 1997, 2000; Mooney & Lee, 1995). However, more recent studies have found that diffusion of policy innovations and policy failures could also happen based on political, demographic, and budgetary similarities among states rather than on regional proximity (Grossback et al., 2004; Karch, 2007; Soule & Earl, 2001; Volden, 2006, 2007). Policies may diffuse through such channels as professional associations, national mass media, electronic communication networks, and networks of policy innovators and entrepreneurs (Karch, 2007; Mintrom, 1997, 2000). For example, McNeal et al. (2003) found some evidence of a positive effect of participation in state professional networks on state innovation in e-government.

Policy diffusion must be distinguished from an independent adoption by a given state. Policy adoption can occur through independent actions of state government; in other words, it may be driven by the state's own experiences and be unrelated to what other states were doing (Volden et al., 2006). One should also distinguish between policy innovations and policy inventions. *Innovations* are policies that are new to adopting states, regardless of how many states adopted it previously; innovations may be adopted independently or borrowed. In contrast, *inventions* mean new solutions, that is, adoption of a policy that did not exist anywhere else (Walker, 1969). To illustrate, performance

funding adoption by Tennessee in 1979 was policy invention because it was the first policy of this kind in the nation and in the world. Subsequent first-time policies in other states were innovations to these states; their adoption may have happened through either policy diffusion or independent actions by these states.

Performance Funding Through the Policy Diffusion Lens

The evidence supporting or refuting the idea of policy diffusion in the higher education arena exists today in two major forms. The first line of research includes attitudinal surveys and individual and comparative case studies of states' experiences. These investigations show that certain regional and national factors may provide for policy borrowing and, when considering a policy change, policymakers look at other states' experiences (Marcus, 1997; Martinez & Nilson, 2006; Ruppert, 2001). Ruppert (2001) reports, "In the course of conducting this and previous higher education issue surveys, legislators often expressed an abiding interest in knowing what other states are doing as they try to work through similar issues" (p. xiii). At the same time, Martinez and Nilson (2006) concede that elected officials often introduce innovations in higher education governance or financial policies with little evidence of their successful implementation elsewhere.

A common theme across these studies is that long-standing and effective performance funding programs have been models for the nation and influenced policy adoptions and policy characteristics in other states (Burke & Associates, 2002; Burke & Minassians, 2003; Burke & Modarresi, 2000; Gaither, 1995; Natow & Dougherty, 2008). However, as a rule, these claims are not substantiated by data. The role of successful

performance funding implementation in policy diffusion warrants a special attention in this and future research.

The second group of studies uses quantitative methods to examine diffusion influences. To date, several studies have examined policy diffusion in higher education (Doyle, 2006; Doyle et al., 2010; Deaton, 2006; Hearn et al., 2007; McLendon et al., 2005; McLendon et al., 2006; McLendon et al., 2007; Mokher, 2008; Mokher & McLendon, 2007). Only two studies have found some evidence of a positive diffusion effect. McLendon et al. (2005) find that regional diffusion is a strong predictor of financing innovations adoption and a much weaker predictor of accountability innovation in higher education. Doyle et al.'s (2010) finding that the number of neighboring states with savings plans affects the likelihood of this policy adoption is statistically significant only at a 90% confidence interval and has a small substantive effect. In the other studies, diffusion influences were either statistically insignificant or negative, that is, contrary to the hypothesized relationships. The finding of a negative diffusion effect calls for an alternative explanation of social learning by states; it could be that states may learn from policy failures and implementation difficulties in other states.

McLendon et al. (2006) tested two regional diffusion hypotheses for three main performance accountability policies, including performance funding. They hypothesized that states whose neighbors have adopted a respective policy would be more likely to follow suit. The authors tested two diffusion models: diffusion from the immediate neighbors and diffusion within four regional higher education consortia. They failed to find a significant diffusion effect in either model.

The above findings, observations, and opinions support two key reasons for policy diffusion: social learning driven by successful policy innovations elsewhere and public pressure from voters (Berry & Berry, 1999). However, the role of interstate competition in higher education policy diffusion remains largely undisclosed and calls for researchers' attention. This research intends to partially fill this gap.

The Principal-Agent Frame: Introduction

The principal-agent frame examines the hierarchical and contractual relationships between entities and the motivations behind their actions (Lane & Kivisto, 2008; Moe, 1984). This conceptual lens is rooted in the principal-agent theory (also known as the economic theory of agency and positivist agency theory) and the public bureaucracy literature (Eisenhardt, 1989; Lane & Kivisto, 2008; McLendon, 2003; Milgrom & Roberts, 1992). In brief, this theory develops hierarchical relationships, in which principals delegate work to agents for implementation. In the words of Moe (1984):

> The principal-agent model is an analytic expression of the agency relationship, in which one party, the principal, considers entering into a contractual agreement with another, the agent, in the expectation that the agent will subsequently choose actions that produce outcomes desired by the principal. (p. 756)

The principal may wish to enlist the services of the agents for the following reasons: (a) the lack of knowledge, ability, expertise, time, or energy and (b) the big size and complexity of the task. The agents, in turn, have the knowledge and expertise necessary to perform the task and are trusted to make decisions and take actions in the best interest of the principal; however, the agents may have their own interests at heart (Lane & Kivisto, 2008; Moe, 1984; Petersen, 1995). Petersen (1995) describes a

principal-agent relationship: It "arises when a principal contracts with an agent to perform some tasks on behalf of the principal. In executing the tasks, the agent chooses an action. The action in turn has […] an outcome, and the outcome affects the welfare of both the principal and the agent" (p. 188).

The key concepts of the principal-agent theory are the notions of hierarchy, contract, information asymmetry, and conflict of interests (Jensen & Meckling, 1976; Moe, 1984). These concepts lie at the heart of inherent problems of the principal-agents relationships.

There are three main problems in these relationships: the adverse selection problem, the moral hazard problem, and increasing costs of delegation and management (Canbäck, 2002; McLendon, 2003; Moe, 1984; Petersen, 1995; Ross, 1973). The adverse selection problem consists in the principal having to select the agents under the conditions of uncertainty and unequally shared risks. Agents differ by type, that is, their capacity to perform the task; however, when enlisting their services, the principle selects the agents without knowing their type (Petersen, 1995).

The moral hazard problem arises due to conditions of incomplete and asymmetric information. Information asymmetry stems from the difference in proximity to the task implementation. The agents observe their type, their actions, and, occasionally, random factors affecting the outcome; the principal generally observes just the outcome and sometimes the agents' actions (Petersen, 1995). Thus, the principal has less information than agents about implementation and makes decisions with incomplete information, while the agents may be unclear about the principal's goals. These factors lead to

information asymmetry and increasing costs of delegation (McLendon, 2003; Milgrom & Roberts, 1990, 1992).

Information asymmetry favors the agent, and the conflict of interests provides an incentive for the agents to shirk (Lane & Kivisto, 2008; Petersen, 1995). *Shirking* means pursuing one's own goals instead of the goals of the principal or slacking at one's work (Fiorina, 1982). Shirking is possible because the principal and the agents' interests are not perfectly aligned. Thus, the problem stems from the need to have the agents choose and implement the right type of action; its solution requires monitoring the agents' behavior and incentivizing them to ensure compliance with the principal's goals (Fiorina, 1982; Moe, 1984; Petersen, 1995). Lane and Kivisto (2008) note:

> This tension is one of the classic dilemmas at the heart of the principal-agent framework: how does one empower an agent to fulfill the needs of the principal, while at the same time constraining the agent from shirking on their responsibilities. (p. 142)

The principal-agent theory solves the moral hazard, or shirking, problem through finding mechanisms that will motivate the agents to act in the best interests of the principal (Lane & Kivisto, 2008). The most common of such mechanisms are monitoring the agents and providing incentives to them to comply with the explicit or implicit contract (Petersen, 1995).

The third problem arises from the increasing cost of delegation and management. The increased costs are due to the following reasons: increase in size, growth in hierarchical bureaucracy, the principal's failure to monitor the agents satisfactorily, increasing inability to replicate high-powered incentives, and the agents' motivation to provide false information beneficial to themselves (Milgrom & Roberts, 1990, 1992).

Although originally developed for individuals and later for private firms, the principal-agent theory has been modified to fit other organizational types, including public bureaucracies and political entities (Lane & Kivisto, 2008; Miller, 2005; Moe, 1984, 1985, 1989; Weingast, 1984; Wood & Waterman, 1991). As a result, two distinct forms of the theory, economic and political principal-agent theory, have been developed. While sharing key assumptions, these perspectives diverge on important issues, such as the nature of the contract, the unit of analysis, the character of the principal-agent relationship, actors' motivation, the mode of control, the output, and the source of shirking (Lane & Kivisto, 2008, pp. 150-154). Both theories have been applied to the study of higher education governance and policy (Kivisto, 2005, 2007; Knot & Payne, 2004; Lane, 2003, 2005, 2007; Lane & Kivisto, 2008; Liefner, 2003; Lowry, 2001b; McLendon, 2003; Nicholson-Crotty & Meier, 2003; Toma, 1986, 1990).

McLendon (2003) suggested that the principal-agent theory could be useful for examining interactions between state governments and higher education institutions. Since then, several studies have applied this frame to studying higher education policy making and governance, and government oversight over institutions (Kivisto, 2005, 2007; Lane, 2003, 2005, 2007; Lane & Kivisto, 2008; McLendon et al., 2006; Nicholson-Crotty & Meier, 2003; Payne, 2003). These studies' findings show the efficacy of this theoretical framework in organizational, political, and policy research in the higher education arena.

The original principal-agent model "is based upon the rational assumption that an individual prefers to pursue self-interest before the interests of others" (Lane & Kivisto, 2008, p. 145). In contrast to the assumed rationality of individuals, this study assumes

rational behavior of bureaucratic organizations: public institutions and state boards. As stated above, rationality refers to making value-maximizing choices and ordering preferences within specified constraints; it means selecting the best means for achieving the goals critical to the institution's success (Allison & Zelikow, 1999; Stone, 1988).

In this interpretation, bureaucratic actors take on increased importance. Leaders in the bureaucracy are key players in the choice and implementation stages of policy development because of the tenure privileges that they possess (Kingdon, 1995). Bureaucracies are deemed rational organizations: They make conscious attempts to link goals to activities and resources to objectives. For its implementation, a policy depends on bureaucratic structures; these structures are needed to efficiently relate the programs to the achievement of specified goals (Birnbaum, 1988).

According to Lane and Kivisto (2008), "as public bureaucracies, public colleges and universities are replete with principal-agent relationships, both internal and external to the institutions" (p. 144). In the context of state higher education systems, the principals are elected officials, legislators and governors, who delegate authority to public institutions for the fulfillment of certain responsibilities and implementation of policies. Similar to other public bureaucracies, higher education institutions operate under conditions of hierarchical control and information asymmetry, under various explicit and implicit contracts, and in an environment of multiple and collective principals (Lane, 2005; Lane & Kivisto, 2008). Performance accountability policies represent mechanisms of legislative and executive oversight over public bureaucracy, including higher education bureaucracy (McLendon et al., 2006).

The roles of principals and agents in the higher education arena may change depending on the level of analysis. "Aside from the ultimate principal and the ultimate agent, each actor in the hierarchy occupies a dual role in which he serves both as principal and as agent" (Moe, 1984). Both state-level agencies for higher education and institutions perform dual functions, depending on the perspective and the context.

State higher education boards are agents in relation to state policymakers and principals to their institutions. As agents, state boards represent the interests of institutions and insulate them from the political reality of state policymaking. As principals, these boards monitor institutional performance and offer various incentives for compliance with their policies. State governance arrangements for higher education systems, and their powers and roles, differ by state and determine various policy outcomes (Doyle, 2004; Lowry, 2001a; McGuinness, 1997; McLendon & Ness, 2003; Nicholson-Crotty & Meier, 2003; Weerts & Ronca, 2006, 2008). In turn, institutions are agents in relation to state boards and elected officials; however, they also serve as principals to their academic and administrative units and students. Therefore, inherent problems of the principal-agent relationships can play out virtually at any level.

Therefore, the principal-agent framework is critical for understanding reasons for policy failures. The biggest threat to policy implementation stems from the above assumption that the principal (policymakers) and agents (public institutions) are self-interested rational actors aiming to maximize their own utility (Moe, 1984). Because the agents do not perfectly align themselves with the principal's objectives, implementation issues arise and can ultimately lead to policy abandonment.

Performance Funding Through the Principal-Agent Lens

The principal-agent frame is critical to this study because it focuses both on the adoption and implementation aspects of the policy; the latter greatly determines policy success and longevity. I start with the goals of state budgeting and the objectives of performance funding, which are pursued by the principals at the adoption stage.

Economic perspective. The primary objectives of state budgeting for higher education are merging intentions with practice, establishing a direction for higher education, and setting up an accountability device (Jones, 1984). Thus, budgeting is a means of steering institutions through funding, an interactive process, and a mechanism of translating policies into activities and providing an accountability framework (Savenije, 1992). By altering the terms on which financial resources are provided, state governments can influence behavior of higher education institutions (Williams, 1984).

> Once an agent has been chosen to perform a task, the next problem is to get her to perform, that is, to choose the right action, which usually is costly to the agent. This can be accomplished by tying the agent's reward to the outcome of the action or by monitoring the action. (Petersen, 1995, p. 193)

Performance funding employs both approaches: It establishes a system for monitoring institutional performance and offers financial rewards for complying with the policy objectives (Burke & Associates, 2002). Both mechanisms serve to alter institutional behavior in ways that are consistent with the principals' interests, that is, to alleviate part of the moral hazard problem. The principal aims to solve the agency problem through designing an incentive structure that makes pursuing the principal's objectives advantageous to the agents (Moe, 1984; Petersen, 1995).

Performance funding is deemed the most direct and effective approach to creating such an incentive structure (Shin & Milton, 2004). In theory, this policy rewards high-performing institutions with funding increases and punishes low-performing institutions with funding reductions (Nedwek, 1996). Thus, it creates a steering capacity without altering the core of institutional budgets (Burke & Associates, 2002; Savenije, 1992).

To align incentives and motivate the agents to pursue the principal's goals, the latter may use the following means: persuasion, the prospect of rewards, and the threat of punishment (Massy, 2003). Ideally, an incentive system should be based on the third principle of economic agency theory, high intensity of incentives. However, in reality, performance funding relies more on the second principle, high level of monitoring, which is more costly and difficult to implement (Massy, 2003).

Soo (2003) describes the conceptual bases of performance funding from the economic perspective:

> [W]e can assume that higher education institutions are rational agents that try to maximize their utility in a policy environment. Performance based funding changes the incentives and is likely to bring changes in universities behavior. Universities will thus rearrange their resources in the way that is most "profitable" in the new environment. Performance based funding will thus theoretically change universities' production function and universities will respond to the policy in a way that is most suitable for them. (pp. 2-3)

Through the adoption of "performance policies with teeth" (Burke, 2001), that is, programs with financial incentives or sanctions, incumbents introduce a mechanism of aligning institutions with the state's goals and priorities. The underlying premise is that "higher education institutions are motivated to improve their performance when performance is linked to budget allocation" (Shin & Milton, 2004, p. 27).

The resource dependency theory (Pfeffer & Salancik, 1978) explains the conceptual bases of performance funding from the institutional position. Institutional responses to changes in resource availability are driven by their dependency on public support and the need to adapt to changing environment in order to ensure organizational survival (Harnisch, 2011). Harnisch summarizes this theory's perspective on performance-based funding: "[B]ecause the leaders of public colleges and universities are significantly dependent on state appropriations, the theory postulates that they will take the measures necessary to retain or enhance their institutions' funding" (p. 2).

Apart from financial incentives, performance funding programs may publicize results of institutional assessment and institutional rankings. If performance fund is small, public relations levers may be more powerful in changing institutional behavior than funding. For example, Schmidt (2002) maintains that "the true power of performance-based financing systems may not lie in their impact on campus budgets. Instead, it is the threat of bad publicity and embarrassment associated with poor reviews that appears to motivate college presidents and other campus leaders" (p. 4).

Another incentive for public higher education institution may include changes in institutional autonomy, for example, in tuition-setting authority (Harnisch, 2011). According to Burke and Modarresi (2000), performance accountability policies have often implied tacit agreements between state governments and institutions: "[S]tate granted increased autonomy to public colleges and universities in return for credible evidence of improved performance" (p. 433).

Thus, by using three main levers—budgeting, publicity, and at times changes in autonomy—performance funding policy systems aim to achieve two key goals:

increasing external accountability and improving higher education performance (Burke & Associates, 2002). However, in actual program implementation, these goals are often attained only partially or not at all. Studies examining the impacts of performance funding policies on various outcomes have generally failed to find any statistically significant results (Belfield, 2012; Dougherty & Reddy, 2011; Doyle & Noland, 2006; Ehlert, 1998; Fryar, 2011; Garrick, 1998; Huang, 2010; Polatajko, 2011; Rabovsky, 2012; Sanford & Hunter, 2011; Shin, 2010; Shin & Milton, 2004; Strawn, 2003; Woodley, 2005; Yancey, 2002).

Therefore, it is critical to identify forces that hinder the attainment of policy objectives and may lead to policy failure. These forces stem from both conceptual issues and implementation difficulties (Burke & Associates, 2002; Burke, 2003). Despite the theoretical desirability of performance funding, its practical implementation faces many challenges (Burke, 2003; Burke & Associates, 2002; Burke & Serban, 1997).

Conceptual and implementation issues. As a concept, performance funding faces several key challenges, which make evaluating higher education performance highly problematic. These conceptual problems stem from the complexity and diversity of higher education, ambiguity of its objectives, difficulty of defining and measuring quality, unwillingness of higher education to accept business management principles, and the lack of agreement on the outcomes of undergraduate education and the means of measuring student achievement (Albright, 1998; Burke & Associates, 2002; Lang, 2004; Serban, 1997b). According to Burke (1998a), some critics find performance funding to be conceptually flawed because "it pursues what they perceive as incompatible goals, such as increasing productivity while improving performance and reducing costs while

raising quality" (p. 11). These issues complicate the task of measuring performance and assessing quality in student learning and other meaningful results. Burke (2003) asserts:

> But the fatal flaw for performance funding, as with outcomes assessment, is the reluctance of the academic community to identify and assess the knowledge and skills that college graduates should possess. […] Unfortunately, the academic community never determined or defined, with any precision, the objectives of undergraduate education nor developed systematic methods for assessing campus performance. (pp. 1-2)

Performance funding programs also have to address the issue of timing in measuring outcomes and implementing assessment systems. Many results in higher education are postponed and cannot be measured immediately. According to Alexander (2004), graduates reach the peak of performance in 25 years after graduation; however, assessment systems generally require measuring outcomes at the time of graduation. Implementation of assessment systems also takes much time and cannot keep up with the political pressures of the moment. Carnevale et al. (1998) comment, "Timing is also key: Elected officials may want immediate implementation and results, but colleges and universities need enough time to make the process work" (p. B7).

The implementation issues of performance funding are well documented in the literature and run the gamut from changing state priorities and conflict of interest between policymakers and institutions to detrimental programmatic characteristics and perceived program ineffectiveness to higher education opposition and the principal-agent problems within and among institutions (Burke, 2001b, 2002a; Burke & Associates, 2002; Burke & Minassians, 2003; Carnevale et al., 1998; Heller, 2001b; Klein, 2005; McLendon et al., 2006; Neal, 1995; Shin & Milton, 2004; Zumeta, 2001).

The last category is especially important and includes multiple implementation issues: creating a competitive environment among institutions, incurring implementation costs, adding to the bureaucratic complexity on campus, failing to motivate students to take assessment seriously, learning to "play the system" by establishing easily achievable criteria, having no impact on the internal distribution of funds, and lacking visibility at the level of individual departments and programs (Banta et al., 1996; Bogue, 2002; Burke, 2003; Burke & Minassians, 2003; Burke & Serban, 1997; Carnevale et al., 1998; Folger & Jones, 1993; Hoyt, 2001; Klein, 2005; Noland et al., 2004).

Bogue and Hall (2003) comment on the last point:

> There is a notable lack of penetration to the department and program level in terms of using assessment data for program improvement decision for decisions related to student placement and progress. This must be counted one of the more important disappointments in the impact of the policy. Thus, for most campuses, energy and attention to the policy centers at the executive administrative levels and very little at the department chair and faculty level. (p. 210)

Finally, there are many conceptual and technical issues with performance indicators, which are the centerpieces of most performance accountability systems (Burke, 1997, 1998a, 1998b; Burke & Associates, 2002; Ewell, 1996; Gaither, 1996; Gaither, Nedwek, & Neal, 1994; Rupper, 1995). On the conceptual side, performance indicators cannot truly capture educational quality, reflect different educational objectives, or account for mission differentiation among campuses (Borden & Banta, 1994; Burke, 1998a; Gaither et al., 1994). On the technical side, Carnevale et al. (1998) argue that the attractiveness of performance indicators is "equal only to the difficulties of designing, implementing, and assessing them" (p. B6).

To conclude, the principal-agent frame helps explain the regularities of the performance funding policy lifecycle. It sheds light on the original intentions behind policy adoption and explains how conceptual and implementation issues may cause policy failure. However, its limitations include the following critical aspects: public pressures and expectations of higher education, political-ideological aspects of state policymaking processes, social learning on the part of state policymakers, and the role of competition for state resources among public sectors and interest groups.

The Role of Budgetary Constraints

The above theoretical frames disregard two conditions that are crucial to understanding the antecedents of policy change: budgetary stringency and the procyclical character of state funding. Consideration of state budgetary issues is important to this research for the following reasons: Budget is the most direct and tangible tie between state government and public higher education institutions (Jones, 1984; Noland et al., 2004), budget constraints affect both policy adoption and failure, and state appropriations to higher education are influenced by the business cycle conditions.

In simple terms, budgeting is defined as a systematic way of resource allocation (Hager et al., 2001, p. 3). Kettl in the foreword to Wildavsky and Gaiden (2004) defines budgeting as making the best use of scarce resources, which is tantamount to making the most of public tax funds. In his view, budgeting "is in part about economics—how to extract the best return from public dollars. In part, it is also about politics—how to make these decisions" (p. xi). The authors themselves rely on Wildavsky's definitions of budgets as "links between financial resources and human behavior to accomplish policy

objectives" and as "a mechanism for making choices among alternative expenditures" (p. 2). Jones (1984) views a budget as a device by which state government signals it priorities and implements its plans, and proposes the following key functions of a budget: linking intentions and actions, state-level planning, and providing a framework for accountability.

The budget system characteristics determine various budgetary outcomes, such as revenue and spending patterns in a state. For example, Nardinelli, Wallace, and Warner (1988) argue that structural and institutional differences in budgetary systems produce variations in price flexibility, which in turn cause differences in the business cycle. Kearns (1994) finds that the length of the budget period, *budget periodicity*, influences state spending: Contrary to a conventionally held view, states with biennial budgets spend more than states that budget annually. She also reports that the GAO survey of 1987 found a direct correlation between budget periodicity and state spending. The budget process is also dependent on availability of relevant, accurate, and timely information (Hyatt, 1985).

According to Lasher and Green (2001), higher education budgets are susceptible to both external and internal forces. External forces include economic, political, and demographic factors, while internal forces include institutional history, mission, and other characteristics. The combination of these influences creates budget constraints. Jones (1984) identifies three main shocks to a state budgetary system that may have a deleterious effect on state appropriations to higher education: declines in enrollment, inflation, and the general economic decline. An additional factor is that, unlike K-12

education, higher education is a discretionary item on the state budget, which may be cut during fiscal stringency periods.

State expenditures generally have a cyclical pattern; in other words, they are curtailed during economic downturns and expanded during economic recoveries. These business cycles affect state budgets and appropriations through the transmission mechanism of tax revenues (Humphrey, 2000). State governments resort to countercyclical fiscal policies in order to reduce expenditures and raise taxes during austere economic times and accumulate the "rainy day" funds in prosperous times (Kane, Orszag, & Gunter, 2003; Levinson, 1998). In the words of Kane et al., (2003), "[t]ypically, states cut back programs during the downturns and then expand them during the subsequent recovery" (p. 14).

Prior research has shown that business cycles affect two factors of importance to higher education: (a) tax revenue and, consequently, state spending and (b) college enrollment. State appropriations to higher education are very sensitive to the business cycle dynamics; appropriations fall during economic downturns and rise during expansion periods. At the same time, enrollment is countercyclical: It grows during bad economic times when government funding is cut, thus placing extreme financial pressure on higher education institutions. A critical finding is that higher education is one of the most cyclical categories of state budgets, but its competitor, K-12 education, is not (Betts & McFarland, 1995; Humphrey, 2000; Kane et al., 2003; Leslie & Ramey, 1986).

Humphrey (2000) finds that real appropriations fall more during recessions than they rise during expansion. After the recession of the early 1990s, post-recession appropriations to higher education stopped exceeding the pre-recession levels.

According to Kane et al. (2003), "[a]s the economy entered a recession in the early 1990s, real appropriations per students again declined. But during the boom of the 1990s, appropriations for higher education rose only slightly and never reached their pre-recession levels" (p. 15). The researchers explain this failure of higher education appropriations to recover largely by the rapid increase in the Medicaid costs.

Most first-time performance funding policies were adopted in the 1990s after a particularly severe recession at the beginning of the decade; at that time, the decline in state support for higher education became especially pronounced. Due to fiscal stringency, institutions raised prices, leading to calls for greater transparency and accountability. During that decade, tuition and fees started to surpass state appropriations as institutions tried to compensate for the decline in state appropriations (Breneman & Finney, 1997; College Board, 2004). Therefore, one may presume that budget constraints of that period played a large role in introduction of performance funding programs; however, this assumption requires empirical testing.

Influenced by cyclical economic conditions, the fiscal capacity of states to support performance funding has greatly determined this policy evolution, creating conditions for both policy adoption and failure. On the one hand, a common explanation for performance funding adoption is fiscal contingency and the intent to enhance institutional efficiency and productivity. On the other hand, state case studies demonstrate that, as budgets get tight, states start abandoning performance funding. Thus, economic recessions, and associated budget difficulties, have been key factor in frequent policy failures (Burke & Associates, 2002; Burke & Minassians, 2003; Klein, 2005).

Based on the above, I conclude that, in addition to the primary theoretical frames, this study must also account for the procyclical nature of state funding for higher education and budgetary constraints of institutions.

The Concept of Policy Failure

Political scientists have extensively analyzed the concept of *policy failure*, or government failure, as opposed to *market failure* (Mitchell & Simmons, 1994). Two primary reasons drive this interest: first, policy failures are ubiquitous and this situation raises many concerns (Ingram & Mann, 1980) and, second, the issue of policy success and failure lies at the heart of public policy analysis (Nagel, 1980). Although the ubiquity of policy failure is acknowledged in various areas of research and practice, this concept remains under-theorized in political science research (Bovens & ‘t Hart, 1996; Canadian Political Science Association (CPSA), 2007; Howlett, 2007; Ingram & Mann, 1980; Lane, 1990; Milne, 2001; Nagel, 1980; Wildavsky, 1979).

Likewise, in higher education studies, policy failure is inadequately conceptualized and there is a lack of empirical research regarding specific policy failures. To the best of my knowledge, no one has systematically and comprehensively examined policy failures in the area of postsecondary education. The only exceptions are isolated case studies of terminated and inactive policies, including performance funding, and, to some extent, annual surveys of performance accountability policies (Burke & Associates, 2002; Burke & Minassians, 2001, 2002, 2003; Burke & Modarresi, 1999; Burke, Rosen, Minassians, & Lessard, 2000; Burke & Serban, 1997; Burke & Serban, 1998b; Dougherty & Natow, 2009; Dougherty et al., 2011; Dougherty et al., 2012). Birnbaum (2000a,

2000b) has uncovered the evolutionary mechanism of academic management fads from birth to decline; however, these innovations are limited to the institutional level, as opposed to statewide policies.

Although widely used, the term policy failure is more elusive than policy adoption or innovation. Several factors contribute to this elusiveness: (a) the employed terms are often ambiguous and may be used interchangeably, although they overlap only partially; (b) the notion of policy failure is inseparably linked to the notions of policy adoption and success; (c) defining a policy failure is open to subjective interpretation and susceptible to political pressures; (d) public policies can fail in various ways, and (e) policy failures may be classified into different categories.

First, the number of terms referring to, or interpreting, the concept of policy failure is large. To illustrate, policy failure can be conceptualized as policy termination (abandonment), retreat on policy objectives or failure to realize the policy aims, policy fiasco or shrinking, policy succession or substitution, policy reformulation, a form of policy learning, prerequisite to a policy paradigm shift, substantive or procedural failure, and preadoption or postadoption failure (Bardach, 1976; Boven & ‘t Hart, 1996; Brewer & deLeon, 1983; Hall, 1993; Hogwood & Peters, 1982; Howlett, 2007; Ingram & Mann, 1980; May, 1992; Nagel, 1980; Volden, 2007; Wildavsky, 1979).

Second, the notions of policy adoption, success, and failure are inextricably linked (Bardach, 1976; Dutton et al., 1980; Hogwood & Peters, 1982; Nagel, 1980; Volden, 2007). Policy success is determined by posteriori evaluation of effects; however, failures can occur at any stage in the policy process (Dutton et al., 1980). Nagel (1980) asserts

that policy failure can happen even at the preadoption stage: “Policies can thus be failures in the sense of never being adopted” (p. 7).

The concepts of policy adoption and policy failure are also linked. Each policy change is, in effect, a negation of the preexisting state of things. Volden (2007) suggests that policy adoption is an abandonment of either failed policies or the “no policy” policy (i.e., the condition that preceded the adoption). “[A]ny study of successful policy adoptions implicitly contains elements of a study of the abandonment of failed policies, for the new policy is replacing something that was no longer as attractive to policymakers” (Volden, 2007, p. 3). He proposes treating the “no policy,” pre-adoption, condition as a separate type of policy, encompassing the choice to take no action.

Expanding on Volden’s idea, one can argue that if a state does not have a policy after its invention elsewhere, it has chosen not to have it. In other words, it is not merely inaction on the part of the state, it is an action that the state chooses not to take. Thus, the condition of having no policy is treated as a specific type of policy; this condition is abandoned when the policy is adopted. Following a similar logic, Bardach (1976) and Hogwood and Peters (1982) suggest that policy termination and policy succession be treated as special cases of policy adoption, when a new policy eliminates or supplants the preexisting policy.

Third, the concept of policy failure is context-dependent, subjective in evaluation, political in nature, and may be interpreted in value-laden terms and promoted for political objectives (Anagnoson, 1980; Bovens & ‘t Hart, 1996, 2011c; Dutton, Danziger, & Kraemer, 1980; Ingram & Mann, 1980). In the words of Howlett (2007), “[c]onsiderations of policy success and failure are evaluative judgments” and serve as

"semantic tools themselves […] in order to seek political advantage" (p. 2). Judgments about policy successes and failures are affected by the environmental conditions in which an evaluation takes place and the timeframe associated with the conditions. The interrelations of various policies and the existence of institutional barriers may further complicate such judgments (Ingram & Mann, 1980). Along the same line, May (1992) asserts that "the objective reality of policy failure is less important that a perception of policy failure" (p. 341).

Next, policies can fail in numerous ways (Howlett, 2007), and it may be difficult to pinpoint the exact markers for failure. Researchers diverge on how to identify a policy failure. For example, one way of measuring policy failure is against original objectives (Ingram & Mann, 1980; Wildavsky, 1979); however, some analysts believe that policy goals may be too subjective and ambitious to serve as reliable measures of success or failure (Ingram & Mann, 1980). The most obvious indicators of policy failure are *policy termination*, or abandonment of a policy (Bardach, 1976; Dery, 1984), and *policy succession*, or substitution with a new policy (Hogwood & Peters, 1982; Volden, 2007). However, there are other objectively and subjectively measured ways—apart from policy abandonment and falling short of predetermined objectives—in which policies can succeed and fail (Bovens et al., 2001; Howlett, 2007; Ingram & Mann, 1980; Kerr, 1976).

Besides, not every failing policy is terminated. Bardach (1976) explains why this is the case: Policy termination is a complicated process, which may produce conflicts; policies are generally designed to last almost indefinitely; policymakers are reluctant to admit their mistakes and may be unwilling to damage the existing program infrastructure; and political incentives for policy abandonment are in short supply. According to

Hogwood and Peters (1982), the interest in policy termination is misplaced because most supposedly new policies, in fact, replace the old ones; therefore, the term policy succession is more appropriate. "[M]ost policy making is actually policy succession: the replacement of an existing policy, program, or organization by another" (Hogwood and Peters, 1982, p. 226). These researchers suggest using the term policy termination only in rare cases when policy abolishment is not followed by policy substitution.

Finally, different classifications of failures are possible. Common classifications use the following oppositions: quantitative versus qualitative failures and goals versus reality. Criticizing these approaches, Nagel (1980) suggests three ways of measuring them: "in terms of the degree of noncompliance, the deviation between actual and optimum, and in terms of opportunity costs, rather than on a dichotomy of failure versus success" (p. 9). Bovens et al. (2001c) argue that policy failures can happen in two related areas of evaluation: program performance (i.e., policy's effectiveness, efficacy and resilience) and political performance (i.e., the ways in which policies are represented in the political arena) (p. 20). Another approach to classifying policy failures is distinguishing between substantive and procedural failures (Howlett, 2007). From the substantive perspective, a failing policy fails to deliver on its goals. In procedural terms, a failing policy may be seen as illegitimate, unfair, or unjust. In the latter case, a policy is considered "failure in normative justification" (Kerr, 1976, p. 361).

The causes of policy failure may include the following: challenges of implementation, failure to translate goals into practice and fulfill the original purposes, inadequate governmental analytic capacity and policymakers' competence, overly ambitious policy goals, attempts to address insurmountable problems, poor task

delegation, a lack of proper oversight over implementers, challenges of political nature, the cyclical nature of the policy life, insular character of policy implementation, proneness of some political systems to experience failures, and a lack of proper learning from past experiences (Anderson, 1996; Birnbaum, 2000a, 2000b; Bovens & 't Hart, 1995, 1996; Downs, 1972; Dur, 2001; Fellegi, 1996; Howlett, 2007; Kerr, 1976; Lane, 1990; Lane & Kivisto, 2008; Lupia & McCubbins, 1994; May, 1992; Peters, 1996; Petersen, 1995; Pressman & Wildavsky, 1973; Scharpf, 1986; Wildavsky, 1979).

Policy failure offers opportunities for policy learning. "[F]ailure serves as a trigger for considering policy redesign and as a potential occasion for policy learning" (May, 1992, p. 341). As a result, through policy learning and creating uncertainty, policy failure and associated policy learning can act as catalysts for policy change (Skogstad, 2007). Policy learning may include two major forms: learning of policy inadequacies and learning of unsuccessful policies in the other states (May, 1992; McLendon et al., 2006; Mooney, 2001; Volden, 2007). In the former case, policies are reformulated in response to widespread perception of failures (May, 1992). In the latter case, "if scholars were to focus on policies that failed to spread, perhaps geographic neighbors should be *less likely* to adopt one another's policies because those neighbors had a privileged, close-up view of just how bad that policy was" (Volden, 2007, p. 2, emphasis in the original).

Volden (2007) found that policy termination in one state is closely related to policy failure in other, especially ideologically proximate, states and is facilitated by the presence of more professional legislatures. This finding demonstrates the phenomenon of policy diffusion in abandonment of failed policies among the states and allows the

researcher to conclude that "at least part of the policy diffusion process is based on learning, and specifically on learning about what policies do not work elsewhere" (p. 25).

At the same time, May (1992) cautions that although policy failure may present opportunities for policy learning, the latter may be constrained by confusion over how to improve policy outcomes, government leaders' unwillingness to acknowledge policy failure, conflict between competing advocacy coalitions, and other factors. Thus, "policy learning does not necessarily follow from policy failure" (p. 351). Dur (2001) concurs that policymakers are not willing to repeal a failing policy and concede defeat because they are concerned with reelection and do not want to be associated with policy failures.

Another positive aspect of policy failure is that it may be an evidence of a political system's response to existing issues, with politicians trying to solve, rather than ignore, problems (Ingram & Mann, 1980). Ingram and Mann (1980) believe that one should consider the political consequences of not taking any actions before passing a judgment on policy failures.

Conclusion. This study aims to identify key determinants of performance funding policy shifts. The literature review has shown that the research community knows a great deal about the antecedents of policy changes. However, regarding performance funding evolution, this knowledge is mostly fragmentary, highly contextual, and subject to various interpretations. Much of the literature is descriptive, anecdotal, state-specific, subjective in nature, and politically or ideologically driven. The more methodologically sound literature generally includes individual and comparative case studies and surveys of key political and organizational actors. Several quantitative

studies have examined effects of performance funding on various outcomes; however, only McLendon et al. (2006) investigated the antecedents of policy adoption of three major performance accountability policies. To the best of my knowledge, there has been no comprehensive quantitative analysis of the entire performance funding policy lifecycle. There is no unifying theoretical framework explaining policy emergence and failure. Also, researchers still have a limited understanding of common factors leading to policy failure in higher education. This research intends to fill these gaps in knowledge and theory by using four distinct theoretical traditions to examine the entire performance funding policy lifecycle. The investigation of the determinants of all possible policy shifts regarding performance funding represents the major contribution of this study.

The following chapter examines the theoretical frameworks in greater detail and proposes a unified approach to the investigation of the performance funding lifecycle.

CHAPTER III

CONCEPTUAL FRAMEWORK

General Approach of the Study

Researchers use different theoretical traditions to explain evolution of public policies; however, these conceptual frameworks are mainly used in isolation. This chapter discusses my general approach to studying the antecedents of policy changes, the proposed hypotheses within each theoretical frame, and the key relationships in the conceptual framework for the study.

My approach integrates several distinct conceptual arenas. In contrast to prior research, this investigation examines all policy shifts simultaneously and within the same model. I build this study around the following assumptions. The first assumption treats policy adoption and failure as political and social processes that are alike in terms of their intrastate and interstate determinants. This means that the same external and internal processes and actors drive states to adopt, discontinue, and readopt performance funding. Thus, I assume that the identified state and policy characteristics affect all events of interest. The second assumption holds that each policy change represents abandonment of the prior condition. It is rooted in Volden (2007), Bardach (1976), and Hogwood and Peters' (1982) arguments that policy adoption is, in effect, abandonment of a failed policy or termination of the "no policy" policy. The final assumption is that the events of interest happen in succession: Adoption precedes failure and failure precedes readoption.

Another feature of my approach is examining policy changes through different conceptual lenses. In addition to analyzing four theoretical frames individually, I use them simultaneously by testing all the respective hypotheses in the comprehensive model; this final model combines all frames, policy shifts, and independent variables. I argue that, despite different assumptions underlying these theoretical frames, their analysis in a unified model is more telling and advantageous than examining each conceptual lens in isolation.

Employing the policy diffusion framework, some studies take a similar approach; they include various political, economic, demographic, educational, organizational, and geographic variables as determinants of policy adoption. These analyses follow Berry and Berry's (1990) advice that "regional diffusion and internal determinants explanations of state innovation should not be analyzed in isolation; instead, unified models are needed" (p. 411). This suggestion leads researchers to identify a diffusion effect, on the one hand, and all the other influences (internal determinants of policy innovation), on the other hand. Thus, these analysts use different internal determinants without focusing too much on the underlying theoretical assumptions. This study differs from the described approach in that the proposed theoretical frames allow me to outline the assumptions driving each group of hypotheses more clearly. I see one contribution of this research in bringing more conceptual clarity to the issue of public policy changes through combined application of different theoretical traditions.

The final conceptual arena allows for potential convergence of the theoretical frames. I base this idea on the possibility that some uncovered relationships may have alternative causal mechanisms. The convergence of the frames may occur at the level of

the hypothesized cause-and-effect relations, with conceptual lenses offering divergent explanations of the observed relationships. Depending on the frame, there could be different reasons for the data to look a certain way and it may be impossible to differentiate between them. Because I use multiple theoretical frames, rival hypotheses could explain the same data differently and without definitive support for either hypothesis. Therefore, there is a chance that in some cases the employed model will not be able to differentiate clearly between different explanations of the observed data.

Although my definition of an operational policy (section *Key Definitions*; Chapter 4) presupposes the agents' awareness of the policy, I model state policymakers' behavior rather than institutional behavior. I am interested in the *decision points* at which elected officials make respective decisions: to mandate a policy, allocate funds to the program, suspend or remove funding, succeed a policy with another one, terminate a policy, maintain a policy after its evaluation, readopt a policy after its termination, and others. These decision points constitute the essence of the events of interest and provide the basis for their classification. At the end of this chapter, I discuss the key relationships in the conceptual framework and place these events in the context of the entire policy cycle.

To conclude, I employ four conceptual lenses—the electoral connection, political environment, policy diffusion, and principal-agent frames—to identify the conditions under which states are more likely to adopt or discontinue performance funding. Within each frame, I propose hypotheses that aim to model policymakers' behavior with respect to the policy changes of interest. My intent is to identify the drivers of performance funding policy shifts and offer theoretical explanations of their causal mechanism.

Electoral Connection Frame

As discussed in the literature review, this conceptual lens focuses on the role of voters in policy shifts. From this standpoint, the elected officials' behavior is influenced by their desire to be reelected and thus by voter preferences (Fenno, 1978; Mayhew, 1973, 2004). In other words, to be reelected, incumbents must comply with their constituents' wishes. Consequently, they structure their political behavior in ways that are consistent with their rational anticipation of voter preferences and demands. Voters perceive the existence of problems and expect politicians to adopt policies to solve them. They rationally calculate which party is more likely to adopt respective policies and decide if it can win the elections. Through a variety of channels, voters make their preferences known to state policymakers, and the latter adopt policies to meet their electorate's preferences and demands (Ahmed & Greene, 2000; Bergstrom & Goodman, 1973; Bowen, 1943; Craw, 2008; Downs, 1957; Erikson et al., 1989; Farnham, 1987; Fenno, 1978; Mayhew, 1974).

Regarding performance funding, electoral connection may work in two ways: (a) through legislative response to voter demand for specific accountability policies; and (b) through legislators' response to a general sense of voter preferences. These two scenarios offer different explanations of policy changes.

In the first type of response, policy emergence and failure are driven by the incumbents' motivation to be reelected and depend on the assumed rationality of elected officials. If performance accountability policies enjoy broad public support, one may expect rational state officials to adopt such policies in order to please their constituency. From this perspective, performance funding enactment could be an outcome of this

policy popularity among the electorate driving incumbents to adopt it. If incumbents are sensitive to voter preferences, performance funding adoption could be a response to the rising demand for this particular type of accountability policies. Thus, adoption of performance funding is seen as a bottom-top process, which starts with the grassroots' demands for greater accountability, efficiency, and institutional improvement and ends with the policymakers' vote to enact a policy aiming to meet these goals. By the same token, policy failure could be explained by its decreasing popularity among voters and subsequent changes in the policymakers' behavior reflecting this dynamic.

However, in reality the first type of response is rare because public pressure is diffuse rather than specific. Voters primarily care about two major issues in higher education: lower tuition and better access (Heller, 2001b; Immerwahr, 2002; Immerwahr & Johnson, 2010; National Center for Public Policy and Higher Education [NCPPHE], 2002). The public may also have concerns about quality, affirmative action, and accountability, but in general, higher education is not a top priority for voters. With the exception of those whose children are going to college soon, voters do not care much about higher education. For most, more pressing issues in other policy domains—economy, jobs, taxes, healthcare, corrections, K-12 education, transportation, public utilities regulation, and welfare—divert attention from higher education and its policies (Gallup, 2010, 2013). Reflecting this diffuse demand, legislators and governors seldom run on a strong higher education platform; at the same time, general educational issues are often present on political agendas (Berdahl, 2004; Florestano & Boyd, 1989; Fusarelli, 2002; Gittell & Kleiman, 2000).

I argue that the second type of response is more plausible and use it as a basis for my hypotheses in this frame. In brief, legislators respond to a general sense of voter preferences. People vote based on broad ideological convictions, and officials rationally anticipate general voters' demands and act on them when creating legislation. This interpretation means that voters seldom push for specific policies. Instead they raise general concerns about broader issues, such as accountability and efficiency in higher education, and legislators arrive at solutions that aim to address these concerns.

The economic, political, ideological, and social changes outlined in the literature review demonstrate a growing popular demand for greater accountability and efficiency of higher education. However, these pressures are quite diffuse and, as a rule, are not aimed at promoting specific accountability policies. Nevertheless, these changes in voter preferences have provided for policymakers' propensity to advocate accountability policies as the means of meeting these demands. Thus, performance funding emergence has partly been a function of the accountability pressures, to a large extent exerted by voters. However, this popular demand cannot explain the selection of performance funding from a pool of available policy options.

Under the electoral connection frame, legislators may propose performance funding policies as a way to address key voter concerns about public higher education. Due to their salience and pervasiveness, concerns about tuition hikes and access to higher education are key drivers for such pressures. Facing challenges of access and affordability, voters want officials to mitigate these issues and have institutions account for their performance and results. However, these wishes seldom take shape of demands for specific policies. In turn, incumbents design policies aiming to both meet this popular

demand and ensure electoral advantage for their party. This is how some state legislatures arrive at the concept of performance funding or any other accountability policy. At the same time, the nature of these policies and details of specific programs are determined by state policymakers, and their agents, rather than the public.

In contrast to the above passage, however, there is still a possibility that voters may specifically push for performance funding. According to the yardstick competition theory discussed in Chapter 2, Besley and Case (1995) argue that the electorate may base their voting decisions on other states' performance. Thus, voters may look at the experiences of states with performance funding and wish to have the same policy to address a similar set of concerns and not to fall behind other states. If meeting this demand is important, policymakers may borrow this policy from other states. In this respect, the electoral connection frame partly converges with the policy diffusion frame, although its causal mechanism is based on voter preferences rather than on state officials' own decisions.

Considering adoption and termination of performance funding, proximity of elections becomes a major determining factor of both of these events (Nordhaus, 1975; Rogoff, 1990). In the words of Barrilleaux et al. (2002):

> [E]lectoral competition shapes the behavior of parties in government, leading them to provide policies more consistent with the demands of their core constituents. […]. [Parties] behave pragmatically, allowing electoral considerations to influence their policy making. (p. 425)

Politicians are believed to be more likely to adopt popular policies closer to elections to ensure more votes and thus the incumbent advantage. They are also more likely to enact unpopular programs or terminate popular policies soon after the elections.

This strategy gives them more time before the next elections to distance themselves from unpopular decisions and subsequently to win the public's approval and votes for the next election (Doyle et al., 2010; Nelson, 2000; Nordhaus, 1975; Rogoff, 1990).

As a policy that aims to ensure accountability and efficiency of higher education, performance funding is likely to enjoy broad ideological support from voters. Therefore, it is more likely to be adopted closer to the election times. This strategy could earn incumbents more votes, and presumably rational officials could adopt performance funding to gain an electoral advantage over competition.

If however, the program is difficult to implement, faces strong opposition, or cannot be funded, state officials may want to discontinue it despite its assumed popularity with the voters. Not wishing to lose electoral support, incumbents are thus unlikely to terminate performance funding close to elections. Instead, they are more likely to discontinue the policy in the beginning of their term in order to let voters' attention drift to other issues by the next election. Following the same logic, performance funding adoption seems less likely at the beginning of the term because it will not offer incumbents any electoral advantage.

Regarding performance funding failure, shifts in voter preferences can explain legislators' decision to discontinue a program. According to Downs (1972), the public quickly loses interest in a policy after its adoption, especially if its implementation is problematic. Therefore, policymakers have some discretion in whether to continue investing in it. The negative experience of other states with performance funding could also provide for waning voter pressure to sustain this policy. Thus, a policy failure could

be a result of the decline in public interest, shift in voter preferences, progression through the political business cycle, or negative influence of other states' examples.

Based on the discussion of factors that could affect performance funding policy shifts under the electoral connection frame, I propose the following hypotheses.

HYPOTHESIS 1: States with a more rapid growth in public-sector enrollment will be more likely to adopt performance funding and less likely to abandon it.

Access to higher education is one of the most critical public concerns. Despite tuition hikes partly caused by the reduction in state funding for higher education (Heller, 2001a), the demand for college access has grown significantly. The combination of the enrollment surge, increasing tuition, and common enrollment caps (due to inability to accommodate all aspirants) has created conditions for frequent denial of college access and thus put this issue on the front burner. The perceived severity of this issue has increased over time, given the constancy of enrollment growth and the rising concerns over institutional capacity to meet this demand for access (AASCU, 2010).

Rapid growth in undergraduate enrollment in public higher education creates pressures on the sector to accommodate larger numbers of students and on the government to provide greater financial support to the enterprise. Given these fiscal and capacity constraints, the usual responses by institutions and policymakers are tuition increases and enrollment caps (AASCU, 2010). These responses translate into stronger public demand for college access and greater pressure on incumbents to meet this demand. I argue that voters who perceive access to be an increasing challenge will be more likely to push elected officials to demand enhanced performance and accountability of higher education. Therefore, heightened public concern over access to higher

education is expected to increase the likelihood of performance funding adoption and decrease the likelihood of its failure. Thus, change in public enrollment is an adequate proxy measure for enrollment pressure on public institutions as perceived by the public.

HYPOTHESIS 2: As the net cost of college increases, states will be more likely to adopt performance funding and less likely to abandon it.

The second critical public concern is with the rising price of higher education. Citizens feel that college education has become less affordable, even given the scope and variety of financial aid available to students and families (Heller, 2001b). Increasing tuition costs drive voters to demand policies ensuring greater accountability of higher education and more government regulation of the enterprise. Thus, a growing concern over rising tuition costs creates pressure on legislators and governors to adopt policies that force higher education institutions to account for their use of public money and results achieved with increased costs. At the same time, available financial aid lessens financial burden associated with obtaining a higher education and may moderate the effect of increasing tuition.

To be sure, an argument can be made that the general public never really knows the actual net cost of college and does not have full information about, or understanding of, the factors that constitute it. According to Hearn and Longanecker (1985), these and related limitations cast "serious doubts about the meaningfulness and importance of net price in college attendance" (p. 494), and "the twin specters of disorderly chronology and inadequate information interfere with the 'real world' applicability of the net price concept" (p. 495). However, this research uses the net cost of college not as a factor of college attendance decision-making but as a proxy measure of vague, yet strong, voters'

concern about affordability of higher education. Even if unknown, fully unavailable, or exaggerated, changes in the net price of higher education are powerful drivers of voter behavior. I argue that in this sense this metric is adequate and useful for capturing the effect of voters' perception of college affordability on the likelihood of policy changes.

Also, when accounting for voters' affordability concerns, employing the net cost of college is preferable to using changes in tuition levels. The net price concept allows focusing more on the voters' motivation for a policy change as opposed to the policymakers' concerns over tuition increases; the latter "may view escalating tuition costs as one indicator of the higher-education sector's lack of accountability" (McLendon et al., 2006, p. 7). Therefore, the concept of the net cost of college helps differentiate between explanations offered by different theoretical frames.

I calculate the net cost of college attendance according to the following formula: *Net cost of college = Average tuition at public four-year institutions – Average state-provided financial aid*.

HYPOTHESES 3 and 4: States will be more likely to adopt performance funding and less likely to abandon it as legislative or gubernatorial elections draw closer.

These hypotheses are steeped in the workings of the political business cycle and are based on the assumed popularity of accountability policies among the electorate. The role of voter support and voters' influence on state policies wax and wane depending on the respective stage of the cycle (Nordhaus, 1975). Due to the concerns that citizens have about state higher education and empirical observations outlined in the literature review, these hypotheses assume that performance funding enjoys broad public support and this support determines incumbent behavior. In the words of Rogoff (1990), "Any incumbent

politician, regardless of his ideological stripes, wants to convince voters that he is doing an efficient job running the government" (p. 21).

Following the dynamics of the political business cycle, politicians are more willing to adopt innovative and popular policies, such as performance funding, during the election year. This tendency is likely to be observed because voters pay attention to the incumbents' recent performance and thus are more likely to reward the latter with votes. By the same logic, terminating an accountability policy with great political capital close to the election time would be detrimental to the reelection chances of incumbents. Abandoning a performance funding policy that has proven ineffective or difficult to implement will most likely occur soon after the election so that the voters' attention will drift to other issues before the next election (Doyle et al., 2010). This rationale applies both to state legislators and governors; all incumbents rationally use the timing-of-the-election factor in creating electoral advantage over competition.

HYPOTHESIS 5: States with a higher proportion of bordering states with operational performance funding and higher net cost of college will be more likely to adopt performance funding and less likely to abandon it.

According to Besley and Case (1995), voters use other states as *yardsticks* to assess performance of their own states. They push legislators to adopt policies similar to the ones in neighboring states (or states in the same media markets) so as not to fall behind in critical areas. From this perspective, voters may look at the experiences of other states with accountability policies and demand that policymakers follow their lead. Thus, a greater number of nearby states with performance funding is likely to amplify the effect of the net cost of college on the likelihood of performance funding adoption. The

same effect on performance funding failure is expected to be reverse: The greater the number of nearby states with performance funding, the weaker is the expected impact of cost of college on the likelihood of terminating performance funding.

Combining the effects of neighboring states with performance funding with the net cost of college allows me to draw a conceptual distinction between different mechanisms of policy spread. If this interaction is statistically significant, I will be able to differentiate policy diffusion driven by voters' behavior from policy diffusion due to behavior of state policymakers. In other words, a significant result will demonstrate that diffusion of performance funding is driven by public pressure and not by state officials' preference to borrow advantageous policies.

Political Environment Frame

This frame analyzes the internal political characteristics of states that affect policymaking and drive policy changes. It asserts that policy positions are formed by policymakers' preferences and focuses on partisan and ideological forces that shape the policy lifecycle. In this frame, parties are seen as key actors that "organize government by fashioning coalition through compromises and bargaining, and winning elections" (Godwin & Ingram, 1980, p. 283) in order to promote their ideas and agendas while ensuring voter buy-in. Through this process, parties determine the policy lifecycle. Ideology is understood as "values, beliefs, and issue-positions" (Gerring, 1998, p. 6). The ideological positions of legislators and governors affect the entire process of state policymaking and many policy decisions (Erikson et al., 1987).

In brief, partisan and ideological identifications of state officials are two critical determinants of state policymaking and are often found to have a statistically significant effect on the outcome of interest (Alt & Lowry, 2000; Berry & Berry, 1990; Erikson et al., 1987). Although overlapping to some extent, these concepts are not identical. "Particularly on a state-by-state basis, partisan identification may be quite different than ideological position" (Doyle, 2006, p. 267). Erikson, Wright, and McIver (1989, 1993) find that party strength is essentially unrelated to elite ideology.

Defined as a set of ideas, values, and beliefs, ideology provides a broader motivation for political actors' behavior. In contrast, the motivation for acting in a partisan fashion is to accomplish goals on behalf of one's party and, more specifically, to ensure the continued party control of the government. Therefore, it is possible that policymakers may act in ways that are ideologically inconsistent with their partisan identification. An example of this inconsistency is a party's decision to gain advantage by supporting policies that are opposite to its ideological leaning (Doyle, 2006).

The political environment lens is related to the electoral connection frame in that parties make rational assumptions about voter preferences, and ideologies may provide for different policy responses to voter demands. However, the political environment frame presupposes a leadership role of parties in promoting policy agendas and not merely responding to voter preferences. Parties, their agendas, and their interactions are important determinants of state policy making and its outcomes. Barrilleaux et al. (2002) note, "Political parties are the most common institutional devices through which democratic competition is structured. The nature of that competition affects what governments do, that is, the policies they produce" (p. 415).

The political environment frame focuses on the role of key state policymakers, namely, legislators and governors. These two groups are the most critical actors in state policy making, including the higher education arena. Specifically, "[s]tate legislatures and governors have long played a critical role in higher education policy, through the power of the budget and their influence on the agendas and membership of public governing boards" (Wellman, 2001, p. 49). Ideological and partisan identification of key policymakers and their interaction create the political environment in the state and, thus, affect all policy changes. Godwin and Ingram (1980) underscore the importance of the political environment:

> A policy succeeds or fails not only on the basis of the resources of its proponents or opponents, its level of funding, the skill and dedication of those who must implement it, and the receptivity of the target population, but also on the basis of the political system's general capacity to act effectively. (p. 279)

According to Godwin and Ingram (1980), the relative effectiveness of government institutions, which may account for policy successes and failures, has to do largely with partisan strength, partisan ideology, and influence of interest groups. At the time of writing, these researchers observed both the nascent decline of parties (a trend also noted by Crotty and Jacobson, 1984) and the disintegration of partisan ideology in terms of liberal-conservative split, as well as the emergence of powerful "single issues" cutting across party lines due to "the failure of pluralist institutions to be representative and responsive" (Godwin & Ingram, 1980, p. 297). Since that time, the trend of parties losing their strength and influence has reversed itself, and more recent literature suggests that parties are getting stronger (for example, Bibby, 1996; Sinclair, 2006). Nonetheless,

both then and currently, parties and ideological positions of policymakers have continued to be important factors of state political environment.

Regarding performance funding, I argue that it is a policy with clear partisan and ideological associations. Performance funding pursues the goals of accountability, efficiency, institutional improvement and quality enhancement; introduces marketlike principles; and, as some believe, promotes business interests in higher education. In this respect, this policy is aligned with the Republican agenda. At the same time, the concepts of educational accountability and institutional efficiency may belong to the above-mentioned "single issues" (Godwin & Ingram, 1980) that cut across party lines.

Therefore, one may expect that states with the Republican leadership will be more willing to introduce this rigid and demanding form of higher education accountability. For Republicans, performance funding adoption achieves critical objectives: It imposes an accountability and efficiency mechanism via incentives for institutions to change their behavior in the desired way without direct government interference and it advocates business interests through aligning institutional incentives with the employers' needs.

Ideological positions of state policymakers could also be a major determining factor for performance funding, which promotes value-laden mechanisms of steering public institutions toward greater competition through incentive-based and information-driven improvement. Performance funding introduces elements of market competition in the publicly supported sector via monetary rewards for enhanced institutional performance. Therefore, this policy gravitates toward a neoconservative ideology and departs noticeably from liberal ideological values. Such distinct ideological leaning could ensure support from certain groups that share the same ideology and preferences.

Viewing performance funding as a policy with clear partisan and ideological associations, I propose the following hypotheses under this frame.

HYPOTHESIS 6: States with a larger Republican presence in state legislatures will be more likely to adopt performance funding and less likely to abandon it.

McLendon et al. (2006) find that Republican legislative strength is positively related to the probability of performance funding adoption. Their explanation is that Republicans, more than Democrats, are oriented toward accountability, choice, and efficiency in higher education, are more suspicious of public bureaucracy, and tend to promote business interests in government programs. In the Republicans' view, performance funding may provide "the strongest leverage for ratcheting up accountability pressures within the large public bureaucracy of higher education" (p. 18). Alternatively, the researchers also speculate that Republicans, whose presence in state legislatures grew significantly in the 1980s and 1990s, may have tended to conduct a more aggressive oversight of their opponents' policies.

In McLendon et al.'s (2006) words, "the finding seems to us sufficiently interesting to merit additional scholarship" (p. 18). The same hypothesis in this study aims to test the above finding in a different model with a new set of covariates.

HYPOTHESIS 7: States with a Republican governor will be more likely to adopt performance funding and less likely to abandon it.

Partisan and ideological reasons behind this hypothesis are the same as for legislators. Governors are powerful political players who can induce policy shifts through direct intervention and influencing the legislative agenda. They are high-powered policy entrepreneurs and may propose important policy changes for legislative

consideration at any stage of the policy cycle. Possessing veto power and the ability to influence policymaking through membership in governing boards and participation in networks, governors can also be influential in policy failures. Governors have been direct initiators of at least six performance funding policies and influenced the design of many policies that were initiated by legislatures. Prior evidence suggests that a change in the governor's party may lead to closing of their predecessors' programs (Burke, 1998; Burke & Serban, 1998).

HYPOTHESIS 8: States with a more conservative government will be more likely to adopt performance funding and less likely to abandon it.

Performance funding is in sync with the conservative leaning toward using market- and incentive-based mechanisms to regulate public institutions as opposed to direct government interference. Thus, it could enjoy greater support of conservative politicians. I expect more conservative governments to be more likely to promote these policies that are aimed at affecting behavior of public bureaucracies.

Policy Diffusion Frame

States can be viewed as policy laboratories that allow experimenting with policies under different conditions and timeframes (Volden, 2006). The policy diffusion frame postulates that public policies migrate across state lines in a systematic manner (Balla, 2001). Policies diffuse due to the following reasons: emulating states with advantageous policies, creating conditions for economic competitiveness, and meeting public demand (Berry & Berry, 1999). Thus, proliferation of policies could be a result of their diffusion across states; likewise, policy termination could be encouraged by its failures in other

states. State policymakers are thought to engage in the process of social learning; they examine other states' experiences and adopt successful policies. This process may also happen in reverse: Learning of a policy failure may prompt state officials to decide against adopting a similar policy or terminate their own program. Thus, states can learn from earlier adoptions and modify the policy to fit their needs better (Balla, 2001; Berry & Berry, 1990, 1992, 1999; Boehmke & Witmer, 2004; Karch, 2007; Mintrom, 1997; Mintrom & Vergari, 1998; Volden, 2006, 2008).

As discussed in the literature review, chronology of performance funding adoptions seems to support both the idea of yardstick competition in the electoral connection frame and the policy diffusion frame. One can easily see that the spread of performance funding policies, as well as their demise, has had clear regional patterns. Thus, it is possible to assume that this spread has occurred due to both voters and state policymakers' sensitivity to what is happening in the other states.

Another potential factor of performance funding diffusion is the salience of such long-standing and successful programs as the ones in Tennessee or Missouri (before its abandonment), or such ambitious endeavors as the original policy in South Carolina. By the same logic, well-publicized failures of some of these experiments could have provided for policy termination in other states. In the latter scenario, diffusion is deemed to have a national, as opposed to just regional, character.

Focusing on the causal mechanisms of policy borrowing, Karch (2007) identifies the following reasons for diffusion: (a) imitation, which is driven by shared policy-relevant characteristics of states with similar political environments; (b) emulation, which involves social learning from policy successes and failures in other states; and (c)

interstate competition, which pressures officials to adopt policies that create competitive advantage over other states.

Traditional policy diffusion studies focus on geographic proximity, which is deemed to facilitate policy migration across adjacent or nearby state lines. However, Karch (2007) criticizes the use of geographic proximity because in many cases it does not explain why diffusion occurs or fails to occur. Also, due to technological advances, the impact of geography has decreased and diffusion of public policies, in his view, might be caused by the national-level forces as opposed to juxtaposition.

> The impact of geography may be due to close communication networks, overlapping media markets, the shared attributes of nearby states, or something else. But the conventional proxies used to model the impact of geographic proximity cannot distinguish among these possibilities. (Karch, 2007, p. 58)

Regarding performance funding, I believe that diffusion mechanisms play out in the following way. First, according to researchers who consider geographic closeness, policymakers can draw lessons from policy responses in proximate states (Doyle et al., 2010; McLendon et al., 2005). From this perspective, contiguous states with performance funding may influence a given state's decision to adopt this policy by virtue of being near and offering more and better information about the policy functioning. Likewise, their decisions to terminate performance funding may provide—again, mostly through offering heuristic shortcuts for decision making—for policy failure in the given state. The key issue is distinguishing policy diffusion from independent adoption.

Second, imitation is based on state officials' perception that a borrowing state and a lending state share some policy-relevant characteristics and belief that the borrowing state should also enact this policy due to this similarity. "[P]olicies spread because

lawmakers imitate their colleagues who operate in similar political environments" (Karch 2007, p. 60). In my view, the only policy-relevant characteristic that is both appropriate and offers sufficient data variation is state government ideology. Because performance funding for public higher education is, to a large extent, a value-laden policy, ideological leanings of state policymakers should affect decisions about its adoption and termination. Governments with similar ideological leanings are expected to imitate each other more readily, meaning that they may adopt or terminate policies in a more or less coordinated fashion.

Third, emulation works through policymakers' desire to copy policies that have proven successful in other states. In Karch's (2007) words, "Emulation is a specific form of imitation, such that officials believe they should adopt a policy because it will allow them to achieve a substantive policy objective. […]. Emulation is also driven by the perceived success of a policy" (p. 60). To reverse Karch's logic, state officials may also want to avoid adopting policies that have proven unsuccessful or difficult to implement in other states. They may also be more likely to terminate their own policies if their prominent counterparts elsewhere ceased to exist. From this position, states that adopt performance funding intend to imitate success of the early policy adopters. Prominent, long-standing, and perceivably successful policies are deemed especially influential in this diffusion mechanism. Such policies have proven that performance funding can be successful and help achieve valuable objectives and thus are more likely to be emulated. In contrast, policy failures can make policymakers uneasy about the efficacy of this approach and can either deter them from adopting their own program or expedite the demise of an existing policy. In brief, policies that have survived through periodic

evaluations are deemed successful. Therefore, policy longevity can serve as a proxy measure for policy success.

Finally, "[a] public policy may also diffuse because officials believe that the failure to adopt it will put their state at a competitive disadvantage, making them feel pressure to keep up with their colleagues in other jurisdictions" (Karch, 2007, p. 62). Policymakers may adopt a policy that, in their view, affects their state's relative attractiveness. Performance funding may be perceived as offering some competitive advantages to adopting states and the policy diffuses due to other states' desire to gain the same advantage. Much of state competition happens in the economic arena, and thus states' motivation to adopt innovative policies may be related to economic development.

If state officials believe that performance funding enhances quality and performance, they may adopt it to increase relative attractiveness of their institutions. A long-term outcome, in their view, will be increasing the number of students coming from the competing states to receive higher education (in-migration) and decreasing the number of students leaving for other states to get a college degree (out-migration). A postponed benefit of the adopted policy could be an increased level of educational attainment and higher state taxes paid by higher education graduates.

Based on the geographic proximity rationale and Karch's (2007) classification of the policy diffusion mechanisms, I propose the following set of hypotheses.

HYPOTHESIS 9: States with a higher proportion of neighbors with performance funding will be more likely to adopt performance funding and less likely to abandon it.

This hypothesis tests the proposition that geographic proximity determines policy diffusion. Engaged in the process of social learning, policymakers are believed to

monitor activities of nearby states and borrow successful policies while steering clear of the failed ones. Although evidence for diffusion is mixed, it is possible that state officials look at neighboring states for examples of effective policies and solutions to common problems. States may also learn from their neighbors' policy failures. Dissemination of information about failed policies could lessen the chances of policy adoption and increase chances of policy demise (Doyle et al., 2005).

Performance funding is a rather confined and specific policy, which does not attract a lot of voter interest and, therefore, does not claim much of elected officials' attention. Because of information access and processing constraints (Byron, 2004; Kingdon, 1995; Mooney, 1991a, 1991b, 1993; Stewart, 1992), state officials look for available examples of policy responses to common issues. States in the same geographic, media, or policy regions—which overlap to a considerable extent—are the obvious sources of such heuristic shortcuts. Therefore, proximate states with operational performance funding policies may influence incumbents' decision to adopt it. In a similar fashion, abandoning performance funding in a bordering states may provide for termination of an existing policy or failure to adopt a new policy in a given state.

HYPOTHESIS 10: States with a larger number of "ideological neighbors" that have made a performance funding policy shift will be more likely to follow suit.

This hypothesis tests the imitation rationale for policy diffusion (Karch, 2007). From this stance, states borrow policies based on their economic, ideological, or demographic similarities with the lending state. In contrast to the previous explanation for borrowing (which relies on policy diffusion across adjacent state lines), this

explanation focuses on policy migration among states sharing certain characteristics that facilitate diffusion.

As demonstrated by Grossback et al. (2004), Volden (2006), and Volden et al. (2008), policy diffusion may happen between states with similar partisan and ideological leanings, and demographic or budgetary situations. Considering the nature of performance funding, I focus on ideological proximity among borrowing and lending states, namely, on similarity in government ideology. The Index of Political Ideology (Berry et al., 1998) allows identifying ideologically proximate states accurately while providing sufficient variation of indices to run statistical analysis.

HYPOTHESIS 11: States with more contemporaneous examples of successful policies will be more likely to adopt performance funding and less likely to abandon it.

This hypothesis tests the emulation reason for policy diffusion (Karch, 2007). Emulation consists in adopting policies that are deemed successful in other states. In this explanation of policy diffusion, state officials learn about an effective program elsewhere and introduce it in their states as something that has proven successful and effective. In brief, policies that are deemed successful are more likely to be emulated. However, if a successful program fails, it could increase the likelihood of other adopters terminating their own program—especially, if these policies have not yet reached their maturity.

This study equates success with longevity and considers policies that have been in operation for five years or more to be successful. I argue that policy longevity is an adequate—although by no means the best—indicator of success; policies that have survived a long time, undergone periodic evaluations, and persisted into the next implementation period can be considered reasonably successful. The very fact of a

continued financial and other investment in the policy testifies to its perceived success and desired impacts. A five-year period is proposed as a measure of policy success because most programs have had shorter implementation periods at the end of which they stand for reevaluation. Five years is also sufficient time for the policy to gain salience as an efficient policy so that other states would be motivated to adopt it, too.

HYPOTHESIS 12: States with a higher ratio of student out-migration to in-migration will be more likely to adopt performance funding and less likely to abandon it.

This hypothesis tests the competition-driven explanation of policy diffusion (Karch, 2007). In higher education, student brain drain is an obvious measure of interstate competition. I distinguish between (a) brain drain of college graduates, that is, "the net emigration of college graduates (skilled personnel) from the state where they got their college degree to another state" (Ionescu & Polgreen, 2008, p. 4), and (b) brain drain of potential and current students, that is, emigration of high school graduates to other states to obtain higher education. This study is concerned only with the latter type of brain drain; however, I acknowledge the inseparable relationships between both types.

States compete for instate high school graduates remaining in their home state to obtain higher education but also for out-of-state students moving in to attend higher education institutions. States engage in this competition by increasing attractiveness of institutions, mostly through enhanced investment in higher education (Ionescu & Polgreen, 2008). States enter into rivalry for students because brain drain has direct economic repercussions: "[L]osing college graduates is a drain on the local economy" (p. 2). If graduates join labor force in the state where they attended college, they will pay taxes, contribute to creating a more educated labor force, and enhance the state's general

educational attainment. Thus, increasing graduates out-migration can lead to decreases in public support of higher education as policymakers may be dissatisfied with its performance (Justman & Thisse, 1997; Strathman, 1994; Wirtz, 2003).

Certainly, incumbents pursue both of these goals: (a) increasing attractiveness of institutions in order to keep *native* students and attract *migratory* students, and (b) raising the level of educational attainment in the state and enlarging its tax base. They may deem brain drain to be an indicator of floundering higher education that cannot attain these policy objectives. In pursuit of these goals, policymakers may look at policies in other states that can create a competitive advantage. Successful performance funding policies, which aim to enhance quality and performance, may seem an obvious response to the brain drain problem that creates significant competitive advantage. Not wishing to fall behind the competition, policymakers may find it necessary to adopt performance funding. In a similar vein, if state officials believe that performance funding helps alleviate the brain drain problem through its focus on better institutional performance and results, they will be less willing to terminate the program or remove its funding.

Principal-Agent Frame

This conceptual lens is rooted in the agency theory and the public bureaucracy literature. Agency theory examines how principals delegate work to agents for implementation by analyzing contractual and hierarchical relationships between them and motivations for their actions. Agency relationships arise when the principals engage the agents—due to the lack of their own expertise, skill, or time—to perform some tasks on their behalf (Lane & Kivisto, 2008; Moe, 1984; Ross, 1973). The principal-agent frame

is appropriate for examination of the relationships between state officials (principals) and higher education institutions and their state boards (agents). As Lane and Kivisto (2008) explain, "Similar to other public bureaucracies, public colleges and universities operate in an environment of hierarchical control and information asymmetry" (p. 143).

The principal-agent relationships have the following inherent problems: the goals and interests of the principal and agents are not perfectly aligned, these actors are driven by different motivations, and they attempt to maximize their own utilities. The principal does not know if the agents do their best to pursue the former's interests. As a solution, the principal may design an incentive structure that makes pursuing the principal's objectives advantageous to the agents. Thus, to ensure compliance with their preferences, the principals have to select the agents, monitor them, and use various incentives (Lane & Kivisto, 2008; Miller, 2005; Moe, 1984; Petersen, 1995).

Performance funding exemplifies precisely this type of incentive and monitoring structure for public higher education institutions. While state officials use performance funding to align higher education with the state's priorities, institutions mostly view it as a sign of increasing government interference and diminishing institutional autonomy (Burke & Associates, 2002). Thus, this policy contains inherent conflicts due to a divergence of interests, priorities, and motivations. In this study, the principal-agent frame is useful for understanding how relationships between state policymakers and institutions affect policy changes.

Reflecting the principals' goals and preferences, performance funding generally aims to pursue statewide goals and priorities. Incumbent politicians often initiate the program and select performance indicators that mostly reveal state economic and

accountability priorities. Conversely, policies initiated by higher education systems usually aim to avoid the anticipated imposition of performance indicators by external actors (Burke & Associates, 2002). Burke (2005d) concludes, "Performance Funding (PF) stresses state priorities, with little recognition of market forces and academic concerns" (p. 311).

Among the main goals of performance funding—demonstrating external accountability, meeting state needs and priorities, and improving institutional quality and performance (Burke, 2003)—colleges are mostly interested in the last one. "[I]nstitutional administrators and faculty have always been more concerned about institutional improvement than accountability" (Shin & Milton, 2004, p. 3). As a rule, their motivation is largely monetary: to secure financial resources through compliance with policymakers' interests. In performance funding programs, targeted state funding is offered as an incentive for institutional cooperation (Burke, 2001b; Shin & Milton, 2004). "Performance based funding changes the incentives and is likely to bring changes in universities behavior. Universities will thus rearrange their resources in the way that is most 'profitable' in the new environment" (Soo, 2003, p. 2). This motivation is far from ideal to ensure perfect alignment of institutional behavior with the state officials' goals and provides for the emergence of the principal-agent problem.

Because higher education institutions are closer to the level of actual policy implementation, they have more and better information than policymakers about the inner workings of a program; however, they have little incentive to inform the principals about all details. On the contrary, as bureaucratic agents, institutions prefer to retain discretion in their interpretation of legislative authority (Lane & Kivisto, 2008). This information

asymmetry provides for deviation from the original intentions and preferences of state officials and thus has a large potential for policy failure.

The principal-agent theory solves this moral hazard problem through finding mechanisms that will motivate the agents to act in the principal's best interests (Lane & Kivisto, 2008). In the higher education arena, the principal-agent issue is solved by using proxy indicators to monitor institutional performance and providing financial incentives to alter institutional behavior. However, the following critical factors can substantially affect the actual application of these approaches: the character of bureaucratic structures that embody the relationships between state officials and higher education institutions and the nature of the policy.

Policies are mandated and adopted by state legislatures. Therefore, institutional characteristics of legislative bodies are important determinants of policy shifts. The most critical characteristics of legislatures are eloquently expressed by the notion of legislative professionalism. In brief, more professionalized legislatures to a greater extent resemble the U.S. Congress in such key attributes as session length, legislative pay, and available staff (McLendon et al., 2006; Squire, 1992, 2000, 2007). Professionalism is important in two respects: first, more professionalized legislatures have greater resources, such as time, staff, and analytics; and second, these resources present a greater policy analytical capacity which provides the potential to design and adopt more successful and sustainable policies. Howlett (2007) defines policy analytical capacity as:

> [T]he amount of basic research a government can conduct or access, its ability to apply statistical methods, applied research methods, and advanced modeling techniques to this data and employ analytical techniques […] in order to gauge broad public opinion and attitudes, as well as those of interest groups and other major policy players, and to anticipate future policy impacts. (p. 4)

As is clear from this definition, more professionalized legislatures have a greater ability to carry out such activities, and this feature is deemed to have a direct bearing on both policy adoption and failure.

Under conditions of unequally distributed power, different priorities, and partially divergent interests and goals, the role of state boards for higher education becomes critical. The state board serves as a "buffer" between state officials and higher education institutions (NCPPHE, 2003; Nicholson-Crotty & Meier, 2003) and may be seen—depending on the type of board, nature of the policy, and one's position—as either "a hand of the government" or, alternatively, a defender of higher education's interests in all interactions with the state government. As discussed in the literature review, the state board is an agent in relation to state policymakers but it can also act as the principal in relation to its subordinate institutions—mostly, in case of consolidated governing boards.

The nature of the program is critical in establishing principal-agent interactions and determining the likelihood of policy adoption or failure (Burke & Associates, 2002; Burke & Modarresi, 2000, 2001). Built-in programmatic features can facilitate or impede principal-agent relations, thereby creating conditions for policy success or failure. Characteristics of performance funding programs are important because they can better align interests and priorities of policymakers and institutions or, on the contrary, create counter-incentives for cooperation. I propose the following hypotheses under the principal-agent frame.

HYPOTHESIS 13: States with more professionalized legislatures will be more likely to adopt performance funding and less likely to abandon it.

The level of state legislative professionalism is determined by such key characteristics as salaries, session length, and staff size (Nicholson-Crotty & Meier, 2003; Squire, 1992, 2000, 2007). More professionalized legislatures have greater analytic, time, and staff resources, may attract better educated members, and may deal with higher education bureaucracy more effectively; therefore, they are deemed to be more disposed to design and adopt innovative policies (Barrilleaux et al., 2002; McLendon et al., 2006; Squire, 2002). According to Nicholson-Crotty and Meier (2003), "[t]he greater resources that more professionalized legislatures have at their discretion allow them to overcome problems of information asymmetry" (p. 89). Besides, the same resources ensure greater policy analytical capacity and may allow more professionalized state legislature to design more sustainable and successful policies that are less likely to fail.

To be sure, performance funding may be also initiated by governors or higher education community, and in such cases, focusing on just legislative professionalism may seem inadequate. However, I argue that legislative professionalism is a good representation of the general culture of governmental professionalism. This broad culture, and not necessarily specific states' characteristics, makes a difference and is deemed to determine transitions in the policy lifecycle.

HYPOTHESES 14a, 14b, and 14c: States with consolidated governing boards will be less likely to adopt performance funding and more likely to abandon it; these expectations will be reverse for states with strong and weak coordinating boards.

McLendon et al. (2006) found that consolidated governing boards were negatively related to performance funding enactment but positively associated with the adoption of more flexible performance budgeting. The researchers explain this finding by protection

of higher education interests from externally imposed accountability. In their view, consolidated governing boards are better poised to protect institutional interests due to the former's political clout and lobbying power. If performance funding is deemed to infringe on institutional autonomy appreciably, these boards may use their clout to founder its adoption or expedite its demise. This hypothesis tests this supposition with a new model and new set of covariates. Conversely, states with strong or weak coordinating boards are considered to be less equipped to stand up against policies of external accountability that infringe on institutional autonomy.

HYPOTHESIS 15: States in which performance funding was initiated by state boards of higher education will be less likely to abandon the policy.

Prior research has found that while stable performance funding policies exhibited an important input by state governing boards, unstable programs were often mandated and used prescribed indicators (Burke & Associates, 2002; Burke & Modarresi, 2000, 2001; Serban, 1997b). This hypothesis tests whether self-initiated programs are actually less prone to failure. The rationale is that policies that were developed with strong input from the higher education community and were not imposed by external actors will have less opposition to policy adoption and stronger support in its implementation.

HYPOTHESIS 16: Performance funding that was initiated via an appropriation bill or budget proviso will be more likely to fail and less likely to be readopted.

Dougherty and Natow (2009), Dougherty et al. (2011), and Dougherty et al. (2012) find that performance funding policies initiated through a budget proviso were more likely to be terminated. Their explanation is that such policies are easier to abandon because termination does not require withdrawing the mandate; it merely requires not

including the policy in the next budget. Because their analysis is limited to case studies of individual states, I intend to retest this finding across states and over time with a quantitative method.

Other Influences on Policy Lifecycle

Several other determinants of policy changes fall outside the proposed theoretical frames but definitely must be accounted for. These influences include short-term economic conditions, resource allocation to higher education, and idiosyncratic regional factors. The first two determinants represent the current economic climate in the state and associated budget constraints, and the last factor accounts for political-cultural and economic differences on a larger scale—among various regions of the country.

Prior research has demonstrated that short-term economic conditions are critical determinants of the policy lifecycle—including the probability of policy adoption—and various educational outcomes (Berry & Berry, 1990, 1992; Betts & McFarland, 1995). These fluctuating economic climates are determined, to a large extent, by the respective stage of the business cycle and national economic situation.

Regarding performance funding, difficult economic times may encourage incumbents to adopt policies that demand financial accountability and efficiency. "[M]any observers of the recent accountability movement in higher education have surmised that the new mandates may be driven in part by fluctuating economic conditions in the states" (McLendon et al., 2006, p. 5). Thus, my model must account for the current economic climate by controlling for indicators of economic health such as the unemployment rate, total state per capita income, or poverty rate. I expect the likelihood

of adopting performance funding to increase as the economic situation worsens and decrease as it improves; the expected effect on the probability of failure will be opposite.

State appropriations to higher education greatly affect policy changes and evolution. Emergence of performance funding was contemporaneous with a diminishing share of state support (Burke & Associates, 2002). As the majority of these policies were adopted through the 1990s, state appropriations slipped considerably due to the national recession and increasing competition from other public services (Burke, 1998a). These developments forced incumbents to reconsider their traditional funding approaches and introduce performance accountability policies. As state appropriations decreased and tuitions rose, so too did calls for accountability on the part of the public and policymakers. The intent behind performance funding was to ensure efficiency of public money spending and demand accountability in the times of rising college costs.

At the same time, many policies were discontinued in financially difficult times. The rationale behind such decision is different. To illustrate, if the program uses supplementary funds to reward institutional performance, budget difficulties may lead state officials to abandon the policy. In other words, state policymakers could make a decision to economize at the expense of the bonus money of the policy. According to Dougherty et al. (2011), institutions are also more willing to sacrifice performance funding in austere economic times in order to protect their core funding.

As mentioned in the literature review, emergence and spread of performance funding demonstrated obvious regional patterns. Therefore, this study needs to account for any economic, political, and cultural differences among regions of the country that may affect various policy shifts. To illustrate one possible mechanism of this influence

in McLendon et al.'s (2006) words, "In higher education, region-based policy consortia […] have long served as conduits for disseminating information about higher-education policies among states within different regions" (p. 20). Therefore, I also take into consideration the existence and operation of higher education regional compacts, the membership in which may be instrumental in determining the policy evolution.

Key Relations in the Conceptual Framework

The basic interrelations of the elements of the conceptual framework for the study are graphically presented in Figure 1. These relations serve as the foundation for formulating the above propositions about my research question.

In the graphical form, the conceptual framework boils down to the questions: "What factors lead to the events of interest?" and "Which actors perform which actions?" Although simplified, this visual presentation of the conceptual framework allows uncovering causal mechanisms behind the events and specifying the sets of actors and actions. To a first approximation, Figure 1 presents the chronology of the policy lifecycle, specifying its major stages and the main points at which the events of interest occur. It also identifies the main environmental factors, key actors, sets of actions available to each group of actors, decision points at which policy shifts (events) can occur, and causes of policy failures.

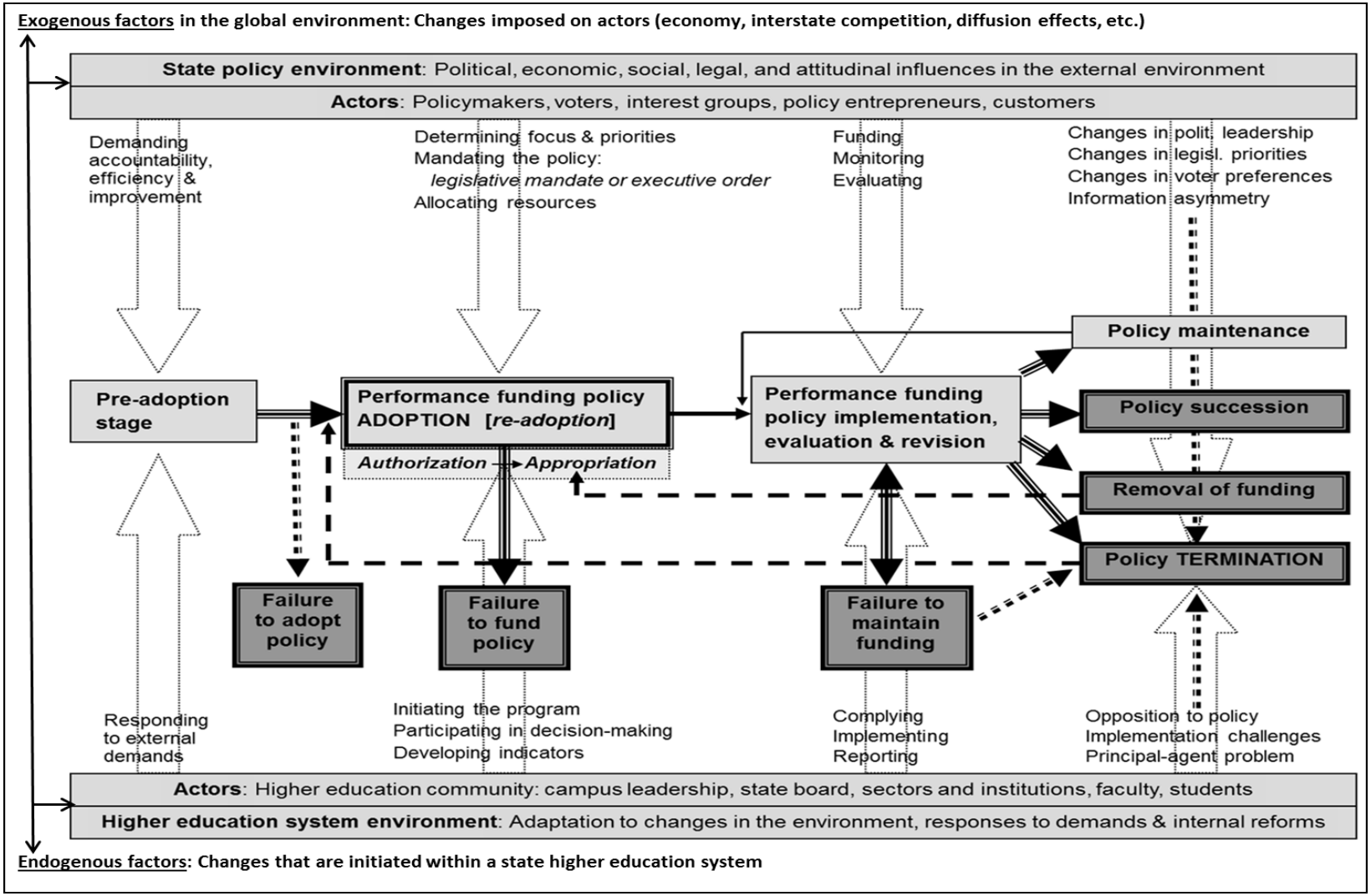

Figure 1. Conceptual Framework for the Study

The policy lifecycle is roughly represented by the four main stages in the center of the graph. It starts with the preadoption stage, leads to adoption (comprising two steps: policy authorization and appropriation), proceeds to policy implementation and revision, and then branches out into four possible outcomes: policy maintenance, policy succession (substitution with another policy), funding removal, and policy termination (mandate withdrawal). This process is cyclical in nature: (a) policy maintenance requires repeatedly going through the implementation-evaluation-revision stage, (b) funding removal may lead to new appropriations, and (c) policy termination provides for potential readoption of the policy. These possibilities are indicated by the reverse arrows on the graph. Because my research focuses on two specific points, policy adoption and failure (identified with double-framed boxes), the preadoption and implementation stages are "black boxes" for me, with the internal processes being important but remaining unspecified.

With double dotted and double straight arrows, Figure 1 indicates the decision points at which various policy failures can occur. These events can happen when (a) a policy proposal fails to be adopted, (b) the policy is not subsequently funded (policy development ends with authorization), (c) its funding is suspended, and (d) the policy is terminated through the mandate withdrawal, permanent funding removal, or substitution with a different policy. Because funding suspension can happen multiple times, the arrow between the boxes for implementation and failure to maintain funding is double-headed.

Figure 1 also identifies major factors in the state policy environment and higher education system environment and the key actors that affect performance funding policy

lifecycle. The wide dotted arrows converging on each stage of the policy process represent sets of actions that are available to each group of actors. In contrast to this design, the influences converging on the Policy Termination box are the causes of policy termination. It is important that any of these causes (the "Why") can be matched up with any of the ultimate types of policy failure (the "How"). Identifying causes for failure in this part of the graph allows me to propose hypotheses that focus on policy termination.

In addition to reasons for policy failure at preliminary stages, the following factors could lead to policy termination at the end of the cycle: changes in the political environment, failure to meet the original goals, lacking resources to resume funding after its suspension, and monitoring and implementation challenges that could lead to campus opposition to the policy and other issues of the principal-agent relationships.

Finally, Figure 1 acknowledges that the state policy and higher education environments, and their actors, are subject to exogenous and endogenous forces in the global environment. These influences provide for changes that could be imposed on the respective actors or initiated by these actors on their own. To illustrate, a short-term massive decline in state revenue gives an exogenous shift that affects both sets of actors, whereas internal reforms in higher education are self-initiated and are not a response to external forces. The objective external factors (most important, budgetary constraints and the natural progression of the business and political cycles) work through the state policy environment, providing for policy shifts at any stage of the policy lifecycle.

In brief, as the visual conceptual framework demonstrates, the performance funding policy lifecycle is an extremely complex phenomenon, which is subject to many exogenous and endogenous forces and involves numerous actors with multiple sets of

actions available to them. Due to this complexity, the causes of policy changes are also complex and affected by various external and internal influences. Graphic presentation of these interrelations and influences allows putting forth testable propositions under the proposed theoretical frames. The conceptual framework serves as a foundation for operationalization of the variables that are examined in Chapter 4.

General Model for the Study

Based on the proposed hypotheses and other critical factors, I suggest the following equation to analyze the time to occurrence of performance funding policy shifts. This general equation will be further elaborated in the section *Model Specification* (Chapter 4).

$$\text{TIME-TO-EVENT}_{it} = \oint (\text{ENROL}_{it},\ \text{NETCOST}_{it},\ \text{ELECTION}_{it},\ \text{YARDSTICK}_{it},\ \text{REPUB}_{it},\ \text{IDEOLOGY}_{it},\ \text{DIFFUSION}_{it},\ \text{BRDRAIN}_{it},\ \text{LEGPROF}_{it},\ \text{BOARD}_{it},\ \text{PROGRAM}_{it},\ \text{ECONSIT}_{it},\ \text{APPROP}_{it},\ \text{REGION}_{it})$$

where $i = 1, \ldots, 47$ for the 47 states examined in the study,

$t = 1, \ldots, 30$ for the years between 1979 and 2009,

TIME-TO-EVENT = time to occurrence of performance funding policy shifts,

ENROL = an annual change in the public-sector enrolment,

NETCOST = the net cost of college attendance,

ELECTION = the proximity of legislative and gubernatorial elections,

YARDSTICK = factors of yardstick competition,

REPUB = Republican presence in the state legislature and the governor's office,

IDEOLOGY = ideological leaning of the state government,

DIFFUSION = other states' experience with performance funding,

BRDRAIN = the extent of student brain drain,

LEGPROF = legislative professionalism,

BOARD = the presence of a particular type of state higher education board,

PROGRAM = idiosyncratic characteristics of performance funding programs,

ECONSIT = the current economic situation in the state,

APPROP = the level of state appropriations to higher education,

REGION = a regional identifier.

CHAPTER IV

DATA AND METHODS

Description of the Dataset

To investigate my research question and test the hypotheses, I compiled a longitudinal panel dataset, which includes critical economic, political, and education indicators of the states. The dataset contains data for 47 states for the period 1979 through 2009. The year 1979 is determined by Tennessee's adoption of the first performance funding program in the nation. The year 2009 is the last year for which the data were available at the time of the analysis.

The dataset is limited to include information on 47 states. Three states were omitted from the analysis: Alaska, Hawaii, and Nebraska. These states are often excluded from comparative studies of the states due to unique characteristics (Doyle, 2006; McLendon et al. 2006; Mokher & McLendon, 2007). Alaska and Hawaii were omitted because they differ from other states on important indicators, including geographic isolation (Berry & Berry, 1990; Mintrom, 1997). Nebraska was omitted due to the unicameral structure of its legislature and nonpartisan elections, which would preclude analysis of important political variables (Doyle, 2006; McLendon et al., 2007).

During the observation period, 27 states adopted performance funding at least once; 13 of them terminated the policy at least once. In addition, many adopting states experienced other types of policy failure: failing to provide funding, suspending or removing funding, or failing to meet all requirements of an operational policy (Table 1).

Table 1. Policy Cycles of State Performance Funding Systems

State	Policy cycle 1		Policy cycle 2		Policy cycle 3	
	Operational	Latent	Operational	Latent	Operational	Latent
Arkansas	1995	1997	1999	2001	2007	2008
	[Act 1029]	*[Act 241]*	*[Act 1180]*	*[Act 221]*	*[Act 1592]*	*[no funding]*
California	1998	1999	–	–	–	–
	[SB 1564]	*[not true PF]*				
Colorado	1994	1996	1999	2004	–	–
	[SB 94-1110]	*[HB 96-1219]*	*[SB 99-229]*	*[SB 04-189]*		
Connecticut	1985	1986	–	–	–	–
	[leg.mandate]	*[not true PF]*				
Florida	1994	1995	1996	2008	–	–
	[Ch. 94-249]	*[no funding]*	*[approp. bill]*	*[no funding]*		
Idaho	2000	2005	–	–	–	–
	[Board's vote]	*[no funding]*				
Illinois	1998	2002	–	–	–	–
	[Board's vote]	*[no funding]*				
Indiana	1997	1998	2003	2004	2007	2008
	[Board's vote]	*[no funding]*	*[Board's vote]*	*[not true PF]*	[*Board's vote*]	*[no funding]*
Kansas	1999	2000	2002	2003	2004	–
	[SB 345]	*[no funding]*	*[SB 647]*	*[no funding]*	[*SB 647*]	
Kentucky	1994	1997	2008	2009	–	–
	[HB 2]	*[HB 1 & 4]*	*[SB 80]*	*[no funding]*		

(continued)

Table 1, continued

State	Policy cycle 1		Policy cycle 2		Policy cycle 3	
	Operational	Latent	Operational	Latent	Operational	Latent
Louisiana	1997	2001	2008	–	–	–
	[Act 18]	*[no funding]*	*(HB 1)*			
Minnesota	1994	1995	1996	1998	–	–
	[Chap. 532]	*[no funding]*	*[Serban & Burke, 1998]*	*[Burke et al., 2002]*		
Missouri	1993	2001	–	–	–	–
	[approp. bill]	*[no funding]*				
New Mexico	2003	2004	2007	–	–	–
	[HB 393]	*[no funding]*	*[approp. bill]*			
New Jersey	1999	2003	–	–	–	–
	[Chap. 138]	*[no funding]*				
New York	1998	1999	2000	2007	–	–
	[Board's vote]	*[not true PF]*	*[approp. bill]*	*[no funding]*		
North Carolina	1999	2000	2001	–	–	–
	[HB 168]	*[no funding]*	*[HB 168: 99]*			
Ohio	1985	1986	1995	2008	2009	–
	[leg.mandate]	*[not true PF]*	*[HB 117]*	*[substitution]*	*[HB 1: 09]*	
Oklahoma	1997	2000	2001	–	–	–
	[approp. bill]	*[no funding]*	*[Board's vote]*			
Oregon	1999	2001	2007	–	–	–
	[Board's vote]	*[no funding]*	*[approp. bill]*			

(continued)

Table 1, continued

State	Policy cycle 1		Policy cycle 2		Policy cycle 3	
	Operational	Latent	Operational	Latent	Operational	Latent
Pennsylvania	2000	–	–	–	–	–
	[Board's vote]					
South Carolina	1996	2003	–	–	–	–
	[Act 359]	*[no funding]*				
South Dakota	1997	2002	2004	–	–	–
	[Board's vote]	*[no funding]*	*[Board's vote]*			
Tennessee	1979	–	–	–	–	–
	[Board's vote]					
Texas	1999	2003	2007	2008	2009	–
	[HB 1]	*[no funding]*	*[HB 3828]*	*[no funding]*	*[SB 1]*	
Virginia	1999	2000	2005	2006	2007	–
	[Board's vote]	*[no funding]*	*[HB 2866]*	*[no funding]*	*[approp. bill]*	
Washington	1997	1999	2007	–	–	–
	[ESHB 2259]	*[no funding]*	*[approp. bill]*			

Note. Operational status of a policy is achieved by policy adoption and readoption, and beginning or resumption of funding. The policy's latent status is achieved by policy termination, temporary or permanent defunding, substitution with another policy, and failing to meet the criterion of sufficient complexity (section *Key Definitions*). The remarks in brackets list indicators of respective policy events: legislative acts, including appropriation bills and budget provisos; state board's actions regarding a policy; and explanation of why a policy is considered nonoperational in spite of existing mandates. In some cases, these remarks include references to studies that provide data on particular events.
Due to space limitations, 2009 readoptions in Arkansas and Indiana are omitted from the table but are used in model estimations.

I use two types of data: data from a variety of reliable secondary sources and unique data collected for this investigation. The following narrative and Table 2 describe all variables and data sources for them.

Dependent Variables

In the Method section, I explain why, despite dealing with different policy changes, this study employs a single dependent variable, which stands for a generic performance funding policy shift. However, for ease of interpretation in this section, I discuss the outcome variable as if it were two separate dependent variables: the first one representing policy adoption (and readoption) and the second one standing for policy failure. Each of these outcomes is a binary event, which is defined as whether or not a state adopted or terminated the policy.

I conceptualize the dependent variable as the hazard rate (probability or risk) for either policy adoption or policy failure. The hazard rate is the instantaneous probability of a policy shift occurring in each period. In other words, it is an instantaneous rate of change—transition from non-adoption to adoption to failure to readoption—given that a state has persisted until this time without experiencing the event. The *Method* section defines the hazard rate in more detail. The data used to estimate hazard rates include both binary variables for each event and duration for every condition, i.e., the length of time that it took a state to adopt, abandon, or readopt the policy.

Table 2. Variable Description and Sources

Variable	Description	Source	Total / Max	Mean	SD
Policy shifts regarding PF	Dummy variables for policy shifts	Prior research Statutes & gov. doc.	91	–	–
Perceived access to higher education	Annual changes (%) in public-sector enrollment	SREB data library	–	1.60	3.20
Net cost of college [*Re-centered*]	*Net cost = Average tuition at 4 yr. HEI – Average state fin. aid*	WSAC tuition data NASSGAP surveys	–	0.00	1,715
Proximity of legislative elections	Number of years before the next election to the State House	Computed from The Book of States	4	0.60	0.65
Proximity of gubernator. elections	Number of years before the next election to the Governor's office	Computed from The Book of States	4	1.47	1.11
Yardstick competition effect	Interaction: Net cost of college X percent of neighbors with PF	Computed from other variables	–	12,269	45,828
Partisan control of the state legislature	Percentage of Republican legislators in state legislatures	Klarner's dataset Book of the States	–	44.02	16.81
Governor's partisan identification	Dummy variable for the presence of a Republic governor	Klarner's dataset Book of the States	–	0.48	0.50
Government ideology	Ideological leaning of state government	Pol. Ideology Index (Berry et al., 2004)	–	49.40	24.00
Regional diffusion	Percent of immediate neighbors with operational PF	Prior research Statutes & gov. doc.	–	14.3	19.95

Table 2, continued

Variable	Description	Source	Total / Max	Mean	SD
Imitation-driven diffusion	Number of ideological neighbors with respective policy shifts	Computed from Berry et al.'s (1998) dataset	8	0.54	1.25
Emulation-driven diffusion	*(# states with successful PF)* * *(inverse log of distance)*	Prior research Statutes & gov. doc.	–	0.38	0.33
Competition-driven diffusion	Ratio of student out-migration to in-migration	Digest of Education Statistics	–	0.94	0.84
Legislative professionalism	LP Index: *[Z-score(salary) + Z-score(session)] / 2*	Computed from the Book of the States	–	0	0.87
State governance arrangement	Dummy variables for the presence of higher ed. boards	State Gov. Structures (ECS); Own data	4	–	–
Self-initiated policy	Dummy variable for board-initiated PF	Prior case studies	–	0.17	0.37
Adopted by appropriation	Dummy var. for PF adopted via an approp. bill or budget proviso	Prior research Appropriation bills	–	0.12	0.32
Unemployment rate	Percent unemployed	Bureau of Labor Stat.	–	0.06	0.02
State support to higher education	State appropriations ($1,000s) per college-age individual	Grapevine database Nat'l Cancer Institute	–	2.44	1.24
Regions / compacts	Dummy variable for higher education regional compacts	Compacts' web-sites	4	–	–

Note. ECS = Education Commission of the States; NASSGAP = National Association of State Student Grant & Aid Programs; PF = performance funding; SREB = Southern Regional Education Board; WSAC = Washington Student Achievement Council (formerly, the Washington Higher Education Coordinating Board).

Description of Policy Adoption

From the policy adoption perspective, the dependent variable is the hazard risk rate for adoption, given that a state has not adopted the policy until this time. The event of performance funding adoption is represented by a binary variable for the year in which the state government, or a higher education state board, made a decision to enact this policy.

In this section, I consider policy adoption and readoption to be similar events because they signify a transition from nonoperational to operational status of the policy; however, in estimations these events are treated as distinct. In this general sense, I define policy adoption as actions taken by state government, or its agencies, to establish performance funding or revive it after a policy failure. These actions generally include legislative mandates, executive orders, votes taken by higher education state boards, and appropriation acts and budget provisos. The year in which the action took place serves as an indicator of policy adoption.

Thus, I operationalize performance funding adoption as the year in which the policy was mandated by the state legislature or ordered by the governor, or when the policy was self-initiated by a higher education state board. However, this operationalization requires an essential refinement. Guided by my definition of an operational state policy (section *Key Definitions*), the policy is in the provisional status until funding is provided. I consider performance funding fully adopted only when it is followed by a funding decision: an appropriation act or a budget proviso. In other words, it becomes an operational policy when it provides public institutions with real financial incentives to alter their behavior.

Therefore, I consider the original authorization of performance funding to be policy adoption just for the year in which it takes place. To maintain the adoption status in subsequent years, the policy must be funded. My rationale for treating the first year of policy existence differently is that state policymakers need additional time to arrange financial support and they may not be able to provide funding in the adoption year. At the same time, institutions receive a clear signal that they need to alter their behavior in light of the new policy. If however, the policy is not funded the following year, it is considered a failure because it has not reached the operational status. The policy continues to have failure (nonoperational) status until institutions get financial incentives to which they can respond.

Performance funding readoption is operationalized as the year in which the policy regains its operational status after a prior failure or suspension. To paraphrase, the policy is considered readopted when a new legislative mandate or executive order revives a previously terminated policy, when suspended funding is resumed, or when an existing policy starts to meet the definition of a "true" performance funding policy.

Description of Policy Failure

From the policy failure perspective, the dependent variable is the hazard risk rate of policy abandonment, given that a state has not experienced failure until this time. The event of performance funding failure is represented by a binary variable for the year in which the state government made a decision to terminate or defund this policy.

Policy abandonment scenarios include the following actions, or lack thereof, of the state government: failing to fund an adopted policy, terminating the policy by

withdrawing or not renewing the mandate, suspending funding, removing funding permanently, substituting performance funding with another policy, and failing to ensure sufficient complexity of the policy. This wide variety of possible failures is consistent with a view that failure can occur at any stage in the policy process (Dutton et al., 1980).

Thus, I conceptualize policy failure to be of two major types. The first type (referred to as *policy failure*) denotes any policy that does not deliver on its intent and goals; it covers the entire spectrum of the above scenarios. The second type (referred to as *policy termination*) embraces a more restricted concept of failure that could only happen at the final stage of the policy cycle. In other words, policy termination is a specific type of policy failure. Figure 2 presents all possible types of performance funding policy failure.

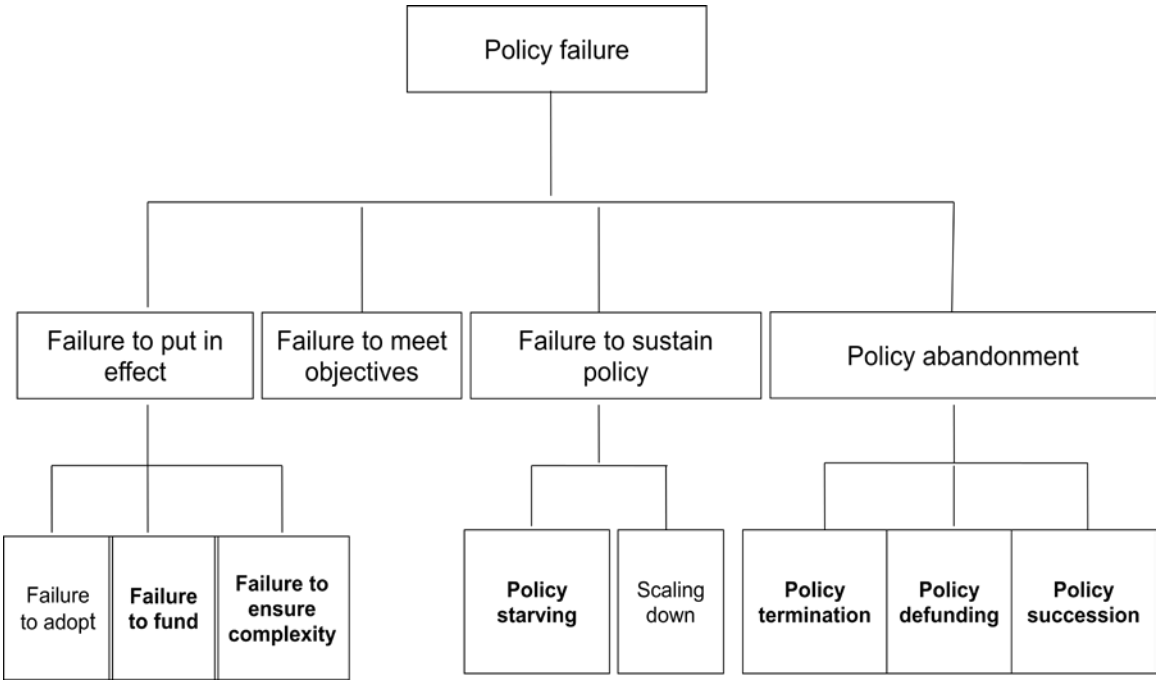

Figure 2. Types of Performance Funding Policy Failure

Based on the above distinction, I operationalize policy failure as the year in which one of the following takes place: an authorized policy is not provided resources in subsequent years (*policy false start*), funding for the policy is suspended (*policy starving*), the policy is officially abandoned by withdrawing or not renewing the legislative mandate or executive order (*policy termination*), funding is permanently removed (*policy defunding*), the policy is succeeded by another performance accountability policy (*policy succession*), or the policy is not upgraded to meet the criterion of sufficient complexity (*policy inadequacy*). These policy changes represent the most typical types of performance funding failure as defined in this study.

To paraphrase, I do not equate policy failure with just policy termination and broaden the concept to incorporate all of the above scenarios. However, in this study, I ignore three types of failure that are presented in Figure 2: failure to adopt a policy (*proposal failure*), failure to meet the objectives (*policy ineffectiveness*), and scaling down of the policy from its original scope (*policy shrinking*). The first type is excluded from consideration because it is impossible to model using the employed approach. The last two types are excluded because both are amenable to subjective interpretations and do not lend themselves to objective measurement.

The data for the dependent variable are drawn from several sources, which were cross-checked against each other for consistency. As a starting point, I use Burke and colleagues' surveys of performance accountability policies (Burke & Minassians, 2001, 2002, 2003). However, due to changing definitions of policy adoption and reliance on self-reported data, these surveys show discrepancies with other sources. Furthermore, as the surveys pay inadequate attention to policy failures, they have to be supplemented with

additional data. The most important sources include annual collections of state statutes, executive acts in states where the policy was initiated by the governor, materials made public by the respective state boards for higher education, and relevant Internet sites. The additional sources of data are case studies of individual programs including dissertations, research by Burke and associates (2002), and investigations by Dougherty and colleagues (Dougherty & Hong, 2005, 2006; Dougherty & Natow, 2009, 2010; Dougherty et al., 2011; Dougherty & Reddy, 2011; Dougherty et al., 2012; Natow & Dougherty, 2008).

Independent Variables

The key independent variables used in this analysis reflect the hypotheses presented in the conceptual framework in Chapter 3. The other covariates include three control variables and the first-order terms of interactions of the main predictors.

Variables for the Electoral Connection Hypotheses

To test the hypotheses of the electoral connection frame, I use five independent variables. Hypothesis 1 addresses perceived challenges of access to higher education and their possible effects on the likelihood of policy changes. To represent accessibility issues, I employ the notion of access pressure, or enrollment pressure on institutions. In general terms, enrollment pressure can be thought of as the number of potential students per available publicly supported seat. By using this concept, I aim to capture perceived problems of access to higher education and acuteness of access pressures.

To operationalize access pressure, I use the annual percentage change in public enrollment. I argue that this metric serves as an adequate proxy measure for perceived

access pressure: Annual enrollment changes capture the current conditions that determine the ease of access to higher education and the public's attitude toward college accessibility. Public enrollment denotes full-time equivalent enrollment in public four- and two-year institutions. The data for this variable are drawn from the data library of the Southern Regional Education Board (SREB, n.d.).

Hypothesis 2 tests the idea that perceived affordability of higher education affects the likelihood of policy shifts. The cost of college is directly related to another higher education issue that voters are concerned about, higher education affordability (Heller, 2001b). Thus, the perceived price of college attendance is a crucial determinant of electoral pressures that could lead to policy adoption or failure. The more the public thinks that tuition is becoming prohibitively expensive, the more it will pressure incumbents to adopt policies demanding accountability and ideally curbing the costs.

To capture the notion of the perceived price of college, I employ the net cost of college attendance. I estimate this variable as follows: *Net cost = Average tuition at public four-year institutions – Average state-provided financial aid*. Thus, this metric is a computed outcome of two separate measures and requires data collection for each state and the entire period of interest (1979-2009). The tuition data are collected from the annual surveys of tuition and fees of the Washington Student Achievement Council (WSAC, n.d.), formerly, the Washington Higher Education Coordinating Board. The financial aid data are compiled from the surveys by the National Association of State Student Grant and Aid Programs (NASSGAP, n.d.). The data on public enrollment, which are needed to estimate the average state aid, come from SREB's data library (SREB, n.d.).

The variable for the net cost of college is also used in an interaction to test Hypothesis 5, explained below. By itself, it denotes the effect of the net cost of college on the likelihood of policy shifts in states with no immediate neighbors that have operational performance funding. To allow for a meaningful interpretation of the other component of the interaction, I have recentered the variable for the cost of college by subtracting its mean value from each observation. Recentering the variable at its mean makes zero the new mean. Due to this change, the other component of the interaction (percent of neighbors with performance funding) is interpreted at this variable's mean.

Hypotheses 3 and 4 address the electoral timing issue. I employ two distinct variables to test the effect of the election proximity on the likelihood of policy shifts. From this perspective, as the election draws closer, incumbents adopt policies with high and immediate visibility that appeal to voters. In contrast, early in their terms, they seek to adopt possibly unpopular policies and terminate popular ones so as to have a "buffer time" before the next election (Doyle et al., 2010; Nordhaus, 1975).

To operationalize the electoral timing factors, I use the number of years until the next legislative or gubernatorial elections. For ease of interpretation, I multiply respective numbers by minus one so that the value grows as the election draws closer. In line with Doyle et al.'s (2010) analysis, I expect that the closer the election date, the more likely a state would be to adopt presumably popular performance funding. In contrast, states would be more likely to terminate this policy soon after the election. The annual Book of the States series is the source of data for these variables (Council of State Governments [CSG], 1982-2009).

Hypothesis 5 tests whether the presence of neighboring states with performance funding modifies the effect of the cost of college on the likelihood of policy shifts due to yardstick competition (Besley & Case, 1995). The employed variable is an interaction of the net cost of college with the percent of contiguous states with performance funding.

Variables for the Political Environment Hypotheses

To test the hypotheses under the political environment frame, I use three variables that help me capture the following concepts: partisan control of the state legislature (Hypothesis 6), party identification of the governor (Hypothesis 7), and government ideology (Hypothesis 8).

Partisan control of the state government is a critical determinant of public policy shifts due to divergent views of the Republican and Democratic policymakers on the issues relating to government strength and size and efficiency of the public sector bureaucracy. The importance of this factor has been convincingly shown in the literature on determinants of state policy outcomes, including adoption of performance accountability policies (Barrilleaux et al., 2002; Berry & Berry, 1990; McLendon et al., 2006). Building on the finding of McLendon et al. (2006), I argue that stronger Republican control of state government provides for greater likelihood of performance funding adoption and lesser likelihood of its abandonment.

To account for partisan composition of the state government, I use two measures of party dominance: percentage of Republican legislators in the state legislature and the presence of an incumbent Republican governor. I estimate the percent of Republican legislators across both houses of the state legislature. The variable for Republican

governor is a dummy variable for the presence of an incumbent governor who is a member of the Republican party. The data sources for these variables include the Books of the States, which have been updated in Klarner's dataset, Measurement of Partisan Balance of State Government (CSG, 1982-2009; Klarner, 2003; 2009).

Policymakers' ideology affects the entire policymaking process and many policy decisions (Erikson et al., 1987) and is one of the key determinants of the policy cycle. Being consistent with the conservative political views, performance funding is expected to be more actively advocated and supported by the conservatively-leaning policymakers. Therefore, I argue that more conservative state governments will be more likely to adopt performance funding and less likely to abandon it, holding all other influences constant.

To capture this concept, I use the Political Ideology Index (Berry et al., 1998; 2007), which places governments on the liberal-conservative continuum, with higher scores indicating greater liberalism. It is calculated based on the roll-call voting behavior of congressmen and the parties' proportional representation in all branches of the state government. The Political Ideology Index through 2006 is made available by the authors (Berry et al., 2007). In my dataset, I use the carry-last-value-forward approach for years 2007, 2008, and 2009.

Variables for the Policy Diffusion Hypotheses

To test mechanisms of the policy spread, I employ Karch's (2007) classification, which identifies three key reasons for policy diffusion. However, I broaden this classification to account for interstate influences on policy failures and also test the effect of geographic proximity on the likelihood of policy shifts. I propose the following

variables for testing causes of policy migration: diffusion prompted by regional factors (Hypothesis 9), imitation-driven diffusion (Hypothesis 10), emulation-driven diffusion (Hypothesis 11), and diffusion driven by interstate competition (Hypothesis 12).

From the geographic proximity stance, "the existence of a public policy in nearby states provides a model upon which state officials can draw and, perhaps more problematically, that this model makes the enactment of the policy more likely" (Karch, 2007, p. 57). Although the role of this factor in the policy diffusion research could be overrated and the empirical evidence for its effect is weak, geographic proximity is still the most popular measure of policy diffusion in the existing literature.

Acknowledging the theoretical ambiguity of this concept, I operationalize proximity-driven policy diffusion as the proportion of bordering states with operational performance funding policies. Using the percent, rather than the number, of immediate neighbors allows me to lessen the proclivity to find a positive diffusion effect caused merely by the given number of bordering states. The data for this variable are taken from prior published research, relevant archival sources, and my interviews of state officials.

The imitation hypothesis claims that states borrow policies based on their ideological similarities with the lending state. Specifically, ideological proximity of state governments is deemed a key factor in facilitating policy diffusion.

To capture the notion of imitation-driven diffusion, I use the number of states with similar ideological leanings that have adopted or abandoned performance funding. I compute this measure from two sources: (1) Berry et al.'s (1998, 2007) Index of Political Ideology for state governments, which allows me to identify ideologically proximate states, and (2) the data on the policy evolution that I have collected. This measure allows

me to test whether diffusion of similar policy shifts occurs among states with proximate government ideology. The states are considered ideological neighbors if their scores on the Index of Political Ideology fall within half of a standard deviation from each other.

The emulation hypothesis focuses on a different mechanism of policy diffusion. It claims that policies are borrowed because they are deemed successful and advantageous for the adopting states. By employing it, I test whether state policymakers take perceived policy success and effectiveness into consideration in making decisions about policy adoption or abandonment.

To test the rationale for policy emulation, I use a proxy measure for policy success that is based on program longevity. Specifically, I employ an interaction of a dummy variable for policies that have persisted for at least five years with a reverse log of distances between state capitals. The first element of this interaction is based on the assumption that such policies have undergone at least one evaluation and are considered successful and worthy of further investment; thus, it is a good proxy for policy success. The second element, which also adds the element of geographic proximity, provides the requisite variation in the variable for different units of analysis. The performance funding dataset collected for this research contains all the necessary information for constructing this variable.

Finally, the interstate-competition hypothesis claims that incumbents may borrow performance funding to create competitive advantage for their state. I use *student brain drain* as an education indicator of interstate competition that has clear and direct economic repercussions. Policymakers may adopt performance funding if they believe that it helps address the brain drain issue. The rationale here could be that performance

funding aims to enhance institutional performance and quality, raising institutional prestige and attractiveness in the eyes of instate and out-of-state students and families.

I operationalize the competition for students as the ratio of student out-migration to student in-migration. Values above one indicate positive brain drain (more students depart than arrive in the state); values below one indicate negative brain drain (more students migrate to the state to enroll in higher education than leave for other states). The data for this variable are drawn from the Digest of Education Statistics (National Center for Education Statistics [NCES], n.d.). I use the carry-last-value-forward approach for years in which these data were not collected.

To be sure, this variable does not allow me to distinguish between policies that were borrowed through policy diffusion and policies that were enacted independently. However, given the time, resource, analytical, informational, political, institutional, and cognitive constraints on decision-making of policymakers (Byron, 2004; Entin, 1973; Kingdon, 1995; March & Simon, 1958; Menzel, 1978; Mooney, 1991a, 1991b, 1993; Simon, 1955; Stewart, 1992; Walker, 1969), it is reasonable to assume that incumbents rely on heuristic shortcuts rather than design policies from scratch. Policies that are deemed to create competitive advantage for other states are likely to serve as available heuristic shortcuts in this resource-constrained environment. As Walker (1969) notes, it may well be that "state officials make most of their decisions by analogy" (p. 889).

Variables for the Principal-Agent Hypotheses

I use six independent variables to test the hypotheses under the principal-agent frame. Hypothesis 13 examines the effect of legislative professionalism on the hazard for

policy shifts. More professionalized legislatures may be more disposed to adopt innovative policies due to greater resources, better-educated members, and capacity to effectively influence bureaucracy (Barrilleaux et al., 2002; McLendon et al., 2006; Nicholson-Crotty & Meier, 2003; Squire, 1992, 2000, 2007). Greater analytical capacity of such legislatures may also help prevent policy failures (Howett, 2007).

Although the most popular measure of legislative professionalism is the Squire Index (1992, 2000, 2007), it is not available for all years of my study. Thus, I computed my own index, which is estimated as the average of the standardized scores of legislative pay and session length. Legislative pay includes salaries plus all related payments: per diem multiplied by the number of days in sessions, overtime pay, and benefits. The data for this variable are drawn from the Book of the States (CSG, 1982-2009).

Hypotheses 14a, 14b, and 14c test the role of higher education governance structures in determining performance funding evolution. I operationalize governance arrangement as dummy variables for the presence of three main types of agencies: consolidated governing boards, coordinating boards without budgetary authority, and coordinating boards with budgetary authority. The weakest types of boards, advisory boards and planning agencies, serve as the reference category. The data on these variables are drawn from editions of McGuiness's State Postsecondary Education Structures Sourcebook (1985, 1988, 1994, 1997, 2001, 2003), with the current version available through the Education Commission of the States (ECS, n.d.).

The final two hypotheses test the effect of the programmatic characteristics on the hazard rates for policy shifts. The nature of the policy is critical for principal-agent relations and can affect the likelihood of policy changes (Burke & Modarresi, 2000,

2001; Burke & Associates, 2002). I use two variables to account for programmatic characteristics that are identified in the literature as critical for the policy evolution. The first covariate, used in Hypothesis 15, is a dummy variable for performance funding policies that were initiated by higher education boards as opposed to external actors. The second predictor, employed in Hypothesis 16, is a dummy variable for policies that were enacted via an appropriation bill or budget proviso. The data for these variables are drawn from published research, archives, and my interviews of state officials.

Control Variables

This study employs three control variables to account for the following critical determinants of the policy lifecycle: short-term economic conditions, state support to higher education, and idiosyncratic regional peculiarities.

To account for the business cycle dynamics, I control for unemployment rate. The data for this variable come from the Bureau of Labor Statistics (BLS, n.d.). To control for fluctuation in state support, I use the amount of appropriation per college-age individual; this variable is computed with the data from the Grapevine database (n.d.) and the National Cancer Institute (NCI, n.d.). I use state membership in higher education regional compacts as a regional identifier. This variable accounts for two distinct factors: (a) economic, political, and cultural differences among regions and (b) governing and information dissemination role of the higher education compacts. The data for this variable come from the sites of the following regional higher education compacts: Midwestern Higher Education Compact (MHEC, n.d.), New England Board of Higher Education (NEBHE, 2010), Southern Regional Education Board (SREB, n.d.), and

Western Interstate Commission for Higher Education (WICHE, n.d.). By virtue of geography, the non-affiliated states of New York, Pennsylvania, and New Jersey are treated as part of the NEBHE regional compact. North Dakota and South Dakota, which belong both to WICHE and MHEC, are treated as MHEC member states.

Concept Operationalization in the Conceptual Framework

The preceding discussion of operationalization of key concepts necessitates revisiting the major relationships in the conceptual framework for the study. To reiterate, the visual conceptual framework (Figure 1, Chapter 3) presents the main stages of the performance funding policy lifecycle, key events of interest, principal actors and their actions, causes of policy failure, and environmental factors of policy development. Importantly, the conceptual framework identifies the *decision points* at which the events of interest (policy adoption, failure, and readoption) can occur. My task consists in operationalizing these decision points and key determinants of policy change.

The independent variables representing my hypotheses under the proposed theoretical frames aim to capture the external and internal forces that affect the probability of policy shifts. The approach of this study is that the same sets of political and socioeconomic processes and actors drive states to make all relevant policy changes. Therefore, the factors of policy development, represented by the independent and control variables, exert their influence on all policy-relevant decision points at all stages of the policy cycle. The only exception to this statement are variables for policy characteristics, which are deemed to affect only the likelihood of policy failure and readoption. The wide dotted lines converging on the boxes for various stages of policy development in

Figure 1 represent either sets of actions available to involved actors or causes of policy failure, as discussed in the *Conceptual Framework*. At the same time, these lines may also represent all influences captured by the employed independent variables. In sum, operationalization of the concepts represented by the independent variables is implicit in the depicted forces acting on the policy lifecycle.

In contrast, operationalization of the policy change concept is explicit in the decision points depicted in Figure 1. These decision points indicate policy shifts of interest and are identified with double-framed boxes, double dotted and double straight arrows for policy failures, and reverse dotted arrows for policy readoption. As mentioned above, the pre-adoption failure, the leftmost double-framed box, falls outside the analysis. The next box, *Performance Funding Policy Adoption (Readoption)*, indicates both adoption and readoption policy shifts with two requisite components (distinct decision points) of operational performance funding: authorization and appropriation. The reverse arrows leading to this box indicate two other decision points: readoption of a previously terminated policy and resumption of funding after its prior removal. The other double-framed shaded boxes identify various policy failure scenarios at different stages of the policy lifecycle. The adoption, failure, and readoption decision points identified in the visual conceptual frame (Figure 1) correspond to the operationalization of policy shifts as discussed above in the sections *Description of Policy Adoption* and *Description of Policy Failure*. I revisit these relationships in my discussion of the study findings.

Method

Modeling Strategy

This investigation examines the determinants of performance funding policy shifts across states and over time. The research question of this study poses several problems. First, competing explanations for policy shifts complicate identification of drivers of specific changes. Second, there are different types of policy adoption and failure, as described at the beginning of this chapter. Third, these events happen at different times, which means that states spend various amounts of time in different conditions. Fourth, policy adoption, failure, and re-adoption precede each other in time, and subsequent events cannot happen until a state has experienced the previous ones. Next, the observation period is limited to 30 years; as a result, some states have not experienced certain events by the end of the observation period but are likely to do so after its expiration. Finally, there are multiple cases when different states made similar policy changes in the same period; in such situations, the exact order of events is unknown, which greatly complicates analysis. All these issues have determined the choice of the research method for the study.

My modeling strategy combines two approaches. To test competing explanations for policy shifts and related hypotheses, I advance four theoretical frames (described in Chapter 3) and propose specific variables. In addition, I adopt a multiple-event perspective and employ a set of cumulative-risk models with repeated events. This strategy is based on the following key assumptions: (a) the same political and social processes and actors drive states to adopt or terminate a policy; (b) each event is a

negation (abandonment) of the prior condition; and (c) these events can happen only in succession: Adoption always precedes failure and failure precedes readoption.

To address the above issues, I employ a quantitative method known as survival analysis, event history modeling, reliability analysis, or event history analysis. This methodology is now widely used across disciplines to study change processes with temporal data. The following sections explain why this analytic technique is best suited for investigating my research question.

Event History Analysis: An Overview

Event history analysis (EHA) originated in biostatistics and biomedical sciences, in studies of illness recidivism and patient mortality. Later, this method was borrowed by social scientists and eventually migrated into the comparative state research (Berry & Berry, 1990; DesJardins, 2003; Doyle, 2006; Jones & Branton, 2005; Volden, 2006).

Berry and Berry's (1990, 1992) studies of state adoption of lottery programs and tax innovations were the first to apply EHA to an exploration of public policy adoption. Since these seminal works, the number of EHA studies of policy adoption has mushroomed, covering such diverse topics as living-will laws, morality policies, legislative term limits, gay rights, abortion regulation, death penalty, anti-smoking measures, motor voter reform, and health-reform policies among others (Balla, 2001; Buckley & Westerland, 2004; Colvin, 2005, 2006; Emmert & Traut, 2003; Grossback et al., 2004; Hays & Glick, 1997; Jones & Branton, 2005; Meseguer, 2006; Mooney, 2001; Mooney & Lee, 1995, 2000; Pierce & Miller, 1999; Scott & Bell, 1999; Shipan & Volden, 2006; Shoji, 2005; Soule & Earl, 2001; Volden, 2006).

Several studies examined policy innovations in education (Mintrom, 1997, 2000; Mintrom & Vergari, 1998; Renzulli & Roscigno, 2005; Rincke, 2004; Warren & Kulick, 2007). In higher education, EHA was first used to study determinants of student departure (DesJardins, 2003). Vanderbilt-based education policy researchers applied this methodology to investigation of education policy adoption and diffusion both in the K-12 and higher education arenas (Deaton, 2006; Doyle, 2006; Doyle et al., 2005; Hearn et al., 2008; McLendon et al., 2006; McLendon et al., 2007; Mokher, 2008; Mokher & McLendon, 2007; Wong & Langevin, 2005; Wong & Shen, 2002).

To the best of my knowledge, only one study used EHA to examine policy failures. Volden (2007) employed a special type of event history analysis—dyad-based EHA, which relied on ideological similarities among the states—to study the abandonment of welfare policies under the Temporary Assistance for Needy Families program. He argues: "Because any new policy adoption is by implication an abandonment of the old policy, a theory of policy abandonment must contain the same elements as a theory of policy adoption" (p. 4). Volden illustrates this idea by referring to Berry and Berry's (1990) examination of lottery programs adoption: He asserts that, in effect, this policy enactment is equivalent to the abandonment of the "no lottery" policy that had existed prior to lottery adoption.

In this investigation, I build on Volden's idea in conceptualization and modeling of the events of interest. His study is also important to my research because it relied on a repeated-events duration model—a special type of EHA modeling that I employ in my investigation as well (Box-Steffensmeier & Jones, 2004; Box-Steffensmeier & Zorn, 2002; Therneau & Grambsch, 2000).

Event history analysis has a number of advantages over the traditional regression methods (Box-Steffensmeier & Jones, 2004). This method allows accounting for both occurrence and timing of events and investigating issues that could not be adequately addressed with other analytic techniques, such as logistic regression or time-series methods. The other key advantage of EHA is its ability to handle the critical issues of censoring and time-varying independent variables (Allison, 1984; Bennett, 1999). Using standard multiple regressions in such cases would lead to a loss of information and biased estimations (Allison, 1984; Box-Steffensmeier & Jones, 2004). In contrast, EHA utilizes information provided by censored cases to produce unbiased estimates; it also allows for time-related changes in values of independent variables. In addition, EHA works well in cases in which there is little variation in the dependent variable (Berry & Berry, 2007).

Key Concepts of Event History Analysis in This Study

Event history analysis is ideal for studying temporal changes (events or transitions), such as policy shifts. An *event* is defined as a qualitative change that occurs at some specific time. This technique is motivated by questions of risk or probability of event occurrence by a certain time (Jones & Branton, 2005). As a duration model, EHA assumes that the risk of an event is characterized by two vectors: duration of time and event occurrence. The event history analysis models "*both* the duration of time spent in the initial state *and* the transition to a subsequent state, that is, the event" (Box-Steffensmeier & Jones, 2004, p. 8, emphasis in the original). In contrast to the ordinary logistic regression, EHA analyzes not only whether an event occurs but also when it occurs; in other words, it considers both the outcome and the timing of an event (Allison,

1984; Yamaguchi, 1991; Box-Steffensmeier & Jones, 1997, 2004; DesJardins, 2003). In this study, the events are performance funding policy shifts.

The fundamental dependent variable in EHA, which controls both the occurrence and timing of the event, is a *hazard rate* (Allison, 1984). The hazard rate is the instantaneous probability, or risk, of event occurrence, given that the event has not occurred prior to a particular time (Yamaguchi, 1991). "Instantaneous" in this context refers to an infinitesimally small time change. Thus, the hazard rate "describes the risk a unit incurs of having a spell or duration end in some period, given that the spell has lasted up to or beyond some length of time" (Box-Steffensmeier & Jones, 2004, p. 15). Therefore, the hazard rate can also be thought of as a conditional failure rate (Box-Steffensmeier & Jones, 2004). This dependent variable measures the duration of time that a unit spends in a given state before it experiences the event of interest. Of primary analytical interest for researchers are the relationships between the observed duration and key predictors.

In this study, the hazard rate is the probability of adopting or abandoning a performance funding policy. It is more correct to say, however, that my dependent variable is the hazard rate for shifting from one condition to another among the three possible destinations: adoption of a policy or not, abandonment of a policy or not, and readoption of a policy or not. These three conditions exhaustively describe all the possible ways in which states can be relative to performance funding at any given time. The employed model also requires that I make a distinction among these conditions through stratification, which is based on the assumptions of how states move from one destination to another. The model assesses how covariates affect the hazard rate.

Another important concept of EHA is the *survival function*. The survival function is the probability that a unit of analysis will "survive" longer than a certain time, that is, the probability of not having the event prior to a particular time (Box-Steffensmeier & Jones, 2004; Yamaguchi, 1991). Expressed differently, it is the proportion of units surviving past a specific period and thus exposed to each period's hazard. In this study, the survival function is the proportion of states that did not adopt (or, alternatively, did not terminate) the policy beyond a certain time.

The notion of the *risk set* includes units that are at risk of event occurrence at a certain time (Allison, 1984). To paraphrase, it is the set of individuals who are eligible to experience the event during a specific interval. In this study, the risk set is two-fold. From the policy adoption perspective, it includes states that are at risk of adopting performance funding, or rather states without an operational policy at a given time. States are considered at risk of original policy adoption beginning in 1979, the *date of origin* for this study. Subsequently, states are at risk of policy readoption immediately after experiencing failure. From the position of policy failure, the risk set includes states with performance funding which may experience any type of failure. States are at risk of policy failure as soon as the policy is adopted or readopted.

Because states that have experienced an event are no longer at risk, they exit the respective risk set and—due to the mutually interrelated nature of policy adoption and failure—immediately enter the risk set for the antithetical event. Thus, as states experience events, the risk set for a respective event diminishes but the risk set for the opposite event increases. Therefore, because the dependent variable is treated as shifts

between the three possible conditions, the overall risk set in this study does not diminish as units experience various events.

An inherent feature of the risk set is that it declines in subsequent periods not only due to event occurrence but also to censoring. *Censoring* occurs "when incomplete information is available about the duration of the risk period because of a limited observation period" (Yamaguchi, 1991, p. 3). There are two types of censoring: left censoring (event time is unknown because the beginning of time is not observed) and right censoring (event time is unknown because event occurrence is not observed). Left censoring is considered much less manageable than right. In this study, however, left censoring is mitigated as the observation begins with the adoption of the first policy in 1979. Also, due to the properties of EHA, right-censored units (states that do not experience the events of interest during the observation period) still provide useful information by offering data on event-nonoccurrence.

Model Estimation

Event history analysis is a common name for a variety of duration methods (Allison, 1984). For this investigation, I use the Cox proportional hazards model modified to account for multiple events of policy adoption and failure that a state can experience. This model is deemed to be "especially amenable to modeling state policy adoption" (Jones & Branton, 2005, p. 424) and, by extension, policy failure.

The Cox proportional hazards model presents several key advantages over alternative model specifications (Box-Steffensmeier & Jones, 2004; Jones & Branton, 2005; Yamaguchi, 1991). Unlike parametric models, it does not require specifying the

baseline hazard function (the functional form of the duration dependence), which helps avoid the danger of incorrect estimations if the time dependence parameter is specified inaccurately (Jones & Branton, 2005, p. 421). The Cox model makes no assumptions about the shape of the baseline hazard rate; the latter is not estimated and is assumed to be common to all observations (Box-Steffensmeier & Jones, 2004). The hazard rate can assume any form suggested by the data. Although the form of the baseline hazard remains unspecified and it is not directly estimated from the data, it is still parameterized as a function of independent variables (that is, covariate parameters are estimated). Due to this feature, the Cox model is often referred to as a semi-parametric model (Cox, 1972; Box-Steffensmeier & Jones, 2004; Jones & Branton, 2005).

Furthermore, the Cox model can be adapted to handle events occurring in the same period (known as *tied events* or *ties*), which cannot be accounted for with a partial likelihood estimation (Box-Steffensmeier & Jones, 2004). This advantage is especially important for my research, which measures time discretely and, as a result, deals with multiple tied events.

Finally, the Cox model can be extended to address issues of multiple events. The possible types of multiple events and respective models include: unordered events of different types (competing risk models), ordered events of the same type (repeated events/ repeatable events/ conditional risk set models), and ordered events of different types (multistate/ competing/ marginal models) (Box-Steffensmeier & Jones, 2004; Cleves, 1999; Jones & Branton, 2005; Therneau & Grambsch, 2000). Repeated events that are dependent upon each other are integral to this study, due to the ordered and sequential nature of policy adoption and failure.

In this investigation, I use a conditional model, known as PWP, named after Prentice, Williams, and Peterson (1981). This model "is based on the idea that an observation is not at risk for the *k*th event until the *k*th–1 event has occurred" (Box-Steffensmeier & Jones, 2004, p. 161). In less technical terms, in this model each subsequent event is dependent on the one that came before it: A unit cannot enter the next stage until it has exited the previous stage. It means that a unit is not considered at risk for an event until it has experienced all prior events (Prentice et al., 1981).

This model employs stratification by event type and event-specific baseline hazards (Ezell, Land, & Cohen, 2009). Stratification modifies the dataset by creating a unique stratum for each possible event; thus, each event is assigned to a separate time-dependent stratum (Therneau & Grambsch, 2000). Unlike the alternative Andersen-Gill model, which assumes that all events are identical, the PWP model requires that all events have their own strata and the hazard rate is allowed to vary by event. Each stratum is different and has its own unique baseline hazard rate, while the coefficients are restricted to be the same within each stratum. The hazard rate for the next event is completely different from the hazard rate for the previous one. "The use of the time-dependent strata means that the underlying intensity function may vary from event to event" (Therneau & Grambsch, 2000, p. 187). To account for the repeated data, the conditional model adjusts the parameter's variance by clustering on the unit and using the robust covariance matrix (Therneau & Grambsch, 2000).

There are two variations of this model, which differ by time scale. In the first variation, the time to event is measured beginning with entry in the risk set (the elapsed time model). The second variation—called the conditional gap time model—relies on the

gap time: It measures time to event from the time of the previous event. In other words, it "uses information about the time in between events" (Therneau & Grambsch, 2000, p. 159). The difference between these types is in the dataset structure; in the gap time model, the interval variable is reset to zero after each event occurrence.

The conditional gap time model is appropriate to use when study risks develop sequentially, and not simultaneously (Lipschuz & Snapinn, 1997; Therneau & Grambsch, 2000). Preserving the order of sequential events in this model makes it preferable to other models that rely on variance correction (Cleves, 1999; Box-Steffensmeier & Jones, 2004; Box-Steffensmeier & Zorn, 2002). Box-Steffensmeier and Jones (2004) review studies that endorse the use of this model and conclude: "The statistical debate about the best model for repeated events when using the variance corrected approach appears to be converging on a single best solution, the conditional gap time model" (p. 160).

The PWP model is more powerful than time-to-first-event specifications. This advantage is created by the number of events available for analysis. To illustrate, there were 27 events of the first-time policy adoptions, 25 first-time policy failures, and only 18 first-time readoptions. However, the total of 91 events happened across all states during the observation period. The larger number of events under analysis allows for better identification of the individual predictors' effect, which may not be picked up in the time-to-first-event models. This advantage alleviates the potential problem of the lack of degrees of freedom to estimate the entire model, which is discussed in the next section. The nature of my research question and the above arguments for the conditional gap time model have converged on the use of the PWP model for this study.

The choice of the PWP model is driven by the following considerations. The goal of this study is to examine the entire policy lifecycle. This task requires analyzing three distinct policy changes: adoption, failure, and readoption. These events are dependent on each other: A state cannot be in a group that can have a subsequent event until it has had the preceding event. After the performance funding invention by Tennessee in 1979, all states became at risk of adopting it, meaning that any state can adopt or disregard this policy. However, no state is at risk of failure until it has adopted the policy. Likewise, a state is not at risk of policy readoption until it has experienced a prior event of failure. Thus, performance funding evolution evinces a rigid sequencing of event occurrence.

This research problem is different from situations in which all units of analysis are at risk of encountering all events. To illustrate the latter, a study analyzing states' adoption of main accountability policies (performance funding, budgeting, and reporting) would have to model the situation in which the risks of these events are identical; in other words, a state can adopt any of these policies, and the likelihood of experiencing one event does not depend on any other event. In contrast, in this study, the risk of a policy shift is specific to each policy change, and states can encounter different events. Moreover, these events (with the exception of the original adoption) can be recurring: The same state can have several policy failures and readoptions. Therefore, the following factors determine the likelihood of a given policy change: the prior event, the time that has elapsed since the preceding event, and a specific combination of the predictors. By estimating the conditional likelihood of the next event after resetting the time counter to zero, the PWP model fits the observed pattern of performance funding evolution.

Model Specification

In this study, I employ the following stratified conditional model:

$$h_k(t) = h_{ok}(t) \exp [\ \beta_1(ChEnrol_{kj}) + \beta_2(NetCost_{kj}) + \beta_3(LegElect_{kj}) + \beta_4(GovElect_{kj}) + \beta_5(NeighborPF_{kj} * NetCost_{kj}) + \beta_6(RepubLeg_{kj}) + \beta_7(RepubGov_{kj}) + \beta_8(GovIdeol_{kj}) + \beta_9(NeighborPF_{kj}) + \beta_{10}(IdeolProx_{kj}) + \beta_{11}(SuccessPF_{kj}) + \beta_{12}(BrDrain_{kj}) + \beta_{13}(LegProf_{kj}) + \beta_{14}(Board1_{kj}) + \beta_{15}(Board2_{kj}) + \beta_{16}(Board3_{kj}) + \beta_{17}(NotImposed_{kj}) + \beta_{18}(AppBill_j) + \beta_{19}(Unemp_{kj}) + \beta_{20}(Approp_{kj}) + \beta_{21}(Region_{kj})]$$

where

t = 1, …, 30 for the 30 years of observation;

j = individual clusters;

$h_k(t)$ = The proportional hazard of experiencing a shift among any of the three conditions (adoption, failure, and readoption), which is allowed to vary by the kth event through the use of stratification;

$h_{ok}(t)$ = The unspecified baseline hazard rate, which is the same for all observations within each stratum;

$\beta_{1\text{-}26}$ = The vector of the following covariates:

ChEnrol = Annual change in public-sector enrollment;

NetCost = Net cost of higher education;

LegElect = Number of years until the next legislative elections;

GovElect = Number of years until the next gubernatorial elections;

NeighborPF = Proportion of bordering states with operational policies;

RepubLeg = Percentage of Republican legislators in the state legislature;

RepubGov = Presence of a Republican governor;

GovIdeol = Index of political ideology of state incumbent officials;

IdeolProx = Number of ideologically proximate states that have made a policy shift;

SuccessPF = Number of states with successful performance funding policies moderated by the inverse log of distance to their capitals;

BrDrain = The ratio of student out-migration to student in-migration;

LegProf = Index of legislative professionalism;

Board1, *Board2*, and *Board3*, = Dummy variables for the presence of a consolidated governing board, and strong and weak coordinating board;

NotImposed = A dummy variable for policies that were self-initiated by state higher education systems;

AppBill = A dummy variable for policies that were adopted through an appropriation bill or budget proviso;

Unemp = Unemployment rate;

Approp = State appropriations to higher education per college-age individual;

Region = A dummy variable for regional higher education compacts.

For ease of interpretation, all coefficients in the model are exponentiated, that is, they are expressed in the form of *hazard ratios*. Hazard ratios greater than one indicate increased risk of the respective policy shift with an increase in the values of predictors. Conversely, hazard ratios less than one indicate a negative relationship between the risk of the policy shift and the values of independent variables.

Solving Other Problems of Estimation

As explained in the previous section, the conditional gap time model allows for overcoming major estimation issues. The remaining problems that need to be addressed include the issue of tied events, the possibility that the proportional hazard assumption of the Cox model does not hold, and the lack of degrees of freedom to estimate the final comprehensive model.

Events occurring in the same period (cases that fail at the exact same time) are known as *tied events* or *ties*. The problem with ties consists in not knowing the true order of event occurrence; however, knowing the exact order of events is necessary for the partial likelihood function estimation. Thus, the presence of ties makes estimation mathematically difficult. Tied events are a considerable issue in this study: Up to eight states can experience events of the same type in the same year.

There are four major approaches to solving the problem of ties, each of which has its own advantages and disadvantages: Breslow approximation, Efron approximation, Exact Marginal (continuous) approximation, and Exact Partial (discrete) approximation (Box-Steffensmeier & Jones, 2004). To handle the issue of ties, I employ the Exact-partial (Discrete-time) method, which assumes that tied events arise from a discrete-time model (Cleves, Gould, Gutierrez, & Marchenko, 2008). I use this method for the following reasons. First, exact methods are more accurate than the Breslow and Efron approaches. The Exact-partial method is the most rigorous approach to handling ties because it involves calculating all possible risk sets at each tied failure time. Second, this method is intended for true discrete temporal data (Box-Steffensmeier & Jones, 2004), and my data measured at annual intervals meet this criterion. Finally, trial comparisons

of the Efron and Exact Partial methods have shown that the latter produces larger standard errors and I opt for estimates that are more conservative.

Another potential problem of estimation is the possibility that proportionality assumption does not hold for all covariates. This assumption claims that the baseline hazard is common to all observations and individual characteristics shift an individual up or down from the baseline. This shift is proportional (that is, it is the same in proportion, although the actual "distance" will not be the same—it depends on values of a predictor). More specifically, the proportionality assumption states that the hazard rates are proportional over time and changes in levels of predictors produce proportionate changes in the hazard function, independent of time (Box-Steffensmeier & Jones, 2004; Kleinbaum & Klein, 2005; Therneau & Grambsch, 2000). This assumption is the basis of the Cox model and is, therefore, extremely important for this study. Several tests, including a link test, tests based on analysis of residuals, and graphical methods, are available to check whether this assumption is correct, and I use all of them.

There are three main options of handling the issue of non-proportionality: (a) stratifying the covariate that is not proportional, (b) partitioning the time periods and running separate models for different time periods, and (c) using an interaction of the problematic covariate with a time counter variable. I choose the third option to address the issue of non-proportionality in several model specifications.

Finally, there may be too many hypotheses and variables in the model for the available data on the states. This potential problem is alleviated by the following considerations. First, the big advantage of EHA is that it uses all information efficiently. For instance, in this dataset, it relies on the state-year structure of the data, in which each

state has individual values of independent variables in each year; that is, the unit of analysis is state-year. EHA also utilizes data provided by the right-censored observations, the states that never experience the events. The PWP model uses information on all events across all states and over the entire observation period, which enhances the power of the model. However, even with such an efficient use of data, the number of employed covariates may turn out to be too large for proper estimation.

I address this problem at two levels: theoretical and technical. From a theoretical perspective, I rely on the conceptual importance of independent variables to make decisions about the covariates' role in the model within each group of hypotheses and then examine the statistical significance of individual coefficients. From a practical stance, I use several specifications and then apply the test of collective significance to determine whether adding a new group of covariates contributes to the explanatory power of the model.

The approach consists in estimating five models: one for each of the four conceptual frames and the respective sets of hypotheses (time-to-first-event specifications), and the final model (conditional gap time specification), which includes all covariates from all hypotheses. The Akaike Information Criterion is used to check whether independent variables really belong in the model, and the Wald test is conducted to determine whether a new group of independent variables significantly improves the model fit. This incremental approach allows me to come up with a parsimonious final model. The estimation results for each model specification are presented in Chapter 5.

CHAPTER V

RESULTS

Overview of the Analytical Approach

This study explores the drivers of performance funding policy changes. It aims to identify the specific antecedents of this policy adoption, failure, and readoption. I study the entire performance funding policy lifecycle across 47 states from 1979 through 2009. The dependent variable is the hazard rate for transitions among three possible conditions relative to performance funding: adopt a new policy or not, abandon an adopted policy or not, and readopt a terminated policy or not. I employ unique definitions of policy adoption and failure (section *Key Definitions* and Chapter 4), which affect the number of events under analysis.

During the observation period, 20 states did not experience any event; in other words, they never adopted performance funding and thus were not at risk of terminating and readopting it. These states were censored at the end of the observation, nonetheless providing useful information on nonoccurrence of policy adoption. The remaining 27 states (three states are excluded from the analysis; section *Description of the Dataset*) experienced a total of 91 events. Based on the employed definitions, these states could have multiple (repeated) events of policy adoption, failure, and readoption.

Focusing on just the first event of each type, 27 states adopted performance funding, 25 of these adopters experienced at least one policy failure, and 18 of terminating states readopted the policy at least once. These numbers are used in the time-

to-first-event models discussed below. However, when accounting for multiple failures and readoptions, the distribution of events looks different: There were 27 events of original performance funding adoption, 38 events of policy failure, and 26 events of readoption.

Figure 3 presents the survival functions for each type of policy shifts in the multistate models, which examine all events simultaneously. Stratum 1 stands for the original adoption, stratum 2 for failure, and stratum 3 for readoption. The analysis time (x-axis) is in years; the survival probability (y-axis) ranges between 0 and 1. To reiterate, the models allow for multiple events of policy failure and readoption for the same state.

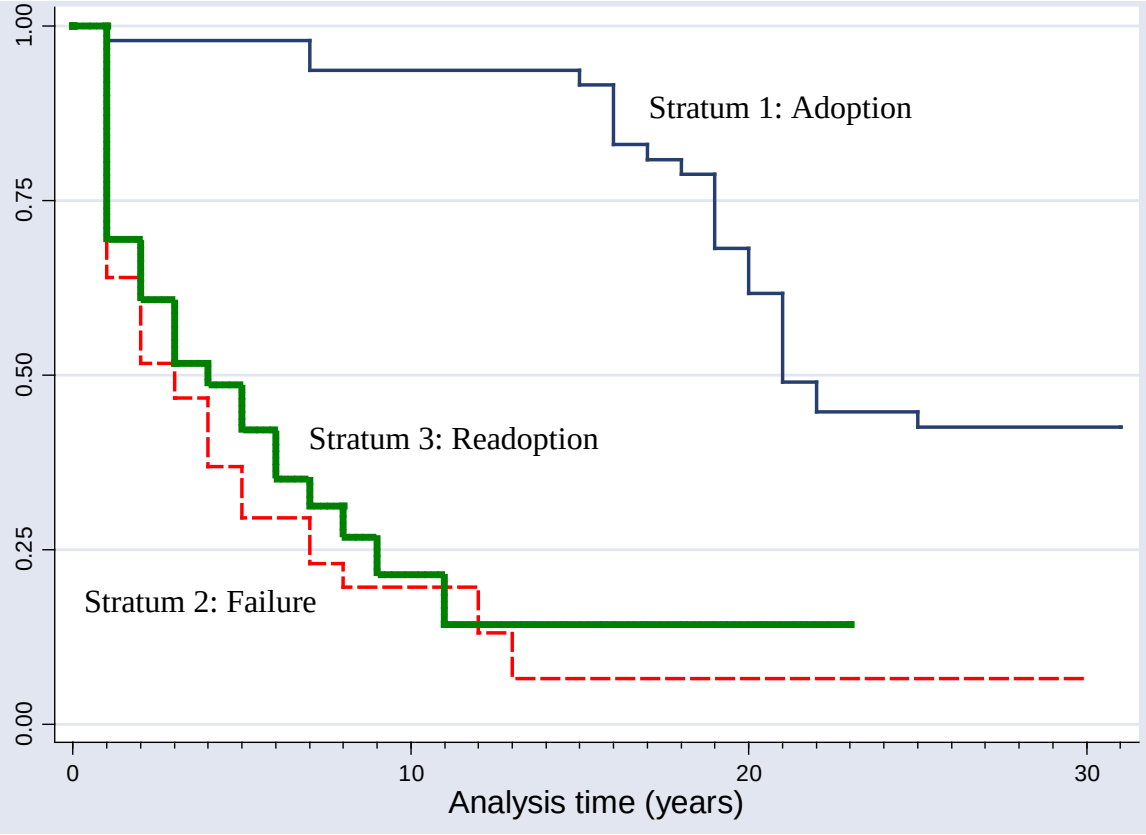

Figure 3. Kaplan-Meier Survival Function by Stratum

The graph shows that most first-time adoptions (Stratum 1) take place between 15 and 22 years into the observation period. Stratum 2 demonstrates that the first-time policy failures generally happen within eight years of policy adoption or readoption. The most drastic decline in the survival curve for policy failure happens a year after policy adoption or readoption. My definitions of operational performance funding and policy failure (section *Key Definitions,* Chapter 4) can provide an explanation for this observation. My interpretation of failure includes years in which the policy mandate persisted but there was no funding. In other words, I equate policy failure with its nonoperational status, including years when no funding was provided. Many policies were not funded immediately after their original adoption, and the first-year drop in the survival curve for failure reflects this type of policy abandonment. A similar pattern is observed for readoptions (Stratum 3): They generally take place within nine years of failure. The most common readoption scenario is funding initiation for a policy that was adopted two years prior to that.

The employed methodology is Event History Analysis in the traditional form (the Cox proportional hazard model) and its adaptations to multiple events of policy failure and readoption and the presence of tied events. The Cox model does not require specifying baseline hazard function, which is not estimated and can assume any form suggested by the data. Nonetheless, the baseline hazard is still parameterized as a function of independent variables.

In the multistate specifications (including the final model), all types of events are included in the same model and stratified by type. Stratification means that each event is allowed to have its own hazard rate. After experiencing an event, the state leaves one

risk set and enters the risk set for subsequent events. However, after this transition, the overall risk set does not diminish—unlike the risk sets in models dealing with singular events. This feature constitutes a major difference of the multistate model from the time-to-first-event models.

In this study, I employ the following model specifications: (1) the traditional Event History Analysis modeling the time-to-first-event for all types of events of interest—policy adoption, failure, and readoption; and (2) the Prentice, Williams, and Peterson's (PWP) conditional gap time model, which assumes that the next event cannot take place until a previous one happened and allows each event type to have its own hazard (Prentice et al., 2008). Each time-to-first-event model and multistate specification requires its own data sets with unique risk sets and analysis time. The multistate models employ variable stratification to account for various types of events and their hazards.

The following section, presenting the study results, mirrors my theoretical frames and proceeds variable by variable rather than model by model. I examine each variable's effect on the adoption, failure, and readoption hazards across model specifications. This decision affects the results presentation and structure of the tables. Model 1 treats the original policy adoption as the key event of interest. Likewise, Model 2 and Model 3 analyze time to the first failure or the first readoption, respectively. In contrast, Model 4 uses PWP to examine the effect of covariates on the hazard rates for adoption, failure, and readoption within a multistate framework with all independent variables stratified by event type. I use this order of model specifications in discussing all theoretical frames.

To facilitate comparison of results, Models 1-4 are referred to as the restricted models and Model 5, which includes relevant covariates from all frames, is referred to as the final model.

For each model specification, I run the following diagnostic tests: the Schoenfeld test, multicollinearity test, and test of collective significance. The Schoenfeld test checks the proportionality of hazards assumption of the Cox model, which is addressed in Chapter 4. The global Schoenfeld test checks whether the overall model violates the proportionality assumption while local tests do it for individual independent variables. Statistically significant Schoenfeld residuals indicate the violation of the proportional hazards assumption: The null hypothesis of proportional hazards is rejected. I verify the Schoenfeld test results with graphical methods for checking for the proportionality assumption violation. The multicollinearity test and the test of collective significance allow making decisions about inclusion of covariates in the final model.

The conditional gap time models using variable stratification do not face the issue of violating the proportional hazards assumptions of the Cox model. This finding serves as an additional support for the use of multistate models versus the time-to-first-event models. In the latter, the proportionality assumption violation is not infrequent, especially in the models that employ many dummy variables, and requires remediation. To address this issue, I turn the problematic independent variables into time-varying covariates through linear interaction with the analysis time in the respective samples. Then the Schoenfeld test and graphical methods are used again to make certain that the proportionality assumption violation has been adequately addressed. These created time-varying covariates are marked with the pound symbol (#) in the tables of results below.

Based on the results of the restricted models, tests of collective significance, and multicollinearity tests, the final model includes all covariates in one model and employs the conditional gap time framework. However, for presentation purposes, a respective part of the final model is included in separate tables for individual theoretical frames. The covariates that are omitted from the final model due to multicollinearity issues are marked with the X symbol in the tables.

The study results are presented in the following tables at the end of this chapter: Table 3 for the electoral connection frame, Table 4 for the political environment frame, Table 5 for the policy diffusion frame, and Table 6 for the principal-agent frame. The respective part of the final model is included in each table; it should be remembered, however, that this model is run simultaneously with variables from all frames. Each frame also includes the same group of control variables: state appropriation per college-age individual, unemployment rate, and regional identifier; however, these variables are not presented in the tables due to the lack of theoretical and statistical significance.

Findings

This section reviews my hypotheses under each theoretical frame and discusses the findings. The study findings confirm my hypotheses only in part. Table 3 presents results for testing hypotheses under the electoral connection frame. As the p-values demonstrate, the model specifications for adoption and readoption are statistically significant; the model for failure and the restricted multistate model do not have much explanatory power. The final model, which includes covariates for all hypotheses, is statistically significant.

First, I hypothesized that states with a more rapid growth in public enrollment would be more likely to adopt performance funding and less likely to abandon it. In other words, the respective variable was expected to have a positive effect on the adoption and readoption hazards and a negative effect on the failure hazard. In line with my hypothesis, I find that the annual change in public enrollment is significantly and positively related to the adoption hazard in all relevant specifications. The magnitude of this covariate's effect varies by model. In Model 1, a one-percent increase in the public-sector enrollment increases the hazard for policy adoption by 22 percent; Model 4 estimates this increase to be about 18 percent. In the final model, this effect grows to 38 percent but the estimate precision declines, as shown by a larger confidence interval. There is no discernible effect of this covariate on the hazards for policy failure or readoption.

The next hypothesis asserts that as the net cost of college increases, states will be more likely to adopt performance funding and less likely to discontinue it. However, I find no empirical evidence for the effect of the cost of college attendance on the adoption, failure, or readoption hazards in any model specification. As Table 3 demonstrates, the coefficient for this variable approximates one (which means zero effect on the outcome of interest) and the confidence interval is so small that it also rounds off to one in all models. In the final model, the variable's strata for failure and readoption are omitted because of multicollinearity issues.

The next two hypotheses test whether state officials' responsiveness to voter preferences improves as the election time draws nearer. I expected that proximity of legislative and gubernatorial elections would make state officials more likely to adopt

presumably popular performance funding and less likely to abandon it. In general, I find no empirical evidence that electoral timing affects performance funding evolution. There is no measurable effect of the timing of legislative elections on hazards for any policy shift. Contrary to my hypothesis, the variable for the timing of gubernatorial elections is negatively related to the readoption hazard in one restricted model but it fails to reach statistical significance in the multistate models.

Finally, I anticipated that the number of neighboring states with performance funding would affect this policy evolution through yardstick competition among states. I find no evidence for the effect of yardstick competition-driven behavior of voters on the hazards for any policy shift. Similar to the results for the cost of college, the hazard for this variable approximates zero and small confidence intervals round off to one in all specifications. In the final model, the failure and readoption strata of this variable are omitted due to multicollinearity issues.

Table 4 presents results for the political environment frame. None of the restricted models of this lens is statistically significant at the conventional level.

I hypothesized that states with a larger Republican presence in state legislatures would be more likely to adopt performance funding and less likely to discontinue it. The percent of Republicans in the state legislature exerts a statistically significant effect on the adoption hazard in the final model. Consistent with my expectations, one additional percent of Republican legislators increases the hazard for performance funding adoption by 6 percent. As the confidence interval shows, this effect can be anywhere from just above zero to 11 percent. This variable is also significant and negative for the failure

hazard in Model 2, which is partly consistent with the hypothesized relationships. However, the finding is not confirmed in the final model due to multicollinearity.

The next two hypotheses under this theoretical frame test the effect of the other political factors of interest: the presence of Republican governors and state government ideology. I expected that states with a Republican governor and more conservative government ideology would be more likely to adopt performance funding and less likely to terminate it. However, as Table 4 shows, there is no discernible effect of these variables on the hazards for any policy shift.

Table 5 presents results for the policy diffusion frame. In this theoretical lens, both multistate models are statistically significant but the restricted models are not.

The first hypothesis under this frame tests whether policy diffusion prompted by geographic proximity affects the hazard for policy shifts. I expected that states with a higher proportion of immediate neighbors with operational performance funding would be more likely to adopt this policy and less likely to discontinue it. However, there is no empirical evidence that this covariate has any effect on the hazard for policy adoption, failure, or readoption. I also tested the hypothesis that performance funding diffusion happens along ideological lines. I hypothesized that states with a larger number of "ideological neighbors" that have made a particular policy shift would be more likely to follow suit; however, I find no evidence supporting this supposition.

The next hypothesis tested the idea that states with more contemporaneous examples of successful policies would be more likely to adopt performance funding and less likely to abandon it. I find that such emulation-driven policy diffusion affects one type of policy shift. Partly in line with my hypothesis, a greater number of successful

examples of policy implementation (coupled with a shorter distance to them) increases the likelihood of policy readoption. Both multistate models show statistically significant effect of this variable on the hazard for readoption. Thus, I find that the presence of successful examples (long-standing operational policies), moderated by geographic proximity, increases the hazard for policy readoption. However, as demonstrated by large confidence intervals, the precise magnitude of the effect remains unknown.

These large estimates and confidence intervals require further exploration. I find that a small number of states that readopted performance funding in 2007 are driving this finding. During the observation period, there were 26 cases of performance funding readoption in 12 years; some states readopted the policy multiple times (Table 1). The number of successful policy examples in a readoption year ranges from one in 1996 to six in 2007, with the mean of 2.8 for all readoption years.

The year of 2007 is unique for the following reasons: first, there were six successful policies in that year, more than in any other readoption year; the second highest number of successful policy examples is four in 2008 and 2009. Second, seven states experienced readoption in 2007, which is the highest number of readoptions in one year in my dataset; the second closest are 2008 and 2009 with four readopting states in each. Six of these events were adoptions of a new policy and one represented resumption of funding. Finally, four of these states (Virginia, Indiana, Arkansas, and Texas) are geographically proximate to most, or some, of the six successful policies as of 2007 (in North Carolina, Ohio, Pennsylvania, Florida, Tennessee, and Oklahoma); as a result, they have the highest values of the variable for policy emulation. This variable—an interaction of the dummy variable for successful programs with a reverse log of distances

between state capitals—ranges from 0.15 to 0.67 for readopting states in other years. In contrast, its values for the top four readopters in 2007 range from 0.89 for Texas to 1.02 for Virginia. In other words, these readopting states had a greater number of successful and more proximate policy examples than readopters in other years. Thus, the four outlying states that readopted the policy in 2007 drive the above finding by virtue of having many successful regional neighbors.

As additional verification, I reran my models with these four states removed from the sample. Estimations from this truncated sample were almost identical on other variables but produced a statistically insignificant result for the effect of the policy emulation variable on the readoption hazard. I conclude that a small part of the sample with a large effect at a particular time causes the estimates of the effect to be imprecise.

The final hypothesis in this theoretical frame tested the role of interstate competition in performance funding evolution. I expected that states with a higher ratio of student out-migration to in-migration would be more likely to adopt performance funding and less likely to discontinue it. However, I find no evidence that diffusion of performance funding policies across state lines is driven by considerations of competition for students. The coefficients of different strata of the respective variable fail to reach statistical significance in all model specifications.

Table 6 presents results for the principal-agent frame. This theoretical lens focuses on two key issues: state-level governance of higher education systems and characteristics of performance funding programs. The governance-related covariates are analyzed in relation to all hazards; however, I consider programmatic characteristics to affect hazards only for policy failure and readoption. The results presentation in Table 6

reflects this difference between the two groups of covariates. With the exception of the failure and readoption models, all other specifications are significant. Findings in this frame are partially consistent with my expectations.

The first hypothesis of this frame tested the idea that states with more professionalized legislatures would be more likely to adopt performance funding and less likely to abandon it. However, I find that legislative professionalism does not have a detectable effect on the probability of performance funding policy shifts in any model.

The next three hypotheses test the role of state governance arrangement in performance funding development. I hypothesized that states with consolidated governing boards would be less likely to adopt performance funding and more likely to abandon it and these expectations would be reverse for states with coordinating boards.

My findings are partly in accord with the hypothesized relationships. Weak and strong coordinating boards are found to have statistically significant and positive relationships with the adoption hazard, and this effect is consistent almost in all models. There is an issue, however, with the magnitude of the effect: Although it is rather consistent across models, the already-vague precision of estimates of the restricted models falls even further in the final model. States with weak coordinating boards are found to be about six times more likely, and states with strong coordinating boards about five or eight times more likely, to adopt performance funding than states in the reference category. Contrary to my expectations and prior research (McLendon et al., 2006), I find no measurable effect for the presence of consolidated governing boards on hazards for any policy shift.

I proposed two hypotheses related to the programmatic characteristics of performance funding policies. First, I expected that states in which performance funding was initiated by state boards of higher education would be less likely to terminate the policy. However, I find no evidence that the board-initiated policies are more or less likely to experience either failure or readoption.

Second, I hypothesized that performance funding enacted via an appropriation bill or budget proviso would be more likely to fail and less likely to be readopted. Partly in line with this hypothesis, the final model shows that policies adopted via appropriation bills are less likely to be readopted after previous abandonment. In contrast to the policies enacted by a legislative mandate or an executive order, programs initiated by an appropriation decision are about 88 percent less likely to be readopted.

In summary, I find that governance arrangement and the mode of program initiation affect the likelihood of performance funding policy changes.

Table 3. Electoral Connection Frame: Determinants of Performance Funding Policy Lifecycle

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Annual change in public sector enrollment						
	Adoption	1.22 **			1.18 *	1.38 ***
		[1.05, 1.41]			[1.03, 1.35]	[1.14, 1.67]
	Failure		1.11		1.12	1.16
			[0.92, 1. 34]		[0.97, 1.30]	[0.99, 1.35]
	Readoption			1.00 #	0.92	0.87
				[0.93, 1.07]	[0.78, 1.09]	[0.68, 1.12]
Net cost of college (*recentered*)						
	Adoption	1.00			1.00	1.00
		[1.00, 1.00]			[1.00, 1.00]	[1.00, 1.00]
	Failure		1.00 #		1.00	X
			[1.00, 1.00]		[1.00, 1.00]	
	Readoption			1.00	1.00	X
				[1.00, 1.00]	[1.00, 1.00]	

Table 3, continued

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Proximity of legislative elections						
	Adoption	3.30			2.94	3.79
		[0.99, 11.05]			[0.82, 10.48]	[0.91, 15.70]
	Failure		0.81		0.85	0.77
			[0.33, 1.97]		[0.40, 1.79]	[0.35, 1.68]
	Readoption			1.31	0.69	0.77
				[0.37, 4.65]	[0.32, 1.49]	[0.28, 2.10]
Proximity of gubernatorial elections						
	Adoption	0.68			0.73	0.68
		[0.43, 1.09]			[0.46, 1.15]	[0.39, 1.19]
	Failure		0.84		0.84	0.88
			[0.50, 1.41]		[0.55, 1.27]	[0.57, 1.36]
	Readoption			0.46 *	0.64	0.57
				[0.23, 0.92]	[0.40, 1.00]	[0.31, 1.05]

Table 3, continued

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Yardstick competition-driven behavior of voters						
	Adoption	1.00			1.00	1.00
		[1.00, 1.00]			[1.00, 1.00]	[1.00, 1.00]
	Failure		1.00		1.00	X
			[1.00, 1.00]		[1.00, 1.00]	
	Readoption			1.00 #	1.00	X
				[1.00, 1.00]	[1.00, 1.00]	
Percent of neighbors with performance funding						
	Adoption	1.02			1.01	*see Table 5*
		[0.99, 1.04]			[0.99, 1.04]	
	Failure		1.02		1.01	*see Table 5*
			[1.00, 1.05]		[0.99, 1.03]	
	Readoption			1.01 #	1.01	*see Table 5*
				[1.00, 1.01]	[0.99, 1.04]	

Table 3, continued

Control variables included:	Yes	Yes	Yes	Yes	Yes
Number of subjects	47	27	24	132	132
Number of failures	27	25	18	91	91
Likelihood ratio	17.21	8.92	23.96	30.50	101.01
Probability > Chi2	0.046	0.349	0.004	0.082	0.001

Note. Control variables: state appropriations to higher education per college-age individual, unemployment rate, and higher education regional compact. The final model is simultaneously run for all theoretical frames; however, only a respective part is presented in the table. # = interaction of the covariate with the time counter variable to address the issue of non-proportionality; X = omission of the variable due to multicollinearity. Percent of neighbors with performance funding is a first-order interaction term in this frame; by itself, it is used to test a separate hypothesis in the Policy Diffusion frame (see Table 5).

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 4. Political Environment Frame: Determinants of Performance Funding Policy Lifecycle

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Percent of Republicans legislators						
	Adoption	1.01			1.00	1.06 *
		[0.97, 1.05]			[0.97, 1.04]	[1.00, 1.11]
	Failure		0.95 *		0.97	X
			[0.91, 1.00]		[0.93, 1.00]	
	Readoption			0.98	0.99	X
				[0.93, 1.03]	[0.95, 1.04]	
Republican governor						
	Adoption	1.05			0.97	0.67
		[0.28, 4.01]			[0.26, 3.63]	[0.10, 4.41]
	Failure		0.97 #		0.38	0.38
			[0.48, 1.96]		[0.10, 1.44]	[0.08, 1.83]
	Readoption			0.94 #	0.63	1.66
				[0.72, 1.22]	[0.19, 2.07]	[0.31, 8.73]

Table 4, continued

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Conservatism of state government						
	Adoption	0.99			1.00	0.99
		[0.96, 1.03]			[0.97, 1.03]	[0.95, 1.03]
	Failure		1.01 #		1.02	1.01
			[0.99, 1.02]		[0.99, 1.05]	[0.98, 1.04]
	Readoption			1.00 #	1.02	0.97
				[1.00, 1.01]	[1.00, 1.05]	[0.93, 1.01]
Control variables included:		Yes	Yes	Yes	Yes	Yes
Number of subjects		47	27	24	132	132
Number of failures		27	25	18	91	91
Likelihood ratio		0.52	10.89	12.02	9.32	101.01
Probability > Chi2		0.998	0.092	0.062	0.676	0.001

Note. Control variables: state appropriations to higher education per college-age individual, unemployment rate, and higher education regional compact. The final model is simultaneously run for all theoretical frames; however, only a respective part is presented in the table. # = interaction of the covariate with the time counter variable to address the issue of non-proportionality; X = omission of the variable due to multicollinearity.

* p<0.05, ** p<0.01, *** p<0.001

Table 5. Policy Diffusion Frame: Determinants of Performance Funding Policy Lifecycle

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Percent of neighbors with performance funding						
	Adoption	1.02			1.02	1.02
		[1.00, 1.05]			[1.00, 1.05]	[0.99, 1.05]
	Failure		1.02		1.01	1.01
			[0.99, 1.04]		[1.00, 1.03]	[0.99, 1.03]
	Readoption			1.00	1.00	1.00
				[0.97, 1.02]	[0.98, 1.03]	[0.97, 1.04]
Number of ideological neighbors with		1.43			1.46	1.60
performance funding	[Adoption]	[0.94, 2.17]			[0.97, 2.20]	[0.92, 2.77]
Number of ideological neighbors who			0.87 #		1.01	0.95
abandoned the policy	[Failure]		[0.55, 1.36]		[0.76, 1.34]	[0.68, 1.31]
Number of ideological neighbors with				0.96 #	0.98	1.45
performance funding	[Readoption]			[0.70, 1.32]	[0.73, 1.31]	[0.87, 2.41]

Table 5, continued

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Number of successful examples of implementation						
	Adoption	0.00			0.00	X
		[0.00, 211.42]			[0.00, 325.86]	
	Failure		7.78		0.74	0.88
			[0.21, 293.41]		[0.14, 3.88]	[0.14, 5.56]
	Readoption			4.83	13.84 **	19.29 *
				[0.30, 77.88]	[2.24, 85.60]	[1.88, 197.38]
Ratio of student out-migration to in-migration						
	Adoption	1.23			1.26	0.79
		[0.82, 1.83]			[0.85, 1.86]	[0.44, 1.44]
	Failure		1.03		1.18	1.50
			[0.65, 1.62]		[0.79, 1.77]	[0.88, 2.56]
	Readoption			0.36	0.52	0.18
				[0.07, 2.78]	[0.17, 1.57]	[0.02, 1.83]

Table 5, continued

	M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
Control variables included:	Yes	Yes	Yes	Yes	Yes
Number of subjects	47	27	24	132	132
Number of failures	27	25	18	91	91
Likelihood ratio	8.68	6.23	6.67	26.87	101.01
Probability > Chi2	0.277	0.398	0.353	0.030	0.001

Note. Control variables: state appropriations to higher education per college-age individual, unemployment rate, and higher education regional compact. The final model is simultaneously run for all theoretical frames; however, only a respective part is presented in the table. # = interaction of the covariate with the time counter variable to address the issue of non-proportionality; X = omission of the variable due to multicollinearity.

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 6. Principal-Agent Frame: Determinants of Performance Funding Policy Lifecycle

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Legislative professionalism						
	Adoption	1.25			1.21	1.68
		[0.74, 2.11]			[0.73, 1.99]	[0.86, 3.30]
	Failure		1.34		0.79	0.68
			[0.63, 2.85]		[0.45, 1.43]	[0.34, 1.36]
	Readoption			0.55	0.62	0.43
				[0.21, 1.42]	[0.28, 1.36]	[0.16, 1.18]
Weak coordinating board						
	Adoption	6.51 *			6.02 *	6.15 *
		[1.41, 29.99]			[1.37, 26.47]	[1.01, 37.47]
	Failure		1.49 #		0.47	0.27
			[0.43, 5.19]		[0.09, 2.44]	[0.04, 1.79]
	Readoption			0.60	3.52	11.02
				[0.03, 11.77]	[0.51, 24.45]	[0.88, 138.16]

Table 6, continued

		M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
		Hazard ratio / [Confidence interval – 95]				
Strong coordinating board						
	Adoption	4.76 *			3.77	8.65 *
		[1.10, 20.63]			[0.91, 15.54]	[1.35, 55.69]
	Failure		2.02 #		0.57	0.46
			[0.61, 6.61]		[0.13, 2.58]	[0.09, 2.43]
	Readoption			0.43	2.46	1.44
				[0.02, 8.83]	[0.40, 15.01]	[0.12, 17.88]
Consolidated governing board						
	Adoption	0.62			0.73	0.29
		[0.12, 3.20]			[0.15, 3.51]	[0.04, 1.94]
	Failure		2.31 #		0.28	0.21
			[0.58, 9.27]		[0.05, 1.60]	[0.03, 1.50]
	Readoption			1.70	5.88	5.00
				[0.07, 41.17]	[0.67, 51.46]	[0.28, 88.11]

Table 6, continued

	M 1. Adoption	M 2. Failure	M 3. Readoption	M 4. Multistate	Final Model
	Hazard ratio / [Confidence interval – 95]				
Initiated by state higher education board					
Failure		0.64		0.92	0.74
		[0.15, 2.80]		[0.32, 2.66]	[0.21 2.65]
Readoption			0.47	0.91	1.70
			[0.14, 1.59]	[0.30, 2.81]	[0.34, 8.52]
Adopted by appropriation					
Failure		0.71		1.17	1.36
		[0.17, 3.02]		[0.43, 3.18]	[0.42, 4.46]
Readoption			0.52	0.39	0.12 **
			[0.16, 1.63]	[0.14, 1.11]	[0.02, 0.56]
Control variables included:	Yes	Yes	Yes	Yes	Yes
Number of subjects	47	27	24	132	132
Number of failures	27	25	18	91	91
Likelihood ratio	20.65	9.90	10.83	33.05	101.01
Probability > Chi2	0.004	0.359	0.094	0.024	0.001

Note. Control variables: state appropriations to higher education per college-age individual, unemployment rate, and higher education regional compact. The final model is simultaneously run for all frames; however, only a respective part is presented. # = interaction of the covariate with the time counter variable to address the issue of non-proportionality. * $p<0.05$, ** $p<0.01$, *** $p<0.001$

CHAPTER VI

CONCLUSIONS

Implications of the Results

The results of the analysis uncover some intriguing relationships that shed new light on the drivers of evolution of performance funding policy systems. The discussion of the results implications is anchored in the proposed relationships within the conceptual framework for the study. As mentioned above, the key concepts that are operationalized in the independent variables aim to capture the main determinants of policy development. These forces represent political and social processes and actors that drive states to make policy shifts. Importantly, these influences are deemed to affect all relevant performance funding policy changes. This section discusses which relationships of the conceptual framework are supported by empirical findings. Similar to the results presentation, their discussion proceeds by theoretical frame.

In the electoral connection frame, the only variable that has statistical significance is the annual change in public enrollment. It has a consistent positive effect on the hazard for policy adoption in all respective model specifications. In line with my hypothesis, I interpret this finding as follows: Steeper decline in perceived college accessibility—represented by sharper increases in enrollment—provides for increased voter pressure on incumbents to accommodate this dynamic. To address voters' concerns about college accessibility, policymakers enact performance funding that aims to enhance institutional efficiency and performance. Thus, in years when issues of college access seem most

conspicuous, state officials are more likely to adopt performance funding. This finding supports the hypothesized relationship in the conceptual framework.

It is important to correctly interpret the probable causal mechanism connecting this variable and the likelihood of policy adoption. As mentioned above, voters seldom push for a specific type of policy and their demands for accountability and better institutional performance are quite general. Moreover, their perception of college accessibility is unlikely to be a direct function of annual changes in college enrollment. Therefore, this variable represents the *anticipatory response* of state officials to assumed voter perception of college accessibility rather than direct response to voter pressure for greater access. In enacting performance funding, policymakers respond to a general sense of voter preferences, given the changes in enrollment, and not to their constituents' direct demand to address the diminishing availability of college seats.

Testing the other hypotheses under the electoral connection frame does not offer empirical support for the proposed relationships. I am somewhat surprised to find that the net cost of college has no measureable effect on the hazards for any policy shifts. I expected that larger increases in the cost of college attendance (that is, steeper decline in higher education affordability) would provide for greater voter pressure on elected officials to adopt accountability policies. Given public concerns over rising tuition, it seemed plausible that the rising cost of tuition would create conditions for the emergence of rigid accountability policies such as performance funding.

However, I do not find empirical evidence for a relationship between the net price of college and the probability of policy adoption or other policy shifts. A possible explanation for the lack of this effect is the general character of voter demands: When

voters call for institutional accountability and tuition caps, as a rule, they do not propose or advocate a particular policy. Most voters are unlikely to be familiar with performance funding characteristics. As a result, their diffuse demands for accountability and tuition control do not translate into performance funding adoption. Besides, even if voters are aware of performance funding per se, they do not necessarily view it as a policy that can hold institutions accountable for rising tuition. On the contrary, the public may see it as an incentive policy that provides additional funding to institutions at a time when colleges are receiving much more revenue through tuition. Guided by this perception of performance funding as an incentive policy, voters may be opposed to its enactment.

I do not find any support for the hypotheses that electoral timing affects performance funding development. I conclude that, in general, proximity of legislative and gubernatorial elections does not affect the likelihood of the respective policy shifts. In other words, incumbents do not attempt to enhance their reelection chances by adopting presumably popular performance funding as their reelection draws closer. Neither are they more likely to terminate this policy in the beginning of their terms. Three explanations can be offered for this finding. First, this lack of the hypothesized effect can support the ideas that higher education is a low-priority item on the election agenda and that incumbents do not view higher education accountability as an issue that provides an electoral advantage. Second, policymakers may slight performance funding as a policy that is too specific and technical in nature, constrained in goals and effects, and unfamiliar to most voters to use it in their electoral battles. Last but not least, incumbents may not see performance funding as a policy that addresses the most urgent public concerns about access and affordability of higher education.

The lack of support for the hypothesis that examples of other of states with performance funding could provide for increased voter pressure on incumbents to adopt similar programs (yardstick competition idea [Besley & Case, 1995]) may have two explanations. The first one is the actual absence of this effect for this specific policy. This explanation is plausible because most voters are unaware of performance funding existence in bordering states, and thus, their general demands for higher education accountability translate into a variety of other policy responses. The second explanation is technical: Since the employed variable is an interaction of the proportion of bordering policy adopters with the variable for the cost of college and the latter is not statistically significant, this leads to the lack of significance of the variable for the yardstick competition-driven behavior of voters. Future research of performance funding should use other proxy measures to capture the possible workings of yardstick competition.

The results for the political environment frame support one of three hypotheses. The final model confirms my expectation that the extent of the Republican presence in state legislatures will have a positive effect on performance funding adoption. The restricted model also shows that this variable is negatively related to the failure hazard, which is consistent with the hypothesis. However, this result is not confirmed in Model 4 and could not be verified in the final model due to multicollinearity. In general, the evidence for the significant role of legislative partisanship compares favorably with the findings of other studies of higher education policymaking (Deaton, 2006; McLendon et al., 2005; McLendon et al., 2006; McLendon, Hearn, & Mokher, 2009). Importantly, this result is consistent with McLendon et al.'s (2006) finding about the critical role of Republican legislative strength in adoption of performance funding policies. This

consistency of results between studies using different approaches offers an additional proof that legislative partisanship is a decisive factor in performance funding evolution.

Next, the presence of an incumbent Republican governor does not have any significant effect on any hazards, which is also consistent with the finding of McLendon et al.'s (2006) study. This result fails to support my hypothesis and contrasts with McLendon et al. (2009) and Archibald & Feldman's (2006) findings that governor's party identification plays a key role in higher education funding decision-making.

Finally, the conservatism of state governments does not have any discernible effect on the hazard for any policy shift. This result runs counter to the findings of prior research that found government ideology to be a statistically significant factor affecting policy change in higher education (Doyle et al., 2010; Nicholson-Crotty & Meier, 2003). I conclude that neither governor's partisanship nor government ideology plays a key role in performance funding evolution. In contrast, the partisanship of state legislators affects the likelihood of specific policy changes (adoption). Thus, the data support one causal mechanism under the political environment frame: preference of Republican legislators for strict performance accountability policies.

In the policy diffusion frame, I combine traditional and recent approaches to explaining why policies migrate across state lines. Thus, my conceptual frame includes four possible causal mechanisms of policy diffusion. Traditional policy diffusion studies view geographic proximity as a factor facilitating policy migration among states (Berry & Berry, 1990, 1992; Doyle, 2006; McLendon et al., 2006; Mintrom, 2000). Recently, this approach has been criticized for lacking true causal explanations of the diffusion process and alternative approaches have been proposed (Karch, 2007; Sponsler, 2010; Volden,

Ting, & Carpenter, 2008). Constant failure to find a positive effect of geographic proximity on the likelihood of policy enactment has been another driver of new approaches to policy diffusion research in higher education arena. Out of about a dozen of higher education diffusion studies, only one found a significant positive diffusion effect (McLendon et al., 2005). In other cases, the diffusion variable was either insignificant or negative (Doyle et al., 2010; Sponsler, 2010). The regional diffusion effect was insignificant in the studies of adoption of innovative accountability policies (McLendon et al., 2005) and performance funding (McLendon et al., 2006).

In this study, one finding partially supports the hypothesized relationships within the conceptual framework. I am surprised to discover that geographic proximity does not matter by itself but becomes a statistically significant factor when policy sustainability (perceived policy success) is also taken into account. In other words, I find that simply being adjacent to a performance funding adopter does not have a detectable effect on the likelihood of a given state's policy shift; however, having a greater number of successful and more proximate policy examples exerts a positive effect on the hazard for performance funding readoption. Specifically, I do not find any support for the hypothesis that the percent of bordering states with operational performance funding determines the likelihood of policy shifts of any type. This result is consistent with other studies of policy innovations in higher education that employed some measure of geographic proximity (Doyle, 2006; Doyle et al., 2010; Hearn et al., 2007; McLendon et al., 2006; McLendon et al., 2007; Mokher, 2008; Mokher & McLendon, 2009).

However, the result for the number of successful programs provides evidence for policy diffusion operating at the national level: A greater presence of long-standing

examples of performance funding, moderated by geographic proximity, increases the likelihood of policy readoption in a given state. The result is significant even after controlling for the impact of bordering states and other influences and is consistent in the multistate specifications. This finding offers partial support to Karch's (2007) idea of policy diffusion due to emulation, that is, states following successful examples of policy implementation—although this causal mechanism seems to affect only the probability of policy readoption. However, the result lacks any conclusive precision: The point estimates are big and confidence intervals are very large. Additional analyses, described in the *Findings* section, showed that this imprecise finding is driven by a small number of states that readopted the policy in 2007and had many proximate and successful policy examples. In general, the intriguing finding of emulation-driven diffusion of certain policy changes warrants special attention in future studies of public policy development.

I find no evidence that the other possible causal mechanisms of diffusion—imitation based on ideological proximity of state governments and interstate competition for students (Karch, 2007)—affect hazards for any performance funding policy shifts.

The significant results for principal-agent frame partly support the hypothesized relationships. Two of the employed variables were insignificant in all model specifications. First, there is no empirical evidence that legislative professionalism is related to any policy shift. The expectation that more professionalized state legislatures would be more likely to adopt innovative performance funding policies and design more sustainable programs is not supported by the data. In preliminary estimations, I also used another measure of legislative professionalism, the presence of legislative term limits, and found that it was positively related to the adoption hazard in the restricted models but

not in the final model. However, I omitted this variable from the final models because of its redundancy and due to the potentially artificial nature of the discovered effect. Term limits were mostly introduced in the 1990s when most first-generation performance funding policies were being adopted. Therefore, the term limits' effect could be due to simultaneity of these processes and not due just to legislative professionalism.

The hypotheses about the role of state boards for higher education were supported in part. Prior research repeatedly showed that the type of postsecondary governance determines policy outcomes (Doyle, 2006; Hearn & Griswold, 1994; Hearn, Griswold, & Marine, 1996; Mokher & McLendon, 2007; Nicholson-Crotty & Meier, 2003). Specifically, McLendon et al. (2006) find that states with consolidated governing boards are less likely to adopt performance funding and explain this finding by better ability of these boards to protect institutional interests in comparison to other types of state boards.

I expected to confirm McLendon et al.'s (2006) finding and ran two independent estimations. In preliminary estimations, in which consolidated governing boards were in the model and all other types of boards were in the reference category, I found a consistently negative effect of this covariate on the hazard for adoption. Thus, preliminary models provided support for McLendon et al.'s (2006) finding. However, adding two types of coordinating boards to the model and using the weakest type of boards as the reference category changes the picture. I find that states with coordinating boards are more likely to adopt the policy than states in the reference category and the presence of consolidated governing boards does not affect any hazard.

The explanation for the above discrepancy is both substantive and technical: When consolidated governing boards are compared to all other types of boards, they are

less likely to adopt performance funding because the more-likely-to-adopt coordinating boards are in the reference category. When coordinating boards are in the model, the true effect surfaces and, in relation to the new reference category, the consolidated boards are no longer significant. Thus, I have been able to specify the effect of state boards discovered by McLendon et al. (2006). However, my results should be interpreted with caution due to large confidence intervals. Another note of caution is that my reference category is relatively small in later years: In 2009, it included eight states with the weakest types of boards (advisory boards and planning agencies); however, this number was higher in the earlier years. The reported results show the effects of state boards in comparison to the states in the reference category. Although the size of the reference category does not affect statistical significance and validity of the results, it is important to keep in mind when discussing their substantive interpretation.

Regarding the key programmatic characteristics, I find that the mode of policy initiation matters but the initiator does not have a detectable effect. Although the finding that policies adopted through an appropriation bill or a budget proviso have a lower probability of readoption does not directly confirm qualitative analyses of performance funding failures (Burke & Associates, 2002; Dougherty et al., 2012; Natow & Dougherty, 2008), it follows the same logic that such policies are unstable and stand little chance of resurgence. The lack of significant results for policies initiated by state boards could mean that it is not crucial whether performance funding was self-initiated or mandated by external actors. This finding fails to support prior qualitative research on the issue (Burke, 1998; Burke & Associates, 2002; Burke & Modarresi, 2001).

In brief, I find only partial support for my hypotheses. I discover some new factors affecting performance funding evolution and find partial evidence for the effects proposed in the previous studies. Also, I fail to find support for certain antecedents of policy shifts suggested in the literature or found to be significant in the prior research.

The conceptual framework offers testable propositions about my research question and aims to uncover causal mechanisms behind the relationships among my key concepts. My findings support the following hypothesized causal mechanisms: policymakers' anticipatory response to voter perception of college accessibility, Republican preference for performance accountability, policy diffusion driven by emulation and proximity, proclivity of weaker state governing boards to respond to accountability pressure, and lower institutionalization of non-mandated policies.

Specifically, I find that the following state-level factors determine the evolution of performance funding policies in higher education: increases in public-sector enrollment; the extent of the Republican presence in state legislatures; the number of, and distance to, sustainable policy examples in other states; type of governance arrangement for state systems of higher education; and the mode of the program initiation. These results confirm some prior findings but also shed new light on what affects development of performance funding. More research is necessary to give a more definitive answer to the question which factors have driven this policy evolution. In several years, when more states will have adopted and tried out a new generation of performance funding, another study will probably be better able to clarify some of the issues that remain unanswered.

Limitations and Directions for Future Research

The limitations of this study comprise three separate areas: omission of potentially relevant theoretical frames and predictors, possibly insufficient operationalization of certain concepts, and computational limitations of the employed models. Given these limitations, some factors affecting performance funding development could remain unidentified and will need to be addressed in future studies.

First, this investigation does not use all possible theoretical frames that could explain performance funding policy shifts. I consciously omit from the analysis some conceptual frames and respective predictors. This omission provides sufficient statistical power for estimation in the final model, which includes all theoretical frames. Also, some omitted theoretical lenses are better fitted for qualitative investigations due to the lack of appropriate quantitative measures for the entire observation period.

To illustrate, I do not employ the Interest-group frame (Pluralist Theory), although prior studies uncovered the critical role of particular coalitions in performance funding evolution (Burke & Associates, 2002; Natow & Dougherty, 2008). In the preliminary models, I used the percent of manufacturing employment as a proxy measure for the extent of business development and strength. However, I omit this covariate from my final model specifications due to inadequate operationalization of the concept of and the lack of other variables under this frame. Further research will have to test the role of the business community in this policy development.

Another potential frame to use in subsequent studies may examine performance funding from the position of the state budgeting process, which lies at the heart of the political process and all public policies (Gosling, 2009; Wildavsky, 1984). In this regard,

a critical limitation of this study is not considering the relative size of each program in percentage of the total budget. Although difficult to glean for all policies over the entire observation period, this variable would provide much needed control for a critical programmatic characteristic. Future studies will need to consider this variable relative to the overall financial situation in the state and higher education budget in particular.

Also, because of the model limitation explained below, I omitted many available programmatic characteristics, leaving just two most critical ones. This omission of potentially important policy features undermines the breadth of the analysis and leaves much ground to cover in subsequent investigations.

Second, operationalization of some concepts may not be totally satisfactory and may require using alternative variables in future research. For example, the variables employed to capture causal mechanisms of policy diffusion are far from ideal, especially the ones used for successful policies and interstate competition. To be sure, other definitions of successful programs are possible, besides the one used in this study, which simply equates success with longevity. Future studies will need to use a more refined definition of policy success that, for example, will take into account the nature of the policy. Competition among states can also be examined from other perspectives as opposed to using student migration patterns. In future studies, researchers may also operationalize perceived issues of access to higher education in a more comprehensive fashion than using the annual change in public sector enrollment. Likewise, yardstick competition among states could be operationalized differently in order to retest this idea.

Finally, through the course of this analysis, it became apparent that the employed model presents a number of computational limitations. Although having enough

statistical power for all analyses, the model is amenable to the issues of multicollinearity, which precluded me from testing all factors of potential importance. For example, I omitted the variable for citizens' ideology due to its high collinearity with government ideology. The same problem prevented me from including citizen partisanship and gubernatorial institutional powers.

The model also does not cope well with variables representing complex ratios and many dummy variables. This issue precluded me from testing several desired predictors. For instance, instead of the net cost of college, originally I intended to use the variable for financial burden, which was estimated as the net cost of college over the median family income. However, the coefficients for this variable were improbably large, as were the confidence intervals. A similar problem occurred with the ratio of this year's enrollment to prior five-year average, which was used as a proxy for enrollment demand, and the ratio of baccalaureate completion over overall enrollment, which stood for higher education performance. Because of the model's inability to process many binary variables, testing the effect of all programmatic characteristics on the outcome of interest no longer fell within the scope of this study.

I also hope that future studies will address the issue of inaccurate estimations and large confidence intervals and will be able to estimate certain effects of interest with greater precision than was possible in this study.

Contributions of the Study

This study provides new insight into the phenomenon of the policy development process and advances our knowledge of the factors driving states to make policy shifts in public higher education. It makes theoretical and empirical contributions to the field of policy studies by testing a set of hypotheses regarding development of performance funding policy systems. This analysis employs four distinct theoretical traditions, advanced methodology, and refined definitions of key concepts in order to answer the research question in a comprehensive fashion. Prior studies of performance funding uncovered some critical determinants of this policy development. However, this investigation provides contributions in a number of new arenas.

This study contributes to the existing literature by proposing a new theoretical perspective for understanding different statuses of a policy and policy changes. I draw a distinction between an "actual" policy with real implications and a "merely adopted" policy existing only in the books. Making this distinction clear requires strict, easy-to-apply definitions of policy shifts. I propose and test unique definitions of operational policy and policy adoption and failure. This perspective provides strict criteria for defining policy existence and nonexistence at any given time. In other words, new definitions accurately determine the policy status: preoperational, operational, or nonoperational. This approach also offers enough statistical power to run advanced analyses. Using an example of performance funding in public higher education, I suggest specific criteria that define it as an operational, as opposed to latent, policy. I argue that this approach can apply more broadly to examination of various policies and, thus, can advance the field of policy studies.

The centerpiece of this research is capturing transitions between nonexistent, operational, and nonoperational statuses of the policy. To answer my research question, I redefine what it means for a policy to be in place and what it means for a policy to be abandoned. My analysis shows that, specifically, policy failures in the higher education arena need to be better understood and more thoroughly conceptualized and examined. Thus far, few political science studies have theorized and examined this phenomenon in its full and rich variety, and no studies of education policies have empirically tested different types of policy failure.

This study confirms that policies can fail in numerous ways but, for a variety of reasons, failure seldom happens by legislative or executive termination of the policy. More often than not, policy retraction takes place by other means such as a lack of appropriation, lack of other intended incentives or sanctions, tacit substitution with another policy, policy shrinking, or failure to meet the original criteria or goals. Despite their ubiquity, these types of policy failure are poorly understood and inadequately studied. By proposing and testing a refined definition of policy failure, this study provides a contribution to the higher education policy literature, the education policy literature, and the general field of public policy studies.

This investigation also contributes to the established literature by conceptualizing the policy cycle as a more complex phenomenon than merely presence or absence of a public policy. I challenge the assumption that policy studies should focus on conditions of a one-way transition from one state of the policy into the other: from non-adoption to adoption or from adoption to failure. Real-life policy development calls for a more nuanced conceptualization of this process, and this study adds to the field by allowing for

a more dynamic policy history. Unlike prior research, I examine the entire performance funding policy lifecycle and simultaneously analyze determinants of policy adoption, failure, and readoption. Thus, I treat performance funding development in a more comprehensive fashion than has been done previously in quantitative studies of policy enactment, development, diffusion, and failure. This novel conceptualization and this new empirical approach require (a) identifying all possible policy shifts regarding performance funding and (b) operationalizing and analyzing their determinants across states and over time.

Applying different theoretical traditions to the examination of multiple policy changes provides another important contribution of this research. The juxtaposition of conceptual frames—and simultaneous testing of respective hypotheses—adds conceptual clarity to the discussion of policy shifts. It also provides for comprehensive consideration of different antecedents of public policy changes. In cases of competing explanations of policy shifts, this approach may also identify their determinants more precisely. For the purposes of this investigation, I use the following theoretical frameworks: the electoral connection, political environment, policy diffusion, and principal-agent frames. Based on this four-pronged approach, I test four sets of theory-driven hypotheses that explain—each from a different standpoint—evolution of performance funding policy systems. I posit that this approach should apply to the examination of any policy development when researchers deal with competing explanations of policy changes, numerous involved actors, and multiple presumed determinants of policy shifts. To be sure, the nature of the policy, the research question, and the conceptualized cause-and effect relationships in the real world should determine the choice of specific theoretical frames.

The use of sophisticated methodology in studying antecedents of multiple mutually dependent policy changes is a contribution to the field of policy studies. I employ several model specifications of multiple-failure event history analysis. The main model of the study, the conditional gap time model (PWP), is the best fit to the research question, the dynamic of policy development, and the collected data. It allows for estimation of the effects of multiple predictors on the outcome of interest across states and over time and provides sufficient statistical power for a comprehensive model. This model also successfully addresses the following issues: different types of policy shifts, their dependence on each other, recurring nature of policy changes, existence of tied events and censored observations, and time-varying covariates and time-dependent effects of predictors. To the best of my knowledge, in such a comprehensive form, this approach has not been used in policy analysis before. This analytic technique allows me to model the complex evolution of performance funding policy systems successfully.

This study also makes a contribution to the literature by suggesting a more refined operationalization of outcomes and predictors than has been used in most previous studies. Analyzing all types of policy shifts provides a contribution to the literature that is mostly focused on policy adoption or, occasionally, policy termination. Incorporating all types of state governing boards for higher education is a departure from other studies that generally focus on the presence of consolidated governing boards. Likewise, I employ a more nuanced approach to investigating a policy diffusion effect: four distinct covariates used in the study represent hypothesized causal mechanisms behind policy migration. I also suggest novel ways to capture the effect of yardstick competition, identify ideological neighbors, and estimate a legislative professionalism score.

The findings of the study offer several contributions to the field. Prior qualitative studies have discovered the effect of changes in state appropriations on policy changes regarding performance funding. Controlling for state appropriations and other influences, this study finds that enrollment pressure, represented by changes in public enrollment, provides for adoption of performance funding policies. The effect of enrollment increases on the likelihood of policy changes contributes to the existing literature by identifying another important determinant of performance funding evolution.

The result for diffusion effects is a key contribution from this research. I find that the number of successful neighbors (states with long-standing performance funding programs) is positively associated with policy readoption. This consistent result is intriguing, especially given very limited findings on diffusion effects in prior studies of higher education policies. This finding uncovers the workings of the emulation mechanism of diffusion whereby policies migrate across states due to incumbents' efforts to imitate successful policies. This study further provides a contribution by showing that the above effect is moderated by the distance to states with sustainable policies. Therefore, I find that geographic proximity does matter; however, uncovering this effect requires using a more sensitive measure of proximity than has been used in many other studies (continuous states or members of the same regional higher education compacts).

This research specifies the effects of the following determinants of policy shifts suggested in previous studies: the type of state governance arrangement for higher education and the mode of policy initiation. This result furnishes evidence that these factors—together with partisanship of state policymakers—should be included, and properly operationalized, in future studies of higher education policy development.

Finally, I believe that despite the academic nature of the study, it also has important practical implications. The practicality of this research resides in valuable lessons drawn from the experiences of states that have implemented performance funding. Understanding the antecedents of different policy shifts may enable state policymakers to design more sustainable and successful programs. In addition, based on specific findings, it is possible to make tentative predictions about the likelihood of respective policy shifts in a given period.

This study opens up several avenues for future research. A promising line of research includes new possibilities for studying policy changes, especially policy failures in higher education. Future studies may examine in greater depth what it means for a policy to be in place and how this understanding affects policy adoption and failure. This approach will require further operationalization of policy statuses and policy changes. Policies that do not depend on state allocations or have multiple target audiences will present a special challenge in terms of distinguishing between the operational and latent status of the policy. This study suggests some policy-specific criteria for determining policy existence; however, it leaves it to subsequent research to elaborate on this issue.

The other avenues for further research include the following: incorporating other theoretical frames and predictors to analyze factors of policy evolution, using alternative methodologies, retesting the effects discovered in this and other studies, examining performance funding in the context of various accountability policies to understand how policy choices affect each other, analyzing the role of programmatic characteristics and financial context, and ultimately building an integral theory of policy development. I hope that this study represents an important stepping stone toward these goals.

Conditions of performance funding stability and failure

At this point in a research project, academic and policy audiences tend to ask very different questions. Scholars scrutinize the study results, contributions, and limitations and consider directions for future research. The study's authors are careful not to make bold claims or make broad generalizations about their findings and thoroughly delineate limitations of their investigation. The common format of finishing the results presentation is to acknowledge that more research needs to be done and express hope that future studies will fill in the remaining gaps. This study is no exception and takes the same cautious approach. In sharp contrast, real-life policymakers and practitioners tend to immediately step over the boundaries of a given research problem and the study's limitations and ask questions that are more general: How do these results relate to a bigger context? How can we apply this new knowledge to practical issues? What are the author's recommendations for solving particular problems? In other words, they want the author to explain what is in it for them and, when applied, how this new knowledge makes the world a better place. The need to answer these broad questions—given the study limitations and their own cautionary leanings—can make academic scholars cringe.

Having delineated my study results, limitations, and contributions, I am going now to answer one critical question that is expected from the policy audience. I understand that any study that examines determining factors of policy adoption and failure should focus specifically on conditions under which these policies are more likely to be successful and conditions under which they are more likely to fail. Such a description must go beyond the limits of the study and synthesize prior research,

implications of the study results, and the author's convictions. In brief, it should aim to summarize what successful and failing policies look like.

This section, thus, focuses on general characteristics of stable and failing performance funding programs. I will summarize key conditions of policy stability and failure, suggested in the literature and in this study. In doing so, I owe a great deal to prior research by Joseph Burke and associates, Kevin Dougherty and colleagues, Brenda Albright, and other scholars and policy analysts who studied performance funding development in various contexts. I also encourage the reader to heed the advice of Burke and Modarresi (2001) who undertook a similar endeavor: "Incorporating these characteristics will not ensure the stability of a program in any state, but success is unlikely without considering them […]. These characteristics represent a reasonable check for potential stability rather than an infallible prescription for success" (p. 66).

I believe that the key factors that create conditions for success or failure of performance funding policies fall under five broad areas: (a) Environmental conditions, which include different contextual factors of policy evolution; (b) Characteristics of the policy adoption process; (c) Policy design, that is, features of the enacted program; (d) Conditions of policy implementation; and (e) Attainment of policy goals and policy effects. Each of these broad policy domains includes various specific factors that are likely to affect policy stability or failure. This loose classification is arbitrary and aims not to provide a comprehensive taxonomy of factors that lead to success or failure but to identify key levels and sublevels of policy systems. In this section, I will outline what the current body of research and practice tells us about the likely conditions for both performance funding success and failure. Table 7 summarizes these key influences.

Table 7. Conditions of performance funding stability and failure

	Conditions of stability	Conditions of failure
I. ENVIRONMENTAL CONDITIONS	Contextual factors:	
Fiscal context / Budget constraints	Stable state funding Gradual funding changes	Budget instability; drastic budget cuts; recessions
Constancy of resources for policy implementation	Adequate and constant resource base	Inadequate or instable resources
State priorities and goals	Stable state priorities	Changing priorities and goals
Continuity of governmental support	Constant officials' support	Loss of original supporters
Continuity of institutional support	Constant campus support for the policy	Lack of campus support for continuation
Involvement of business community	Continuity of business interest and support	Weakening of business interest after adoption
Maturity of the policy	Established policy with strong supporters and allies	Immature policy with few supporters and allies
Perception of the policy	Policy perceived as effective, fair, and advantageous	Policy perceived as ineffective and/or unfair
II. POLICY ADOPTION	Characteristics of the adoption process:	
Policy initiator	Higher education agency	Legislature/governor/business
Method of adoption	Non-mandated policy	Mandated (*not necessarily*)
Mode of adoption	Statute or executive order	Budget proviso/ appropr. bill
State agency support / Collaboration with higher education community	Important input from higher education community	Low involvement of higher education community

Table 7, continued

	Conditions of stability	Conditions of failure
Development of performance indicators, weights, and standards	Indicators developed by higher education community	Externally prescribed indicators
Assignment of weights to indicators	Weights assigned by institutions to reflect mission	Imposed or incorrect weights affecting instit'l responses
Policy introduction	Starting small: piloting the program and phasing it in	Drastic policy introduction
Adequate planning	Sufficient time for planning	Limited time for planning
III. POLICY DESIGN	Program features:	
Strength and size of the program	Sufficient funding to induce changes & motivate colleges	Too small to produce changes Too large: Budget instability
Budget planning and fiscal predictability	Stable budget planning and implementation	Wide budget fluctuations from period to period
Complexity of the program	Easy-to-implement program due to its simplicity	Too difficult to implement because of complexity
Cost of data collection, analysis, and implementation	Reasonable cost of data collection & implementation	Too expensive to collect data and implement
Use of incentives or sanctions	Only incentive funding	Use of sanctions/disincentives
Type of funding	Supplementary / additional	Withheld / reallocated
Restrictions on funding	Discretionary funds	Non-discretionary funds
Relationship among institutions	Promoting collaboration	Promoting competition
Number of performance indicators	Reasonable number	Too many and too detailed

Table 7, continued

	Conditions of stability	Conditions of failure
Nature of performance indicators	Cleary defined, outcome-oriented measures	Too numerous indicators or indicators of different types
Success standards	Institutional improvement Comparison against self	Comparison against better performing institutions
Mission diversity	Using common and separate performance indicators	Using uniform measures across sectors and institutions
IV. POLICY IMPLEMENTATION	Characteristics of policy implementation:	
Policy requirements	Stability of requirements	Fluctuating requirements
Policy review and revision	Periodic policy revision	No (or too frequent) revisions
Periodic increases in funding levels	Gradual increase in funding	Stagnant or reduced funding
Collaboration among policymakers	Continuing collaboration	Lack of collaboration
Consultation among all stakeholders	Sustaining dialogue among all involved parties	Not involving stakeholders at all stages of implementation
Policy penetration within institutions	Involving all actors at all levels within colleges	Low penetration within institutions
V. POLICY GOALS AND EFFECTS	Evidence of / sense of:	
Ensuring external accountability	Demonstrating accountability	Failing to demonstrate accountability
Responding to state and public priorities	Achieving policy goals related to state needs	Failing to meet important state needs
Enhancing institutional quality / Improving student outcomes	Improved institutional performance and outcomes	Lack of noticeable improvement

Table 7, continued

	Conditions of stability	Conditions of failure
Increasing / streamlining funding for higher education	Increased funding for higher education	Lack of noticeable increase in state appropriations
Financial impact on institutions	Substantial financial impact	Little financial impact
Increasing attractiveness of institutions / Changing student enrollment & graduation patterns	Increased attractiveness Beating competition for students	No changes in institutional attractiveness or student enrollment behavior
Responding to constituent concerns	Addressing voter concerns through the policy	Inadequate indicators not addressing voter concerns
Improving public perception of higher education	Improved public perception of higher education	Lack of improvement in public perception

To reiterate, the above conditions are the summary of influences suggested in the literature (in key sources cited repeatedly in this work) and in this study.

Environmental factors create the context for policy development and offer multiple stimuli and shocks that reverberate throughout all levels of policy systems. In other words, state-level environmental conditions are part of the super-system that also includes economic and social factors, related policy domains, existing policies, and major actors. The key words summarizing the most relevant environmental conditions of policy success are stability and continuity: namely, fiscal and resource stability; stability of state priorities and goals; continuity of support from the state government, institutions, and business community; and continuity of positive perception of the policy and its effects.

The general financial situation in the state and availability of adequate resources for policy implementation is undoubtedly one of the most important determining factors of success and failure. It is conceivable that declines in state appropriations provided stimuli for the emergence of the first-generation of performance funding policies, although existing empirical research has yet to demonstrate this causal link. However, there is evidence that declines in state appropriations, and related inadequacy of resources for policy implementation, has often led to policy starvation and demise. Under increased competition for scare state resources, supplementary performance funding policies may be readily sacrificed to protect the core budget.

Changing state priorities and goals and rotation of state officials in public offices often spell disaster to performance funding policies. The history of performance funding is replete with cases when abrupt changes in the political agenda, changes in the political leadership, or the loss of original policy supporters in the state government or implementing agencies led to policy demise. Therefore, a key condition for success is constant commitment to the policy despite shifts in leadership and agendas. One way of ensuring this commitment is to emphasize and promote policy values—responsiveness to state and public needs, quality, improvement, efficiency, and effectiveness—that may strike a chord with policymakers of different political affiliations. Another option is to enact policy initiatives through the law so as to make it harder for the policy to be terminated by new officeholders or political appointees.

Continuity of support from campuses and the business community is also of utmost importance. Some performance funding policies failed partly because institutions, originally motivated by prospects of additional money, became uninterested in policy

continuation; in some cases, particular institutions or sectors may oppose the policy if they perceive it as putting them at a disadvantage. In a similar vein, business interest in the policy, which could be very influential at the policy adoption stage, usually subsides after its enactment, and this weakening of interest and support contributes to eventual policy failure. To keep the policy afloat, therefore, it is critical to ensure support from these key policy actors. To be sure, attainment of this goal requires different leverages: for example, offering increases in unrestricted funding for campuses and providing better educational outcomes that are important to state businesses.

To a large extent, continuity of support from all the involved actors has to do with policy maturity and its perceived effectiveness. Nascent policies have had less time and fewer chances to accumulate strong support above and beyond the efforts of original initiators. In contrast, established policies have gained traction and are likely to have accumulated new allies and supporters. In brief, a growing, or at least constant, support base for the policy is a major factor in its stability. This point is related to importance of perception of the policy and its effects. For a policy to succeed, there should be a perception, or an empirical proof, of its effectiveness. Perceived, or actual, policy effectiveness increases its support base and, thus, the likelihood of policy success.

The above conditions include only the most relevant contextual factors that are the closest to the level of the policy system. These factors transmit the effect of other, broader environmental conditions. For example, a national recession can exert influence through sharp declines in state appropriations and changes in the state government and business priorities. Emergence of the national Completion Agenda provides for greater commitment and support from various actors, affects the availability of financial and

other resources, and changes attitudes towards performance funding and its expected effects. As is clear from the above discussion, these environmental factors, in turn, are directly related to the conditions operating at the policy system's level, such as program design and policy effects. I will now turn to summarizing these factors at the system level.

Conditions that frame the policy adoption process greatly determine the likelihood of policy success or failure. This study and prior research and policy observations have shown that characteristics of the policy adoption process are associated with specific policy outcomes, although most of these conditions are still in need of empirical testing. This set of determining factors includes the following key conditions that shape policy adoption: (a) the policy initiator; (b) method and mode of adoption; (c) development of performance indicators, weights, and standards, (d) input from higher education community during the policy proposal and adoption stages, and (e) approaches to policy planning, introduction, and implementation.

The policy initiator is critical because policies imposed by outsiders, as opposed to the ones initiated by the higher education community, may encounter greater opposition and implementation difficulties and thus be more prone to failure. The policy initiator may be different from the ultimate policy adopter; for instance, a policy proposed by a state board for higher education may be finally adopted by the state legislature. A closely related issue is the method of policy adoption, which differentiates between mandated and non-mandated policies. The difference between the first and the second condition lies in the existence of an external public pronouncement mandating the policy as opposed to a state board' vote to launch a policy.

To reiterate, self-initiated policies could be eventually mandated by law or an executive order. Observers of the past policies (it is too soon to evaluate the more recent Performance Funding 2.0 programs) generally believed that mandated policies could be less stable than policies developed and enacted by state boards for higher education. At the same time, an existing mandate—especially when backed up by financial support—provides for greater commitment to the policy, on the one hand, and makes it more difficult to terminate it, on the other hand. This leads to the importance of another factor, the mode of policy adoption. Past research and this study show that policies put into law are more likely to be stable than policies that were enacted via a budget proviso or an appropriation bill.

The next important condition of policy success is the level of involvement of the higher education community in the policy development and adoption process. Policies that enjoy greater input from systems and institutions at all stages of policy development are more likely to enjoy success and stability as well. At the pre-adoption stage, this involvement is especially important in the development of performance indicators, assigned weights, and success standards. Prior research showed that externally prescribed indicators—without much input from institutions and especially when coupled with externally imposed policies—were associated with higher policy failure rates than policies in which institutions offered input in all these aspects and were involved in shaping the proposed policy.

Last but not least, it is important to launch a policy in the right way. The right way means starting small and giving all the involved actors sufficient time for planning and implementation. A policy should be pilot tested and gradually phased-in, giving

policymakers and institutions the possibility to make adjustments and revisions when real-world implementation uncovers some difficulties or inherent problems. There should be no expectation or pressure to immediately see the policy functioning flawlessly. Starting small is critical for eventual success.

The most crucial group of conditions for policy success or failure includes key characteristics of policy design. Proposed and adopted programmatic features determine the likelihood of any policy shift, from adoption to termination to readoption. Although all performance funding programs are different from each other, it is possible to identify design commonalities among them and predict, with some degree of certainty, which characteristics may contribute to policy success or failure. The main features include the size and complexity of the program, consequences for institutions, an employed funding scheme, number and type of indicators, and protection of mission diversity.

Policy analysts and policymakers have struggled to strike a fine balance between creating programs that, on the one hand, would be sizeable enough to induce desired changes and, on the other hand, would be small enough so as not to create budget instability and poor fiscal predictability due to fluctuations in performance funds. If performance funding is small, institutions will not be incentivized to alter their behavior and pursue the principals' goals. If however, it becomes too large, annual budgeting becomes more problematic. Driven by these and other considerations, most Performance Funding 1.0 programs were small, keeping, on average, at around 2 or 3 percent of annual state allocations. Some observers suspect that this programmatic weakness could be a partial explanation of the general lack of performance funding effects on various outcomes tested in different studies. However, the new generation of performance

funding policies is challenging the assumption of small size and allocates much larger proportions of state appropriations to institutions based on performance. Tennessee, with a hundred percent of funding based on outcomes under a new funding formula, is spearheading this effort. It will be extremely interesting to follow development of such large-scale policies, as the ones in Tennessee, Ohio, and Louisiana, in the future.

Complexity of the program and associated costs of data collection, analysis, and implementation are also critical in determining a policy's fate. Successful programs are generally easy to implement and have reasonable implementation costs. These features are directly related to the number of performance indicators and the amount of data to process. Complexity inhibits implementation and dampens institutional interest in the program, especially if the reward size is small. Institutions incur large costs of data collection and analysis; they also have additional bureaucratic burden associated with program implementation. Thus, colleges will only be interested in giving the policy their best effort if rewards are appreciably larger than compliance costs. Ease of implementation and rewards outpacing the costs make a policy more attractive to institutions and may create conditions for success. Therefore, simplicity and reasonable implementation costs are the cachet of sustainable programs.

Successful programs are more likely to use incentives for institutions and refrain from using sanctions and disincentives. The prospect of losing additional monies and having bad publicity is, in itself, a powerful enough disincentive to persuade institutions to comply with the policy. If however, a program includes actual sanctions for non-compliance, it is more likely to face strong opposition from campuses. Strong disincentives also include problematic funding schemes. One example is withholding a

portion of the funds and having institutions earn it back. Prior research has shown that such programs are not sustainable and create opposition to the policy. Other problematic funding schemes are placing restrictions on the use of performance monies and making institutions compete for funds. Thus, successful programs should strive for the following: using incentives without resorting to sanctions, providing supplementary and discretionary funding that goes above the core budget allocations and has no usage restrictions, and promoting collaboration among campus without having them compete with each other.

Both complexity of the program and costs of implementation are to a large extent driven by the number of standards and performance indicators that are employed. Some performance funding policies have fallen under the burden of their sophisticated systems with a large number of indicators that include measures of different types (output, outcome, input, and process-oriented). South Carolina's program with its 37 indicators in nine broad categories is the most conspicuous example. Analysts have suggested that sustainable policies should strive to use a limited number of clearly defined indicators that should be mostly outcome-oriented. Also, the employed standards should be focused on institutional improvement and avoid unfair inter-institutional comparisons. More recently adopted performance funding policies follow through on these suggestions by focusing on course degree completion and few other specific outcomes; in these programs, outcomes are usually compared against an institution's past performance. On the other hand, it remains to be seen whether a more sophisticated approach taken by Tennessee with its 29 indicators and a hundred-percent-outcomes-driven formula is also a viable option.

The last critical feature of program design is protection of mission diversity. A common criticism is that performance funding imposes uniform criteria and standards on different sectors and institutional types and, thus, disadvantages some institutions or offers the wrong incentives for them. Researchers have suggested that a successful policy should use both common and separate indicators for different sectors and take mission differences into account. Again, the example of Tennessee, which uses both common and sector-specific measures and mission-specific weights for indicators, could be an answer to this criticism and a way of protecting mission diversity.

The next group of factors of policy stability includes characteristics of its implementation. Stability and collaboration are the key words describing conditions of policy success at this level. Stability pertains to policy requirements, funding, and revisions. For the policy system to attain its goals, its requirements should be stable during a pre-specified period, at the end of which a policy should stand for reevaluation. Fluctuating requirements disrupt the process and make compliance with the policy extremely difficult. Institutions need time to adjust before producing the desired outcomes. If requirements change too often or policy revisions take place too frequently, the policy will not be able to gain traction and institutions will be quick to show their unhappiness with the process. To keep institutions happy, funding, too, should be stable and if possible gradually increase over the course of the policy's life. Collaboration and continuing consultation among all involved parties are critical for implementation. This condition for success also includes involvement of faculty and staff below the level of institutions' senior administrators. In other words, for the policy to be sustainable, it should penetrate deeply within colleges. Because many important outcomes happen due

to interactions between students, faculty, and staff, a general awareness of the policy and its requirements within institutions will likely facilitate attainment of its goals.

Finally, policy success hinges on the extent to which it meets its goals and produces the intended effects. The policy is more likely to persist if there is evidence, or perception, of demonstrating accountability, meeting state needs, and improving institutional quality and student outcomes. Stable policies also increase, or optimize, funding for higher education and produce appreciable financial impacts on institutions and their practices. Ideally, successful policies should show that their implementation positively affects institutional attractiveness and changes student enrollment and graduation patterns. More generally, successful policies create a perception of responding to constituent concerns and improve public perception of higher education.

To be sure, no real-life policy can be expected to meet all the above potential conditions for success. However, considering these contributing factors in designing and implementing a performance funding policy will increase its chances for eventual success. Policymakers who contemplate adopting these policies but ignore the factors that affect their stability will do so at their own peril. I am certain that policy research will continue to provide actionable ideas to guide policy development in higher education and hope that this dissertation has contributed to this important process.

REFERENCES

American Association of State Colleges and Universities (AASCU). (2010, January). *Top 10 higher education state policy issues* (Policy Brief). Retrieved from http://www.congressweb.com/aascu/docfiles/AASCU_Top_Ten_Policy_Issues_2010.pdf

Ahmed, S., & Greene, K. V. (2000). Is the median voter a clear-cut winner? Comparing the median voter theory and competing theories in explaining local government spending. *Public Choice, 105*, 207–30.

Albright, B. N. (1998). *The transition from business as usual to funding for results: State efforts to integrate performance measures in the higher education budgetary process*. Denver, CO: State Higher Education Executive Officers Association.

Alesina, A. (1988). *Macroeconomic policy and politics: NBER macroeconomic annual*. Cambridge, MA: MIT Press.

Alesina, A., Cohen, G. D., & Roubini, N. (1992). *Macroeconomic policy and elections in OECD countries* (Working paper #3830). NBER Working Papers Series. Cambridge, MA: National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w3830.pdf?new_window=1

Alexander, F. K. (2000). The changing face of accountability: Monitoring and assessing institutional performance in higher education. *Journal of Higher Education, 71*(4), 411-431.

Alexander, F. K. (2004, February 24). *Performance funding: Internal and external perspectives*. Speech at the meeting of the Performance Funding Advisory Committee, Tennessee Higher Education Commission, Nashville, TN.

Allers, M. A., & Elhorst, J. P. (2005). Tax mimicking and yardstick competition among local governments in the Netherlands. *International Tax and Public Finance, 12*, 493–513.

Allison, G., & Zelikow, P. (1999). *Essence of decision: Explaining the Cuban missile crisis* (2nd ed.). New York: Longman.

Allison, P. D. (1984). *Event history analysis: Regression for longitudinal event data*. Beverly Hills, CA: Sage Publications.

Alt, J. E., & Lowry, R. C. (2000). A dynamic model of state budget outcomes under divided partisan government. *Journal of Politics, 62*(4), 1035-1069.

Anagnoson, J. T. (1980). Targeting federal categorical grants: An impossible dream? In H. M. Ingram & D. E. Mann (Eds.), *Why policies succeed or fail* (pp. 231-254). Beverly Hill, CA: Sage Publications.

Anders, K. (2001). *Beyond results: Accountability, discretion, and performance budget reforms* (Contemporary studies in applied behavioral science, Volume 11). New York: Elsevier Science.

Anderson, G. (1996). The new focus on the policy capacity of the federal government. *Canadian Public Administration, 39*(4), 469-488.

Archibald, R. B., & Feldman, D. H. (2006). State higher education spending and the tax revolt. *The Journal of Higher Education, 77*(4), 618-644.

Astin, A. W. (1990). Can state-mandated assessment work? *Educational Record, 71*(4), 34-42.

Ayers, D. F. (2005). Neoliberal ideology in community college mission statements: A critical discourse analysis. *The Review of Higher Education, 28*(4), 527-549.

Baez, B. (2007, November). *Neo-liberalism in higher education*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Louisville, KY.

Baker, S. H. (2003). The tax revolt and electoral competition. *Public Choice, 115*(3), 333–345.

Balla, S. (2001). Interstate professionals association and the diffusion of policy innovation. *American Politics Research, 29*, 221-245.

Balmaceda, F. (2008, November). Uncertainty, pay for performance, and asymmetric information. *Journal of Law, Economics, and Organization*, 1-42.

Banta, T. W., Rudolph, L. B., Van Dyke, J., & Fisher, H. S. (1996). Performance funding comes of age in Tennessee. *Journal of Higher Education, 67*(1), 23-45.

Bardach, E. (1976). Policy termination as a political process. *Policy Sciences, 7*, 123-131.

Barrilleaux, C. (1997). A test of the independent influences of electoral competition and party strength in a model of state policy-making. *American Journal of Political Science, 41*(4), 1462-1466.

Barrilleaux, C., Holbrook, T., & Langer, L. (2002). Electoral competition, legislative balance, and American state welfare policy. *American Journal of Political Science, 46*(2), 415-427.

Barrow, C. W. (1990). *Universities and the capitalist state: Corporate liberalism and the reconstruction of American higher education, 1894–1928*. Madison: University of Wisconsin Press.

Belfield, C. (2012, April). *Washington State Student Achievement initiative: Achievement points analysis for academic years 2007–2011*. New York: Community College Research Center, Teachers College, Columbia University.

Bell, D. A. (2005). *Changing organizational stories: The effects of performance-based funding on three community colleges in Florida* (Doctoral dissertation). University of California, Berkeley.

Bennett, D. S. (1999). Parametric models, duration dependence, and time-varying data revisited. *American Journal of Political Science, 43*(1), 256-270.

Berdahl, R. O. (2004, June). *Strong governors and higher education: A survey and analysis*. Retrieved from http://www.sheeo.org/govern/gov-home.htm

Bergstrom, T. E., & Goodman, R. P. (1973). Private demand for public goods. *American Economic Review, 63*, 280–296.

Bernstein, R. A. (1989). *Elections, representation, and congressional voting behavior: The myth of constituency control*. Englewood Cliffs, NJ: Prentice Hall.

Berry, F. S. (1994). Sizing up state policy innovation research. *Policy Studies Journal, 22*(3), 442-456.

Berry, F. S., & Berry, W. D. (1990). State lottery adoptions as policy innovations: An event history analysis. *American Political Science Review, 84*(2), 395-416.

Berry, F. S., & Berry, W. D. (1992). Tax innovation in the states: Capitalizing on political opportunity. *American Journal of Political Science, 36*(3), 715-742.

Berry, F. S., & Berry, W. D. (1999). Innovation and diffusion models in policy research. In P. Sabatier (Ed.), *Theories of the Policy Process* (pp. 169-200). Boulder, CO: Westview Press.

Berry, F. S., & Berry, W. D. (2007). Innovation and diffusion models in policy research. In P. Sabatier (Ed.), *Theories of the policy process* (2nd ed.). Boulder, CO: Westview Press.

Berry, W. D., Ringquist, E. J., Fording, R. C., & Hanson, R. L. (1998). Measuring citizen and government ideology in the American states, 1960-93. *American Journal of Political Science, 42*(1), 327-348.

Berry, W. D., Ringquist, E. J., Fording, R. C., & Hanson, R. L. (2007). *Replication data for: Measuring citizen and government ideology in the American states, 1960-93*.

Retrieved from http://dvn.iq.harvard.edu/dvn/dv/rfording/faces/study/StudyPage.xhtml?globalId=hdl:1902.1/10570

Besley, T., & Case, A. (1995). Incumbent behavior: Vote-seeking, tax-setting, and yardstick competition. *The American Economic Review, 85*(1), 25-45.

Besley, T., & Case, A. (2002, July). Political institutions and policy choices: Evidence from the United States. *Institute for Fiscal Studies Working Papers, WP02/13*. Retrieved from http://www.ifs.org.uk/wps/wp0213.pdf

Betts, J. R., & McFarland, L. L. (1995). Safe port in a storm: The impact of labor market conditions on community college enrollment. *Journal of Human Resources, 30*(4), 741-765.

Bibby, J. F. (1996). *Politics, parties, and elections in America* (3rd ed.). Chicago: Nelson-Hall.

Birkland, T.A. (2001). *An introduction to the policy process: Theories, concepts, and models of public policy making*. Armonk, NY: M.E. Sharpe, Inc.

Birnbaum, R. (1988). *How colleges work: The cybernetics of academic organization and leadership.* San-Francisco: Jossey-Bass Publishers.

Birnbaum, R. (2000a). *Management fads in higher education: Where they come from, what they do, why they fail*. San Francisco: Jossey-Bass.

Birnbaum, R. (2000b). The life cycle of academic management fads. *The Journal of Higher Education, 71*(1), 1-16.

Bizer, D. S., & Durlaf, S. N. (1990). Testing the positive theory of government finance. *Journal of Monetary Economics, 26*, 123-141.

Black, D. (1958). *The theory of committees and elections*. Cambridge: Cambridge University Press.

Blondal, S., Field, S., & Girouard, N. (2002). Investment in human capital through upper-secondary and tertiary education. *OECD Economic Studies, 34*, 41-89.

Boehmke, F.J., & Witmer, R. (2004). Disentangling diffusion: The effects of social learning and economic competition on state policy innovation and expansion. *Political Research Quarterly, 57*(1), 39-51.

Bogue, E. G. (1997). *Improvement versus stewardship: Reconciling political and academic accountability cultures*. Paper presented at the Conference on Values in Higher Education, the University of Tennessee at Knoxville.

Bogue, E. G. (2002). Twenty years of performance funding in Tennessee: A case study of policy intent and effectiveness. In J. C. Burke (Ed.), & Associates, *Funding public*

colleges and universities for performance: Popularity, problems, and prospects (pp. 85-105). Albany, NY: The Rockefeller Institute Press.

Bogue, E. G., & Aper, J. (2000). *Exploring the heritage of American higher education: The evolution of philosophy and policy*. Phoenix, AZ: American Council on Education/Oryx Press.

Bogue, E. G., Creech, J., & Folger, J. (1993). *Assessing quality in higher education: Policy actions in the SREB states*. Atlanta, GA: Southern Regional Education Board.

Bogue, E. G., & Hall, K. B. (2003). *Quality and accountability in higher education: Improving policy, enhancing performance*. Westport, CT: Praeger.

Borcherding, T. E., & Deacon, R. T. (1972). The demand for services of non-federal governments. *American Economic Review, 62*, 891–901.

Borden, V. M. H., & Banta, T. W. (Eds.). (1994). *Using performance indicators to guide strategic decision making*. New Directions for Institutional Research, No. 82. San Francisco: Jossey-Bass Publishers.

Bovens, M., & 't Hart, P. (1996). *Understanding policy fiascoes*. New Brunswick, NJ: Transaction Publishers.

Bovens, M., 't Hart, P., & Peters, B. G. (Eds.). (2001). *Success and failure in public governance: A comparative analysis*. Cheltenham, UK: Edward Elgar Publishing.

Bowen, H. (1943). The interpretation of voting in the allocation of economic resources. *Quarterly Journal of Economics, 58*(1), 27-48.

Box-Steffensmeier, J. M, & Jones, B. S. (1997). Time is of the essence: Event history models in political science. *American Journal of Political Science, 41*(4), 1414–61.

Box-Steffensmeier, J. M., & Jones, B. S. (2004). *Event history modeling: A guide for social scientists*. Cambridge, UK: Cambridge University Press.

Box-Steffensmeier, J. M., & Zorn, C. (2002). Duration models for repeated events. *Journal of Politics, 64*(4), 1069-1094.

Breneman, D. W., & Finney, J. E. (1997). The changing landscape: Higher education finance in the 1990s. In P. M. Callan & J. E. Finney (Eds.), *Public and private financing of higher education: Shaping public policy for the future* (pp. 30-59). Phoenix, AZ: The Oryx Press.

Brewer, G. D., & deLeon, P. (1983). *The foundations of policy analysis*. Pacific Grove, CA: Brooks/Cole Publishing.

Brueckner, J. K. (2003). Strategic interaction among governments: An overview of empirical studies. *International Regional Science Review*, 26, 175–188.

Bridges, G. L. (1999). *Performance funding of higher education: A critical analysis of performance funding in the State of Colorado* (Doctoral dissertation). University of Colorado at Denver.

Buckley, J., & Westerland, C. (2004). Duration dependence, functional forms, and corrected standard errors: Improving EHA models of state policy diffusion. *State Politics & Policy Quarterly, 4(*1), 94-113.

Bureau of Labor Statistics (BLS). (n.d.). *Regional and state unemployment (annual)*. Retrieved from http://www.bls.gov/schedule/archives/all_nr.htm#SRGUNE

Burke, J. C. (1997). *Performance funding indicators: Concerns, values, and models for two- and four-year colleges and universities*. Albany, NY. Rockefeller Institute.

Burke, J. C. (1998a). Performance funding: Present status and future prospects. In J. C. Burke & A. M. Serban (Eds.), *Performance funding for public higher education: Fad or trend?* New Directions for Institutional Research, No. 97 (pp. 5-13). San Francisco: Jossey-Bass.

Burke, J. C. (1998b). Performance funding indicators: Concerns, values, and models for state colleges and universities. In J. C. Burke & A. M. Serban (Eds.), *Performance funding for public higher education: Fad or trend?* New Directions for Institutional Research, No. 97 (pp. 49-60). San Francisco: Jossey-Bass.

Burke, J. C. (2001a). *Accountability, reporting, and performance: Why haven't they made more difference*? New York: Ford Foundation.

Burke, J. C. (2001b). Paying for performance in public higher education. In D. Forsythe (Ed.), *Quicker, better, cheaper? Managing performance in American government* (pp. 417-451). Albany, NY: Rockefeller Institute Press.

Burke, J. C. (2002a). Performance funding: Assessing program stability. In J. C. Burke (Ed.), & Associates, *Funding public colleges and universities for performance: Popularity, problems, and prospects* (pp. 243-264). Albany, NY: The Rockefeller Institute Press.

Burke, J. C. (2002b). Performance funding: Easier to start than to sustain. In J. C. Burke (Ed.), & Associates, *Funding public colleges and universities for performance: Popularity, problems, and prospects* (pp. 219-241). Albany, NY: The Rockefeller Institute Press.

Burke, J. C. (2002c). Performance funding and budgeting: Old differences and new similarities. In J. C. Burke (Ed.), & Associates, *Funding public colleges and universities for performance: Popularity, problems, and prospects* (pp. 19-37). Albany, NY: The Rockefeller Institute Press.

Burke, J. C. (2002d). Performance funding in South Carolina: From fringe to mainstream. In J. C. Burke (Ed.), & Associates, *Funding public colleges and universities for performance: Popularity, problems, and prospects* (pp. 195-217). Albany, NY: The Rockefeller Institute Press.

Burke, J. C. (2003). The new accountability for public higher education: From regulation to results. *Research in University Evaluation, 3*, 65-87.

Burke, J. C. (2005a). Preface. In J. C. Burke (Ed.), & Associates, *Achieving accountability in higher education: Balancing public, academic, and market demands* (pp. ix-xix). San Francisco: Jossey-Bass.

Burke, J. C. (2005b). The many faces of accountability. In J. C. Burke (Ed.), & Associates, *Achieving accountability in higher education: Balancing public, academic, and market demands* (pp. 1-24). San Francisco: Jossey-Bass.

Burke, J. C. (2005c). Reinventing accountability: From bureaucratic rules to performance results. In J. C. Burke (Ed.), & Associates, *Achieving accountability in higher education: Balancing public, academic, and market demands* (pp. 216-245). San Francisco: Jossey-Bass.

Burke, J. C. (2005d). The three corners of the accountability triangle. In J. C. Burke (Ed.), & Associates, *Achieving accountability in higher education: Balancing public, academic, and market demands* (pp. 296-234). San Francisco: Jossey-Bass.

Burke, J. C. (2003, May). *Meeting the challenge of change and continuity: Keep what you can, change what you must*. Keynote Address at the Conference on Performance Funding in South Carolina.

Burke, J. C. (Ed.), & Associates. (2002). *Funding public colleges and universities for performance: Popularity, problems, and prospects*. Albany, NY: The Rockefeller Institute Press.

Burke, J. C. (Ed.), & Associates. (2005). *Achieving accountability in higher education: Balancing public, academic, and market demands*. San Francisco: Jossey-Bass.

Burke, J. C., & Minassians, H. P. (2001). *Linking state resources to campus results: From fad to trend: The fifth annual survey (2001)*. Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Minassians, H. P. (2002). *Performance reporting: The preferred "No Cost" alternative accountability program*: *The sixth annual report (2002).* Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Minassians, H. P. (2003). *Performance reporting: "Real" accountability or accountability "Lite"*. *Seventh annual survey, 2003*. Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Modarresi, S. (1999). *Performance funding and budgeting: Popularity and volatility – The third annual survey*. Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Modarresi, S. (2000). To keep or not to keep performance funding? Signals from stakeholders. *The Journal of Higher Education, 71*(4), 432-453.

Burke, J. C., & Modarresi, S. (2001). Performance funding programs: Assessing their stability. *Research in Higher Education, 42*(1), 51-70.

Burke, J. C., Rosen, J., Minassians, H., & Lessard, T. (2000). *Performance funding and budgeting: An emerging merger*? *The Fourth Annual Survey (2000)*. Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Serban, A. M. (1997). *Performance funding of public higher education: Results should count*. Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Serban, A. M. (Eds.). (1998a). *Performance funding for public higher education: Fad or trend?* New Directions for Institutional Research, No. 97. San Francisco: Jossey-Bass.

Burke, J. C., & Serban, A. M. (1998b). *Funding public higher education for results: Fad or trend? Results from the second annual survey.* Albany, NY: Rockefeller Institute of Government, State University of New York.

Burke, J. C., & Serban, A. M. (1998c). State synopses for performance funding programs. In J. C. Burke & A. M. Serban (Eds.), *Performance funding for public higher education: Fad or trend?* New Directions for Institutional Research, No. 97 (pp. 25-48). San Francisco: Jossey-Bass.

Byron, M. (Ed). (2004). *Satisficing and maximizing: Moral theorists on practical reason*. Cambridge, UK: Cambridge University Press.

Canadian Political Science Association (CPSA). (2007). *Materials of the workshop Law and Public Policy: Public Policy Failure* (The annual meeting of the CPSA). Saskatoon, Saskatchewan, Canada. Retrieved from http://www.cpsa-acsp.ca/pdfs/2007_Programme.pdf

Canbäck, S. (2002). *Bureaucratic limits of firm size: Empirical analysis using transaction cost economics* (Doctoral dissertation). Brunel University. Retrieved from http://www.canback.com/

Carnevale, A. P., Johnson, N. C., & Edwards, A. R. (1998, April 10). Performance-based appropriations: Fad or wave of the future? *The Chronicle of Higher Education, 44*(31), pp. B6-B7.

China, J. W. (1998). *Legislating quality: The impact of performance based funding on public South Carolina technical colleges* (Doctoral dissertation). The University of Texas, Austin.

Cleves, M. (1999). Analysis of multiple failure-time data with Stata. *Stata Technical Bulletin, 49,* 30-39.

Cleves, M. A, Gould, W. W., Gutierrez, R. G., & Marchenko, Y. U. (2008). *An introduction to survival analysis using Stata* (2nd ed.). College Station, TX: A Stata Press Publication.

Cochran, C. L, & Malone, E. F. (1995). *Public policy: Perspectives and choices*. New York: McGraw Hill.

Cochran, C. E., Mayer, L., Carr, T. R., & Cayer, N. J. (1999). *American public policy: An Introduction* (6th ed.). New York: St. Martin's Press.

College Board. (2004). *Trends in college pricing*. Washington, D.C.: Author.

Colvin, R. A. (2005). Agenda setting innovation and gay rights policy. *The American Review of Politics, 25,* 241-263.

Colvin, R. A. (2006). Innovation of state-level gay rights laws: The role of Fortune 500 corporations. *Business and Society Review, 111*(4), 363–386

Cook, C. E. (1998). *Lobbying for higher education: How colleges and universities influence federal policy*. Nashville, TN: Vanderbilt University Press.

Coulson-Clark, M. M. (1999). *From process to outcome: Performance funding policy in Kentucky Public Higher Education, 1994-1997* (Doctoral dissertation). University of Kentucky.

Council of State Governments., & American Legislators' Association. (1982-2009). *The Book of the States*. Lexington, KY: The author.

Cox, D. R. (1972). Regression models and life tables. *Journal of the Royal Statistical Society B, 34,* 187-220.

Cram, L. (2001) Whither the commission? Reform, renewal and the issue-attention cycle. *Journal of European Public Policy, 8(*5), 770–786.

Craw, M. (2008). Taming the Leviathan: Institutional and economic constraints on municipal budgets. *Urban Affairs Review, 43*(5), 663-690.

Crotty, W. J., & Jacobson, G. (1984). *American parties in decline* (2nd ed.). Boston, MA: Little Brown.

Dahl, R. A. (1961). *Who governs? Democracy and power in an American city*. New Haven: Yale University Press.

Deaton, R. (2006). *Policy shifts in tuition setting authority in the American states: An event history analysis of state policy adoption* (Doctoral dissertation). Vanderbilt University, Nashville, TN.

Deming, W. E. (1986). *Out of the crisis*. Cambridge, MA: MIT Center for Advanced Engineering Study.

Deming, W. E. (1993). *The new economics for industry, government, education*. Cambridge, MA: MIT Center for Advanced Engineering Study.

Dery, D. (1983). Evaluation and termination in the policy cycle. *Policy Sciences, 17*, 13-26.

DesJardins, S. L. (2003). Event history methods. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. XVIII) (pp. 421–472). London: Kluwer.

Dollery, B. E., & Worthington, A. C. (1996). The evaluation of public policy: Normative economic theories of government failure. *Journal of Interdisciplinary Economics, 7*(1), 27-39.

Dougherty, K., & Hong, E. (2005, July). *State systems of performance accountability for community colleges: Impacts and lessons for policymakers*. An Achieving the Dream policy brief. Boston, MA: Jobs for the Future.

Dougherty, K., & Hong, E. (2006). Performance accountability as imperfect panacea: The community college experience. In T. Bailey & V. S. Morest (Eds.), *Defending the community college equity agenda*. Baltimore, MD: The Johns Hopkins University Press.

Dougherty, K. J., & Natow, R. S. (2009). *The demise of higher education performance funding systems in three states* (CCRC Working Paper No. 17). New York: Community College Research Center, Teachers College, Columbia University.

Dougherty, K, & Natow, R. (2010). *Continuity and change in long-lasting state performance funding systems for higher education: The cases of Tennessee and Florida* (CCRC Working Paper No 18). New York: Community College Research Center, Teachers College, Columbia University.

Dougherty, K. J., Natow, R. S., Hare, R. J., Jones, S. M., & Vega, B. E. (2011, February). *The politics of performance funding in eight states: Origins, demise, and change* (Final Report to Lumina Foundation for Education). New York: Community College Research Center, Teachers College, Columbia University.

Dougherty, K., Natow, R., & Vega, B. (2012). Popular but unstable: Explaining why state performance funding systems in the United States often do not persist. *Teachers College Record, 114*, 1-41.

Dougherty, K., & Reid, M. (2007, April 5). *Fifty states of Achieving the Dream: State policies to enhance access to and success in community colleges*. New York: Community College Research Center, Teachers College, Columbia University.

Dougherty, K. J., & Reddy, V. (2011). *The impacts of state performance funding systems on higher education institutions: Research literature review and policy recommendations* (CCRC Working Paper No. 37). New York: Community College Research Center, Teachers College, Columbia University.

Downs, A. (1957). *An economic theory of democracy*. New York: Harper & Row.

Downs, A. (1972). Up and down with ecology: The "issue attention cycle." *The Public Interest, 28*, 38-50.

Downs, G. W., & Larkey, P. D. (1986). *The search for government efficiency: From hubris to helplessness*. New York: Random House.

Doyle, W. R. (2004). *The politics of public college tuition and financial aid* (Doctoral dissertation). Palo Alto, CA: Stanford University.

Doyle, W. R. (2006). Adoption of merit-based student grant programs: An event history analysis. *Educational Evaluation and Policy Analysis, 28*(3), 259-285.

Doyle, W. R. (2007a). Public opinion, partisan identification, and higher education policy. *The Journal of Higher Education, 78*(4), 369-401.

Doyle, W. R. (2007b). The political economy of redistribution through higher education subsidies. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. XXII) (pp. 335-409). Dordrecht, The Netherlands: Springer.

Doyle, W. R., McLendon, M. K., & Hearn, J. C. (2005, November). *The adoption of prepaid tuition and savings plans in the American states: An event history analysis*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Philadelphia, PA.

Doyle, W. R., McLendon, M. K., & Hearn, J. C. (2010). The adoption of prepaid tuition and savings plans in the American states: An event history analysis. *Research in Higher Education, 51*(7), 659-686.

Doyle, W. R., & Noland, B. (2006, May 15-18*). Does performance funding make a difference for students?* Paper presented at the annual meeting of the Association for Institutional Research, Chicago, IL.

Dutton, W. H., Danziger, J. N., & Kraemer, K. L. (1980). Did the policy fail?: The selective use of automated information in the policy-making process. In H. M. Ingram & D. E. Mann (Eds.), *Why policies succeed or fail* (pp. 163-184). Beverly Hill, CA: Sage Publications.

Dye, T. R. (1998). *Understanding public policy* (9th ed.). Englewood Cliffs, N.J.: Prentice Halls.

Edmark, K. & Agren, H. (2008). Identifying strategic interactions in Swedish local income tax policies. *Journal of Urban Economics*, *63*(3), 849-857.

Education Commission of the States (ECS). (n.d.). *State profiles: Postsecondary governance structures database*. Retrieved from http://mb2.ecs.org/reports/Report. aspx?id=221

Ehlert, M. W. (1998). *Estimates of the impact of performance-based funding on the labor market effectiveness of Missouri's area vocational-technical schools* (Doctoral dissertation). University of Missouri, Columbia.

Ehrenberg, R. G. (2006). *What's happening to public higher education*? Westport, CT: Praeger.

Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*, 57-74.

Emmert, C. F., & Traut, C. A. (2003). Bans on executing the mentally retarded: An event history analysis of state policy adoption. *State and Local Government Review, 35*(2), 112-122.

Entin, K. (1973). Information exchange in congress: The case of the house armed services. *The Western Political Quarterly, 26*(3), 427-439.

Erikson, R. S, McIver, J. P, & Wright, G. C. (1987). State political culture and public opinion. *The American Political Science Review, 81*(3), 797-814.

Erikson, R. S, Wright, G. C, & McIver, J. P. (1989). Political parties, public opinion, and state policy in the United States. *American Political Science Review, 83*(3), 729-750.

Erikson, R. S, Wright, G. C, & McIver, J. P. (1993). *Statehouse democracy: Public opinion and policy in the American states*. Cambridge, MA: Cambridge University Press.

Ewell, P. T. (1994). A matter of integrity: Accountability and the future of self-regulation. *Change, 26*(6), 24-29.

Ewell, P. T. (1996). The current patterns of state-level assessment: Results of a national inventory. In G. H. Gaither (Ed.), *Performance indicators in higher education:*

What works, what doesn't, and what's next? College Station: The Texas A&M University.

Ewell, P. T. (1997). Accountability and assessment in a second debate: New looks or same old story? In *Assessing impact: Evidence and action* (pp. 7-22). Washington, D.C.: American Association for Higher Education.

Ewell, P. T. (2003). Assessment (again). [Editorial]. *Change, 35*(1), 4-5.

Ezell, M. E., Land, K. C., & Cohen, L. E. (2009). Modeling multiple failure time data: A survey of variance-corrected proportional hazards models with empirical applications to arrest data. *Sociological Methodology, 33,* 111-167.

Farnham, P. G. (1987). Form of government and the median voter. *Social Science Quarterly, 68*(3), 569–82.

Fellegi, I. (1996). *Strengthening our policy capacity*. Ottawa: Deputy Ministers Task Forces.

Fenno, R. F. (1978). *Home style: House Members in their districts*. Boston, MA: Little, Brown.

Fiorina, M. P. (1974). Representatives, roll calls, and constituencies. Lexington, MA: Lexington Books.

Fiorina, M. P. (1982). Legislative choice of regulatory reforms: Legal process or administrative process? *Public Choice, 39*, 33-61.

Florestano, P. S., & Boyd, L. V. (1989). Governors and higher education. *Policy Studies Journal, 17*(4), 863-877.

Fore, M. J. (1998). *South Carolina's performance funding: Rationale for the benchmarks and the possible impact on technical colleges* (Doctoral dissertation). University of South Carolina.

Forsythe, D. (Ed.). (2001). *Quicker, better, cheaper? Managing performance in American government*. Albany, NY: Rockefeller Institute Press.

Fryar, A. H. (2011, June). *The Disparate impacts of accountability – Searching for causal mechanisms*. Paper presented at the Public Management Research Conference, Syracuse, NY. Retrieved from http://www1.maxwell.syr.edu/

Freeman, M. S. (2000). *The experience of performance funding on higher education at the campus level in the past twenty years* (Doctoral dissertation). University of Tennessee.

Fulks, J. (2001). *Performance funding in California: Performance on demand—payment unavailable: Law, politics and economics of higher education*. Course paper presented to Nova Southern University (Florida) for Ph.D.

Fusarelli, L. D. (2002). The political economy of gubernatorial elections: Implications for education policy. *Educational policy, 16*(1): 139-160.

Gaither, G. H. (Ed.). (1995). *Assessing performance in an age of accountability: Case studies*. New Directions for Higher Education, No. 91. San Francisco: Jossey-Bass.

Gaither, G. H. (Ed.). (1996). *Performance indicators in higher education: What works, what doesn't, and what's next*? College Station: The Texas A&M University.

Gaither, G. H., Nedwek, B. P., & Neal, J. E. (Eds.). (1994). *Measuring up: The promises and pitfalls of performance indicators in higher education*. ASHE/ERIC Higher Education Report No. 5. Washington, D.C.: George Washington University, Graduate School of Education and Human Development.

Gallup. (2010, April 8). *Voters rate economy as top issue for 2010*. Retrieved from http://www.gallup.com/poll/127247/voters-rate-economy-top-issue-2010.aspx

Gallup. (2013, March 14). *In U.S., fewer mention economic issues as top problem*. Retrieved from http://www.gallup.com/poll/161342/fewer-mention-economic-issues-top-problem.aspx

Garand, J. C. (1988). Explaining government growth in the U.S. states. *American Political Science Review, 82*, 837-849.

Garand, J. C. (1989). Measuring government size in the American states: Implications for testing models of government growth. *Social Science Quarterly, 70*, 487-496.

Garrick, R. E. (1998). *A comparison of the achievement of selected higher education institutions on selected performance indicators* (Doctoral dissertation). University of South Carolina.

Gerring, J. (1998). *Party ideologies in America, 1828-1996*. New York: Cambridge University Press.

Giroux, H. A. (2002). Neoliberalism, corporate culture, and the promise of higher education: The university as a democratic public sphere. *Harvard Educational Review, 72*(4), 425-463.

Gittell, M., & Kleiman, N. S. (2000). The political context of higher education. *American Behavioral Scientist, 43*(7), 1058-1091.

Godwin, R. K., & Ingram, H. M. (1980). Single issues: Their impact on politics. In H. M. Ingram & D. E. Mann (Eds.), *Why policies succeed or fail* (pp. 279-299). Beverly Hill, CA: Sage Publications.

Gordon, D. T. (Ed.). (2003). *A nation reformed? American education 20 years after A Nation at Risk*. Cambridge, MA: Harvard Education Press.

Gose, B. (2002, July 5). The fall of the flagships: Do the best state universities need to privatize to survive? *The Chronicle of Higher Education*, pp. A19–A21.

Gosling, J. J. (2009). *Budgetary politics in American governments* (5th ed.). New York: Routledge.

Grapevine. (n.d.). *An annual compilation of data on state fiscal support for higher education*. Retrieved from http://grapevine.illinoisstate.edu/

Gray, V. (1973). Innovation in the states: A diffusion study. *American Political Science Review, 67*, 1174-1185.

Gray, V., & Lowery, D. (1988). Interest group politics and economic growth in the U.S. states. *American Political Science Review*, *82*(1), 109-131.

Green, R. (2003). Markets, management, and "reengineering" higher education. *Annals of the American Academy of Political and Social Science, 585*, 196-210.

Grogan, C. M. (1994). Political-economic factors influencing state Medicaid policy. *Political Research Quarterly*, *47*(3), 589-622.

Grossback, L. J., Nicholson-Crotty, S., & Peterson, D. A. M. (2004). Ideology and learning in policy diffusion. *American Politics Research, 32*(5), 521-545.

Hackman, J. R., & Wageman, R. (1995). Total quality management: Empirical, conceptual, and practical issues. *Administrative Science Quarterly*, *40*(2), 309-342.

Hager, G., Hobson, A., & Wilson, G. (2001). *Performance-based budgeting: Concepts and examples*. (Research Report no. 302). Frankfort, KY: Legislative Research Commission. Retrieved from http://www.lrc.ky.gov/lrcpubs/RR302.pdf

Hall, P. A. (1993) Policy paradigms, social learning, and the state: The case of economic policymaking in Britain. *Comparative Politics*, *23*, 275-296.

Hall, C. M. (2002). Travel safety, terrorism and the media: The significance of the issue-attention cycle. *Current Issues in Tourism*, *5*(5): 458-466.

Hammer, M., & Champy, J. (1993). *Reengineering the corporation: A manifesto for business revolution*. New York: Harper Business.

Hanushek, E. A. (et al.). (1994). *Making schools work: Improving performance and controlling cost*. Washington, D.C.: The Brookings Institution.

Hanushek, E. A., & Jorgenson, D. W. (Eds.). (1996). *Improving America's schools.* Washington, D.C.: National Academy Press.

Harnisch, T. L. (2011). *Performance-based funding: A re-emerging strategy in public higher education financing* (A Higher Education Policy Brief). American Association of State Colleges and Universities.

Hays, S. P., & Glick, H. R. (1997). The role of agenda setting in policy innovation: An event history analysis of living-will laws. *American Politics Quarterly*, *25*: 497-516.

Hatry, H. P., Greiner, J. M., & Ashford, B. G. (1994). *Issues and case studies in teacher incentive plans* (2nd ed.) Washington, D. C.: The Urban Institute Press.

Hearn, J. C. (1993). The paradox of growth in federal aid for college students, 1965-1990. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. IX) (pp. 94-153). Edison, NJ: Agathon Press.

Hearn, J. C. (1998). The growing loan orientation in federal financial aid policy: A historical perspective. In R. Fossey & M. Bateman (Eds.), *Condemning students to debt: College loans and public policy* (pp. 47-75). New York: Teachers College Press.

Hearn, J. C. (2003). *Diversifying campus revenue streams: Opportunities and risks*. Washington, D.C.: American Council on Education, Center for Policy Analysis.

Hearn, J. C., & Longanecker, D. (1985). Enrollment effects of alternative postsecondary pricing policies. *The Journal of Higher Education, 56*(5), 485-508.

Hearn, J. C., & Griswold, C. P. (1994). State-level centralization and policy innovation in U.S. postsecondary education. *Educational Evaluation and Policy Analysis, 16*(2), 161-190.

Hearn, J. C., Griswold, C. P., & Marine, G. M. (1996). Region, resources, and reason: A contextual analysis of state tuition and student aid policies. *Research in Higher Education, 37*, 241-278.

Hearn, J. C., Lewis, D. R., Kallsen, L., Holdsworth, J. M., & Jones, L. M. (2002, April). *"Incentives for managed growth" at the University of Minnesota: Incentives-based planning and budgeting in a large public research university.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans. LA.

Hearn, J. C., McLendon, M. K., & Mokher, C. G. (2007, November). *Accounting for student success: An empirical analysis of the origins and spread of state student*

unit-record systems. Paper presented at the annual meeting of the Association for the Study of Higher Education, Louisville, KY.

Hearn, J. C., McLendon, M. K., & Mokher, C. G. (2008). Accounting for student success: An empirical analysis of the origins and spread of state student unit-record systems. *Research in Higher Education, 49*, 665–683.

Heller, D. E. (1999). The effects of tuition and state financial aid on public college enrollment. *The Review of Higher Education, 23*(1), 65-89.

Heller, D. E. (2001a). Trends in the affordability of public colleges and universities: The contradiction of increasing prices and increasing enrollment. In D. E. Heller (Ed.), *The states and public higher education: Affordability, access, and accountability*. Baltimore, MD: The John Hopkins University Press.

Heller, D. E. (Ed.). (2001b). *The states and public higher education: Affordability, access, and accountability*. Baltimore, MD: The John Hopkins University Press.

Henry, G. T., & Gordon, C. S. (2001). Tracking issue attention. *Public Opinion Quarterly, 65*(2), 157-177.

Herrington, C., & Fowler, F. (2003). Rethinking the role of states and educational governance. In W. L. Boyd & D. Miretzky (Eds.), *American educational governance on trial: Changes and challenges* (pp. 271-290). Chicago, IL: The University of Chicago Press.

Hogwood, B. W., & Peters, B. G. (1982). The dynamics of policy change: Policy succession. *Policy Sciences, 14*, 225-245.

Hollings, R. L. (1996). *Reinventing government: An analysis and annotated bibliography*. Commack, NY: Nova Science Publishers.

Hotelling, H. (1929). Stability in competition. *Economic Journal, 39*, 41-57.

Howlett, M. (2007, May 30 – June 1). *Policy analytical capacity as a source of policy failure*. Paper presented at the annual meeting of the Canadian Political Science Association, Saskatoon, Saskatchewan. Retrieved from http://www.cpsa-acsp.ca/papers-2007/Howlett.pdf

Hoyt, J. E. (2001). Performance funding in higher education: The effects of student motivation on the use of outcomes tests to measure institutional effectiveness. *Research in Higher Education, 42*(1), 71-85.

Humphreys, B. R. (2000). Do business cycles affect state appropriations to higher education? *Southern Economic Journal, 67*(2), 398-413.

Husted, T. A., & Kenny, L. W. (1997). The effect of the expansion of the voting franchise on the size of government. *The Journal of Political Economy, 105*(1), 54-82.

Huang, Y. (2010, November). *Does performance funding improve performance?* Paper presented at the annual meeting of the Association for the Study of Higher Education, Indianapolis, IN.

Hyatt, J. A. (1985). Information: Setting the context for effective budgeting. In D. Berg & G. M. Skogley (Eds.), *Making the budget process work.* New Directions for Higher Education, No. 52 (pp. 5-13). San Francisco: Jossey-Bass.

Immerwahr, J. (2002). *The affordability of higher education: A review of recent survey research* (Report). National Center for Public Policy and Higher Education and Public Agenda. Retrieved from http://www.highereducation.org/reports/affordability_pa/affordability_pa.shtml

Immerwahr, J., & Johnson, J. (2010). *Squeeze play 2010: Continued public anxiety on cost, harsher judgments on how colleges are run* (Report). National Center for Public Policy and Higher Education and Public Agenda. Retrieved from http://www.publicagenda.org/files/pdf/SqueezePlay2010report_0.pdf

Ingram, H. M., & Mann, D. E. (Eds.). (1980). *Why policies succeed or fail*. Beverly Hill, CA: Sage Publications.

Ingraham, P., & Moynihan, D. (2001). Beyond measurement: Managing for results in state government. In D. Forsythe (Ed.), *Quicker, better, cheaper? Managing performance in American government* (pp. 309-333). Albany, NY: Rockefeller Institute Press.

Inman, R. P. (1978). Testing political economy's 'as if' proposition: Is the median income voter really decisive? *Public Choice, 33*, 45-66.

Ionescu, F., & Polgreen, L. (2008). *A theory of brain drain and public funding for higher education in the U.S.* Unpublished manuscript. Hamilton, NY: Colgate University, Department of Economics. Retrieved from http://people.colgate.edu/fionescu/Braindrain.pdf

Ishikawa, K. (1985). *What is total quality control? The Japanese way*. Englewood Cliffs, NJ: Prentice-Hall.

Iversen, R. R. (2004). Voices from the middle: How performance funding impacts workforce organizations, professionals and customers. *Journal of Sociology and Social Welfare, 31*(2), 125-156.

Jenkins-Smith, H., & Sabatier, P. (1994). Evaluating the advocacy coalition framework. *Journal of Public Policy, 14*(2), 175-203.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Johnstone, J., Arora, A., & Experton, W. (1998). *The financing and management of higher education: A status report on worldwide reforms* (Working paper). Washington, DC: World Bank.

Johnstone, D. B., & Preeti, S. M. (2000, February). *Higher education finance and accountability: An international comparative examination of tuition and financial assistance policies*. Center for Comparative and Global Studies in Education, State University of New York.

Jones, B. S., & Branton, R. P. (2005). Beyond logit and probit: Cox duration models of single, repeating, and competing events for state policy adoption. *State Politics & Policy Quarterly, 5*(4), 420-443.

Jones, D. (1984). *Higher education budgeting at the state level: Concepts and principles*. Boulder, CO: National Center for Higher Education Management Systems.

Jones, W. A. (2009). Neoliberalism in the Spellings report: A language-in-use discourse analysis. *Higher Education in Review, 6*, 45-62.

Jordan, M. M., & Hackbart, M. M. (1999). Performance budgeting and performance funding in the states: A states assessment. *Public Budgeting and Finance, 19*(1), 68-88.

Juran, J.M. (1974). *The quality control handbook* (3rd ed.). New York: McGraw-Hill.

Justman, M., & Thisse, J. F. (1997). Implication of the mobility of skilled labor for local public funding of higher education. *Economics Letters, 55*, 409–12.

Kane, T. J., Orszag, P. R., & Gunter, D. L. (2003, May). *State fiscal constraints and higher education spending: The role of Medicaid and the business cycle* (Discussion Paper No. 11). Washington, DC: Brookings Institution.

Karch, A. (2007). Emerging issues and future directions in state policy diffusion research. *State Politics and Policy Quarterly, 7*(1), 54-80.

Kearns, P. S. (1994). State budget periodicity: An analysis of the determinants and the effect on state spending. *Journal of Policy Analysis and Management, 13*(2), 331-362.

Kerr, D. H. (1976). The logic of 'policy' and successful policies. *Policy Sciences, 7*, 351-363.

King, D. C. (2001). *Political party competition and fidelity to the median voter in the U.S. Congress*. Unpublished manuscript. Harvard University, John F. Kennedy School of Government.

Kingdon, J. W. (1995). *Agendas, alternatives, and public policies*. New York: Longman Press.

Kivisto, J. A. (2005). The government-higher education institution relationship: Theoretical considerations from the perspective of agency theory. *Tertiary Education and Management, 11*(1), 1-17.

Kivisto, J. A. (2007). *Agency theory as a framework for the government-university relationship*. Tampere: Higher Education Group / Tampere University Press.

Klarner, C. (2003). The measurement of the partisan balance of state government. *State Politics and Policy Quarterly, 3*(3), 309-319.

Klarner, C. (2009). State partisan balance – 1959 to 2007. *State Politics and Policy Quarterly Data Resource*. Retrieved from http://www.ipsr.ku.edu/SPPQ/journal_datasets/klarner.shtml, updated February 2009.

Klein, S. (2005). *Performance-based funding in adult education: Literature review and theoretical framework*. Report prepared for U.S. Department of Education. Berkley, CA: MPR Associates.

Kleinbaum, D. G., & Klein, M. (2005). *Survival analysis: A self-learning text* (2nd ed.). New York: Springer.

Klingman, D., & Lammers, W. W. (1984). The "general policy liberalism" factor in American state politics. *American Journal of Political Science, 28*(3), 598-610.

Knot, J. H., & Payne, A. A. (2004). The impact of state governance structures on management and performance of public organizations: A study of higher education institutions. *Journal of Policy Analysis and Management, 23*(1), 13-30.

Kraft, M. E., & Furlong, S. R. (2007). *Public policy: Politics, analysis, and alternatives* (2nd ed.). Washington, DC: CQ Press.

Kroll, M. (1962). Hypotheses and design for the study of public policies in the United States. *Midwest Journal of Political Science, 6*(4), 363-383.

Lane, J. E. (1990). *Institutional reform: A public policy perspective*. Aldershot, England: Dartmouth Publishing.

Lane, J. E. (2003, November 12-16). *State government oversight of public higher education: Police patrols and fire alarms*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Portland, OR.

Lane, J. E. (2005, November 17-19). *State oversight of higher education: A theoretical review of agency problems with complex principals*. Paper presented at the annual conference of the Association for the Study of Higher Education, Philadelphia, PA.

Lane, J. E. (2007). Spider wed of oversight: Latent and manifest regulatory controls in higher education. *The Journal of Higher Education, 78*(6), 1-30.

Lane, J. E., & Kivisto, J. A. (2008). Interests, information, and incentives in higher education: Principal-agent theory and its potential applications to the study of higher education governance. In J. C. Smart (Ed.), *Higher education: Handbook* of theory and research (vol. XXIII) (pp. 141-179). Springer Press.

Lang, D. W. (2004, December 3-4). *The political economy of performance funding*. An essay prepared for the Taking Public Universities Seriously Conference, University of Toronto.

Lasher, W. F., & Greene, D. L. (2001). College and university budgeting: What do we know? What do we need to know? In M. B. Paulsen & J. C. Smart (Eds.), *The finance of higher education: Theory, research, policy, and practice* (pp. 501-542). New York: Agathon Press.

Layzell, D. T. (1999). Linking performance to funding outcomes at the state level for public institutions of higher education: Past, present and future. *Research in Higher Education, 40*(2), 233-246.

Layzell, D. T. (2001). Linking performance to funding outcomes for public institutions of higher education: The US experience. In J. L. Yeager et al. (Eds.), *ASHE reader on finance in higher education* (2nd ed.) (pp. 199-218). Boston, MA: Pearson Custom Publishing.

Lederman, D. (2008, December 17). Performance funding 2.0. *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/news/2008/12/17/perform

Leslie, L. L., & Ramey, G. (1986). State appropriations and enrollments: Does enrollment growth still pay? *The Journal of Higher Education, 57*(1), 1-19.

Levine, A. (1997, January, 31). Higher education's new status as a mature industry. *The Chronicle of Higher Education*, A48.

Levinson, A. (1998). Balanced budgets and business cycles: Evidence from the states. *National Tax Journal, 51*(4), 715-732.

Liefner, I. (2003). Funding, resource allocation, and performance in higher education systems. *Higher Education, 46*, 469-489.

Lindbeck, A. (1976). Stabilization policy in open economies with endogenous politicians. *American Economic Review, 66*, 1-19.

Lindert, P. (1994). The rise of social spending 1880-1930. *Explorations in Economic History, 31*, 1-36.

Lindert, P. (1996). What limits social spending? *Explorations in Economic History, 33*, 1-34.

Lipschuz, K. H., & Snapinn, S. M. (1997). An overview of statistical methods for multiple failure time data in clinical trials – Discussion. *Statistics in Medicine, 16*, 846-848.

Lowry, R. C. (2001a). The effects of state political interests and campus outputs on public university revenues. *Economics of Education Review, 20*, 105-119.

Lowry, R. C. (2001b). Governmental structure, trustee selection, and public university prices and spending. *American Journal of Political Science, 45*(4), 845-861.

Lupia, A., & McCubbins, M. D. (1994). Learning from oversight: Fire alarms and police patrols reconstructed. *Journal of Law, Economics, and Organization, 10*(1), 96-125.

Lyall, K. C., & Sell, K. R. (2005). *The true genius of America at risk: Are we losing our public universities to de facto privatization?* Westport, CT: Praeger.

March, J. G., & Simon, H. (1958). *Organization*. New York: Wiley.

Marchese, T. (1993). TQM: Time for ideas. *Change, 25*(3), 10.

Marchese, T. (1996). Bye, bye, CQI: For now. *Change, 28*(3), 4.

Marcus, L. R. (1997). Restructuring state higher education governance patterns. *Review of Higher Education, 20*(4), 399-418.

Martinez, M. C. & Nilson, M. (2006). Assessing the connection between higher education policy and performance. *Educational Policy, 20*, 299-322.

Massy, W. F. (Ed.). (1996a). *Resource allocation in higher education*. Ann Harbor, MI: The University of Michigan Press.

Massy, W. F. (1996b). Introduction. In W. F. Massy (Ed.), *Resource allocation in higher education* (pp. 3-13). Ann Harbor, MI: The University of Michigan Press.

Massy, W. F. (1996c). Productivity issues in higher education. In W. F. Massy (Ed.), *Resource allocation in higher education* (pp. 49-86). Ann Harbor, MI: The University of Michigan Press.

Massy, W. F. (2003). *Honoring the trust: Quality and cost containment in higher education*. Boston, MA: Anker Publishing Company.

Massy, W. F., & Zemsky, R. (1994). Faculty discretionary time: Departments and the "academic ratchet." *The Journal of Higher Education, 65*(1), 1-22.

May, P. J. (1992). Policy learning and failure. *Journal of Public Policy, 12*(4), 331-354.

Mayhew, D. R. (1974). *Congress: The electoral connection*. New Haven, CT: Yale University Press.

Mayhew, D. R. (2002). *Electoral realignment: A critique of an American genre*. New Haven, CT: Yale University Press.

Mayhew, D. R. (2004). *Congress: The electoral connection* (2nd ed.). New Haven, CT: Yale University Press.

McChesney, R. W. (1999). Introduction. In N. Chomsky (Ed.), *Profit over people: Neoliberalism and global order*. New York: Seven Stories Press.

McGuinness, A. C. (1985, 1988, 1994, 1997, 2001, 2003). *State postsecondary education structures sourcebook: State coordinating and governing boards*. Denver, CO: Education Commission of the States.

McLendon, M. K. (2003). The politics of higher education: Toward an expanded research agenda. *Educational Policy, 17*(1), 165-191.

McLendon, M. K., Deaton, R., & Hearn, J. C. (2007). The enactment of reforms in state governance of higher education: Testing the political instability hypothesis. *The Journal of Higher Education, 78*(6), 645-675.

McLendon, M. K., Hearn, J. C., & Deaton, R. (2006). Called to account: Analyzing the origins and spread of state performance-accountability policies for higher education. *Educational Evaluation and Policy Analysis, 28*(1), 1-24.

McLendon, M. K., Hearn, J. C., & Mokher, C. G. (2009). Partisans, professionals, and power: The role of political factors in state higher education funding. *The Journal of Higher Education, 80*(6), 686-713.

McLendon, M. K., Heller, D. E., & Young, S. (2005). State postsecondary education policy innovations: Politics, competition, and the interstate migration of policy ideas. *The Journal of Higher Education, 76*(4), 363-400.

McLendon, M. K., & Ness, E. (2003). The politics of state higher education governance reform. *Peabody Journal of Education, 78*(4), 66-88.

McNeal, R. S., Tolbert, C. J., Mossberger, K., & Dotterweich, L. J. (2003). Innovating in digital government in the American states. *Social Science Quarterly, 84*(1), 52-70.

Mehrotra, A., Damberg, C. L., Sorbero, M. E. S., & Teleki, S. S. (2009). Pay for performance in the hospital setting: What is the state of the evidence? *American Journal of Medical Quality, 24*, 19-28.

Metlzer, A. H., & Richard, S. F. (1981). A rational theory of the size of government. *The Journal of Political Economy, 89*(5), 914-927.

Menzel, D. C. (1978). State legislative constraints on the development of water resources. *Journal of the American Water Resources Association, 14*(6), 1331-1339.

Merrifield, J. (1998, July). *Contested ground: Performance accountability in adult basic education* (NCSALL Report No. 1). Cambridge, MA: Harvard Graduate School of Education, The National Center for the Study of Adult Learning and Literacy.

Meseguer, C. (2006). Learning and economic policy choices. *European Journal of Political Economy, 22*(1), 156-178.

Meyer, H. H. (1975). The pay-for-performance dilemma. *Organization Science, 33*, 39-50.

Midwestern Higher Education Compact (MHEC). (n.d.). *Member states*. Retrieved from http://www.mhec.org/memberstates

Mikesell, J. L. (1978). Election periods and state tax policy cycles. *Public Choice, 33*(3), 99-106.

Milgrom, P., & Roberts, J. (1990). The economics of modern manufacturing: Technology, strategy, and organization. *The American Economic Review, 80*(3), 511-528.

Milgrom, P., & Roberts, J. (1992). *Economics, organization, and management*. Cliffs, NJ: Prentice Hall.

Miller, G. J. (2005). The political evolution of principal-agent models. *Annual Review of Political Science, 8*, 203-225.

Milne, F. (2001, January 26). *Australian universities: A study in public policy failure* (Working Paper No. 1080). Kingston, Ontario, Canada: Queen's University, Department of Economics. Retrieved from http://www.econ.queensu.ca/working_papers/papers/qed_wp_1080.pdf

Mintrom, M. (1997). Policy entrepreneurs and the diffusion of innovation. *American Journal of Political Science, 41*(3), 738-770.

Mintrom, M. (2000). *Policy entrepreneurs and school choice*. Washington, D.C.: Georgetown University Press.

Mintrom, M., & Vergari, S. (1998). Policy networks and innovation diffusion: The case of state education reforms. *Journal of Politics, 60*(1), 126-148.

Mitchell, W. C., & Simmons, R. T. (1994). *Beyond politics: Markets, welfare, and the future of bureaucracy*. Boulder, CA: Westview Press.

Moe, T. M. (1984). The new economics of organization. *American Journal of Political Science, 28*(4), 739-777.

Moe, T. M. (1985). Control and feedback in economic regulation: The case of the NLRB. *American Political Science Review, 79*(4), 1094-1116.

Moe, T. M. (1989). The politics of bureaucratic structure. In J. E. Chubb & P. E. Peterson (Eds.), *Can government govern* (pp. 267-324)? Washington, DC: Brookings.

Mokher, C. G. (2008). *Developing networks for educational collaboration: An event history analysis of the spread of statewide P-16 councils* (Doctoral dissertation). Vanderbilt University, Nashville, TN.

Mokher, C. G., & McLendon, M. K. (2007, November 10). *Uniting secondary and postsecondary education: An event history analysis of state adoption of dual enrollment policies*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Louisville, KY.

Mooney, C. Z. (1991a). Peddling information in the state legislature: Closeness counts. *Western Political Quarterly, 44*, 433-444.

Mooney, C. Z. (1991b). Information sources in state legislative decision making. *Legislative Studies Quarterly, 16*(3), 445-455.

Mooney, C. Z. (1993). Strategic information search in legislative decision making. *Social Science Quarterly, 74*(1), 185-198.

Mooney, C. Z. (2001). Modeling regional effects on state policy diffusion. *Political Research Quarterly, 54*(1), 103-124.

Mooney, C. Z., & Lee, M. H. (1995). Legislating morality in the American states: The case of pre-Roe abortion regulation reform. *American Journal of Political Science, 39*(3), 599–627.

Mooney, C. Z., & Lee, M. H. (2000). Influence of values on consensus and contentious morality policy: U.S. death penalty reform, 1956-82. *The Journal of Politics, 62*(1), 223-239.

Mortenson, T. G. (2004*).* State tax fund appropriations for higher education: FY 1961 to FY 2004. *Postsecondary Education Opportunity, 139*.

Mueller, D. (1989). *Public choice II*. Cambridge: Cambridge University Press.

Mueller, D., & Stratmann, T. (2003). The economic effect of democratic participation. *Journal of Public Economics, 87*(9-10), 2129-2155.

Nagel, S. S. (1980). Series editor's introduction. In H. M. Ingram & D. E. Mann (Eds.), *Why policies succeed or fail* (pp. 7-10). Beverly Hill, CA: Sage Publications.

Nardinelli, C., Wallace, M. S., & Warner, J. T. (1988). State business cycles and their relationship to the national cycle: Structural and institutional determinants. *Southern Economic Journal, 54*(4), 950-960.

National Association of State Student Grant and Aid Programs (NASSGAP). (n.d.). *Annual survey reports on state-sponsored student financial aid*. Retrieved from http://www.nassgap.org/viewrepository.aspx?categoryID=3

National Cancer Institute (NCI). (n.d.). *U.S population data*. Retrieved from http://www.seer.cancer.gov/popdata/download.html

National Center for Education Statistics (NCES). (n.d.). *Digest of education statistics*. Retrieved from http://nces.ed.gov/programs/digest/index.asp

National Center for Public Policy and Higher Education (NCPPHE). (2002). *Losing ground: A national status report on the affordability of American higher education*. Retrieved from http://www.highereducation.org/reports/losing_ground/affordability_report_final_bw.pdf

National Center for Public Policy and Higher Education (NCPPHE). (2003, February). *Purposes, policies, performance: Higher education and the fulfillment of a state's public agenda* (National Center Report No 03-1). Retrieved from http://www.highereducation.org/reports/aiheps/aiheps.shtml

Natow, R., & Dougherty, K. (2008, November 8). *Performance funding through theoretical lenses: Examining the applicability of the advocacy coalition framework*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Jacksonville, FL.

Neal, J. E. (1995). Overview of policy and practice: Differences and similarities in developing higher education accountability. In G. Gaither (Ed.), *Assessing performance in an age of accountability: Case studies*. New Directions for Higher Education, No. 91. (pp. 5-10). San Francisco: Jossey-Bass.

Nedwek, B. (1996). Public policy and public trust: The use and misuse of performance indicators in higher education. In J. C. Smart (Ed.), *Higher education: Handbook of theory and practice* (Vol. XI) (pp. 47-89). New York: Agathon Press.

Nelson, M. A. (2000). Electoral cycles and the politics of state tax policy. *Public Finance Review, 28*(6), 540-560.

New England Board of Higher Education (NEBHE). (2010). *Master property program*. http://www.nebhe.org/info/pdf/reinventing/NEBHE_Programs.pdf

Nicholson-Crotty, J., & Meier, K. J. (2003). Politics, structure, and public policy: The case of higher education. *Educational Policy, 17*(1), 80-97.

Noland, B. E. (2006). *Changing perceptions and outcomes: The accountability paradox in Tennessee*. New Directions for Higher Education, No. 135 (pp. 59-67). San Francisco: Jossey-Bass.

Noland, B. E., Skolits, G., & Johnson, B. D. (2004). *Improving institutional accountability through performance funding: The Tennessee experience*. Unpublished manuscript, Tennessee Higher Education Commission.

Noland, B. E., Johnson, B. D., & Skolits, G. (2004). *Changing perceptions and outcomes: The Tennessee performance funding experience*. Paper presented at the annual forum of the Association for Institutional Research, Boston, MA.

Nordhaus, W. D. (1975). The political business cycle. *The Review of Economic Studies, 42*(2), 169-190.

Oakland, J. S. (2003). *Total quality management: Text with cases* (3rd ed.). Burlington, MA: Butterworth-Heinemann.

Okunade, A. A. (2004). What factors influence state appropriations for public higher education in the United States? *Journal of Education Finance, 30*(2), 123-138.

Olssen, M., & Peters, M. (2005). Neoliberalism, higher education and the knowledge economy: From the free market to the knowledge capitalism. *Journal of Education Policy, 20*(3), 313-345.

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

Owlia, M. S., & Aspinwall, E. M. (1997). TQM in higher education—a review. *International Journal of Quality & Reliability Management, 4*1(5), 527-543.

Payne, A. A. (2003). The effects of congressional appropriation committee membership on the distribution of federal research funding to universities. *Economic Inquiry, 41*(2), 325-345.

Peters, B. G. (1996). *The policy capacity of government* (Research Paper No. 18). Ottawa: Canadian Center for Management Development.

Peters, B. G. (1999). *American public policy: Promise and performance* (5th ed.). Chappaqua, NY: Chatham House/Seven Rivers.

Peters, B. G., & Hogwood, B. W. (1985). In search of the issue-attention cycle. *Journal of Politics, 47,* 239-253.

Petersen, T. (1995). The principal-agent relationship in organizations. In P. Foss (Ed.), *Economic approaches to organizations and institutions: An introduction* (pp. 187-212). Aldershot, UK: Dartmouth Publishing.

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper and Row.

Phillips, M. (2002). *The effectiveness of performance-based outcome measures in a community college system* (Doctoral dissertation). University of Florida.

Pierce, P. A., & Miller, D. E. (1999). Variations in the diffusion of state lottery adoptions: How revenue dedication changes morality politics. *Policy Studies Journal, 27*(4), 696-706.

Pilegge, J. C. (1992). *Budget reforms.* In J. Rabin (Ed.), *Public productivity handbook* (pp. 195-212). New York: Marcel Dekker.

Polatajko, M. M. (2011). *Performance funding of state public higher education: Has it delivered the desired external accountability and institutional improvement?* (Doctoral dissertation). Cleveland State University.

Prendergast, C. (2002). The tenuous trade-off between risk and incentives. *Journal of Political Economy, 110*(5), 1071–1102.

Prentice, R. L., Williams, B. J., & Peterson, A. V. (1981). On the regression analysis of multivariate failure time models. *Biometrica, 68,* 373-379.

Pressman, J. L., & Wildavsky, A. B. (1973). *Implementation: How great expectations in Washington are dashed in Oakland*. Berkley, CA: University of California Press.

Pyhrr, P. A. (1977). The zero-base approach to government budgeting. *Public Administration Review, 37,* 15-41.

Rabovsky, T. (2012). Accountability in higher education: Exploring impacts on state budgets and institutional spending patterns. *Journal of Public Administration Research and Theory, 22*(4), 675-700.

Renzulli, L. A., & Roscigno, V. J. (2005). Charter school policy, implementation, and diffusion across the United States. *Sociology of Education, 78*(4), 344-265.

Rich, A. (2004). *Think tanks, public policy, and the politics of expertise*. Cambridge, UK: Cambridge University Press.

Rincke, J. (2003). *Yardstick competition and policy innovations* (Discussion paper No 05-11). Mannheim, Germany: Mannheim University.

Rincke, J. (2004). *Neighborhood effects in the diffusion of policy innovation – Evidence from charter school legislation in the U.S*. Mannheim, Germany: Mannheim University.

Rincke, J. (2009). Yardstick competition and public sector innovation. *International Tax and Public Finance, 16*(3), 337-361.

Roberts, K. W. S. (1977). Voting over income tax schedules. *Journal of Public Economics, 8*, 329-340.

Rogoff, K. (1990). Equilibrium political budget cycles. *The American Economic Review, 80*(1), 21-36.

Romer, T., & Rosenthal, H. (1979). The elusive median voter. *Journal of Public Economics, 12*, 143-170.

Romer, T., & Rosenthal, H. (1982). Median voters for budget maximizers: Evidence from school expenditure referenda. *Economic Inquiry, 20*, 556-578.

Romer, T., & Rosenthal, H. (1984). Voting models and empirical evidence. *American Scientists, 72*, 465-473.

Rork, J. C. (2009). Yardstick competition in toll revenues: Evidence from U.S. states. *Journal of Transport Economics and Policy, 43*, 123-139.

Rosen, H. S. (1988). *Public finance*. Homewood, IL: Irwin.

Ross, S. A. (1973). The economic theory of agency: The principal's problem. *The American Economic Review*, *63*(2), 134-139.

Ross, J. E. (1993). *Total quality management: Text, cases, and readings*. Delray Beach, FL: St. Lucie Press.

Rupert, S. S. (Ed.). (1994). *Charting higher education accountability: A source book on state-level performance indicators*. Denver, CO: Education Commission on the States.

Ruppert, S. S. (1995). Roots and realities of state-level performance indicators systems. In G. H. Gaither (Ed.), *Assessing performance in an age of accountability: Case studies*. New Directions for Higher Education, No. 91 (pp. 11-23). San Francisco: Jossey-Bass.

Ruppert, S. S. (2001). *Where we go from here: State legislative views on higher education in the new millennium: Results of the 2001 higher education issues survey*. Washington, D. C.: National Education Association.

Sanford, T., & Hunter, J.M (2011). Impact of performance-funding on retention and graduation rates. *Educational Policy Analysis Archives, 19*(33), 1-27.

Saunders, D. B. (2010). Neoliberal ideology and public higher education in the United States. *Journal for Critical Education Policy Studies, 8*(1), 41-77.

Savenije, B. (1992). University budgeting: Creating incentives for change? *Research in Higher Education, 33*(5), 641-656.

Scharpf, F. W. (1986). Policy failure and institutional reform: Why should form follow function? *International Social Science Journal, 38*(108), 179-190.

Schick, A. (1966). The road to PPB: The stages of budget reform. *Public Administration Review, 26,* 243-258.

Schick, A. (1977). Zero-base budgeting and sunset: Redundancy or symbiosis? *The Bureaucrat, 6,* 12-32.

Schick, A. (1979). *The status of zero-base budgeting in the states*. Washington, D. C.: National Association of State Budget Officers.

Schmidt, P. (2002, February 22). Most states tie aid to performance, despite little proof that it works. *The Chronicle of Higher Education, 48*(24), p. A20.

Schmidtlein, F. A. (1999). Assumptions underlying performance-based budgeting. *Tertiary Education and Management, 5*(2), 159-174.

Schneider, A., & Ingram, H. (1993). The social construction of target populations: Implications for politics and policy. *American Political Science Review, 87*(2), 334-348.

Scott, K. M., & Bell, L. C. (1999, November 4-6). *Modeling mistrust: An event history analysis of term limits for state legislator*s. Paper presented at the annual meeting of the Southern Political Science Association, Savannah, Georgia.

Serban, A. M. (1997a). *Performance funding for public higher education: A comparative analysis* (Doctoral dissertation). State University of New York at Albany.

Serban, A. M. (1997b). Performance funding for public higher education: Views of critical stakeholders. In J. C. Burke & A. M. Serban (Eds.), *Performance funding and budgeting for public higher education: Current status and future prospects* (pp. 7-34). Albany, NY: Rockefeller Institute of Government.

Serban, A. M. (1998). Precursors of performance funding. In Burke, J. C. & Serban, A. M. (Eds.), *Performance funding for public higher education: Fad or trend*? New Directions for Institutional Research, No. 97 (pp. 15-24). San Francisco: Jossey-Bass.

Serban, A. M., & Burke, J. C. (1998). Meeting the performance funding challenge: A nine-state comparative analysis. *Public Productivity & Management Review, 22*(2), 157-176.

Seymour, D. (1992). *On Q: Causing quality in higher education*. New York: American Council on Education / Macmillan.

Seymour, D. (1995). *Once upon a campus: Lessons for improving quality and productivity in higher education*. Phoenix, AZ: Oryx Press.

Shafritz, J. M., Layne, K. S., & Borick, C. P. (Eds.). (2005). *Classics of public policy*. New York: Pearson/Longman.

Shin, J. C. (2010). Impacts of performance-based accountability on institutional performance in the U.S. *Higher Education, 60*(1), 47-68.

Shin, J., & Milton, S. (2004, May 26). The effects of performance budgeting and funding programs on graduation rate in public four-year colleges and universities. *Education Policy Analysis Archives, 12*(22).

Shipan, C. R., & Volden, C. (2006). Bottom-up federalism: The diffusion of antismoking policies from U.S. cities to states. *American Journal of Political Science, 50*(4), 825–843.

Shleifer, A. (1985). A theory of yardstick competition. *Rand Journal of Economics, 16*(3), 319-327.

Shoji, K. (2005, May 13-14). *Reluctant incumbents: Partisan conflict, electoral competition, and motor voter reform*. Paper presented at the conference on State Politics and Policy, Lansing, MI.

Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics, 69*(1), 99-118.

Sinclair, B. (2006). *Party wars: Polarization and the politics of national policy making*. Norman, OK: University of Oklahoma Press.

Skogstad, G. (2007, June 30–May 1). *Policy failure, policy learning and policy development in a context of internationalization*. Paper presented at the annual meeting of the Canadian Political Science Association, Saskatoon, Saskatchewan. Retrieved from http://www.cpsa-acsp.ca/papers-2007/Skogstad.pdf

Slaughter, S., & Leslie, L. L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Baltimore, MD: Johns Hopkins University Press.

Slaughter, S., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state, and higher education*. Baltimore, MD: The Johns Hopkins University Press.

Soo, M. (2003). *The impact of performance based funding schemes on universities' behavior* (A preliminary research plan). Chapel Hill: University of North

Carolina. Retrieved from http://www.utwente.nl/cheps/documenten/susu2003/soo.pdf

Soule, S. A., & Earl, J. (2001). The enactment of state-level hate crime law in the United States: Intrastate and interstate factors. *Sociological Perspectives, 44*(3), 281-305.

Southern Regional Education Board (SREB). (n.d.). *About SREB.* Retrieved from http://www.sreb.org/page/1068/about_SREB.html

Southern Regional Education Board (SREB). (n.d.). *Education data*. Retrieved from http://www.sreb.org/page/1075/education_data.html

Sponsler, B. (2010). Coveting more than thy neighbor: Beyond geographically proximate explanations of postsecondary policy diffusion. *Higher Education in Review, 7,* 47-66.

Squire, P. (1992). Legislative professionalization and membership diversity in state legislatures. *Legislative Studies Quarterly, 17*(1), 69-79.

Squire, P. (2000). Uncontested seats in state legislative elections. *Legislative Studies Quarterly, 25*(1), 131-146.

Squire, P. (2007). Measuring state legislative professionalism: The Squire index revisited. *State Politics & Policy Quarterly, 7*(2), 211-227.

Squire, P., & Hamm, K. E. (2005). *101 chambers: Congress, state legislatures, and the futures of legislative studies*. Columbus, OH: Ohio State University Press.

Stevens, J. B. (1993). *The economics of collective choice*. Boulder, CO: Westview Press.

Stewart, T. L. (1992). *An analysis of the revenue policy-making process of the Texas legislature* (Doctoral dissertation). The University of Texas Health Sciences Center at Houston School of Public Health.

Stone, D. A. (1988). *Policy paradox and political reason*. Glenview, Illinois: Scott, Foresman, & Company.

Strathman, J. G. (1994). Migration, benefit spillovers and state support of higher education. *Urban Studies, 31*(6), 913–920.

Strawn, S. W. (2003). *Herding cats with carrots and sticks: Performance funding, governance structures and faculty productivity* (Doctoral dissertation). University of Kansas.

Tanner, S. J. (2005). *The effectiveness of accountability policy in higher education: The perspectives of higher education leaders* (Doctoral dissertation). The University of Tennessee.

Therneau, T. M., & Grambsch, P. M. (2000). *Modeling survival data: Extending the Cox model*. New York: Springer.

Thompson, F. J., & Riccucci, N. M. (1998). Reinventing government. *Annual Review of Political Science, 1,* 231-257.

Toma, E. F. (1986). State university boards of trustees: A principal-agent perspective. *Public Choice, 49*, 155-163.

Toma, E. F. (1990). Boards of trustees, agency problems, and university output. *Public Choice, 67,* 1-9.

Toutkoushian, R. K. (2006, September 7-9). *An economist's perspective on the privatization of public higher education*. Paper presented at the State of the Art Conference, Institute of Higher Education, University of Georgia.

Trostel, P. A., & Ronca, J. M. (2007). *A simple unifying measure of state support for higher education* (Working paper). Wisconsin Center for the Advancement of Postsecondary Education. Retrieved from http://www.wiscape.wisc.edu/publications/WP007

Tufte, E. R. (1978). *Political control of the economy*. Princeton, NJ: Princeton University Press.

Volden, C. (2006). States as policy laboratories: Emulating success in the children's health insurance program. *American Journal of Political Science, 50*(2), 294-312.

Volden, C. (2007, April 12). *Failures: diffusion, learning, and policy abandonment*. Paper presented at the annual meeting of the Midwest Political Science Association, Palmer House Hotel, Chicago, IL.

Volden, C., Ting, M. M., & Carpenter, D. P. (2008). *A formal model of learning and policy diffusion*. Paper presented at MPSA annual meeting, Chicago, IL.

Walker, J. L. (1969). The diffusion of innovations among the American states. *The American Political Science Review, 63*(3), 880-899.

Warren, J. R., & Kulick, R. (2007). Modeling states' enactment of high school exit examination policies. *Social Forces, 86*(1), 215-230.

Washington Student Achievement Council (WSAC). (n.d.). *Tuition and fee reports*. Retrieved from http://www.wsac.wa.gov/PublicationsLibrary/PolicyAndResearch/Tuition

Weerts, D. J., & Ronca, J. M. (2006). Examining differences in state support for higher education: A comparative study of state appropriations for research universities. *Journal of Higher Education, 77*(6), 935-965.

Weerts, D. J., & Ronca, J. M. (2008). *Determinants of state appropriations for higher education from 1985-2005: An organizational theory analysis* (Working paper). Wisconsin Center for the Advancement of Postsecondary Education. Retrieved from http://www.wiscape.wisc.edu/ publications/WP013

Weingast, B. R. (1984). The congressional bureaucratic system: A principal-agent perspective (with application to the SEC). *Public Choice, 44*(1), 147-191.

Weissberg, R. (1976). *Public opinion and popular government*. Englewood Cliffs, NJ: Prentice Hall.

Wellman, J. V. (2001). Assessing state accountability systems. *Change, 33*(2), 47-52.

Western Interstate Commission for Higher Education (WICHE). (n.d.). *WICHE region*. Retrieved from http://www.wiche.edu/states

Wildavsky, A. (1979). *Speaking truth to power: The art and craft of policy analysis*. Boston, MA: Little, Brown and Company.

Wildavsky. A. (1984). *The politics of the budgetary process* (4th ed.). Boston, MA: Little, Brown and Co.

Wildavsky, A., & Gaiden, N. (2004). *The new politics of the budgetary process* (5th ed.). New York: Pearson Education, Inc.

Williams, G. (1984). The economic approach. In B. R. Clark (Ed.), *Perspectives on higher education. Eight disciplinary and comparative views* (pp. 79-105). Berkeley: University of California Press.

Williams, R. C. (2005). *Higher education stakeholders' perceptions of Tennessee's current performance funding policy* (Doctoral dissertation). Tennessee State University.

Willoughby, K., & Melkers, J. (2001). Performance budgeting in the states. In D. Forsythe (Ed.), *Quicker, better, cheaper? Managing performance in American government* (pp. 335-364). Albany, NY: Rockefeller Institute Press.

Wirtz, R. A. (2003). Plugging the brain drain. *Federal Reserve Bank of Minneapolis Fedgazette, 15*(1), 1–7.

Wood, B. D., & Waterman, R. W. (1991). The dynamics of political control of the bureaucracy. *American Political Science Review, 85*(3), 801-828.

Woodley, S. K. (2005). *A critical analysis of the effect of performance funding and budgeting systems on university performance* (D. B. A. dissertation). Nova Southeastern University.

Wong, K. K., & Langevin, W. E. (2005). *The diffusion of governance reform in American public education: An event history analysis of state takeover and charter school laws* (Vol. 2005). Nashville, TN: Vanderbilt University, National Center on School Choice.

Wong, K. K., & Shen, F. X. (2002). Politics of state-led reform in education: Market competition and electoral dynamics. *Educational Policy, 16*(1), 161-192.

Wright, G. C., Jr., Erikson, R. S., & McIver, J. P. (1987). Public opinion and policy liberalism in the American states. *American Journal of Political Science, 31*(4), 980-1001.

Wrobel, S. L., & Connelly, D. R. (2002, August-September). *Revisiting the issue-attention cycle: New perspectives and prospects*. Paper presented at the annual meeting of the American Political Science Association, Boston, MA.

Wrobel, S. L., & Connelly, D. R. (2004, April 15). *The issue-attention cycle and executive opportunity*. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, IL.

Wrobel, S. L., & Connelly, D. R. (2006, January 4-7). *The issue-attention cycle and executive opportunity: An integrated approach to the War on Terror*. Paper presented at the Annual Meeting of the Southern Political Science Association, Atlanta, GA.

Yamaguchi, K. (1991). *Event history analysis*. Newbury Park, CA: Sage Publications.

Yancey, G. W. (2002). *Fiscal equity change in the Florida community college system during the first five years after the implementation of performance funding* (Doctoral dissertation). University of Florida.

Young, K., Chambers, C., Kells, H., & Associates. (1983). *Understanding accreditation: Contemporary perspectives on issues and practices in evaluation educational quality*. San Fransisco, CA: Jossey-Bass.

Zumeta, W. (2000). Accountability: Challenges for higher education. *The NEA 2000 Almanac of Higher Education*, 57-71.

Zumeta, W. (2001). Public policy and accountability in higher education: Lessons from the past and present for the new Millennium. In D. E. Heller (Ed.), *The states and public higher education: Affordability, access, and accountability* (pp. 155-197). Baltimore: John Hopkins University Press.