REGULATING THE NEW BORDERLANDS: AN EVENT HISTORY ANALYSIS OF STATE CROSS-BORDER DISTANCE HIGHER EDUCATION POLICY ADOPTION

by

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Cross-border state distance higher education policy is a complex web of complicated and often contradictory regulations stretching across 50 states and 14 US territories. This study examined the applicability of strategic choice theory to state higher education policy innovation in the context of the adoption of policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions. Using Event History Analysis, the role of power structures and the political and social environment in which policy adoption decisions were made were examined alongside established policy adoption predictors. Significant applicability of strategic choice theory to state distance higher education policy adoption was identified. Findings indicate that cross-border distance higher education policy adoption diverges from established trends in state higher education policy adoption, and that public and non-public institutions have the potential to play key roles in shaping future policy adoption.
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CHAPTER 1
INTRODUCTION

Higher education governance in the United States comprises a system of oversight by the federal government, state governments and voluntary accreditation associations. Each arm of this “Iron Triangle” plays a unique and yet interrelated role in ensuring institutions maintain acceptable operational standards (Ewell, Boeke, & Zis, 2010). While federal regulations and some accreditation regulations are universally applicable throughout the United States (Ewell et al., 2010; John & Parsons, 2004), state higher education governance policies vary significantly from states to state (State Higher Education Executive Officers, 2012). The significant increase in distance education since 2000 (Aud et al., 2011) has increased the complexity of higher education regulation as states and institutions struggle to draw jurisdictional boundaries for an educational delivery mechanism designed to be “borderless.”

The 2010 announcement of the Federal Program Integrity Rules for the 2008 Higher Education Act placed increased attention on the complexity of distance higher education regulation by providing a federal enforcement mechanism for institutional compliance with the state laws in each state in which the institution served students through distance education (Poulin & Raymond, 2012). Motivated in part by what was seen as a deficit in state level accountability for distance higher education, the federal regulation was designed to reinforce the role of states in overseeing distance higher education by enforcing compliance to state regulations in each state in which an institution served students. Following the passage of the federal rule, each institution that
served students through distance education bore the regulatory burden of each state in which the institution served students, and each state regulatory agency was now responsible for some degree of oversight of each institution that served students residing with boundaries.

Distance higher education was no longer borderless. Instead, a new “borderland” was established, one that was embroiled in a web of complicated and often contradictory regulations stretching across 50 states and 14 US territories. Prior to the 2010 announcement of the Federal Program Integrity Rules, most institutions operated without knowledge or consideration of the regulations of states in which they did not have a brick and mortar presence (Poulin & Fong, 2011). Despite the rapid growth in both the distance higher education industry and state regulations that were designed to regulate distance higher education, no empirical studies of state distance higher education policy innovation have been published. While some trade publications do exist (Goldstein, Lacey, & Janiga, 2006; Poulin & Fong, 2011; State Higher Education Executive Officers, 2012), they are primarily surveys of regulation. Careful application of more generalized state policy innovation models may demonstrate applicability to this emerging research agenda.

**Current Policy Status**

The 2010 Federal Program Integrity Rules were the first widespread effort to enforce state regulations on regionally accredited distance education institutions with no brick and mortar presence within a state (Poulin & Raymond, 2012). A 2011 Western Interstate Commission for Higher Education (WICHE) survey of institutions indicated that as few as 3% of institutions were compliant prior to announcement of the federal
rule. Although the state authorization provision of the Federal Program Integrity Rules was struck down by the federal appeals court in 2011 (Bergerson, 2012), widespread awareness had already been created among institutions and state governance agencies (Poulin & Fong, 2011).

Application of these state laws to individual institutions created a significant regulatory and financial burden on institutions (Poulin & Fong, 2011) and significantly increased the volume of requests for services at individual state regulatory agencies (Hill, 2012). A 2011 WICHE survey of institutions estimated an initial budget impact of the state authorization compliance of $94,000 to $244,000 per institution with substantial annual or semiannual re-authorization costs (Poulin & Fong, 2011). State agencies have also noted the impact of the increased number of institutions seeking authorization (Hill, 2012) including long processing times and an inability to answer specific questions due to the volume of applications and small state staffs.

While many distance higher education providers will be able to successfully navigate state authorization, there has been significant cause for concern that smaller providers may not have the resources to seek the authorizations that would be necessary for them to continue to serve students in other states (Poulin & Fong, 2011). This was a particular concern among regional public and private institutions many of whom specifically target nontraditional and underserved populations. In a 2009 joint address to Congress, President Obama announced the College Completion Agenda that included the goals of increasing the college degree attainment rate among adults in the United States by 20% by 2020 (Kanter, Ochoa, Chong, & Nassif, 2011). The potential loss of regional public institutions from the distance higher education market could significantly hamper
this effort. This loss could be especially detrimental to nontraditional students who represent the largest consumers of distance education (U.S. Department of Education, 2009).

In 2011 several significant efforts were launched to draft model legislation for interstate reciprocity agreements that would allow institutions to operate across state lines (Hill, 2012; State Higher Education Executive Officers, 2012). The State Authorization Reciprocity Agreement (SARA) developed in partnership between the Council of State Governments, the Lumina Foundation and the President’s Forum received national attention (Hill, 2012) as one approach to easing regulatory burden on institutions and state regulators. However, to be successful any interstate reciprocity movement would require legislative adoption in most states. While existing state higher education policy innovation literature may provide some insight into the process by which such widespread policy adoption could take place, there was a significant gap in the literature that relates to state distance higher education policy innovation.

Need for Research

State higher education policy innovation represents a small but growing field of research (Bastedo, 2007; Sponsler, 2010). Building upon the work of Berry and Berry (1990), higher education researchers have found significant applicability of more general state policy innovation models to higher education policy over the previous decade (Knott & Payne, 2004; McLendon, 2003b; McLendon, Hearn, & Mokher, 2009; McLendon & Ness, 2003; Volkwein & Tandberg, 2008; Young, Heller, & McLendon, 2005). Despite these findings, many of these authors (McLendon, 2003a; McLendon & Cohen-Vogel, 2008; Volkwein & Tandberg, 2008; Young et al., 2005) have continued to
call for the development of theoretically based models that explore the role of social and political pressures on the higher education policy development and innovation process. These calls have been echoed in the more general policy innovation literature (Sponsler, 2010) where researchers have noted the continued reliance on previously identified policy innovation predictors without a corresponding focus on the processes those predicators represent. These calls demonstrated a need for additional theory driven research regarding state higher education policy innovation.

This study sought to meet a practical need for research regarding distance higher education policy innovation. State higher education policy research has been largely silent on the issue of distance education. Several reasons for this silence may exist. First, while distance higher education has experienced exponential growth since 2000 (Aud et al., 2011), it was relatively new in the higher education landscape. Additionally, much of the earliest growth in distance higher education was led by proprietary schools that, for the most part, operated outside of traditional higher education regulatory structures because of their limited eligibility to participate in federal student aid programs at the time (Skinner, 2007). Second, prior to the passage of the 2010 Federal Program Integrity Rules there was very little awareness of state distance education policy even within the distance education industry (Goldstein et al., 2006; Poulin & Raymond, 2012; State Higher Education Executive Officers, 2012). Because the industry was largely unaware of the potential interstate implications of the passage of state distance higher education rules (Goldstein et al., 2006), policy innovations were largely ignored by practitioners and scholars alike. Last, as an emerging modality, much of research regarding distance
education focused on pedagogical concerns and technological development rather than policy.

The 2010 Federal Program Integrity Rules that require institutions to prove compliance with the state regulations in each state where the institution served students was the first widespread effort to enforce state regulations on institutions located outside of states’ borders (Poulin & Raymond, 2012). While institutions and state regulatory agencies have struggled to understand and implement the existing policies and achieve compliance, little focus has been placed on analyzing factors that may have influenced the development of the widely varying webs of state regulation (Harley & Lawrence, 2007). This study was designed to expand upon existing state policy innovation models through strategic choice theory to assist in identifying the role of power and the social and political environment in state distance higher education policy decisions. The dynamic policy innovation environment of cross-border distance higher education brought about by the convergence of emerging technologies and expanded state jurisdiction presented a unique opportunity to examine the application of strategic choice theory.

Purpose Statement

This study was designed to expand upon existing state policy innovation models through the application of strategic choice theory to identify the role of power and the social and political environment in state higher education policy decisions. This study sought to provide a timely and innovative lens for examining state policy innovation within the changing landscape of distance education. A well-defined research gap existed
and the potential for a broad range of implications for both practical application and further research resulted from the study.

**Conceptual Framework**

Prior to the 1990s two prominent models of the determinates of state policy innovation had been established in literature: internal determinates and interstate policy migration. Following Berry and Berry’s (1990) work on state lottery adoption, a new model emerged that blended internal and interstate migration through the use of Event History Analysis. McLendon (2003b) and others (Knott & Payne, 2004; McLendon et al., 2009; McLendon & Ness, 2003; Volkwein & Tandberg, 2008; Young et al., 2005) adapted this model to state higher education policy innovation by including state higher education governance structure as established by Hearn and Griswald (1994). Despite the fact that this model has shown significant applicability to a variety of state higher education policy types, researchers (McLendon, 2003a; McLendon & Cohen-Vogel, 2008; Volkwein & Tandberg, 2008; Young et al., 2005) have continued to call for models that further explore the political and environmental factors that influence policy innovation.

Through the application of strategic choice theory, this study expands upon previous research to analyze the relationship between the predictors of state higher education policy innovation and the adoption of policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions. Strategic choice theory addresses an existing research gap by directing attention toward the structural role of power and the social and political environment in policy decisions.

**Research Questions and Hypothesis**
Based upon prior research and the established theoretical framework, the following research question was addressed by this study:

What conditions influence the probability that states will adopt a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions within their boundaries?

This study hypothesized that the interstate policy migration and a unified measure of state higher education governance structure would have limited influence on the adoption of state polices that restrict the operation of out-of-state distance higher education institutions. When such influence was identified, it was predicted that the directionality of these relationships will be similar to that of studies that have examined state higher education fiscal and accountability policy adoption. The study further hypothesized that the variables designed to focus on the role of power and the social and political environment through strategic choice theory would demonstrate practical and statistically significant influence on the adoption of policies that restrict the operation of out-of-state distance higher education institutions. Study findings both confirmed and contradicted these hypotheses. Specific hypotheses for each covariate were tested and their results are discussed in the discussion section of this paper.

**Overview of Research Methods**

This study employed Event History Analysis (EHA), a form of logistic regression sometimes referred to as hazard or survival analysis. EHA predicts the probability that a unit will transition from one status to another given a vector of independent variables (Box-Steffensmeier & Jones, 2004). In the context of this study, EHA was used to predict the probability that a state would adopt a policy that regulated the distance education
operations of out-of-state, regionally accredited higher education institutions. EHA has a number of advantages over standard regression models that make it particularly well suited for this study. First, EHA allows researchers to combine the analysis of state characteristics and interstate policy migration into a single form of analysis (Berry & Berry, 1990; Buckley & Westerland, 2004; Young et al., 2005). Second, EHA allows for the inclusion of both time variant and time invariant characteristics of each state (Box-Steffensmeier & Jones, 2004) which was not possible in standard regression models. Third, EHA has a unique ability to address cases that do not adopt within the time-frame cases, thus allowing them to remain in the dataset (Box-Steffensmeier & Jones, 2004). EHA has undergone significant refinement over the past two decades (Berry & Berry, 1990, 1991; Buckley & Westerland, 2004) and has been successfully applied in a number of studies of state higher education policy innovation (McLendon, 2003b; McLendon, Hearn, & Deaton, 2006).

**Significance of Research**

This study sought to provide a timely and innovative lens for examining state policy innovation within the changing landscape of distance education. This study makes significant contributions to several fields of literature by examining the predictors of state policy innovation in the context of distance higher education. While a significant body of state higher education policy research exists, there has been a continued call for policy innovation models that further explore the political and environmental factors that influence policy innovation. This study sought to apply strategic choice theory as a lens that may provide insight into state policy innovation across various fields.
There are no previous empirical studies that examine state distance higher education policy, creating a significant gap in the literature. The 2010 Federal Program Integrity Rules for distance education set off a chain reaction of state and institutional changes that have already begun to reshape this dynamic and rapidly changing industry. Current efforts were underway to reshape state distance higher education policy through interstate reciprocity agreements, yet no empirical studies of current state distance education policy existed. This study makes a significant contribution to this field that may be of particular interest to both scholars and practitioners wishing to expand existing state policy innovation models to distance higher education.

Limitations and Threats

This study had a number of limitations. Though existing literature supports quantitative predictive models of state higher education policy innovation, policy adoption has been viewed as highly dependent on personal relationships between legislators, government agencies, and policy entrepreneurs, and individuals who champion adoption of specific policy initiatives (McLendon et al., 2009; Tandberg, 2008). The large scale of most policy innovation research used in this study design has tended to ignore these micro-realities of the policy innovation process. Therefore this study did not allow for exploration of factors such as policy entrepreneurship that some studies had hypothesized may be important variables in policy innovation.

This study was limited in scope by choices made in defining the dependent variable based on the minimum standards for regional accreditation for the Higher Learning Commission. Because of the varied nature of state higher education polices, some policies that restricted the actions of the target institutions may have been excluded.
from the study. This was most likely in states where such policies may have been administered by branches of the state government that were not directly related to state higher education governance. Examples included state Secretary of State offices or consumer protection agencies. Extensive efforts have been made to identify these “indirect regulators” by referencing surveys of state regulators conducted by the State Higher Education Executive Officers organization (SHEEO). The surveys were designed to direct institutions to the full range of regulators involved in authorizing an institution to operate within a given state.

The use of a single researcher to classify policy adoptions and state governance structures posed a threat to reliability in this study. Multiple sources that have previously classified state governance structures were consulted to compare the classification decisions made in this study with those others have made. Computer software that supported identification of key words and phrases in the state laws was also used to increase the reliability of the researcher in correctly identifying and classifying policy adoptions.

The scope of this study was also limited by the time frame chosen for inclusion. While the 2000-2010 was a period of rapid growth for the distance higher education industry, five states (Arkansas, Arizona, Nevada, North Carolina, and Massachusetts) passed laws that regulated out-of-state distance higher education prior to 2000. This was one of the key considerations in selecting EHA as the analytical model for this study as EHA allowed for the inclusion of these states. The other end of the time period for this study, posed its own concerns. Following the announcement of the 2010 Federal Program Integrity Rules, as many as 20 states enacted changes to their state distance higher
education policies. The time period chosen for this study specifically excluded changes made after the federal rules were announced. The changes in federal distance higher education rules appear to have created motivational pressure to adopt innovative policies that were not accounted for in this study’s conceptual model. This lead to exclusion of these changes from the study.

The main threat to validity and reliability in this study was unobserved variables that may have been correlated with both the variables of interest and the error term. This threat was minimized by the use of a theoretical framework that assisted in identifying variables to include in the study. Alternative theories were also explored to attempt to identify other variables that should be addressed in the analysis.

The use of a single researcher always increases the potential for bias. Comparison with prior research, the use of analytic software, and qualitative memos were used to identify and control for bias to the extent that such control is possible.

**Key Definitions**

*Policy Adoption:* The adoption by a state of a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions within its boundaries inclusive of both physical and virtual presence as defined by state law.

*Distance Education:* Institution-based formal education that uses one or more forms of technology to deliver instruction to students who are separated from the instructor. Distance education may take place synchronously or asynchronously (Schlosser & Simonson, 2009).

*Interstate Policy Migration:* The process by which policy innovations spread across groups or regions of states.
Iron Triangle: The Iron Triangle refers to the interconnected relationship between the three pillars of higher education regulation in the United States: the federal government, state governments and peer-based voluntary accreditation associations (Ewell et al., 2010).

Out-of-State Distance Higher Education Institution: A regionally accredited higher education institution that offered distance education programs or courses to students who reside in states in which the institution does not maintain a brick and mortar presence.

State Policy Innovation: The passage of legislation that was new to the state regardless of whether or not other states had previously passed similar legislation (Walker, 1969).

Organization of the Study

This introduction presented an overview of the study including reviewing the policy issues, establishing the need for the study, establishing the boundaries and limitations of the study and defining key terms. Chapter 2 explores the theoretical and empirical literature on which this study is based. This included a review of the interconnected role of the federal government, state governments and regional accrediting agencies in regulating traditional and distance higher education, and the establishment of the proposed conceptual framework for this study. Chapter 3 establishes the methodology for the study including the research hypothesis, variables and measures used, and an overview of Event History Analysis, the research method for this study. Results of the analysis described in Chapter 3 are presented in Chapter 4 including hypothesis specific results. The study concludes in Chapter 5 with discussion of the findings and their implications for both policy and theory as well as opportunities for future research.
CHAPTER 2

REVIEW OF RELATED LITERATURE

This literature review begins by discussing the interconnected role of the federal government, state governments and regional accrediting agencies in regulating traditional and distance higher education. The limited trade publications regarding state distance higher education are explored with a specific focus on cross-border regulation. State policy innovation literature is reviewed as the foundation of the theoretical framework for this study, and strategic choice theory is introduced as a potential lens for expanding traditional state policy innovation models. Finally the conceptual model for this study is presented and discussed.

Historical Higher Education Policy- The Iron Triangle

Higher education regulation in the United States has historically involved what is commonly referred to as the Iron Triangle including oversight by the federal government, state governments and peer-based, voluntary accreditation associations (Ewell et al., 2010). While some overlap exists in the purview of each agency, these agencies played a distinct role in promoting and maintaining academic and fiscal health among the United States’ public, private non-profit, and proprietary higher education institutions. Federal oversight was based primarily on the federal government’s distribution of federal Title IV student aid funds (John & Parsons, 2004). State governments had taken on widely varying roles in higher education governance from strict planning, to programmatic and budgetary control to consumer protection against fraudulent enterprises (Hearn & Griswold, 1994; McLendon et al., 2009). Since the mid-1990s, peer-based voluntary accreditation associations have held the role of establishing, evaluating, and promoting
academic and operational standards for institutions alongside state and federal government agencies (Ewell et al., 2010). Rules and regulations were often cross-referenced between these regulatory bodies. Generally, each regulatory body has required institutions to be in compliance with the standards set by the other two bodies to maintain approval to operate as well as collect and distribute federal student aid funds to enroll students.

**The role of the federal government.** Though the federal government had played varying roles in higher education since its foundation, oversight of education was generally a power designated to the states in the United States Constitution (John & Parsons, 2004). The 1862 Morrill Act was the first significant movement toward establishing a federal role in higher education. The Morrill Act established a partnership between state and federal governments in which states were apportioned grants of land by the federal government. The proceeds from the sale of those lands were then to be used to establish state colleges and universities commonly referred to as “land grant institutions”. Federal funding and action towards public institutions between 1880 and 1920 were sporadic and largely industry or topically driven (John & Parsons, 2004). Funds were designed to encourage the research and study of particular issues that were deemed to be of national importance, such as agricultural productivity, while largely leaving governance and oversight of the institutions themselves to the states.

The GI bill of 1944 opened the door for the modern relationship between higher education institutions and the federal government by establishing guaranteed federal financial aid for veterans serving after 1940 (John & Parsons, 2004). Federal monies for higher education were for the first time portable at the student level, so long as they were
used at institutions deemed eligible by the new federal rules. Peer-based voluntary regional accreditation associations were designated the role of establishing and evaluating eligibility standards, thereby cementing the role of third pillar of the Iron Triangle of higher education regulation, regional accreditation. This relationship continued when non-military federal student aid programs were developed throughout the second half of the century.

Since the 1940s, the federal government’s authority in regulating higher education had largely remained in the distribution of federal student financial aid (John & Parsons, 2004; McLendon, 2003a). The various federal student aid programs available today include Pell and other grant programs as well as subsidized student loan programs, usually collectively referred to as Title IV funding (U.S. Department of Education, 2010b). This name references the title of the Federal Higher Education Act, which established and governed the distribution of these funds. In 2010 the federal government provided more than 161 billion dollars in Title IV grants and subsided loans (U.S. Department of Education, 2010b) as well as more than 10.5 billion dollars in education benefits for veterans of the armed services and their families (Veterans Administration Office of Budget, 2012).

The role of state government. Formal state and federal partnerships in higher education began with the 1862 Morrill Act, granting federal land to states to provide a revenue stream to establish state colleges (John & Parsons, 2004). Throughout America’s early history local and state governments played a key, if somewhat sporadic, role in supporting colleges and universities. In the early 1900s states began to develop funding mechanisms to provide consistent revenue for public institutions so that by the mid-
century every state provided some form of annual appropriation to support their public colleges and universities (McLendon, 2003b). Along with state funding came the establishment of state regulations regarding the operations of public institutions. Although few states provided funding for private institutions, regulations, when developed, were often extended to them. This pattern increased as states trended towards more centralized forms of public higher education governance in the 1950s and 1960s and with the increased participation of private colleges in accreditation and federal student aid programs (McLendon, 2003b). In 2002, 48 states had regulatory bodies that in some form regulated the actions of both public and private institutions with brick and mortar facilities located within their borders (McGuinness, 2002).

The role of accreditation. Since the mid-1940s federally recognized regional accrediting agencies have taken an active role in regulating higher education in public and nonprofit arenas (Ewell et al., 2010; John & Parsons, 2004). Regional accreditation has long played an integral role in higher education governance, serving as the third arm of what is often referred to as the Iron Triangle of higher education governance along with state and federal oversight (Ewell et al., 2010). In the United States all degree granting (bachelors and beyond) institutions have long been required to seek accreditation from one of six nongovernmental peer-based voluntary regional accrediting agencies in order to be eligible to participate in federal financial aid systems (Eaton, 2006). Although many states also required degree granting institutions to participate in regional accreditation to operate within their boundaries, some did not (Ewell et al., 2010).
The Iron Triangle and Distance Education

The explosion of distance education over the last 20 years had significantly expanded the reach of many colleges and universities, opening doors for many nontraditional students to gain access to higher education (Aud et al., 2011). In the late 1990s and early 2000s several articles were published calling for the inclusion of distance education into the regional higher education accreditation process (Eaton, 2001; Lezberg, 1998). Recognizing the importance of this rapidly expanding modality, in 2001 the Council of Regional Accrediting Commissions established the “Best practices for electronically offered degree and certificate programs.” In 2006, the document was updated as the “Guidelines for the evaluation of distance education” (Higher Learning Commission, 2006). These guidelines were subsequently adopted by all federally recognized regional accrediting agencies. These good practices emphasized the importance of integrating distance education programs and processes into the existing structures of institutions in order to ensure that academic, fiscal, and fiduciary responsibilities were met. In their various adopted forms, these principles mirrored the core regional accreditation standards for fiduciary responsibility, program of instruction, faculty, student support services and fiscal resources.

One of the most significant movements toward reciprocal recognition of authority to operate between states also grew out of regional accreditation (Hill, 2012). The Southern Regional Electronic Campus (SREC) was formed in 1998 as a central coordination point for accredited institutions in the southern United States whose programs met or exceeded the SREC’s standards of good practice. Through the state agreements to participate in the SREC, participating institutions had been able to acquire
exemptions from the jurisdictional regulations from other member states (Southern Regional Education Board, 2012).

Distance education’s growth also affected state higher education governance, though historically most states had only regulated institutions physically located within their borders (Goldstein et al., 2006). As institutions expanded their reach beyond their state borders, many states gradually took on the role of regulating out-of-state education providers who had limited or no physical presence within their state in an effort to ensure educational quality and to protect consumers. While some states, including Iowa, New Mexico, and Oklahoma, developed legislation that specifically targeted distance education, many others, including Arkansas, North Dakota and West Virginia, relied on broadened interpretation of existing rules and laws designed to regulate brick and mortar institutions. These regulations often focused heavily on the concept of “physical presence” within a jurisdiction, a term that included or excluded activities ranging from holding an in-state address to engaging in web-based search engine marketing (State Higher Education Executive Officers, 2012). Action since 2010 on the part of some states, like Texas, to actively interpret their regulations to exclude many forms of distance education from state regulation may indicate that some states were not aware that their existing laws would or could be interpreted as regulating distance education at the time the regulations were drafted.

Even as regulation grew, states relied heavily on institutions to self-report their presence within the state and to request authorization to operate. With varying capacities to facilitate authorizations, most states had very few resources dedicated to the process of authorizing and monitoring compliance, resulting in as few as 10 percent of institutions
serving students outside of their home state actively seeking registration (Poulin & Fong, 2011). Often states only pursued actions against unauthorized operations when a complaint was made against the institution to the Secretary of State or Attorney General’s offices. Although some calls for coordination and recognition of the potential implications of state regulation for distance education were made (Goldstein et al., 2006), the industry largely ignored the warnings.

**The Impact of the 2010 Federal Program Integrity Rules**

The 2010 announcement of a federal intent to enforce compliance with state regulations by the US Department of Education as part of the federal rule-making process following the passage of the Higher Education Act of 2008 had a significant impact on distance higher education. Leveraging the collective buying power of federal student aid programs, the federal government had long established various rules and standards for intuitions that wished to be recognized as Title IV eligible and be given access to distribute these funds to students. The Higher Education Act of 2008 was the latest in a series of bills that laid out the conditions under which schools could be deemed eligible to distribute federal financial aid funds.

Beyond requiring participation in accreditation since the adoption of the 1944 GI Bill, the federal government had consistently required Title IV eligible institutions to demonstrate compliance with any state higher education regulations in states in which they operated brick and mortar campuses. The Federal Program Integrity Rules of 2010, developed through the rule-making process tied to the Higher Education Act of 2008 (U.S. Department of Education, 2010a), signaled a significant change in policy to shift the focus of enforcement from the physical location of the institutions to the physical
location of the student. Citing the need for an increased state role in regulating higher education, the federal government established rule 34 CFR--PART 600.9(c) stating:

If an institution is offering postsecondary education through distance or correspondence education to students in a State in which it is not physically located or in which it is otherwise subject to State jurisdiction as determined by the State, the institution must meet any State requirements for it to be legally offering postsecondary distance or correspondence education in that State. An institution must be able to document to the Secretary the State's approval upon request.

This provision, which became known as the state authorization provision, tied Title IV eligibility to compliance with state higher education regulations in all states in which the institution served students. If state laws claimed jurisdiction over the education services being provided, institutions now had a federal obligation to comply with the states’ regulations or cease serving students in that state. Additionally, the rule required each institution to be able to demonstrate state compliance upon request. Full enforcement of this rule would have eliminated access to the federal student financial aid program for institutions that could not prove full compliance with state regulations in each state in which the institution served students (Poulin & Raymond, 2012).

It was estimated at the time that as few as 3% of institutions were prepared to demonstrate such compliance (Poulin & Fong, 2011). The America Association of Private Sector Colleges and Universities filed suit in 2010. In July 2011 the state authorization provision was vacated by the United States District Court for the District of Columbia on procedural grounds due to a violation of the public comment rules for the provision (Poulin & Raymond, 2012). While overturning the rule removed the immediate threat of loss of Title IV funds for institutions, it had drawn attention to the largely ignored patchwork of preexisting state laws that claimed jurisdiction over cross-border educational operations.
In 2010, forty-eight states had some process in place for qualified degree granting institutions to request state authorization to operate (State Higher Education Executive Officers, 2012). However, the criteria for determining whether institutions operate within the jurisdiction, as well as the scope of the role of the state in regulating ongoing institutional operations, continued to vary greatly from state to state. Although the state authorizations provision of the Federal Program Integrity Rules was subsequently vacated, operating within a state without authorization could violate existing prohibitions against fraudulent operations (Poulin & Raymond, 2012; State Higher Education Executive Officers, 2012). This could expose institutions to the risk of a loss of eligibility for Title IV funds in addition to state level enforcement mechanisms.

The University Professional and Continuing Education Association and the Western Interstate Compact for Higher Education Cooperative for Educational Technologies (WCET) surveyed institutions in member states in 2011. Sixty-nine percent of respondents indicated that their institutions had not yet begun the process of seeking state authorizations (Poulin & Fong, 2011). As few as 3% of institutions believed themselves to be fully compliant in all of the states in which they served students.

**Current Status of Distance Higher Education Research**

Very few scholarly articles exist on interstate distance education policy, but some trade publications and reports have been available. SHEEO (State Higher Education Executive Officers, 2012) and regional higher education compacts such as the Western Interstate Compact for Higher Education (WICHE) (Poulin & Raymond, 2012) published reports and surveys comparing state higher education regulations and their applicability to cross-border regulation. One of the few accounts of the growth of state distance
education policy development was included in the forward of a trade publication published by Dow Lohnes (Goldstein et al., 2006), a well-known Washington legal firm involved in distance education policy advocacy. In the report the author recounted efforts made in the 1970s to coordinate state regulation around distance education, primarily provided at the time through telecasting. A federally funded project called ALLTEL called for coordination between states regarding the provision of distance education. However, their recommendations were largely ignored, and no systemic coordination efforts materialized.

While institutions and state regulatory agencies struggled to understand and implement the existing policies and achieve compliance, little focus had been placed on analyzing factors that may have influenced the development of these widely varying webs of state regulation (Harley & Lawrence, 2007). This study was designed to expand upon existing state policy innovation models through strategic choice theory to assist in identifying the role of power and the social and political environment in state higher education policy decisions. A well-defined research gap has been established as well as the potential for a broad range of implications for both practical application and further research that result from the study.

**Theoretical Framework**

The 1960s resurgence of interest in state level political structures (Sharkansky & Hofterbert, 1969; Walker, 1969) saw the first empirical studies of the characteristics that influenced state policy innovation (Dye, 1966; Walker, 1969). This research viewed the 50 states as individual policy actors that mutually influenced each other in the context of a larger social system (Dye, 1990). Two distinct models emerged: one based on the
influence of various state characteristics (Dye, 1966), the other on policy migration among regions of states (Walker, 1969). The identification of policy innovation as a unit of analysis was largely credited to Walker (1969) who defined state policy innovation as the passage of legislation that was new to the state regardless of whether or not other states had previously passed similar legislation. Heavily influenced by organizational innovation scholars (Sharkansky & Hofferbert, 1969; Walker, 1969), early policy innovation research analyzed both internal and external factors, finding through separate analytical processes that both played a significant role in predicting which states would adopt policies.

During the 1990s econometric models of state policy innovation gained prominence (Bastedo, 2007), beginning with Berry and Berry’s (1990) work on state lottery adoption. This work utilized Event History Analysis to provide a more complex and nuanced view of policy innovation that combined both state characteristics and policy migration into a single form of analysis. Event History Analysis, rooted in biomedical survival analysis, allowed scholars to isolate the role of these two established sets of predictors and provide insight into how state characteristics and policy migration worked together to influence policy innovation.

Berry and Berry’s work served as the foundation for an emerging set of work by state higher education policy researchers (McLendon, 2003b; McLendon & Ness, 2003; Volkwein & Tandberg, 2008; Young et al., 2005) who were also exploring the role of state higher education governance structure on state higher education policy innovation (Hearn & Griswold, 1994). Recent higher education policy research had utilized econometric models of policy innovation that include three models of state policy
innovation to help explain divergent and convergent policy innovation trends: state characteristics, policy migration, and state higher education governance structure (McLendon & Cohen-Vogel, 2008; McLendon et al., 2009). The focus on state funding policies by many state policy innovation scholars (McLendon et al., 2009; Tandberg, 2008, 2010; Volkwein & Tandberg, 2008) may in part account for the prevalence of economic and econometric models in state higher education policy studies.

State characteristics. Like many political science and economic models (Scott, 2000), early studies of state policy innovation (Dye, 1966) were rooted in rational choice theory. Rational choice theory framed all choice, including policy adoption, as comprised of a series of individual choices in which the individuals carefully weigh the outcomes of available options (Scott, 2000). Decisions were viewed as having been based on careful examination of those options to determine that will bring about the preferred outcome as determined by those empowered to make choices. Because it was not possible for individuals to be cognizant of all of the elements that may affect all of the potential outcomes of a decision, decisions were said to be made in the context of bounded rationality. Bounded rationality recognized that decisions were made based on the information available to the individual at a given time rather than on perfect and complete knowledge (Scott, 2000). Rational choice theory had historically been focused on individual decisions, and collective decisions had been viewed as being ultimately reducible to a series of individual decision. Though primarily rooted in theoretical scholarship from the 1920s, since the mid-century rational choice theorists became increasingly focused on mathematical formulations converging closely with trends in economics research (Scott, 2000).
This rational choice approach was clearly modeled in Dye’s 1966 work. Dye (1966) viewed state policy choices as directly reflective of state characteristics, many of them related to state fiscal policy. Through a rational choice model, these characteristics can be viewed as serving as the basis on which policy choices were made. Dye’s research identified distinct trends in policy innovation based on a number of state demographic and fiscal traits. Often cited as one of the first scholars of state level policy innovation research, Dye’s work established the presence of a significant relationship between state characteristics and policy innovation. These findings were almost immediately controversial because of their departure from commonly accepted political science concepts of representation and party conflict that dominated policy outcomes research at the time (Walker, 1969).

A number of socioeconomic and political characteristics had been shown to influence state policy migration, though the directionality of the influence varied based on the type of legislation. Several studies found that states with higher per capita income were more likely to pass higher education policies related to performance (Knott & Payne, 2004) and fiscal (McLendon et al., 2009; Volkwein & Tandberg, 2008) reform. Consistent relationships were identified between political party control and state higher education policy innovation (Knott & Payne, 2004; Volkwein & Tandberg, 2008; Young et al., 2005). Particularly, states with single party control legislatures had been more likely to engage in policy innovation (McLendon & Ness, 2003; Young et al., 2005). Rates of participation in higher education had also been seen as a potential predictor of policy innovation (Young et al., 2005) especially those policies tied to tuition and state higher education funding (Volkwein & Tandberg, 2008).
**Policy migration.** Even though state characteristics had shown significant applicability to state policy innovation over time (Berry & Berry, 1991; McLendon, 2003b; Volkwein & Tandberg, 2008; Young et al., 2005), challenges to their use to explain policy innovation began as early as 1969 by scholars like Walker. Walker (1969) first theorized that policy innovation was a process that was influenced not only by internal characteristics, but also by the patterns of policy behavior in surrounding states. Through his work, he sought to create a theoretical model that examined not just why some states adopted policies, but also how the adoption of a policy in one state affected the spread of similar policies to other states. One of the earliest studies to examine policy migration among states, the study included 88 public policies passed by at least 25 states between 1900 and 1967. He found that while state characteristics remained significant indicators of policy adoptions, strong regional trends also existed. Finally, Walker (1969) proposed relationships between policy migration and state characteristics that he noted at the time were “untestable propositions” (p. 881) in hopes of spurring further research.

**Blending the models through Event History Analysis.** Berry and Berry’s 1990 study of state lottery adoption was among the first research to utilize methodology that allowed the researchers to examine the relationships between state characteristics and interstate policy migration within a single methodology. This study for the first time blended both rational choice and isomorphic frameworks, as proposed in Walker’s 1969 study. Using Event History Analysis, also known as survival analysis, Berry and Berry examined state lottery adoption from 1964 to 1986 across the United States. The authors’ findings indicated that state characteristics and interstate policy migration appeared to work hand-in-hand in predicting state policy innovation. Current research had indicated
that state policy innovation was largely the product of one of two forces: intrastate characteristics or interstate policy migration (Berry & Berry, 1990, 1991; Dye, 1966; Knott & Payne, 2004; McLendon, 2003b; McLendon & Cohen-Vogel, 2008; McLendon et al., 2009; Nettles & Cole, 1999; Sharkansky & Hofferbert, 1969; Tandberg, 2010; Volkwein & Tandberg, 2008; Walker, 1969; Young et al., 2005).

**State higher education governance.** Higher education governance structure was introduced as a state higher education policy predictor by Hearn and Griswold in 1994. Although each state’s governance structure for higher education is unique, some similarities exist that allow for classification. The most commonly cited format for classification had identified three basic types of governance structure: consolidated governing bodies, regulatory coordinating bodies, and advisory/planning bodies (McGuinness, 2002). In 2002, twenty-two states had consolidated governing bodies that exercised significant oversight of the comprehensive functions of their designated public institutions including the right to appoint leadership positions. At the time, twenty-five states had regulatory coordinating bodies that maintained programmatic authority and some budgetary approval authority. Three states had advisory or planning bodies that had limited programmatic and budgetary review powers and no approval authority (McLendon, 2003b). Using the classification structure McGuinness, Hearn and Griswald’s (1994) research indicated that states with more consolidated governance structures were more likely to adopt innovative policies.

Significant structural variance had existed between states even within these categories. Bodies might have been recognized as boards, committees, or commissions and members might have been appointed or elected, dependent upon the state. Some
states had separate bodies that regulated different types of institutions, such as public and private institutions, community colleges, and four year institutions. It should be noted that the designation of an institution as public, private non-profit, or proprietary has also been dependent on individual state law. In the context of higher education regulation, a number of states have defined all out-of-state institutions as private or proprietary regardless of their federal designation (Poulin & Raymond, 2012). The 1950s and 1960s saw states trending towards more consolidated governance, but that trend reversed in the 1980s and 1990s with a shift towards coordinating boards (McLendon, 2003b). State governance structures had continued to shift as eight states (Arizona, Florida, Louisiana, Maine, Massachusetts, Oklahoma, Oregon and Tennessee) included in this study made changes to their governance structure between 2000 and 2010.

**Strategic choice theory.** A number of studies found significant application in state higher education policy innovation for models that combined state characteristics, policy migration and state governance structure into a single analytical model (McLendon, 2003b; McLendon et al., 2009; Volkwein & Tandberg, 2008; Young et al., 2005). Yet, researchers have continued to call for studies that more closely examined the political and social realities in which policy decisions were made (McLendon & Cohen-Vogel, 2008; McLendon et al., 2009). One answer to this criticism maybe found in strategic choice theory.

In 1972, Child introduced strategic choice theory as a reaction to institutional models that viewed organizational structures as resulting primarily from the economic characteristics of the organization. Child dismissed what he termed “the simplest theoretical solution… that the contextual factors determine structural variables” (p. 2),
challenging that the existing models failed to give adequate consideration to the “agency of choice” invested in those with decision-making roles. Instead, he advocated for a move towards models that examined the role of power and the political and social environment in shaping decisions by simultaneously expanding and limiting the “acceptable” options available to decision makers. Strategic choice theory as Child (1972) modeled it, framed economic and other structural conditions as a result of choices made by those in power and influenced by the social and political environment in which those conditions existed.

In strategic choice theory, Child (1972) raised three interconnected issues for analysis: the role of agency and choice, the role of the environment in which choices are made, and the relationship between decision makers and the environment. Agency, in this context, described the ability of an individual to act in the world (Child, 1997). An individual’s agency could be viewed as constantly in conflict with social norms and pressures that served to limit the scope of choices that were deemed “acceptable” by both the individual and society. In policy innovation, decision makers’ ability to exercise their “agency” could be viewed as having been limited by the social and political environment in which those decisions were made. These “environmental” factors limit the policy decisions that were viewed by the individual as “acceptable” to themselves and their constituents. The factors that could limit the “agency” of decision makers differ based on the structures that existed and the relative power of those attempting to influence decisions. For example, elected decision makers would be subject to different “environmental” influences than appointed or hired decision makers. A strategic choice theory interpretation would call for consideration of the roles of those empowered to
make decisions, the role of the social and political environment in which the decisions were made, and the relationships between the decision makers and the environment.

Child’s seeming dismissal of traditional econometric models brought extensive criticism (March, 1978). Scholars argued that Child placed too much emphasis on individual agency and ignored the role that historic structures played in limiting options and maintaining status quo (Child, 1997; March, 1978). His later (1997) work acknowledged the validity of such criticism in some applications of his earlier work. In this later work, Child reflected that the prospect of strategic choice theory for future research was in models that expanded upon institutional theory to bring the role of power and the environment in which decisions were made into tension along with the more traditional structural characteristics (Child, 1997).

The application of strategic choice theory to state higher education policy innovation suggested changes to the established models in two distinct ways. First, research into state higher education policy should examine the role and nature of power distribution in state higher education governance. Second, consideration should be given not only to the social and political environment in which higher education policy decisions were made, but also to the relationship between the environment and those empowered to make policy decisions. This study sought to introduce new variables to the existing state higher education policy model that reflect these key strategic choice theory considerations. This application of new variables was further explored in the conceptual model section of this chapter.

**Conceptual model.** Previous research had identified three types of determinates for state policy innovation: state characteristics (Dye, 1966), interstate policy migration...
(Walker, 1969; Young et al., 2005) and state higher education governance structures (Knott & Payne, 2004). A number of studies found significant application for models that combine these determinates into a single analytical model (McLendon, 2003b; McLendon et al., 2009; Volkwein & Tandberg, 2008; Young et al., 2005). Yet, state higher education policy innovation scholars continued to call for studies that more closely examine the political and social realities in which policy decisions are made (McLendon & Cohen-Vogel, 2008; McLendon et al., 2009). The application of strategic choice theory developed focusing attention of the role of power and social and political environment in which policy decisions are made (Child, 1972, 1997). Strategic choice theory may provide an avenue to address the gaps in the state higher education policy innovation model noted in prior literature.

The application of strategic choice theory to the changes in the relationship between higher education and state governance brought forth by the expansion of distance education called for examination of the three key issues: the role of power, the role of the social and political environment, and the relationship between the environment and those empowered to make decisions. This study expanded on established models of state higher education policy innovation using strategic choice theory to identify and test variables designed to address the role of power and the social and political environment to the adoption of policies that regulate the actions of out-of-state distance higher education institutions between 2000 and 2010. The dynamic policy innovation environment of cross-border distance higher education brought about by the convergence of emerging technologies and expanded state jurisdiction presented a unique opportunity to apply this approach within an established research gap.
This study expanded upon the existing state higher education policy adoption model in two ways. First, it sought to examine the role of power by expanding the classification of state higher education governance structures to include variables designed to focus on the power distribution among decision makers. As strategic choice theory would suggest, efforts to analyze the role of state higher education governance structures in outcomes has sometimes been hampered by the role of personality in the success of a board and the difficulty in defining authority and power in systems where authority and power often rest in informal relationships between boards and their respective legislatures (Nettles & Cole, 1999).

The most commonly used measure for state higher education governance structure is the McGuiness (2002) classification system that places each state’s governance structure in one of four categories based in large part on the centralization of its governance systems for in-state public higher education. While this classification has shown wide applicability for studies examining state higher education policy innovation that impacts in-state public institutions, it was too broad a characterization to allow for examination of the role of power distribution among decision makers when predicting policy that was applied to institutions outside of the state’s public institutional systems. Therefore, this study included variables that provided for greater stratification of state higher education governance systems. These variables included the relationship of the decision-making body that determined eligibility of out-of-state institutions to operate within their state to their in-state public institutions, the centralization of in-state higher education governance, politicization of the decision-making body and the state’s role in regulating in-state non-public higher education.
Second, strategic choice theory called for the inclusion of variables that examine the limitations of decision-making power based on the social and political environment in which decisions were made. These variables included: the passage of related distance education policy within the state, the presence of recognized advocacy organizations for non-public institutions within the state, representation of non-public institutions on state higher education governance or advisory boards, and the development and availability of technology. State policy innovation literature had been largely silent on the role of the passage of related legislation. This may, in part, have been due to differences in the way policy arenas were defined by authors. However, at least one study suggested that models examining state higher education policy innovation should also include other policy innovations in the states that may influence adoption of the policy of interest (McLendon & Cohen-Vogel, 2008). Conceptually, this appeared to be particularly appropriate in distance education policy innovation where, for example, the creation of a statewide K-12 distance education program might influence the passage of similar innovations in higher education policy.
Figure 2.1 Theoretical Framework of state distance higher education policy adoption

**State Characteristics**
- Political control of the state legislature
- State spending on higher education
- State population participation in higher education
- State median income
- Legislative professionalism

**Power Structures**
- Centralization of in-state higher education governance - single or multi system
- State role in programmatic and budgetary determinations of in-state public institutions
- Did the same board that made operational decisions regarding in-state institutions also approve operations of out-of-state institutions?
- State regulation of in-state regionally accredited non-public institutions
- Politicization of Board/percentage of board appointed by the Governor

**Decision-making Environment**
- Passage of related distance education legislation within the state
- Presence of organized advocacy organizations for non-state supported higher education
- Representation of non-state supported institutions on state higher education governance or advisory boards
- Technology development and availability (Year)

**State higher education policy adoption of a policy that regulated the actions of out-of-state public institutions providing cross-border distance higher education**
Summary of Empirical Literature

The Iron Triangle of the federal government, state government, and peer-based voluntary accreditation illustrates the interconnected nature of higher education regulation in the United States. While each member of the triangle has unique roles and responsibilities, their regulations were often cross-referencing and intertwined. Since the inception of distance higher education, these roles have slowly been expanded to include distance education with regional accrediting agencies taking the lead in establishing operational standards. A firm understanding of the interconnected nature of regulation is important when exploring state distance higher education policy innovation where policy decisions quite naturally extend far beyond a state's physical boundaries.

Distance higher education challenged many of the traditional relationships between institutions and states. New technologies had enabled institutions to compete in educational markets which are not restricted by geographic boundaries. States had struggled to determine their role in regulating institutions that serve state residents but do not maintain a brick and mortar presence within their state. This had resulted in a complex web of regulation that imposes a significant regularity burden on states and institutions alike. However, scholarly research had been largely silent on the subject of state distance higher education policy.

State policy innovation research had been largely dominated by two models of policy predictors: state characteristics and policy diffusion/migration. In more recent years, event history analysis has been used to examine both state characteristics and policy migration in a single analytical model. This combined model had shown significant applicability to state policy innovation research, including studies specific to
state higher education policies. While there was general support for this combined model, scholars continued to call for expansion of the model to include variables that attempt to account for the social and political realities that surround policy decision. Strategic choice theory places focus on the role of power and social and political environment in which decisions were made. Application of strategic choice theory provided a unique lens to expand upon traditional state policy innovation models.

This chapter presented a conceptual model that reflects the expansion of traditional state higher education policy models through strategic choice theory. In this model state higher education governance structure was expanded to reflect the role of power structures in the policy decision-making process. Particular focus was placed on the role of decision makers in regulating both in-state and out-of-state institutions. This power role was particularly applicable to this study’s focus on policies that regulate out-of-state distance education institutions. The model was further expanded through the inclusion of variables designed to measure the social and political dynamics of the decision-making environment.
CHAPTER 3

METHODS

This study employed Event History Analysis to explore the applicability of strategic choice theory to expand upon existing models of state higher education policy innovation in the context of the adoption of polices that regulate the distance education operations of out-of-state, regionally accredited higher education institutions. Prior to the 1990s two prominent models of the determinates of state policy innovation had been established in literature: state characteristics and interstate policy migration. Following Berry and Berry’s (1990) work on state lottery adoption, a new model emerged that blended state characteristics and interstate migration through the use of EHA.

McLendon (2003b) and others had adapted Berry and Berry’s (1990) model to state higher education policy innovation by including state higher education governance structure as established by Hearn and Griswold (1994). Despite the fact that this model had shown significant applicability to a variety of state higher education policy types, researchers had continued to call for models (McLendon, 2003b; McLendon et al., 2009; Volkwein & Tandberg, 2008; Young et al., 2005) that further explored the political and environmental factors that influence policy innovation. Strategic choice theory addressed this research gap by directing attention towards the structural role of power and the social and political environment in policy decisions.

This chapter presents the research design used in this study based on the application of a strategic choice theory lens to expand on existing state policy innovation models. The chapter begins by presenting the research questions followed by an overview
of the analytic method and key variables for this study. The next section of the chapter outlines each of the theoretically derived eleven hypotheses in the context of their application to the three models of state policy innovation included in this study: state characteristics, policy migration and strategic choice. Descriptors for each of the independent variables are presented in the context of the hypotheses they address. The final section of this chapter addresses the Event History Analysis model and formulas used in this study.

**Research Question**

Based upon prior research and the established theoretical framework, the following research question was addressed in this study:

What conditions influence the probability that states will adopt a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions within their boundaries?

A series of eleven variable specific hypotheses were examined utilizing Event History Analysis to address this research question.

**Analytic Model**

This study utilized Event History Analysis (EHA), a form of logistic regression that utilizes a panel dataset that includes both cross-sectional and longitudinal data (Kennedy, 2008) to model the probability of a change in status or the occurrence of an event (Singer & Willett, 2003). The use of EHA in this study allowed analysis of the relationship between the identified independent variables and a state’s adoption of polices that regulate the distance education operations of out-of-state, regionally accredited
higher education institutions. Stata software was used for all quantitative analysis in this study.

**Dependent variable.** The conceptual dependent variable in this study was the probability of a state adopting the identified policy innovation during a specified time period based on a state's given configuration of independent variables. EHA allowed for the use of historical adoptions of such policies by states to predict this probability by substituting the conceptual dependent variable with an observed dependent dummy variable (Berry & Berry, 1990) representing the actual passage of such policies between 2000 and 2010 in the forty-eight contiguous United States.

Policy innovations included those that regulate any of the following practices:

- Fiduciary Responsibility
- Public Information
- Program of Instruction, Degree and Credit Requirements
- Faculty
- Student Support Services
- Fiscal Resources

This list was based on the minimum standards for regional accreditation for the Higher Learning Council and was consistent with the good practices for distance education as defined by the Commission on Regional Accrediting Agencies as well as the minimum standards for regional accreditation by each of the eight regional accrediting agencies. Table 3.2 provides an overview of how each state’s policy met the criteria for inclusion in the study.
Table 3.1
Categories of Regulation of Publically-Funded, Regionally-Accredited, Out-of-State Institutions by State

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<th>Faculty Requirements</th>
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<th>Public Information</th>
<th>Fiscal Recourses</th>
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</tbody>
</table>

CT, DE, GA, HI, ID, IL, IN, ME, MD, MO, MS, MT, NC, ND, NH, NM, NV, NY, SC, SD, TN, UT, WA, WI, and WY did not regulate any of the criteria factors for publically-funded, regionally-accredited out-of-state institutions during the study period.

● State regulated
○ State regulated but exempts accredited institutions from demonstrating compliance

Policy innovations were identified by hand review of each state’s higher education laws. Sections of the law referring to the identified topics were coded, and the
exact phrasing transcribed into a spreadsheet using states as row headers and the above categories as column headers. State higher education laws were collected in PDF format, or converted to PDF format to enable key word searches using the search feature of the word processing software to identify any key pieces of legislation that may have been missed during hand coding. Once collected in the spreadsheet, nominal variables were created for each of the categories. The year in which the legislation was enacted was taken from each state’s legislative record. Lexis Nexus was used to aid in this search. Findings were cross-referenced with online legislative databases available from the Education Commission on the States. When a discrepancy was found, the state legislative record was the dominate standard. Categories of regulation were then collapsed into one dichotomous variable for each state, for each year with one representing adoption of any policy types during that year. Although rare within this sample, if policies were adopted over a period of years, for example fiscal policy in one year and faculty policy in another, only the adoption of the first policy that regulated the target institutions was used. Because the focus of this study was policy innovation, once a state was identified as adopting a policy regulating publicly-funded, regionally-accredited, out-of-state institutions, the state was dropped from the analysis in subsequent years.
Table 3.2

Variable Descriptions and Data Sources

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passed legislation regulating the operations of out-of-state, regionally-accredited, publically-funded institutions</td>
<td>State legislative records, Education Commission on the States</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>Political control state legislature</td>
<td>US Census</td>
<td>Categorical: Democratic control of both houses, Republican control of both houses, split control, converted to dummy variables</td>
</tr>
<tr>
<td>State spending on higher education</td>
<td>American Community Survey, US Census, Illinois State University Grapevine Data</td>
<td>Calculated, continuous</td>
</tr>
<tr>
<td>State participation in higher education</td>
<td>American Community Survey, US Census, National Center for Educational Statistics</td>
<td>Calculated, continuous</td>
</tr>
<tr>
<td>State median income</td>
<td>American Community Survey, US Census</td>
<td>Continuous in thousands of 2010 dollars</td>
</tr>
<tr>
<td>Legislative professionalism</td>
<td>National Council of State Legislators</td>
<td>Continuous in thousands of 2010 dollars</td>
</tr>
<tr>
<td>Interstate policy migration</td>
<td>State legislative records and Education Commission on the States Policy database</td>
<td>Categorical: no contiguous states with a policy, one contiguous state with policy, two contiguous states with policy, and three or more contiguous states with policy</td>
</tr>
<tr>
<td>Centralization of higher education</td>
<td>Education Commission on the States Policy database</td>
<td>Dichotomous: single or multi system structure for four-year public institutions</td>
</tr>
<tr>
<td>State role in in-in-state public institutional budget and program decisions</td>
<td>Education Commission on the States Policy database</td>
<td>Dichotomous: state or local control of budget and program approval for public institutions</td>
</tr>
<tr>
<td>Variable</td>
<td>Source</td>
<td>Form</td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Same state board approved out-of-state institutions and approved budget or program for in-state institutions</td>
<td>Education Commission on the States Policy database</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>Politicization of the state higher education governance board/commission</td>
<td>Education Commission on the States Governance Structures database</td>
<td>Percentage of the state higher education governance board appointed by the governor</td>
</tr>
</tbody>
</table>

**Decision-making Environment**

| Previously passed legislation establishing an in-state public distance education institution or system (lagged) | State legislative records and Education Commission on the States Policy database | Dichotomous |
| Previously passed legislation establishing or regulating K-12 distance education (lagged) | State legislative records and Education Commission on the States Policy database | Dichotomous |
| Presence of an organized non-public education advocacy group | Education Commission on the States Policy database | Dichotomous |
| Legislatively mandated presence of at least one non-public higher education representative on state higher education policy advisory board/commission | Education Commission on the States Policy database | Dichotomous |
| Year | | Dichotomous dummies |

**Sample.** The 48 states in the contiguous United States constituted the sample for this study. A nearest neighbor model for interstate policy migration was utilized in this study (McLendon, 2003b; Young et al., 2005) as a theoretically based independent variable. Because Hawaii and Alaska do not share a contiguous border with any other state, they were excluded from the sample.
Hypotheses

Based on a review of the literature, a series of hypotheses were developed regarding the relationship of those variables previously established in literature and those indicated through the application of strategic choice to the adoption of state higher education policy that restricted the operations of out-of-state distance higher education institutions. This study hypothesized that the traditional state higher education policy predictors of state characteristics, interstate policy migration and state higher education governance structure would have limited applicability to the adoption of state policies that restrict the operation of out-of-state distance higher education institutions. The study further hypothesized that the inclusion of variables indicated through the application of strategic choice theory that were designed to focus on the role of power and social and political environment would demonstrate predicative and statistical significance in predicting the adoption of policies that restrict the operation of out-of-state distance higher education institutions. These hypotheses were outlined in Table 2.

State characteristics. State characteristics served as motivators that framed rational policy choices. This viewpoint was supported and rooted in early studies of policy innovation that examined the roles of state characteristics on policy innovation (Walker, 1969). The influence of state characteristics on state higher education policy innovation has been well established (Hearn & Griswold, 1994; Knott & Payne, 2004; McLendon, 2003b; McLendon et al., 2006; McLendon et al., 2009; McLendon & Ness, 2003; Young et al., 2005). Observations of state level characteristics for each year in the study (2000-2010) were used as control variables based on prior research (Knott & Payne, 2004; Lowry, 2001; McLendon, 2003b; Volkwein & Tandberg, 2008) to assist in
isolating the potential contribution of the variables of interest to the states adoption of the policy. These variables included: political control of the state legislature, state spending on higher education, population participation in higher education, median income, and legislative professionalism.

_Hypothesis 1. Political Control._ States with single party control would be more likely to adopt polices that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (McLendon et al., 2009).

Consistent relationships were identified between political party control and state higher education policy innovation (Knott & Payne, 2004; Volkwein & Tandberg, 2008; Young et al., 2005). In states with single party control, legislatures have been more likely to engage in policy innovation (McLendon & Ness, 2003; Young et al., 2005). In this study, political control of state legislature was a categorical variable entered into analysis as a series of dummy variables. The political majority in each state’s upper and lower houses was determined for each year using data from the US Census. States were then categorized as having had Democratic control of both houses, Republican control of both houses, or split control. This model allowed for the inclusion of Nebraska that is commonly excluded from comparative state policy studies due to its unicameral form of state governance. Split control was used as reference in all models.

_Hypothesis 2. Spending on higher education per capita._ States that made larger fiscal investments per capita in in-state higher education would be more likely adopt polices that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (Volkwein & Tandberg, 2008).
Regulation and funding have a strong correlational history in the United States (Volkwein & Tandberg, 2008). In higher education, federal regulation of higher education exists almost entirely in direct relationship to institutional eligibility for Title IV federal student aid (John & Parsons, 2004). In one of the earliest studies of state policy innovation, Dye (1966) found that a “state’s economic development rather than its [political] party system that [was] the principal determinant of its educational policy” (Dye, 1966, p. 110). More recent studies found similar relationships between increased state higher education funding and the adoption of policies that establish operational or fiscal standards (Volkwein & Tandberg, 2008).

Cross-border regulation of distance education introduced protectionism as a potential factor in states’ regulatory choices. States that invested more per capita dollars in in-state higher education might be seen as more likely adopt policies restricting out-of-state distance education institutions because the state had a larger investment in the success of their in-state institutions. A fairly wide-spread, though untested, belief existed among distance education institutions today that state distance higher education policies were intended to limit competition from out-of-state institutions for students. In a 2012 web-broadcast, the director of one state’s higher education regulatory body indicated that he believed the one thing all institutions within his state would agree on was, “that my agency should keep every other institution out of the state” (Hill, 2012). The examination of the relationship between state per capita spending on public higher education and the passage of policies that restrict the operation of out-of-state distance higher education provided new insight into this issue.
State spending on higher education per capita was a calculated variable created by dividing state spending for higher education by the state population for each year included in the study. State spending on higher education was taken from the Illinois State University *Grapevine* data which was curated annually in conjunction with the State Higher Education Executive Officers (SHEEO) organization. State population was taken from the American Community Survey of the US Census. The calculated variable was presented in 2010 US dollars per state resident.

**Hypothesis 3. State population participation in higher education. States that had achieved high rates of participation in higher education would be more likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions.** (McLendon, 2003b; McLendon et al., 2006; McLendon et al., 2009; Volkwein & Tandberg, 2008).

Rates of participation in higher education had also been seen as a potential predictor of policy innovation (Young et al., 2005) especially those policies tied to tuition and state higher education funding (Volkwein & Tandberg, 2008). State population participation in higher education was a calculated variable created by dividing the annual number of students enrolled in Title IV participating institutions within the state by the estimated annual state population. That number was then converted to a percentage of the population and compared to the median US rate of participation. State percentage of population participation in higher education as compared to the mean US percentage of population participating in higher education was then used to as the independent variable. The number of students enrolled in Title IV funded institutions within the state was taken from the Annual Education Digest published by the National Center for Educational
Statistics. Both public and private institutional data was gathered and disaggregated results were used in the study. State population was taken from the American Community Survey of the US Census.

**Hypothesis 4. State median income.** States with higher median incomes would be more likely adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (Knott & Payne, 2004; McLendon, 2003b; McLendon et al., 2009; Volkwein & Tandberg, 2008).

Several studies found that states with higher per capita income were more likely to pass higher education policies related to performance (Knott & Payne, 2004) and fiscal reform (McLendon et al., 2009; Volkwein & Tandberg, 2008). State median income was taken from the American Community Survey of the US Census for each year in the sample. The data was presented in thousands of 2010 US dollars.

**Hypothesis 5. Legislative professionalism.** States with greater degrees of legislative professionalism would be more likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (Knott & Payne, 2004; McLendon, 2003a, 2003b; McLendon et al., 2009).

Legislative professionalism has been shown to have a significant and positive relationship with state policy innovation (Tandberg, 2008). Legislative professionalism as a metric was designed to assess the general capacity of legislative bodies to digest, process, and produce policy (Squire, 2007). Legislative professionalism has been associated with year-round session, greater staff resources, as well as pay and benefits levels associated with full-time employment. Research indicated that more professional legislatures were more likely to adopt innovative policies (Tandberg, 2008). Increased
time spent in legislative session and greater legislative ambition had been proposed as possible causes for increased interest in policy innovation (Barrilleaux & Berkman, 2003).

Complex formulas for calculating legislative professionalism, that included time in session, compensation and staffing resources, are often found in policy innovation literature (Squire, 2007). However, annual compensation had been shown to produce similar results and perform equally well in statistical models (Carey, Niemi, & Powell, 2000; McLendon et al., 2009; Tandberg, 2008) including those examining its role in the passage of state higher education policy innovation. This study followed this model and used annual compensation as a measure of legislative professionalism. Annual compensation for state legislators was taken from data publically available through the National Council of State Legislatures.

**Policy migration.** Interstate policy migration, the adoption of similar policies by neighboring states, had been established as a predictor of state policy innovation in prior research (Berry & Berry, 1990, 1991; McLendon, 2003b) including research specific to state higher education policy innovation (McLendon & Cohen-Vogel, 2008; McLendon, 2003b; McLendon et al., 2006; Walker, 1969; Young et al., 2005).

*Hypothesis 6. Interstate policy migration. States that shared a border with one or more states that previously adopted policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions would be more likely to adopt similar policies* (Berry & Berry, 1990; McLendon & Cohen-Vogel, 2008; McLendon et al., 2006; Walker, 1969; Young et al., 2005). *This influence would increase as the number of bordering states that had passed said legislation increased.*
The neighboring states model of interstate policy migration introduced by Berry and Berry (1990) that had commonly been used in state policy innovation studies was utilized in this study. This refinement has allowed the researchers to compensate for many of the previous criticisms of policy migration studies that centered on the arbitrary nature of defining regional boundaries (McLendon, 2003b). The presence of a policy that would have met the criteria for inclusion in this study as regulating the operations of out-of-state distance higher education was determined for each year for each state that shared a contiguous border with the states in the sample. As all 48 contiguous states were used in this study, the techniques used to identify policy adoption by the states in the sample were used throughout the study. The number of neighboring states with a relevant policy was then calculated by hand for each state, each year. This calculation included any states that enacted and then revoked applicable regulation within the time frame of the study. Following the model used by McLendon (2003b), this data was then collapsed into four categories: no contagious states with a policy, one contiguous state with the policy, two contiguous states with a policy, and three or more contiguous states with a policy.

**Strategic choice variables.** Through the application of strategic choice theory, this study expanded upon the existing state higher education policy innovation model in two ways. First, it sought to reexamine the classification of state higher education governance structure to include variables designed to focus on the power structures that distribute influence among decision makers. Second, it included variables that examined the limitations of decision-making power based on the social and political environment in which decisions were made.
**Power structures.** The most commonly used measure for state higher education governance structure is the McGuiness (2002) classification system that places each state’s governance structure in one of three categories based in large part of the centralization of its governance systems for in-state public higher education. This classification had shown wide applicability or studies examining state higher education policy innovation that impacts in-state public institutions (Hearn & Griswold, 1994; McLendon et al., 2006; McLendon et al., 2009; Young et al., 2005). However, for this study it was too broad a characterization to allow for examination of the role of power distribution among decision makers when predicting policy that was applied to institutions outside of the state’s public institutional systems. Therefore, this study included four variables that provide for greater stratification of state higher education governance systems including the following: centralization of in-state higher education governance, the relationship of the decision-making body that determines eligibility of out-of-state institutions to operate within their state to their in-state public institutions, and the state’s role in regulating in-state non-public higher education.

Several data points were collected regarding the nature of the relationship between two entities within each state: the state board or commission that determines eligibility of out-of-state distance education institutions to operate within the state, and states public higher education system. All data was collected from a legislative database maintained by the Education Commission on the States and were publicly available on their website. The Education Commission on the States is the publisher of McGuiness (2002) higher education governance classification schema.
Hypothesis 7. States with more centralized governance systems would be more likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (Knott & Payne, 2004; McLendon et al., 2006; McLendon et al., 2009; Young et al., 2005; Zumeta, 1996).

The degree of centralization of public higher education varied significantly between states from a single centralized state system to individual, locally appointed governing bodies (McGuinness, 2002). This was a key factor in McGuinness’ (2002) classification of state higher education governance. Prior literature indicated the states that have more centralized structures were more likely to adopt innovative policies that established standards of performance and fiscal management (Knott & Payne, 2004; McLendon et al., 2006; McLendon et al., 2009; Young et al., 2005; Zumeta, 1996). In this study, public higher education centralization was a dichotomous variable representing state utilization of a single centralized system of organization for its in-state public four-year higher education.

Hypothesis 8. Roles and responsibilities of state boards. States in which state higher education boards had more control over in-state institutions including making both strategic decisions for in-state public institutions and grants authorization for non-public educational providers would be more likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (Thompson & Zumeta, 2001).

Strategic choice analysis would suggest that state the roles and responsibilities of the state higher education board/commission in the operations and oversight of in-state institutions might influence the decision to adopt policies which limit the operations of
out-of-state institutions for several reasons. First, as detailed in Table 3.3 a review of the stated purposes listed in the legislation included in this study revealed that most states intended for such legislation to protect consumers and ensure high quality educational opportunities for its students. State boards that have been endowed with the responsibility of determining budgetary and programmatic decisions for their in-state institutions presumably believed that those roles assist the state in ensuring consumer protection and ensuring high quality educational opportunities. Therefore these states might be more likely to presume that enforcing similar oversight over out-of-state institutions would be necessary to achieve these goals. Secondly, the dual responsibilities for determining access of out-of-state institutions to serve students within the state and maintaining the health of in-state public institutions might impose limits on the options viewed as acceptable by a decision maker (Child, 1997).

The membership of state higher education governance boards/commissions varied significantly from state to state and may also influence how the board/commission perceives its role. Some state boards/commissions consisted primarily of representatives from state higher education institutions while others were primarily appointed representatives of the public. States in which state higher education boards/commissions were primarily appointed by the governor to represent the public may have been more likely to regulate publically-funded regionally, accredited out-of-state institutions for several reasons. Boards/commissions that primarily consisted of political appointees might be more likely to regulate because these individuals may be less familiar with the role of accreditation and federal regulations and therefore feel a greater need for state based oversight in order to protect consumers and ensure high quality educational
opportunities. Additionally, these individuals might also have been more vulnerable to state level shifts in political power and therefore may have been more likely to vote for policies that reflected the larger interests of their parties.

Table 3.3

Stated Legislative Purpose for Laws Regulating the Operations of Publically-Funded, Regionally-Accredited, Out-of-State Institutions by State

<table>
<thead>
<tr>
<th>States</th>
<th>Consumer Protection</th>
<th>Ensure Quality</th>
<th>Enforcement</th>
<th>Protect Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
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<tr>
<td>Arizona</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
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<tr>
<td>Arkansas</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
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<tr>
<td>California</td>
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<td>●</td>
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<tr>
<td>Colorado</td>
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<td>●</td>
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<tr>
<td>Florida</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
<td>●</td>
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<td></td>
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<tr>
<td>Kansas</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Maryland</td>
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<tr>
<td>Massachusetts</td>
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<tr>
<td>Minnesota</td>
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<tr>
<td>Nebraska</td>
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<td>North Carolina</td>
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<td>Oregon</td>
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<tr>
<td>Pennsylvania</td>
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<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
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<td>●</td>
<td></td>
</tr>
<tr>
<td>Texas</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
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<tr>
<td>Virginia</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>West Virginia</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>

AL, IL, MI, and NJ did not articulate the purpose of their legislation.

CT, DE, GA, HI, ID, IL, IN, ME, MD, MO, MS, MT, NC, ND, NH, NM, NV, NY, SC, SD, TN, UT, WA, WI, and WY did not regulate any of the criteria factors for publically-funded, regionally-accredited out-of-state institutions during the study period.
This hypothesis was tested using three variables. The first role of the state higher education governance structure examined was the role state boards/commissions play in strategic decision-making at the institutional level (McGuinness, 2002). One well established boundary line for classifying state roles has been the jurisdiction of a state level board to determine and exercise budgetary and/or programmatic control over individual institutions. This was a dichotomous variable representing state level board or commission’s jurisdiction to exercise budgetary control over the state’s public higher education institution. The second role of the state higher education governance structure examined was a dichotomous variable representing the relationship of in-state institutions to the state board or commission designated to determine eligibility or authorize out-of-state distance education institutions. A one in the dummy variable represented a state board or commission that had responsibility for both determining eligibility and authorization of out-of-state distance education institutions and also had budgetary and or programmatic control over the state’s public higher education institutions. Third, politicization of the board/commission was a continuous variable representing the percentage of the state higher education board/commissions which was appointed by the governor.

**Decision-making environment.** Strategic choice theory calls for the inclusion of variables that examine the limitations of decision-making power based on the social and political environment in which decisions were made (Child, 1972). These four variables included: the passage of related distance education policy within the state, the presence of recognized advocacy organizations for non-public institutions within the state,
representation of non-public institutions on state higher education governance or advisory boards, and technology development and availability.

Hypothesis 9. States that previously passed legislation authorizing in-state distance education systems would be more likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions (McLendon & Cohen-Vogel, 2008)

As recommended in prior literature (McLendon & Cohen-Vogel, 2008) and suggested by strategic choice theory, two measures of prior passage of related policy were included in this analysis. Previous passage of related legislation may signal a change in the policy making environment around a particular policy arena (McLendon & Cohen-Vogel, 2008; McLendon et al., 2009). Previous passage of legislation establishing an in-state, public distance education institution or system and previous passage of legislation establishing or regulating K-12 distance education were represented as dummy variables indicating whether a state had such a law in place. The Education Commission on the States’ online database of state higher education policy between 1995 and 2012 was used to identify passage of legislation during the study period. When passage was identified, these variables were lagged one year following passage of the legislation because the supposed effect would not be expected in the year in which the policy was adopted. Following adoption, these variables were entered as one for the remaining years the state was included in the study.

Hypothesis 10. States that had active representation of non-public institutions in their state higher education policy process would be less likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education
institutions (McLendon et al., 2009; Tandberg, 2010; Tandberg & Anderson, 2012; Volkwein & Tandberg, 2008).

Previous literature suggested that a variety of outside groups might exert influence over decision makers and the decision-making process in state higher education policy through various activities usually associated with lobbying (McLendon et al., 2009; Tandberg, 2008, 2010). This research indicated that this influence might be exerted by groups traditionally viewed as inside and outside of the system, including state appointed advisory groups, industry representatives, and institutional leaders. Currently no states have organized out-of-state distance higher education advocacy groups. Therefore, two data points were used in this study to gauge the presence of non-public higher education representatives at the state level. The first was a dichotomous variable that indicated the presence of a recognized non-public higher education advocacy group within the state. The second was a dichotomous variable that indicated the legislatively mandated presence of at least one non-public higher education representative on a state appointed higher education policy advisory board/commission.

**Hypothesis 11. States would be more likely to adopt policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education as technology development increases the capacity of institutions to serve students at a distance.**

Distance education experienced rapid growth during the time frame examined in this period (Aud et al., 2011). Historically, during periods of strong growth in higher education both state and federal governments have introduced new regulations (John & Parsons, 2004). Regional accreditation agencies have cited the growth of distance
education as a primary motivator for the expansion of their standards to include distance education during the same period covered in this study. While distance education technology development in general was an important covariate for this study, the development of specific technologies was outside of the scope of this study. Therefore, time itself was used as a proxy for distance education industry growth and technology development between 2000 and 2001. The Weibull model used in this study allowed for the inclusion of time as a theoretically supported independent variable (Box-Steffensmeier & Jones, 2004).
Table 3.4

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Hypothesis</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State Characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₀₁ Political party control</td>
<td>States with single party control will be more likely to more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td>H₀₂ State spending on higher education</td>
<td>States that make larger fiscal investments per capita in in-state higher education will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td>H₀₃ Higher education participation</td>
<td>States that have achieved a high rates of participation in higher education will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td>H₀₄ Median income</td>
<td>States with higher median incomes will be less likely to adopt policies</td>
<td>-</td>
</tr>
<tr>
<td>H₀₅ Legislative professionalism</td>
<td>States with greater degrees of legislative professionalism will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td><strong>Policy Migration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₀₆ Policy migration</td>
<td>States that share a border with one or more states that have previously adopted policies will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td><strong>Power Structure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₀₇ Centralized board</td>
<td>States with more centralized governance systems will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td>H₀₈ Roles and Responsibilities of state boards</td>
<td>States in which the higher education board/commission was more politicized and exercised more control for strategic decisions for in-state public institutions will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td><strong>Decision-making Environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₀₉ In-state distance education</td>
<td>States that have previously passed legislation authorizing an in-state distance education systems will be more likely to adopt policies</td>
<td>+</td>
</tr>
<tr>
<td>H₁₀ Non-public institutional representation</td>
<td>States with active representation of non-public institutions in their state higher education policy process will be less likely to adopt policies</td>
<td>-</td>
</tr>
<tr>
<td>H₁₁ Technology development</td>
<td>As technology development increases states will be more likely to adopt policies</td>
<td>+</td>
</tr>
</tbody>
</table>
Event History Analysis

Event History Analysis (EHA) is a form of logistic regression sometimes referred to as hazard or survival analysis. EHA is grounded in bio-medical research designed to predict survival rates (Box-Steffensmeier & Jones, 2004). Berry and Berry’s (1990) lottery adoption study is widely credited with popularizing EHA in state governance policy innovation and diffusion studies (Buckley & Westerland, 2004; McLendon, 2003b; Young et al., 2005). EHA has undergone significant refinement over the past two decades (Berry & Berry, 1990, 1991; Buckley & Westerland, 2004) and has been successfully applied in several studies of state higher education policy innovation (McLendon, 2003b; McLendon et al., 2006).

EHA has demonstrated a number of advantages over standard regression models that have led to its dominance in state policy innovation research since Berry & Berry’s (1990) work. First, as Berry and Berry’s (1990) study established, EHA allowed researchers to combine the analysis of state characteristics and interstate policy migration into a single form of analysis (Berry & Berry, 1990; Buckley & Westerland, 2004; Young et al., 2005). Second, the use of EHA allows for the inclusion of both time variant and time invariant characteristics of each state (Box-Steffensmeier & Jones, 2004) which was not possible in standard regression models. Third, EHA has a unique ability to address censored observations, such as those who do not adopt within the time-frame, allowing them to remain in the dataset (Box-Steffensmeier & Jones, 2004). This has been particularly important in analysis of rare events, like policy innovation, where an event would not be observed in the majority of the cases in the dataset (McLendon, 2003b).
Key terms in Event History Analysis. EHA utilizes longitudinal data to model the probability of a change in status or the occurrence of an event (Singer & Willett, 2003). An event is defined as a distinguishable change in status of a unit such as in the case of this study, the adoption of a targeted policy. As a change in status, an event can be linked to a discrete point in time (Blossfeld & Golsch, 2007). Prior to an event’s occurrence, the unit is seen as at risk of experiencing the event (Box-Steffensmeier & Jones, 2004). In this context prior to adoption of a targeted policy, a state is viewed as at risk of adopting a policy. This risk of event occurrence (policy adoptions) is quantified in the hazard rate that is further explored in the next section. The time between the time in which a unit enters into a risk set and the occurrence of an event is sometimes referred to as the waiting period. In state policy innovation research, a state is seen as entering a risk set when the first state adopts a similar policy (Berry & Berry, 1990). A state which had not yet adopted a policy would then be in the waiting period. Because of its roots in calculating survival rates in bio-medical research, the language often reflects a bias towards continuance of the status quo (Box-Steffensmeier & Jones, 2004). Therefore a unit that has experienced an event, like policy adoption, is often referred to as failed, and the rate at which units experience events, or states experience policy adoption, is referred to the failure rate. In the context of this study an increase in the failure rate represents an increased number of states that adopted the targeted policy.

Mathematical concepts in EHA. Box-Steffensmeier and Jones (2004) described the key mathematical concepts of EHA. First, EHA defines time as an absolutely continuous non-random variable denoted by $T$. The actual time of an event, policy adoption, is noted as $t$. $T$’s possible values have a “probability distribution characterized
by a probability density function of \( f(t) \) and a cumulative probability function of \( F(t) \).”

(Box-Steffensmeier & Jones, 2004, p. 12) The survivor function, the authors explained, describes the probability “a survival time \( T \) is equal to or greater than some value \( t \).” In this study the survivor function described the probability that a state would not pass a targeted policy during the designated time period. The survivor function was therefore the expected ratio of units that survive to a given \( t \). This is modeled as:

\[
S(t) = 1 - F(t) = P(T > t) \]  (Box-Steffensmeier & Jones, 2004, p. 13)

The hazard rate, sometimes referred to as the conditional failure rate, is the rate at which a unit fails by a given \( t \). The hazard rate models the relationship between failure times and the survivor function. The hazard rate was presented by Box-Steffensmeier and Jones (2004, p. 14) as:

\[
h(t) = \frac{f(t)}{S(t)}
\]

In this study the hazard rate represented the likelihood of a state adopting a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. The likelihood of failure, or policy adoption, may have increased or decreased over time as the risk of failure increased or decreased as time passed. Whenever possible, predicted changes of risk over time were carefully considered in determining the shape of the hazard model (Blossfeld & Golsch, 2007; Box-Steffensmeier & Jones, 1997, 2004).

**Weibull Model**

A number of parametric and semi-paramedic models of EHA exist. Choices between these models were based on the estimation of the shape of the hazard model (Box-Steffensmeier & Jones, 2004; Buckley & Westerland, 2004). Estimation of the
shape of the hazard model is primarily a theoretical practice based upon the assumed relationship between the risk and time (Box-Steffensmeier & Jones, 2004). Determining the shape of the hazard model was of particular importance in EHA (Box-Steffensmeier & Jones, 2004; Buckley & Westerland, 2004). When the shape of the hazard function was not appropriately identified, Larsen and Vaupel (1993) note “even the best-fitting model may not fit well enough to be useful” (p. 96).

The Weibull model is a parametric model that is most appropriate when the baseline hazard or risk is thought to increase over time. In this study the risk represented the likelihood that a state would adopt a policy that restricted the actions of out-of-state distance higher education institutions. Because of the rapid growth in distance education and availability of technology during the study timeframe, it was estimated that the risk of adoption increased over time. Therefore the Weibull model was most appropriate for this study. While the Cox regression model has been commonly used in policy innovation studies, the Weibull was a more appropriate choice for this study because of its ability to model the increasing risk of policy adoption over time.

Box-Steffensmeier & Jones (2004) indicate that the hazard rate of the Weibull model distribution can be expressed as:

\[ h(t) = \lambda p (\lambda t)^{p-1} \quad t > 0, \lambda > 0, p > 0 \quad (p. 26) \]

where \( \lambda \) is a positive scale parameter and \( p \) is known as the shape parameter. The shape of the hazard rate depended on the value of \( p \). If \( p > 1 \) the risk increased over time, and if \( p < 1 \) the risk decreased overtime. The Weibull distribution is, therefore, more flexible than other models because it is a function of two parameters rather than one as is standard in other parametric and semi-parametric models.
The survivor function of the Weibull model is

\[ S(t) = e^{(\lambda t)^p} \]  

(Box-Steffensmeier & Jones, 2004, p. 26)

The Weibull model has commonly been parameterized by constructing a linear log model for \( \log(T) \) and treating the log of the time to adoption as the response variable (Box-Steffensmeier & Jones, 2004). This model has allowed for easier comparison to traditional linear models. Expressed as a log linear model the Weibull model is

\[ \log(T) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \ldots + \beta_j X_{ij} + \varepsilon \]

(Box-Steffensmeier & Jones, 2004, p. 26)

where \( \beta_j \) are variable coefficients, \( X_{ij} \) a vector of independent covariates, and \( \varepsilon \) is an error term. (Box-Steffensmeier & Jones, 2004). The Weibull model uses the maximum partial likelihood estimate. It is important to note when interpreting findings using the Weibull model that as a log of duration times, the coefficients have been expressed as failure rates rather than the persistence rates as given using the more commonly used Cox model (Box-Steffensmeier & Jones, 2004).

**Model Specification**

This study employed a Weibull model of Event History Analysis to examine how various state conditions as established by the covariates in this study affected the hazard rate for state adoption of a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. The Weibull was appropriate for this study because it modeled the shape of the hazard rate as increasing over time (Blossfeld & Golsch, 2007; Box-Steffensmeier & Jones, 2004). The Weibull model employed in this study could be represented as:
\[ \log(T) = \beta_0 + \beta_1 \text{STATECHARACTERISTICS}_{it} + \beta_2 \text{POLICYMIGRATION}_{it} + \beta_3 \text{POWERSTRUCTURE}_{it} + \beta_4 \text{ENVIRONMENT}_{it} + \varepsilon \]

In order to examine the date and effects of various predictors on the outcome variable, holding all other predictors constant, the following sub-models were tested. The first model isolated state characteristics, and the second model isolated policy migration. The remaining models isolated the strategic choice predictors, power structure and social and political environment respectively. The fully specified model combined all four of the previous models.

Model A (State Characteristics):

\[
\text{ADOPT (log)}_{it} = \alpha + \beta_1 \text{PCONTROL}_{it} + \beta_2 \text{SPEND}_{it} + \beta_3 \text{PARTICIPATE}_{it} + \beta_4 \text{INCOME}_{it} + \beta_5 \text{LEGPROF}_{it} + \varepsilon
\]

Model B (Policy Migration):

\[
\text{ADOPT (log)}_{it} = \alpha + \beta_1 \text{MIGRATION}_{it} + \varepsilon
\]

Model C (Power Structure):

\[
\text{ADOPT (log)}_{it} = \alpha + \beta_1 \text{CENTRAL}_{it} + \beta_2 \text{ROLE}_{it} + \beta_3 \text{BOARD}_{it} + \varepsilon
\]

Model D (Political and Social Environment):

\[
\text{ADOPT (log)}_{it} = \alpha + \beta_1 \text{PRELEGK12}_{it} + \beta_2 \text{PRELEGHE}_{it} + \beta_3 \text{ADVOCACY}_{it} + \beta_4 \text{REPRESENT}_{it} + \varepsilon
\]

Model E (full):

\[
\text{ADOPT (log)}_{it} = \alpha + \beta_1 \text{PCONTROL}_{it} + \beta_2 \text{SPEND}_{it} + \beta_3 \text{PARTICIPATE}_{it} + \beta_4 \text{INCOME}_{it} + \beta_5 \text{LEGPROF}_{it} + \beta_6 \text{MIGRATION}_{it} + \beta_7 \text{CENTRAL}_{it} + \beta_8 \text{ROLE}_{it} + \beta_9 \text{BOARD}_{it} + \beta_{10} \text{PRELEGK12}_{it} + \beta_{11} \text{PRELEGHE}_{it} + \beta_{12} \text{ADVOCACY}_{it} + \beta_{13} \text{REPRESENT}_{it} + \varepsilon
\]
Where:

$\text{ADOPT} (\log)_{it} =$ adoption of a state policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions in state $i$ in year $t$

$\text{PCONTROL}_{it} =$ political control state legislature

$\text{SPEND}_{it} =$ state spending on higher education

$\text{PARTICIPATE}_{it} =$ state rate of participation in higher education

$\text{INCOME}_{it} =$ state median income

$\text{LEGPROF}_{it} =$ legislative professionalism

$\text{MIGRATION}_{it} =$ previous adoption of a policy which meets the study criteria in states sharing a contiguous border

$\text{CENTRAL}_{it} =$ centralization of higher education

$\text{ROLE}_{it} =$ state role in in-state public institution budget and program decisions

$\text{BOARD}_{it} =$ same state board approved out-of-state institutions and approved budget or program for in-state institutions

$\text{PRELEGK12}_{it} =$ previously passed legislation establishing an in-state public distance education institution or system (lagged)

$\text{PRELEGHE}_{it} =$ previously passed legislation establishing or regulating K-12 distance education (lagged)

$\text{ADVOCACY}_{it} =$ presence of an organized non-public education advocacy group

$\text{REPRESENT}_{it} =$ legislatively mandated presence of at least one non-public higher education representative on state higher education policy advisory board/commission
**Data preparation.** Five steps were undertaken to prepare data for event history analysis: (a) defining event occurrence, (b) identifying the starting point for the measurement of time, fallacy of period centrism (c) specifying the metric of time, (d) dealing with censored observations, and (e) creating the initial risk set (Singer & Willet, 2003).

*Defining the event occurrence.* Because EHA predicts the probability of policy innovation using historical policy adoption data, defining when an event occurs is of critical importance. In this study policy innovations were defined as state adoption of a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. Policies were identified as those that regulate institutions in one of six functional areas based on the minimum standards for good practices for distance education as defined by the Commission on Regional Accrediting Agencies. Legislative records were used to calculate the year of policy adoption.

*Identifying the starting point for the measurement of time.* Though some distance education has existed for more than 100 years in the form of correspondence courses, innovation and regulation began in the early 1990s and was fairly common by 2000. Therefore this study used 2000 as the starting point for measurement. Five states (Arkansas, Arizona, Nevada, North Carolina, and Massachusetts) regulate out-of state distance higher education based on policies passed prior to 2000. One of EHA’s unique characteristics was its ability to address what were referred to as censored cases in which the event had occurred outside of the time frame of the study. This is discussed further below in the section on handling censored cases.
The relatively short period addressed in this study opens the risk of what Blossfield, Golsch, and Rohwer (2007) call the “Fallacy of Period Centrism.” In analysis like EHA in which time plays such a key role, the selection of a short time period raises questions regarding potential selection bias. During this short period of time it was possible, the authors note, that special conditions may have existed that were not otherwise accounted for in the study. Though specific suggestions for reducing this risk were not made by the authors (Blossfeld & Golsch, 2007), this study included several features that would appear to reduce the risk of period centrism. First, the authors generally limited this criticism to studies that used only a “few” waves of data. This study examines policy adoption over a period of ten years. Secondly, the selection of the time period for this study was data driven and responsive to known changes in industry conditions within the time period selected. Third, the selection of an EHA model that specified that shape of the hazard rate as increasing overtime reflected an assumption of changes within the study period reducing the risk of findings of false significance (Box-Steffensmeier & Jones, 2004).

Specifying the metric of time. In order to define a time period, a metric of how time was measured has to be established (Blossfeld & Golsch, 2007). Although policies might conceivably have been adopted on any given date within a year, policy innovation studies represent policy adoption as occurring within a given year (Berry & Berry, 1990; McLendon, 2003a; McLendon et al., 2006; Volkwein & Tandberg, 2008; Young et al., 2005). The use of yearly observations of policy adoption also facilitated the alignment of covariates that were commonly measured on an annual basis, including state median
income, state expenditures on higher education, and percentage of participation in higher education. This study used the year as the metric of time.

The use of an annual metric of time did however introduce the issue of ties in the dataset. While policies adopted in separate states where almost certainly adopted on different dates within a given year, the use of a yearly metric meant that some states “tied” with others in length of time to adoption. The Weibull model used in this study utilized the relative ranking in time to adoption to calculate coefficients (Blossfeld & Golsch, 2007). This allowed this study to use the “exact method” of breaking ties supported by Stata software.

**Censored observations.** Censored observations refer to units in which the event does not occur within the time frame under study (Box-Steffensmeier & Jones, 2004). Any study of events is likely to include some observations of units that do not experience the event. Censored events have been especially common in policy innovation studies as state policy adoption is a relatively rare occurrence (McLendon, 2003b). In this study a state that adopted a policy prior to the study period was considered left censored, and a state that has not adopted a policy by the end of the study period was considered right censored. This study included both right and left censored observations.

Five states regulated out-of-state distance higher education during the study period using policies adopted prior to 2000. One option for handling these cases would have been to exclude them from the study. However, their exclusion raised two distinct issues. First, two of the states that entered the study period with regulations in place, altered their regulations during the time period of the study so that their regulations would no longer meet the policy threshold. Exclusion of these states from the dataset
would have failed to include this important change. Second, excluding these states would have introduced the potential of selection bias as it was possible that these states shared common characteristics that influenced their policy adoption.

EHA has a unique ability to handle censored observations that might otherwise be excluded from other forms of analysis (Box-Steffensmeier & Jones, 2004). Because this study included both time-invariant and time-variant characteristics, individual observation of each state year were be used in this analysis (Box-Steffensmeier & Jones, 2004). This allowed right censored states to be entered into the dataset in the first year as having adopted the policy. In order to include right censored states, state that adopted a policy prior to 2000, an undefined baseline year in which no policy has been adopted was established in the dataset. The right censored states, as well as others that adopted within the first year, were then dropped from subsequent year observations. This allowed for the inclusion of all 48 states into the dataset and allowed the two states that entered the study with a policy but later dropped the policy to reenter the dataset when their policy was altered so that it no longer meets the policy selection threshold. Because policy adoption has been a relatively rare occurrence, left censored observations were very common in this dataset. Left censored variables do not present any analytical issues for EHA (Blossfeld & Golsch, 2007; Box-Steffensmeier & Jones, 2004), which made it an ideal choice for this study.

Creating the initial risk set. The initial risk set in EHA represents all of units at risk of experiencing the event at the beginning of the study period (Box-Steffensmeier & Jones, 2004). In this study the 48 contiguous states represented the initial risk set. This included five right censored states that are included in the first year observation as
adopting the policy. The inclusion of time varying covariates in this study necessitated a yearly observation structure sometimes referred to as a person-period format (Blossfeld & Golsch, 2007). Once a state adopted a policy that meets the study criteria, it was removed from the dataset. This resulted in a decreasing number of observations in later years of the study as each state that adopted the policy in the previous year was removed from the risk set. If the state altered its policy so that its policy no longer met the study threshold, it returned to the risk set.

Summary

The purpose of this study was to explore the applicability of strategic choice theory to expand upon existing models of state higher education policy innovation in the context of the adoption of policies that regulated the actions of out-of-state public higher education institutions providing cross-border distance higher education. This chapter established the research design for this study including relevant hypothesis. The final section of this chapter addressed the choice of Event History Analysis as the method of analysis for this study and highlighted key areas of concern.
CHAPTER 4

RESULTS

The central purpose of this study was to explore the applicability of strategic choice theory to expand upon existing models of state higher education policy innovation in the context of the adoption of policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. Based upon prior research and the established theoretical framework, the following research question guided this study: What conditions influence the probability that states would adopt a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions within their boundaries?

A series of eleven variable specific hypotheses were examined utilizing the Weibull model of EHA to address this research question. Results indicated that several variables demonstrated a statistically significant influence on the adoption of qualifying legislation during the study period: state median income, interstate policy migration, centralization of higher education, and the presence of a state recognized, non-public higher education advocacy group. Results both supported and contradicted hypothesized influences and prior literature on state higher education policy innovation.

This chapter begins by reporting the descriptive statistics for each of the variables in the first and last years of the study. Kaplan-Meier failure functions and Nelson-Aalen cumulative hazard statistics are also presented. Results for each of the five Weibull proportional hazard event history models are presented, followed by specific results for each of the hypotheses specified to address the research question. Results are displayed
and discussed in the context of their relationship to the theoretical model presented in Chapter 2.

**Descriptive Statistics**

The descriptive statistics for the dependent and independent variables used in this study are presented in Table 4. Descriptive statistics are given for the first (2000) and last (2010) year included in analysis for all 48 states.

Table 4.1

<table>
<thead>
<tr>
<th>Descriptive Statistics: Mean and Standard Deviation</th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td><strong>2000</strong></td>
<td><strong>2010</strong></td>
</tr>
<tr>
<td>Dependent Variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State has adopted policy (event)</td>
<td>0.12 (0.33)</td>
<td>0.48 (0.49)</td>
</tr>
<tr>
<td>State Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democrat controlled legislature</td>
<td>0.32 (0.47)</td>
<td>0.48 (0.499)</td>
</tr>
<tr>
<td>Republican controlled legislature</td>
<td>0.41 (0.49)</td>
<td>0.36 (0.48)</td>
</tr>
<tr>
<td>Split control legislature</td>
<td>0.28 (0.44)</td>
<td>0.17 (0.37)</td>
</tr>
<tr>
<td>Per capita higher education expenditures</td>
<td>200.76 (48.75)</td>
<td>258.37 (82.69)</td>
</tr>
<tr>
<td>Per capita enrollment in higher education</td>
<td>0.05 (0.01)</td>
<td>0.07 (0.01)</td>
</tr>
<tr>
<td>Enrollment in HE as % compared national average.</td>
<td>0.98 (0.15)</td>
<td>1.00 (0.22)</td>
</tr>
<tr>
<td>Median income (in thousands)</td>
<td>51.57 (7.80)</td>
<td>48.80 (7.39)</td>
</tr>
<tr>
<td>Legislative Professionalism (in thousands of dollars)</td>
<td>35.73 (23.66)</td>
<td>35.73 (23.66)</td>
</tr>
<tr>
<td>Interstate Policy Migration</td>
<td>0.58 (0.68)</td>
<td>1.60 (0.60)</td>
</tr>
<tr>
<td>Power Structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centralization of higher education</td>
<td>0.44 (0.51)</td>
<td>0.44 (0.51)</td>
</tr>
<tr>
<td>State role in budget and program decisions</td>
<td>0.80 (0.40)</td>
<td>0.80 (0.40)</td>
</tr>
<tr>
<td>Same board approved out-of-state institutions and approved in-state institutions</td>
<td>0.31 (0.11)</td>
<td>0.31 (0.11)</td>
</tr>
<tr>
<td>Percentage of state higher education board or commission appointed by the governor</td>
<td>0.80 (0.29)</td>
<td>0.80 (0.29)</td>
</tr>
<tr>
<td>Power Structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previously established in-state public distance higher education</td>
<td>0.02 (0.14)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Previously established K-12 distance education</td>
<td>0.07 (0.24)</td>
<td>0.02 (0.14)</td>
</tr>
<tr>
<td>Presence of organized non-public higher education advocacy group</td>
<td>0.84 (0.35)</td>
<td>0.84 (0.35)</td>
</tr>
<tr>
<td>Legislatively mandated representative from private or proprietary institution on any higher education advisory or governing board</td>
<td>0.33 (0.47)</td>
<td>0.33 (0.47)</td>
</tr>
</tbody>
</table>
**Dependent Variable.** The dependent variable for this study was the adoption of a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. There was a substantial increase, from 12% to 48%, in the number of states that had adopted qualifying policies. In 2000 six states (Arkansas, Arizona, Kentucky, Nevada, North Carolina, and Massachusetts) had regulations in place. The laws in five of those states (Arkansas, Arizona, Nevada, North Carolina, and Massachusetts) were adopted prior to the period included in this study. Kentucky adopted its policy in 2000. By 2010, 23 (48%) states had adopted a policy that met the criteria for inclusion in this study. Table 4.2 outlines the remaining policy adoption that occurred within the time frame of the study.

Table 4.2

<table>
<thead>
<tr>
<th>State</th>
<th>Year Adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas</td>
<td>1977</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>1997</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1998</td>
</tr>
<tr>
<td>Nevada, Arizona</td>
<td>1999</td>
</tr>
<tr>
<td>Kentucky</td>
<td>2000</td>
</tr>
<tr>
<td>Michigan, Oklahoma</td>
<td>2001</td>
</tr>
<tr>
<td>New Mexico</td>
<td>2002</td>
</tr>
<tr>
<td>Louisiana</td>
<td>2003</td>
</tr>
<tr>
<td>Alabama, Montana, Rhode Island</td>
<td>2004</td>
</tr>
<tr>
<td>Oregon</td>
<td>2005</td>
</tr>
<tr>
<td>Virginia, West Virginia</td>
<td>2006</td>
</tr>
<tr>
<td>Colorado, Pennsylvania</td>
<td>2008</td>
</tr>
<tr>
<td>Illinois, Minnesota, Ohio, Texas</td>
<td>2009</td>
</tr>
<tr>
<td>Kansas</td>
<td>2010</td>
</tr>
</tbody>
</table>

CA, CT, DE, FL, GA, ID, IN, IA, ME, MD, MI, NE, NH, NJ, NY, ND, SC, SD, TN, UT, VT, WA, WI, WY did not adopt a policy that meets the inclusion criteria for this study during the study time frame.
Independent Variables- State Characteristics.

**Political control of the state legislature.** The composition of state legislatures shifted between 2000 and 2010, reflective of larger national trends during this time frame including change in presidential party leadership (Republican to Democratic) in 2008. This trend was reflected in state legislatures with a 16% increase (from 32% to 48%) in the number of state legislatures controlled by the Democrats between 2000 and 2010. The largest movement appeared to be from split controlled to Democratic controlled with an 11% decrease in the number of split controlled legislatures (from 28% to 17%) during this same time frame. Republican controlled legislatures also decreased 7% (from 41% to 36%) during the study time frame. As Figure 4.1 demonstrates, however, the trend in legislative control between 2000 and 2010 was not monotonic. Instead each party experienced both periods of gain and loss during the study time frame with significant shifts in 2002 and annually from 2005-2010.

![Figure 4.1 Legislative control by party](image_url)
State spending on higher education. Median per-capita state spending on higher education increased moderately between 2000 and 2010 from $200.76 to $258.32. During this same time, however, the gap between those states that contributed the lowest amounts to higher education and those that contributed the highest amount increased significantly. In 2000 the range between highest and lowest per-capita spending was $244.00, a gap that had nearly doubled by 2010 to $435.00. While states like Colorado, Massachusetts, and Oregon saw net decreases in per capita spending, others like Louisiana, New Mexico North Carolina, North Dakota and Wyoming saw net increases of $130.00 to $260.00. These differences demonstrated significant variance in the role of the state in funding higher education from state to state and identified it as an important variable to consider in state level comparative analysis.

State participation in higher education. Participation in higher education increased by 2% from 2000 to 2010. Because this rate was adjusted for population, it represented a real increase in the rate of participation in higher education across the United States. This increase was seen more significantly in some states than others. Most states saw modest gains between 1%-3%, but some states like Arizona and Iowa saw gains between 5.8% and 6.1%. In order to maximize state by state changes in higher education participation during the study period, this study utilized the percentage of state population participating in all Title V eligible higher education institutions as compared to the national average for all higher education participation for analysis. It should be noted that states have not commonly required out-of-state distance higher education institutions to report data for the Integrated Postsecondary Education Data System (IPEDS) data for distance students. Additionally, although IPEDS collects data on
students served by distance education, it does not require institutions to report the states in which the students reside. Therefore, it is likely that these figures have primarily reflected changes in in-state face-to-face and distance enrollments. Any out-of-state distance students would be counted in the states in which the institution maintains its primary brick and mortar presence.

**State Median Income.** State median income dropped by more than $3000.00 between 2000 and 2010 beginning at $51,570.00 and ending at $48,000.00. This reflected a downward trend in incomes at a national level in response to the double dip recession experienced in the United States during the 2000s. Again, this trend varied significantly from state to state as some states experienced drops in median income exceeding $10,000 (Michigan, Minnesota, Missouri) and others experienced gains exceeding $5000.00 (Vermont, West Virginia and North Dakota). While these trends were not entirely regional, states in the industrial Eastern and Midwestern United States took the most significant losses.

**Legislative professionalism.** Legislative compensation was used as a proxy for legislative professionalism (Carey, Niemi, & Powell, 2000; McLendon et al., 2009; Tandberg, 2008). Legislative compensation was a time invariant variable in this study as compensation to legislators remained stable during the study period. Median legislative compensation was $35,732.00. Legislative compensation varied significantly from state to state and was at least in part reflective of the differences in the legislative process between states. In some states (California) state legislators served in year-around sessions and were compensated for full time equivalency ($95,000 plus per-diem). In other states (New Hampshire), legislators only served for a few weeks per year, and were
compensated as little as $100 per year with no per-diem. Most states required legislators to serve 3-4 months per year and compensated those legislators between $20,000 and $30,000 per year for their service.

**Policy migration.** The significant increase in the number of states adopting policies which regulated the operations of out-of-state, regionally-accredited, publically-funded institutions was reflected in the increase in the mean number of bordering states that had adopted such a policy. The mean number of neighboring states that had previously adopted a qualifying policy increased from .58 in 2000 to 2.4 in 2010. Because of the geographic differences in the states, the number of potential neighboring states that could adopt varied by state. To control for the number of neighboring states, policy migration was coded to 0 for no states, 1 for one state, and 2 for two or more states following McLendon’s (2003b) model. The coded mean for 2000 was .56, and the coded mean for 2010 was 1.60.

**Power structure variables**

**Centralization of higher education.** Centralization of higher education was measured by the number of public higher education systems present within a state. States with a single system were coded as 1, and states with more than one system were coded 0. States were fairly evenly split between single and multi-system structures. Forty-four percent of states operated in single state systems. This was a time-invariant variable.

**State role in budgetary and program decisions.** The state role in budgetary and program decisions of its public universities has been one of the key factors used in the McGuiness classification system of state higher education governance structures. Eighty
percent of the states included in this study took an active role in determining or approving the budgets of their public institutions. This was a time-invariant variable.

**Single board made both strategic decisions for in-state public institutions and grants authorization for non-public educational providers.** During the time frame included in this study, 31% (14) of states had separate boards for overseeing in-state public institutions and authorizing non-public providers. In 69% of the states in the sample the same board or commission had both some responsibility for budgetary or programmatic approval for in-state public and the authority to grant approval for the operations of non-public higher education institutions including those without a brick and mortar presence.

**Percentage of state higher education board or commission appointed by the governor.** The mean percentage of state higher education board or commission members appointed by a governor is 80%. In more than half of the states (25) all members of the board or commission were appointed by the governor, though in most states because of staggered terms, a single governor would not be able to appoint all members of the board or commission in a single gubernatorial term. In five states, the Governor had no appointing authority over the board or commission. In these states the board or commission was commonly made up of members of the legislature and representatives from specific state institutions or systems.

**Decision-making environment**

**Previous passage of statewide distance higher education institution or system.** In 2000 one state (2%) had passed qualifying legislation in the previous year. In 2010 no states had passed qualifying legislation in the previous year. Eleven states passed
qualifying legislation within the study period with the highest number of passages (3) in 2000.

**Previous passage of statewide distance K-12 education institution or system.** In 2000 three states (7%) had passed qualifying legislation in the previous year while in 2010 one (2%) state had passed qualifying legislation in the previous year. Thirty-three (67%) states passed qualifying legislation within the study period with the highest number of passages (6) in 2005 and 2006. Because some states authorized statewide distance K-12 and created a statewide distance K-12 institution or system in different year, some states (4) had multiple observations of this variable.

**Presence of a state recognized advocacy group for private or proprietary higher education.** Forty-one (84%) states had a state recognized advocacy group for in-state private and or propriety higher education institutions. The group’s stated purposes and relationships to the state higher education structure varied from state to state, but most included advocacy, raising awareness, or lobbying on behalf of its member organizations as its primary purpose. This was a time-invariant variable.

**Legislatively mandated representation of private or proprietary higher education institutions on state- level board, commission or advisory group.** Only 16 (33%) states mandated representation of in-state private or proprietary higher education in the policy making process. While the remaining states may have appointed representatives from non-public institutions to higher education boards or commissions their state regulations did not require it. This was a time-invariant variable.
Pre-estimation Results

The failure function, hazard rate and cumulative hazard rate are key elements of Event History Analysis (EHA) and each provide insight into the relationship between the dependent variable, policy adoption, and time. The failure function represented the ratio of states that had adopted the policy to states that had not yet adopted the policy during each time period in the study. The hazard rate demonstrated the risk that any state in the risk set in a particular year would adopt the policy in that year. The cumulative hazard represented the cumulative risk of policy adoption by any state in the risk set in that year, taking into account the adoptions that have already occurred within the study period. Table 4.3 displays the Kaplan-Meier survivor function and Nelson-Aalen cumulative hazard rate in a life table format that also illustrates the number of adoptions per year and the impact of adoptions on the size of the risk set.

Table 4.3 shows that adoption of policies that regulated the operations of out-of-state, regionally-accredited, publically-funded institutions have been well distributed over the 10 years of the study. Although it appears that the largest number of adoptions occurred in 2000, this number reflects all adoptions up to 2000 when in fact only Kentucky adopted a qualifying policy in 2000. For the remainder of the study period between one and three states adopted a qualifying policy each year. By 2010 the cumulative hazard for adoption of a qualifying policy was .62, reflecting a 62% chance that a given state that has not previously adopted a qualifying policy would adopt such a policy in the coming year. In 2010, 26 states remained in the risk set, and 47% of states had adopted a qualifying policy.
Table 4.3

Kaplan-Meier survivor function and Nelson-Aalen cumulative hazard rate life table

<table>
<thead>
<tr>
<th>Interval</th>
<th>Annual Failure Rate</th>
<th>Cumulative Failure</th>
<th>Remaining in Dataset</th>
<th>Failure Rate</th>
<th>Cumulative Hazard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2000</td>
<td>6</td>
<td>6</td>
<td>42</td>
<td>0.13</td>
<td>0.13 (0.05)</td>
</tr>
<tr>
<td>2001</td>
<td>2</td>
<td>8</td>
<td>40</td>
<td>0.17</td>
<td>0.17 (0.06)</td>
</tr>
<tr>
<td>2002</td>
<td>1</td>
<td>9</td>
<td>39</td>
<td>0.19</td>
<td>0.20 (0.07)</td>
</tr>
<tr>
<td>2003</td>
<td>1</td>
<td>10</td>
<td>38</td>
<td>0.21</td>
<td>0.22 (0.07)</td>
</tr>
<tr>
<td>2004</td>
<td>3</td>
<td>13</td>
<td>35</td>
<td>0.27</td>
<td>0.30 (0.08)</td>
</tr>
<tr>
<td>2005</td>
<td>1</td>
<td>14</td>
<td>34</td>
<td>0.29</td>
<td>0.33 (0.09)</td>
</tr>
<tr>
<td>2006</td>
<td>2</td>
<td>16</td>
<td>32</td>
<td>0.33</td>
<td>0.39 (0.10)</td>
</tr>
<tr>
<td>2007</td>
<td>1</td>
<td>17</td>
<td>31</td>
<td>0.35</td>
<td>0.42 (0.10)</td>
</tr>
<tr>
<td>2008</td>
<td>2</td>
<td>19</td>
<td>29</td>
<td>0.40</td>
<td>0.49 (0.11)</td>
</tr>
<tr>
<td>2009</td>
<td>3</td>
<td>22</td>
<td>26</td>
<td>0.46</td>
<td>0.59 (0.13)</td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
<td>23</td>
<td>25</td>
<td>0.48</td>
<td>0.63 (0.13)</td>
</tr>
</tbody>
</table>

The cumulative hazard function is illustrated graphically in Figure 4.2. This function illustrates that as time passed, all other things being equal, the risk of a state adopting a qualifying policy increased. This study assumed a monotonically increasing risk of adoption in the selection of the Weibull model of EHA for this study. This finding validated the use of the Weibull model. This model is particularly appropriate when the hazard is monotonically increasing or decreasing over time (Blossfeld & Golsch, 2007; Box-Steffensmeier & Jones, 2004). This finding also supported Hypothesis 11 of this study that the passage of time between 2000 and 2010 that was a time of rapid expansion of distance education and innovation in distance education technology that had a significant influence on the adoption of policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions.
Weibull Models

Hazard rates were estimated for five models using the Weibull model of EHA. Each of the four sets of predictor variables identified in the theoretical model for this study (state characteristic, policy migration, power structure and political and social environment) was modeled separately. A fifth “full model” combined all four sets of predictor variables into one model. Modeling of the four sets of predictor variables separately allowed for more detailed exploration of each of the study hypothesis. Results of the five models are presented in Table 4.5. All models were estimated using proportional hazards, time metrics, and robust standard errors clustered on each state.

Models 1, State Characteristics. The hazard rate for democratic control of the legislature, state spending on higher education, state participation in higher education, and legislative professionalism were not statistically significant. Republican control of the legislature was statistically significant ($p = 0.05$), demonstrating a 73% decreased
hazard of adopting a qualifying policy over a split legislature. The hazard rate for state median income was also statistically significant ($p = 0.04$), indicating a thousand dollar increase in state median income decreased the risk of adoption of a qualifying policy by 6%.

Model B, Interstate policy migration. The hazard rate for interstate policy migration was not statistically significant in this model.

Model C, Power Structure. The hazard rate for higher education centralization was highly statistically significant ($p = 0.00$). This finding indicated that the risk of adopting a qualifying policy was decreased by 65% in states with multiple state higher education systems. The remaining variables in this model were not statistically significant.

Model D, Political and Social Environment. The presence on a state recognized advocacy group for non-public higher education institutions demonstrated a statistically significant hazard rate ($p = .03$). The presence of a non-public advocacy group decreased the risk of adopting a qualifying policy by 70%. None of the remaining variables in this model were significant.
### Table 4.4

Results from Weibull models of state adoption of target policies

<table>
<thead>
<tr>
<th></th>
<th>Mod. A</th>
<th>Mod. B</th>
<th>Mod. C</th>
<th>Mod. D</th>
<th>Mod. E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democratic control of state legislature</td>
<td>0.94</td>
<td></td>
<td></td>
<td>1.10</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td></td>
<td></td>
<td>(0.65)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>Republican control of state legislature</td>
<td>0.27*</td>
<td></td>
<td></td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td></td>
<td></td>
<td>(0.25)</td>
<td>(0.25)</td>
</tr>
<tr>
<td>State spending on higher education (per capita)</td>
<td>0.99</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td></td>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>State participation in higher education</td>
<td>3.32</td>
<td></td>
<td></td>
<td>5.54</td>
<td>5.54</td>
</tr>
<tr>
<td></td>
<td>(3.92)</td>
<td></td>
<td></td>
<td>(8.28)</td>
<td>(8.28)</td>
</tr>
<tr>
<td>State median income (per thousand)</td>
<td>0.94*</td>
<td></td>
<td></td>
<td>0.92*</td>
<td>0.92*</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td></td>
<td></td>
<td>(0.40)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Legislative professionalism</td>
<td>0.99</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td></td>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Interstate Policy Migration</td>
<td>0.89</td>
<td></td>
<td></td>
<td>0.54*</td>
<td>0.54*</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td></td>
<td></td>
<td>(0.17)</td>
<td>(0.17)</td>
</tr>
<tr>
<td><strong>Power Structures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centralization of higher education</td>
<td>0.35**</td>
<td>0.46*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State role in budget and program decisions</td>
<td>1.51</td>
<td></td>
<td>1.00</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>(0.93)</td>
<td></td>
<td>(0.78)</td>
<td></td>
<td>(0.78)</td>
</tr>
<tr>
<td>Same board approved out-of-state institutions and approved in-state institutions</td>
<td>1.19</td>
<td>1.60</td>
<td></td>
<td>1.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.58)</td>
<td>(1.32)</td>
<td></td>
<td>(1.32)</td>
<td></td>
</tr>
<tr>
<td>Percentage of higher education governing body appointed by the governor</td>
<td>1.08</td>
<td>0.61</td>
<td></td>
<td>0.61</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.80)</td>
<td>(0.59)</td>
<td></td>
<td>(0.59)</td>
<td></td>
</tr>
<tr>
<td><strong>Decision-making Environment</strong></td>
<td>1.27</td>
<td>1.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previously established in-state public distance higher education</td>
<td>(1.30)</td>
<td>(0.95)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previously established K-12 distance education</td>
<td>2.32</td>
<td>2.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.41)</td>
<td>(1.93)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of organized non-public higher education advocacy group</td>
<td>0.30*</td>
<td>0.23*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.16)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representation of non-public institutions</td>
<td>0.64</td>
<td>0.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.35)</td>
<td>(0.31)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Log pseudolikelihood</td>
<td>91.74</td>
<td>86.66</td>
<td>90.53</td>
<td>90.73</td>
<td>101.07</td>
</tr>
<tr>
<td>$X^2$</td>
<td>10.72</td>
<td>0.18</td>
<td>7.9</td>
<td>8.31</td>
<td>28.98</td>
</tr>
<tr>
<td>$/ln_p$</td>
<td>4.12**</td>
<td>4.20</td>
<td>4.55**</td>
<td>3.98</td>
<td>5.52**</td>
</tr>
<tr>
<td></td>
<td>(2.42)</td>
<td>(2.12)</td>
<td>(1.45)</td>
<td>(2.56)</td>
<td>(0.58)</td>
</tr>
<tr>
<td>$p$</td>
<td>61.73</td>
<td>68.71</td>
<td>94.82</td>
<td>53.4</td>
<td>250.92</td>
</tr>
</tbody>
</table>

** Significant at the $p < .01$ level.  * Significant at $p < .05$ level
**Model E, Full Model.** When all of the predictor variables were entered into the fully specified model, several remained statistically significant from the previous models. Republican control of the legislature was no longer statistically significant. One new influence on the likelihood of adopting a qualifying policy also emerged. When interstate policy migration, which was not significant in the stand alone Model B, was added to the full model, it was statically significant \( (p = .05) \). A one unit increase in the number of neighboring states that had previously adopted a qualifying policy decreased the risk of a given state adopting a qualifying policy by 46%.

**Hypothesis Testing**

Table 4.5 displays the coefficients, standard errors, and confidence intervals for the fully specified Weibull model. Results indicated that state median income, interstate policy migration, centralization of higher education and the presence of organized non-public higher education advocacy groups were statistically significant influences on the adoption of policies that regulated the operations of out-of-state, regionally-accredited, publically-funded institutions. Findings both confirmed and contradicted the hypothesis presented in the theoretical framework of this study. Specific results for each hypothesis are discussed in the context of their placement in the theoretical framework.
Table 4.5

Results from fully specified Weibull model of state adoption of target policies with 95% confidence intervals

<table>
<thead>
<tr>
<th>State Characteristics</th>
<th>Coefficient (RSE)</th>
<th>95% Conf. Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic control of state legislature</td>
<td>0.10 (0.59)</td>
<td>-1.05, 1.25</td>
</tr>
<tr>
<td>Republican control of state legislature</td>
<td>-0.98 (0.67)</td>
<td>-2.27, 0.32</td>
</tr>
<tr>
<td>State spending on higher education (per capita)</td>
<td>-0.00 (0.01)</td>
<td>-0.02, 0.02</td>
</tr>
<tr>
<td>State participation in higher education</td>
<td>1.71 (1.50)</td>
<td>-1.22, 4.64</td>
</tr>
<tr>
<td>State median income (per thousand)</td>
<td>-0.09* (0.04)</td>
<td>-0.16, -0.01</td>
</tr>
<tr>
<td>Legislative professionalism</td>
<td>0.00 (0.00)</td>
<td>0.00, 0.00</td>
</tr>
<tr>
<td>Interstate Policy Migration</td>
<td>-0.62* (0.33)</td>
<td>-1.26, 0.02</td>
</tr>
</tbody>
</table>

| Power Structures                              |                   |                     |
| Centralization of higher education            | -0.78* (0.37)     | -1.50, (-0.07)      |
| State role in budget and program decisions    | -0.00 (0.78)      | -1.53, 1.52         |
| Same board approved out-of-state institutions and approved in-state institutions | 0.47 (0.83) | -1.15, 2.09 |
| Percentage of state higher education governing body appointed by the governor | -0.50 (0.96) | -2.39, 1.39 |

| Decision-making Environment                   |                   |                     |
| Previously established in-state public distance higher education | 0.02 (0.94) | -1.83, 1.86 |
| Previously established K-12 distance education | 1.02 (0.70) | -0.34, 2.38 |
| Presence of organized non-public higher education advocacy group | -1.45* (0.66) | -2.75, -0.15 |
| Representation of non-public institutions on state higher education governing or advisory body | -1.45* (0.66) | -2.75, -0.15 |
| Constant                                      | -1902.2 (1107.9)  | -4073.6, 269.2      |

* Significant at .05 level

State characteristics. Political party control, state spending on higher education, higher education participation and legislative professionalism were hypothesized to increase the likelihood of the adoption of policies that regulated the operations of out-of-
state, regionally-accredited, publically-funded institutions. Median income was hypothesized to decrease the likelihood of adoption.

**Political party control.** It was hypothesized that states with single party control of the legislature would be more likely to adopt policies than states with split party control. As reported in Table 4.3 the results were mixed. Split control legislatures were 10% less likely to adopt qualifying legislation than Democratic controlled legislatures, but 62% more likely to adopt qualifying legislation than Republican controlled legislatures. The hazard ratio for Democratic controlled legislatures was not statistically significant in either the state characteristics specific model or the fully specified model. The hazard ratio for Republican controlled legislature was statistically significant in the states characteristic specific model ($p = 0.05$) but did not remain significant in the fully specified model. These findings did not support the study hypothesis that single party control of the legislature increased a state’s likelihood to adopt policies that regulated the operations of out-of-state, regionally-accredited, publically-funded institutions.

**State spending on higher education.** The study hypothesized that states which made larger fiscal investments in in-state public higher education would be more likely to adopt policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. Analysis did not support this hypothesis. No significant influence of state higher education spending on a state’s likelihood of adopting a qualifying policy was found.

**Higher education participation.** States which had achieved higher rates of participation in higher education were hypothesized to be more likely to adopt policies that regulated the operations of out-of-state, regionally-accredited, publically-funded
institutions. While the hazard ratio was positive for this variable (5.54) it was not statistically significant. Therefore this hypothesis was not supported by the findings.

Median income. Higher median income was hypothesized to have a negative influence on policy adoption. States with higher median incomes have been found to be less likely to pass higher education policies related to performance (Knott & Payne, 2004) and fiscal (McLendon et al., 2009; Volkwein & Tandberg, 2008) reform. This hypothesis was strongly supported in analysis. A thousand dollar increase in state median income decreased the likelihood of adopting a state policy by 6% in the state characteristic specific model and 8% in the fully specified models. Both findings were statistically significant (p = .04).

Figure 4.2 illustrates these findings broken out by income quartile. As the figure illustrates, states in the lowest quartile for median income experienced significantly higher risk of policy adoption than those in any other quartile. While states in the second quartile were at higher risk than other states initially, their relative risk converged with states in the upper two quartiles in 2008. In 2010 the risk of adopting a qualifying policy was similar for the upper three income quartile states, and approximately 40% lower than the risk for states in the lowest quartile.
Figure 4.3 Nelson-Aalen cumulative hazard rates by median income quartiles

Legislative professionalism The study hypothesized that states with more professional legislatures would be more likely to adopt policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. Analysis did not support this hypothesis. No significant influence of legislative professionalism on a state’s likelihood of adopting a qualifying policy was identified.

Interstate policy migration. A state’s likelihood of adopting a policy that regulated the operations of out-of-state, regionally accredited higher education institutions was hypothesized to increase as neighboring states adopted similar policies. The interstate policy migration specific model found no statistically significant relationship between a state’s adoption of a qualifying policy and the adoption patterns of its neighboring states. The $X^2$ for this model was 0.18 demonstrating that the inclusion of interstate policy migration did not improve the model fit over a constant only model. However, when entered into the fully specified model, interstate policy migration did
demonstrate a statistically significant influence on policy adoption, but not in the
direction hypothesized. In the fully specified model, a one unit increase in neighboring
adoptions decreased the likelihood of a state adopting a qualifying policy by 46% (p = .05)

Figure 4.3 provides a graphic depiction for the cumulative hazard estimates for
states by the number of neighboring states that had previously adopted a qualifying
policy. In order to control for the fact that the number of potential neighboring states
which could adopt varies by state policy migration was coded to 0 for no states, one for
one state and 2 for two or more states following McLendon’s (2003b) model. The risk for
states with one previously adopting neighboring state was higher than for those states in
the other two categories throughout the study period. States with no previously adopting
neighbors experienced greater risk of policy adoption than states with two or more
previously adopting neighbors throughout much of the study. In 2009, however, the risk
of policy adoption in states with two or more adopting neighbors eclipsed that of states
with no adopting neighbors and continued to increase in 2010.
Figure 4.4 Nelson-Aalen cumulative hazard estimates by policy migration

**Power structure.** Centralization of higher education, responsibilities of state boards, and politicization of higher education governance were all hypothesized to increase the likelihood of states adopting qualifying policies.

**Centralization of Higher Education.** States with more centralized governance structures were hypothesized to be more likely to adopt policies that regulated the operations of out-of-state, regionally accredited higher education institutions. States with multiple higher education systems, and thus less centralization of governance, were 65% less likely to adopt a qualifying policy ($p = .000$) in the power structure specific model, and 54% less likely in the fully specified model ($p = .03$). This finding supported the study hypothesis that centralization of higher education governance significantly influenced state adoption of qualifying policies.
Roles and responsibilities of state higher education governance boards. The variables related to state higher education governance boards were examined. The first was the role of the state higher education board in determining in-state public institutions. The second was the potential of conflicting agendas for boards that make strategic decisions for in-state public institutions and grant authorization for non-public educational providers. The third was politicization of the higher education governance board as reflective of the percentage of the board appointed by the governor. All of the variables were hypothesized to increase the likelihood that states would adopt a qualifying policy. This finding was not supported by the study’s findings. No significant influence of any of these measures of state higher education governance boards on a state’s likelihood of adopting a qualifying policy was identified.

Decision-making environment. Previous passage of in-state distance education legislation, non-public institutional representation, and technological development were all hypothesized to be key elements in the social and political environment that to influenced the adoption of a policy that regulated the operations of out-of-state, regionally accredited higher education institutions. Previous passage of in-state distance education legislation and technological development were hypothesized to increase the likelihood of adoption whereas non-public institutional representation was hypothesized to decrease the likelihood of policy adoption.

Previous passage of in-state distance education legislation. Previous passage of both K-12 and higher education distance education was hypothesized to have a positive influence on adoption of a qualifying policy. This finding was not supported by the
analysis. No significant influence of in-state distance higher education on a state’s likelihood of adopting a qualifying policy was identified.

*Non-public institutional representation.* Mixed results were indicted by the study’s findings on the influence of non-public institutional representation on the adoption of qualifying policies. No significant relationship between legislatively mandated representation of non-public institutions on state higher education governing or advisory bodies was found. This finding appears to mirror previously discussed findings of non-significance regarding other elements of state higher education governance structure.

The presence of a state recognized, organized non-public higher education advocacy group did demonstrate a negative and significant influence on adoption of a qualifying policy in both the decision-making environment specific and fully specified models. In the decision-making environment specific model the presence of a state recognized non-public higher education advocacy group deceased the likelihood of adoption of a policy by 70% (p =.03). In the fully specified model, the influence was even greater as states with state recognized non-public higher education advocacy groups were 77% (p = .03) less likely to adopt a policy regulating the operations of out-of-state, regionally-accredited, publically-funded institutions.
### Table 4.6

Summary of Findings, by hypothesis including expected and actual effects on policy

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Hypothesis</th>
<th>Expected Sign</th>
<th>Actual Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H01 Political party control</td>
<td>States with single party control will be more likely to adopt policies</td>
<td>+</td>
<td>Mixed</td>
</tr>
<tr>
<td>H02 State spending on higher education</td>
<td>States that make larger fiscal investments per capita in in-state higher education will be more likely to adopt policies</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>H03 Higher education participation</td>
<td>States that have achieved high rates of participation in higher education will be more likely to adopt policies</td>
<td>+</td>
<td>(n.s.)</td>
</tr>
<tr>
<td>H04 Median income</td>
<td>States with higher median incomes will be less likely to adopt policies</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>H05 Legislative professionalism</td>
<td>States with greater degrees of legislative professionalism will be more likely to adopt policies</td>
<td>+</td>
<td>(n.s.)</td>
</tr>
<tr>
<td>Policy Migration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H06 Policy migration</td>
<td>States that share a border with one or more states that have previously adopted policies will be more likely to adopt policies</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Power Structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H07 Centralized governance</td>
<td>States with more centralized governance systems will be more likely to adopt policies</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>H08 Politicization of higher education governance board</td>
<td>States in which the higher education governance structure is more politicized will be more likely to adopt policies</td>
<td>+</td>
<td>(n.s.)</td>
</tr>
<tr>
<td>Decision-making Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H09 In-state distance education</td>
<td>States that have previously passed legislation authorizing in-state distance education systems will be more likely to adopt policies</td>
<td>+</td>
<td>(n.s.)</td>
</tr>
<tr>
<td>H10 Non-public institutional representation</td>
<td>States with active representation of non-public institutions in their state higher education policy process will be less likely to adopt policies</td>
<td>-</td>
<td>(n.s.)</td>
</tr>
<tr>
<td>H011 Technology development</td>
<td>As technology development increases states will be more likely to adopt policies</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
Summary

Results described in this chapter indicate that several variables influenced the likelihood of a state adopting a policy that regulated the operations of out-of-state, regionally-accredited, publically-funded institutions. Table 4.6 summarizes the significance and direction of the effects of each hypothesized variable included in the fully specified model. The implications of these findings and conclusions derived from them are addressed in the final chapter of this dissertation.
CHAPTER 5
DISCUSSIONS AND CONCLUSIONS

This chapter begins with a discussion of the findings presented in Chapter 4 and how they address the central research question for this study: What conditions influence the probability that states will adopt a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions within their boundaries? Each of the findings is discussed in the context of their contribution to the theoretical framework on which this study is based. Finally, theoretical and policy implications for research are addressed.

Review of the Study

The purpose of this study was to explore the applicability of strategic choice theory to expand upon existing models of state higher education policy innovation in the context of the adoption of polices that regulate the distance education operations of out-of-state, regionally accredited higher education institutions. Based upon prior research and the established theoretical framework, the central research question was developed. Four sets of predictor variables were identified by the theoretical framework. The first two sets of predictor variables were based on existing models of state policy adoption: state characteristics and interstate policy migration. The remaining sets of predictor variables were based on the application of strategic choice theory: power structures and decision-making environment. The power structures variable set represented an expansion of state higher education governance structure that had demonstrated influence on state higher education policy innovation in prior literature (Knott & Payne, 2004; McLendon, 2003b;
McLendon et al., 2009; McLendon & Ness, 2003; Volkwein & Tandberg, 2008; Young et al., 2005). The decision-making environment variable set was designed to reflect phenomenon outside of the formal governance structure which may have influenced policy adoption.

Table 5.1

Summary of findings, by covariate including expected and actual effects on policy

<table>
<thead>
<tr>
<th>State Characteristics</th>
<th>Expected</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic control of state legislature</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Republican control of state legislature</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>State Spending on Higher Education (per capita)</td>
<td>-</td>
<td>none</td>
</tr>
<tr>
<td>State participation in higher education</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>State median income (per thousand)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Legislative professionalism</td>
<td>+</td>
<td>none</td>
</tr>
</tbody>
</table>

| Interstate Policy Migration                                                           | +        | -      |

| Power Structures                                                                      |          |        |
| Centralization of higher education                                                    | +        | +      |
| State role in budget and program decisions                                            | +        | none   |
| Same board approved out-of-state institutions and approved in-state institutions     | +        | +      |
| Percentage of state higher education governing body appointed by the governor         | +        | +      |

| Decision-making Environment                                                           |          |        |
| Previously established in-state public distance higher education                     | +        | +      |
| Previously established K-12 distance education                                        | +        | +      |
| Presence of organized non-public higher education advocacy group                      | -        | -      |
| Representation of non-public institutions on state higher education governing or advisory body | -        | -      |

* Significant at .05 level

A series of eleven hypotheses were developed to explore the influence of each of the four sets of predictor variables on the probability that states would adopt a policy that
regulated the distance education operations of out-of-state, regionally accredited higher education institutions within their boundaries. Five Event History Analysis (EHA) models were crafted to address the eleven hypotheses using the Webuill model. Each of four sets of predictor variables was tested separately to provide for more in-depth analysis of the independent variables. Finally a fully specified model which included each of the previous models was specified. Table 5.1 provides a list of the predictor variables tested with their expected and actual influences on the adoption of the target polices during the study timeframe.

**Discussion of Findings**

This study suggested a theoretical framework for the adoption of polices that restricted the actions of out-of-state public institutions providing cross-border distance higher education which included traditional policy predictors and strategic choice variables. Statistically significant influences where identified in each of the four theoretical predictors: state characteristics, policy migration, power structures and decision-making environment. The applicability of state characteristics was limited to median income and a negative relationship was identified between policy migration and policy adoption. Findings supported the application of strategic choice variables related to power structures and the social and political environment to state policy adoption research. Together these findings support application of the framework of state policy adoption presented in this study which included analysis of the role of power and the political and social environment in shaping policy innovation with specific attention given to both formal and informal power structures.
**State characteristics.** Five state characteristics were hypothesized to influence the adoption of a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions: single party control of the state legislature, state spending on higher education, state participation in higher education, median income, and legislative professionalism. The findings both confirmed and contradicted the hypothesized relationships between these variables and the adoption of the target policies. Most findings did not reach statistical significance. Although Republican controlled legislatures were significantly less likely to adopt a target policy in the state characteristics specific model, only state median income was a statistically significant predictor of policy adoption in the fully specified model. These findings build upon prior literature to indicate that while state characteristics do play an important role in shaping policy innovation, researchers should look beyond demography when examining the factors that influence state policy choices to models.

**Political party control.** This study hypothesized that states with single party control would be more likely to adopt a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. The findings indicate that single party control was an inconsistent predictor of policy adoption in this sample. Differences in policy adoption trends were seen between single party and split legislatures, but the directionality of those differences was dependent on the political party in control. Democratic controlled legislatures were 10% more likely to adopt a targeted policy than split controlled legislatures. Republican controlled legislatures were 62% less likely to adopt a targeted policy than a split control legislature. However, while Republican control of the legislature was a statistically significant predictor in the state
characteristics specific model, political control of the legislature by either party was not a statistically significant predictor in the fully specified model. This lack of significance contradicts findings in prior literature.

Prior literature had demonstrated fairly consistent relationships between political party control and state higher education policy innovation (Knott & Payne, 2004; Volkwein & Tandberg, 2008; Young et al., 2005). In states with single party control, legislatures have been more likely to engage in policy innovation (McLendon & Ness, 2003; Young et al., 2005). Differences between the types of legislation examined in this study, legislation regulating out-of-state institutions, and those types examined in previous literature, primarily in-state fiscal and accountability policies, may account for this study’s divergent findings. In-state higher education fiscal and accountability policies often have hefty price tags (Young et al., 2005) for state legislatures making partisan decision-making all the more likely as they strike at the heart of partisan conflicts over spending philosophies. However, policies that are primarily regulatory in nature and technically complex tend to generate less partisan conflict while generating more attention from special interest groups (Gerber & Teske, 2000).

The fiscal implications of adopting a policy that regulated the distance education operations of out-of-state, regionally accredited higher education institutions would vary significantly with the details of each states policy. In most states the cost of regulating out-of-state institutions is at least in part passed on to the institutions themselves placing the fiscal implications of regulations on the institutions rather than the states. These fees tend to vary with the degree of oversight the state assumes. For example, states like Ohio and Massachusetts assume roles which mirror accreditation including site visits and panel
reviews and have fees which have been estimated in the range of $12,000 to $50,000 (Poulin & Fong, 2011; State Higher Education Executive Officers, 2012), Conversely, Wyoming requires a minimal filing for regionally accredited institutions and charges a flat fee of $50.00.

Speculation has existed among institutions that in some circumstances state registration fees have been designed to generate income for states rather than to offset authorization costs. This has included speculation that income generation serves as a motivating factor policy adoption. The significant fees associated with both initial and renewal authorization processes in some states have appeared to some to lend credence to these speculations.

In the methods section of this study, Table 3.3 outlined the stated purpose of authorization legislation for states which included such language in their regulations. These findings indicated that authorization legislation was predominantly motivated by a desire to insure consumer protection and establish quality standards for higher education. This intent appeared to be echoed in the findings presented in Table 3.1 which referenced the categories of actions which were regulated under state authorizations provisions. Faculty qualifications and programs of study were the most commonly regulated actions followed by fiduciary responsibilities. These actions are clearly tied to consumer protection and quality standards, further bolstering the conclusion that authorization requirements have been motivated by these factors rather than as a source of revenue generation for the state. These findings do not entirely preclude revenue generation as a regulatory motivator. However, in conjunction with the lack of significance between policy adoption and state characteristics, such as political party control, that have
traditionally demonstrated strong relationships to fiscal policy adoption, it appears to be unlikely that revenue generation has been a primary motivation for this type of policy adoption in most states.

Several possible alternative explanations for this study’s divergent findings can be identified. There has been significant industry speculation (Hill, 2012) that states may be motivated to pass policies which restrict out-of-state institutions in order to protect the state’s higher education market for in-state institutions. This is reinforced by the state characteristics only model findings. These findings indicated that republican legislatures, which have traditionally championed free market approaches, were significantly less likely to adopt the targeted policy. The lack of significance for party control in the full model may reflect a reality in which partisan legislative politics play a smaller role in choosing to regulate institutions that do not have a well-established constituency within a state. These possibilities and how they may apply to policies which regulate out-of-state distance institutions is further explored in the later sections of this chapter. The possibility of protectionist motivations for policy adoption is further discussed in the state spending on higher education and higher education participation section of this chapter. The relationship between in-state and out-of-state regulation is further discussed in the decision-making environment discussion section.

*State spending on higher education and higher education participation.*

Regulation and funding have a strong correlation history in the United States (Volkwein & Tandberg, 2008). This study hypothesized that states that make larger fiscal investments per capita in in-state higher education will be more likely to adopt policies that regulate out-of-state institutions. The findings of this study did not support this
hypothesis. The fully specified model showed a hazard rate of one for the state spending on higher education per capita indicating that there was no influence on adoption of the target policies. Similarly, the study’s findings failed to support the hypothesis that states with higher participation in higher education would be more likely to adopt the targeted policies. No significant relationship was found between higher education participation and policy adoption.

While not statistically significant these findings may have practical significance for policy innovation. Together these variables target an industry perception that state authorization laws are designed, at least in part, to be protective of the higher education market within a state (Hill, 2012). States are commonly assumed to limit the out-of-state institutions that can enter the state to complete with in-state institutions for students and tuition dollars. This study’s findings appear to contradict this premise instead finding that state investment in in-state institutions may not be a primary motivation for the passage of these policies.

There are distinct limits on the ability to interpret legislative motivation for adoption of policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions from such distal measures as higher education spending and participation in higher education on the. However, the implication that these polices may not be designed to keep out-of-state institutions out of the market may be further buoyed by the fact that their adoption does not appear to follow the pattern of fiscally minded policy innovation. In one of the earliest studies of state policy innovation, Dye (1966) found that a “state’s economic development rather than its [political] party system that [was] the principal determinant of its educational
policy” (Dye, 1966, p. 110). More recent studies have found similar relationships between increased state higher education funding and the adoption of policies that establish operational or fiscal standards (Volkwein & Tandberg, 2008).

Rates of participation in higher education have also been seen as a potential predictor of policy innovation (Young et al., 2005), especially those policies tied to tuition and state higher education funding (Volkwein & Tandberg, 2008). Yet this study’s findings indicate policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions appear not to be as influenced by state fiscal concerns as by the fiscal health of the citizens of the states. Taken together these findings appear to imply that the motivation for these laws is focused more on consumer protection than on protection of government enterprises. The relationship between policy adoption and the fiscal health of state citizens is further discussed in the median income section of this chapter.

**Median income.** This study hypothesized the states with higher median incomes would be more likely to adopt policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. This hypothesis was supported by the findings of this study. A $1,000 increase in state median income resulted in an 8% increase in the hazard rate for policy adoption. Several studies have found that states with higher per capita income were more likely to pass higher education policies related to performance (Knott & Payne, 2004) and fiscal (McLendon et al., 2009; Volkwein & Tandberg, 2008) reform. These findings also contradict findings from a number of studies that have attempted to link state fiscal health to post-secondary policy innovations that are not fundamentally fiscal (McLendon et al., 2006). In light of the
earlier finding that state spending on higher education and state higher education
enrollment where not significant influencers on the adoption of the targeted policies and
that policies restricting out-of-state institutions are not fundamentally fiscal, this finding
does seem point to other interpretations of the relationship between state median income
and policy adoption.

Figure 5.1 showed the cumulative hazard rate for states broken out by median
income quartiles. While initially risk increased at relatively equal rate, the risk among the
top three income groups remained relatively stable throughout the time period and only
increased at the end of the study period. However, in that same period, the hazard rate for
the lowest income quartile increased rapidly. At the end of the study, period states in the
lowest quartile states have more than 40% higher risk of adopting a targeted policy. One
explanation for the increased risk among the lowest earning states is that these states
might have felt a greater urgency to pass legislation that established stronger consumer
protections.

Consumer protection is the most often cited purpose of policies that regulated the
distance education operations of out-of-state, regionally accredited higher education
institutions. These states may have seen a larger influx of low-quality educational
providers following a significant downturn in their local economies or have had more
active policy entrepreneurship around consumer protection issues during the study time
frame. These states may also have had an increased need to provide an avenue to collect
revenue to cover the costs associated with overseeing the operations of out-of state
institutions because they had less tax revenue at their disposal. Regardless of the cause,
these findings indicate that the relationship between median income and policy adoption is more complicated than the initial findings would imply.

Figure 5.1 Nelson-Aalen cumulative hazard rates by median income quartiles

Legislative professionalism. This study hypothesized that states with higher degrees of legislative professionalism would be more likely to adopt a targeted policy. The findings of this study did not support this hypothesis as legislative professionalism appears to have had no influence on policy adoption. Prior research has indicated that more professional legislatures are more likely to adopt innovative policies. Tandberg (2008) found a significant and positive relationship with state higher education fiscal policy innovation. Tandberg examined higher education appropriations between 1997 and 2001 finding that more professional legislature slightly favored increased higher education expenditures. Increased time spent in legislative session and greater legislative ambition have been proposed as possible causes for increased interest in policy innovation (Barrilleaux & Berkman, 2003).
**Interstate policy migration.** Interstate policy migration was the second set of theoretically driven policy predictors for this study. The study hypothesized that states that share a border with one or more states that have previously adopted a targeted policy would be more likely to adopt a policy that restricted the actions of out-of-state public institutions providing cross-border distance higher education. This influence was further hypothesized to increase as the number of previously adopting neighboring states increased. The findings of this study did not support this hypothesis. A one unit increase in a state’s interstate policy migration category decreased the likelihood of policy adoption by 46%. Table 4.4 demonstrates cumulative hazard rates by policy migration category. States with one neighboring state that had previously adopted the policy were at the highest risk of policy adoption, but states with two or more previously adopting neighboring states had the lowest risk of policy adoption.

Although there is strong support for a positive relationship between policy adoption and interstate policy migration in prior literature (McLendon & Cohen-Vogel, 2008; McLendon, 2003b; Walker, 1969), there have also been a number on policy adoption studies that have either found policy migration’s influence is dependent of the type of legislation (Doyle, McLendon, & Hearn, 2010; Young et al., 2005). Other studies have found negative or non-significant influences of policy migration on policy adoption (Doyle, 2006; McLendon & Cohen-Vogel, 2008; McLendon et al., 2006; McLendon et al., 2009; Sponsler, 2011). Given these conflicting findings in prior literature the findings of this study are not surprising.

There are a number of reasons interstate policy migration may demonstrate a negative influence on policy passage. Any study that has attempted to define interstate
influence by assigning a state to a set of states that may influence the target states’
behavior necessarily has made some arbitrary decisions which may not reflect the nature
of policy influences that exist. This study employed the “neighboring states” model
commonly used in state policy innovation studies (McLendon, 2003b; Young et al.,
2005). This model assumed that states that share a contagious border were most likely to
influence each other’s policy adoption behavior. In an increasingly global society, this
assumption may be misplaced and fail to recognize which states are seen as “innovators”
to be imitated. For example, this study does not include a rank or indicator designed to
measure the role of “prestige” or perceptions of higher education quality which may mark
certain states as “bell weathers” for policy replication rather than simple proximity.

Timing of policy adoption may also have influence on other states. In 2005,
Young et al. found that found a positive and significant relationship between the number
of contiguous states that had previously adopted a policy and adoption of higher
education finance policies. They also noted, however, that it appeared that the greatest
influence occurred between three and five years after the original policy adoption. They
noted that such findings warranted further exploration of the extent to which policy
entrepreneurship might influence policy migration in some policy arenas.

Beyond the issues that surround the appropriate definition of influential states and
the timing of policy innovation, other possible explanations for negative policy migration
findings have been identified. If one assumes that states do in fact learn from their nearest
neighbors, one must assume that some states may choose not to regulate based on the
experience they observe in adopting states. It is possible that states surrounded by states
that imposed significant limits on out-of-state institutions may have observed negative
impacts on those states and therefore choose not to adopt similar policies. Outcomes linked to policy adoption such as loss of public support for legislators who championed policy adoption, the establishment of organized opposition to policy passage and implementation, or an erosion of the relationship between legislators and higher education entities in one state would likely temper enthusiasm for the adoption of a similar policy in a neighboring state. Neighboring states may also have observed the positive gains that states predict from policy implementation are not fully realized. To assume that all states would adopt the same policies as their neighbors is to assume that all policy passage results in gains that other states will want to imitate, an assumption that appears to be misplaced in this arena.

Finally, the influence of policy migration on adoption of the policies targeted in this study may reflect the unique nature of cross-border regulation. When examining cross-border distance education legislation, it is reasonable to assume that institutions within a state that wished to engage in servicing students in another state would be most affected by the rules in its neighboring states. Residents of neighboring states could be viewed as more likely to choose to attend a school in a neighboring state, as opposed to one in a distance state, based on phenomena like prestige, brand recognition, and reputation. Therefore, a state that passed a policy that imposed significant restrictions on out-of-state institutions would seem to have imposed that burden first and foremost on its closest neighbors. This could be seen as a motivation for neighboring states to pass similar legislation especially in states where large cities have been located on or near the state border. In such cases institutions on both sides of the border would be likely to attract relatively local but still technically out-of-state students. Therefore, the passage of
restrictive policies in one state might prompt reactive passage of similar legislation in the neighboring state. Yet, in many instances, states have preexisting reciprocity agreements with at least some of its neighboring states.

Localized interstate reciprocity agreements exist between many neighboring states and often have resulted in the states closest to the state passing restrictive policy being exempted from the policy requirements. Such agreements exist, for example, between Kansas and Missouri and Wisconsin and Minnesota. Other states extend some degree of reciprocity to all regionally accredited institutions in states within the authority of a shared regional accreditor (Rhode Island) or regional compact (Southern Regional Electronic Campus). By enacting localized interstate reciprocity agreements, states may have found a balance between providing a broad range of degree options to students while establishing institutional expectations that reflected the values and concerns of their geographic region. Therefore the states most impacted by a state’s passage of policies that restricted the actions of out-of-state public institutions providing cross-border distance higher education may not be states that are nearest neighbors to that state. Instead, it may be those states that fall just beyond such reciprocity agreements whose propensity to adopt policies would be most influenced.

A number of regional differences that may have influenced the migration of cross-border distance higher education policy were outside of the scope of this study. These kinds of differences often exist within the category of actions states chose to regulate rather than in the choice to regulate at all. Further research is warranted into the role of regionalism in cross-border regulatory practices. This research should include exploration of specific categories of regulation such as the definition of physical presence.
**Strategic choice variables.** This study sought to examine the applicability of strategic choice theory to build upon existing models of state higher education policy innovation. Strategic choice theory suggested that power structures and the social and political environment in which decisions are made limit the choices viewed as acceptable to decision makers (Child, 1997). Two sets of strategic choice predictor variables were introduced in this study: power structure and decision-making environment.

**Power structure.** Variables included in the power structure predictor set for this study were designed to represent formal government structures that had legislatively mandated roles in state higher education governance. In previous studies, higher education governance structure has shown wide applicability to policy innovation. Higher education governance structure has most commonly been defined in literature using the McGuiness classification system (Hearn & Griswold, 1994; McLendon et al., 2006; McLendon et al., 2009; Young et al., 2005). This system is based primarily on the role of the state higher education governance board in the operations of the state’s public institutions. This study hypothesized that this classification system which often results in the reduction of state higher governance structure to a simple bivariate variable, was too broad a characterization of the complex and highly variant nature of this group of governing boards. It was hypothesized that this classification system did not adequately allow for the level of analysis of the role of power structures in influencing the adoptions of policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education. Therefore this study employed four variables that sought to more closely examine the differences existing in governance structures between states: centralization of in-state higher education governance, the relationship of the
decision-making body that determines eligibility of out-of-state institutions to operate within their state to their in-state public institutions, and the state’s role in regulating in-state, non-public higher education.

Two hypotheses were formed based on prior literature. First, that states with more centralized governance systems would be more likely to adopt the targeting policies. Second, that states in which the state higher education governance boards exercised more control over their in-state institutions would be more likely to adopt the targeted policies. Analysis supported the first hypothesis indicating that states with more centralized higher education systems were more likely to adopt the targeted policies. This indicates that organized action at the institution or system level has the potential to significantly influence certain types of policy adoption. However, the study found no significant influence of the roles and responsibilities of state higher education boards/commissions on policy adoption.

Centralized governance. This study hypothesized that states with more centralized governance structures would be more likely to adopt policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education. The directionally of this hypotheses assumed that in-state public institutions would support legislation that restricted the actions of out-of-state public institutions providing cross-border distance higher education. While there was no published evidence that in-state institutions have supported this type of legislation in the past, there appeared to be a general assumption in the higher education industry that in-state institutions would prefer that state regulators prevented out-of-state institutions from operating within their borders (Hill, 2012).
This study parameterized public higher education centralization as a dichotomous variable representing state utilization of a single centralized system of organization for its in-state, public, four-year higher education States with multiple higher education systems were 64% less likely ($p = .03$) to adopt a targeted policy. This confirmed findings in prior literature (Knott & Payne, 2004; McLendon et al., 2006; McLendon et al., 2009; Young et al., 2005; Zumeta, 1996) that indicated that states with more centralized governance structure were more likely to adopt innovative policies that establish standards of performance and fiscal management.

Although little research exists that directly references the role of institutions in higher education lobbying, Tandberg’s 2006, study does offer some insight into this finding. The author conducted an in-depth case study of a large land grant institution’s lobbying arm and found that alliances tended to be an outgrowth of the state’s higher education environment. It was noted that when a state’s higher education institutions were aligned on an issue they were perceived to play a powerful role in policy adoption. In a single system state, the centralization of authority provides a clear point of contact between the legislature and public higher education. In a multi-system state, institutions or systems may be required to attempt to gain support for their legislative agendas by building support from local legislators and may have difficulty gaining a voice for their legislative needs to the state agenda. While divergent options about policy undoubtedly exist among institutions in a single system state, the centralization of power and resources into a single system office allows that office the freedom to prioritize the needs of institutions and present a unified position on issues. Such a system condenses the number of power brokers who interface with the legislature, and pushes inter-institutional agenda
conflicts to internal systems. Because centralized systems “speak with one voice,” they may be more likely to have an active role in setting a legislative agenda.

*Roles and responsibilities of State Boards/Commissions.* States in which state higher education boards had more control over in-state institutions were hypothesized to be more likely to adopt policies that regulated the distance education operations of out-of-state, regionally accredited higher education institutions. Measures of state board/commission roles and responsibilities included a dichotomous variable that represented whether the same board made both strategic decisions for in-state public institutions and grants authorization for non-public educational providers, a dichotomous variable that represented the role of the board/commission in making budgetary decisions for its in-state institution, and a variable that represented the percentage of the board/commission that was appointed by the governor. Findings did not support the hypothesis that states in which state higher education boards had more control over in-state institutions including making both strategic decisions for in-state public institutions and grants authorization for non-public educational providers would be more likely to adopt policies that regulate the distance education operations of out-of-state, regionally accredited higher education institutions. None of the roles and responsibilities variables had a significant influence on the likelihood that a state would adopt the policies targeted in this study.

Although this study hypothesized that these more detailed variables would be more likely to identify influence than the more global measures generally used for higher education governance structure, these findings are not surprising given the mixed findings seen in prior literature. Although some measure of higher education governance
structure, most often the McGuninnes model (Hearn & Griswold, 1994; McLendon et al., 2006; McLendon et al., 2009; Young et al., 2005), is almost universally included in state higher education policy adoption studies, but the results have varied significantly. Zumeta (1996) found that that higher education governance structure had a significant relationship with state higher education policy adoption, especially in relationship to policies that regulated non-public institutions. However, Young et al. (2005) found that state political climates and interstate policy migration were better predictors of state higher education finance and accountability policy adoption than government structures or socio-demographic state characteristics. Additionally, a number of studies (Nettles & Cole, 1999; Sponsler, 2011) have found no statistically significant influence of higher education governance structure on policy adoption.

The interest in the lack of significant influence of state higher education governance structure on policy adoption is perhaps in comparison to the significant influence of the centralization of state higher education systems on policy adoption. While diffusion of power in state higher education has a significant negative influence on the adoption of targeted policies, state higher education governance structures do not appear to influence policy adoption. There are several possible explanations for this difference which may account for these differences including variations in the perceived and actual purposes, roles, and makeups of these bodies.

First, state higher education governance board/commissions and higher education systems have very different purposes in most states. Although there is some variation between states, state higher education systems are generally charged with the maintenance and promotion of a specific set of higher education institutions within the
state. The state higher education governance board/commission’s role is usually very
different. It generally functions as the “implementation” arm of the state government. In
most states, governing bodies have been charged with overseeing and making
recommendations regarding the implementation of the relevant laws set by the state
legislature. As such, these bodies may view their role as that of maintaining the
regulations rather than developing innovative policy recommendations that would in most
cases expand the reach of their body. State higher education governance
boards/commissions usually have direct oversight over the state offices that would be
charged with carrying out any legislation that was developed. In many states higher
education offices have small staffs and limited budgets. Therefore the state higher
education board/commission might be more sensitive to the workload associated with
carrying out policies that extended their oversight to out-of-state institutions.

The difference in role of state higher education governance boards/commissions
and state higher education systems may also influence their perspectives on the risks and
benefits of certain policy decisions. In many states, the state’s higher education
governance board/commission has been charged with the oversight of both public and
private institutions. State higher education systems generally have a more focused
mission that allows them to focus and advocate solely for the needs of their in-state
public institutions. This may have resulted in an impetus and ability for higher education
systems to take a more active role in lobbying legislatures for policies which might be
viewed as offering some benefit or protection of the state’s public institutions.

Finally, in many states there is a significant difference in the makeup of the body
of a state higher education board/commission and the leadership of the state higher
education system. Nationally, during the study period 80% of governing body members were appointed by the governor to represent the interests of the public. As such, they may have come from diverse professional backgrounds that may not have included higher education administration. In comparison, state higher education system offices are often staffed by long standing higher education professionals who have served in a variety of positions in higher education institutions or other state systems. As strategic choice theory suggests, these differences in background and makeup influence both the policies that either body would view as beneficial to higher education in their state and to the roles that bodies take on in introducing and advocating for policy innovations.

**Decision-making environment.** Strategic choice theory suggests that social and political realities of the decision-making environment have significant influence on the choices which may be viewed as acceptable to decision makers. In this study three sets of variables were designed to test the applicability of this theory to policies that restricted the actions of out-of-state public institutions providing cross-border distance higher education: In state distance education, non-public institutional representation, and time.

**In-state distance education.** Previous passage of related legislation might signal a change in the policy making environment around a particular policy arena (McLendon & Cohen-Vogel, 2008; McLendon et al., 2009). Therefore, this study hypothesized that states which had previously passed distance education legislation that established in-state distance education systems at the K-12 or post-secondary level would be more likely to adopt legislation that restricted the actions of out-of-state public institutions providing cross-border distance higher education. The findings did not support this hypothesis. The hazard ratio for previous passage of legislation that established an in-state distance higher
education institution or system was perceptually no different than zero. The hazard rate for passage of a state K-12 distance education institution demonstrated a positive relationship between passage and the adopting of the targeted policies, but the finding was not statistically significant. In this study it does not appear that passage of in-state distance higher education policy is a signal for changes in the policy agenda for out-of-state institutions.

**Non-public institutional representation.** This study hypothesized that states with organized representation of non-public institutions would be less likely to adopt policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education. Findings indicated mixed results. Previous literature suggested that a variety of outside groups may exert influence over decision makers and decision-making processes in state higher education policy through various activities usually associated with lobbying (McLendon et al., 2009; Tandberg, 2008, 2010). This study’s findings indicate that representatives of outside groups may have more influence on policy adoption outside the formal structures of government than they do from the inside. Legislatively mandated representation of non-public higher education on a state higher education governance or advisory body showed no significant influence on policy adoption. Conversely, the presence of a state recognized non-public higher education advocacy group within the state decreases the likelihood of policy adoption by 77% (p = .03).

These findings appear to follow a trend established in the power structure linked hypothesis in which state higher education governance boards/commissions had far less influence on policy adoption than the state public-higher education systems. In a similar
fashion, representation of non-public institutions on the state higher education governance board did not appear to influence policy adoption, but the presence of an organized advocacy group for non-public higher education did have a significant influence on policy adoption. These findings appear to confirm Tandberg’s (2008) findings in his study of state higher education appropriations. His findings indicated that density of higher education special interest groups had a significant and positive effect on higher education appropriations when state higher education governance structure did not. Organized non-public higher education groups could be seen to serve much the same role as a highly centralized public higher education system including building key relationships with legislators, setting statewide agendas for policy adoption and pushing inter-institutional conflicts to internal systems.

Interestingly, the findings of this study indicate that centralization of the state public higher education systems and central organization of non-public higher education institutions appeared to influence policy adoption in different ways. This is not surprising given the different relationships that these two groups have with state government. In almost every state, the rules which restrict the operations of out-of-state institutions are an outgrowth of the regulations established for in-state, non-public institutions. While some states explicitly regulate out-of-state distance education institutions separately, most states interpret their jurisdiction to enforce their in-state, non-public institution regulations to be extended to out-of-state distance education providers that establish a presence within their education market. During the study period no state enforced more restrictive regulation on out-of state distance education providers than was enforced on the in-state, non-public higher education institutions, and in fact the regulatory burden
and oversight for out-of-state distance providers was often less than was required for in-state, non-public institutions.

While the actions that determine an institution’s presence within a state’s jurisdiction vary considerably from state to state (Goldstein et al., 2006; State Higher Education Executive Officers, 2012), the logic used to enforce the law remains remarkably similar. As noted in Chapter 3 of this study, states generally cited consumer protection and ensuring high quality educational opportunities for students. As a result non-public institutions would be assumed to have very different preferences in state policy adoption regarding the restriction of out-of-state institutions because these same laws would often also restrict the operations of in-state, non-public institutions. A negative and significant relationship between organized non-public institution advocacy and the adoption of policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education indicates that the organization of non-public higher education institutions has been successful in decreasing the likelihood of the adoption of restrictive distance education polices. The applications of these findings are further discussed in the policy implication section of this chapter.

\textit{Time.} Historically, during periods of strong growth in higher education both state and federal governments have introduced new regulations (John & Parsons, 2004). The monotonic cumulative hazard rate for this study confirms that the risk of adopting a policy that restricts the actions of out-of-state public institutions providing cross-border distance higher education increased during the study period. This finding justified the inclusion of time as a theoretically driven independent variable and use of the Weibull model of EHA.
Theoretical Implications

For more than 40 years state policy innovation has largely been viewed as a function of two distinct forces: state characteristics and policy migration. Despite the widespread applicability of these models to state policy innovation (Knott & Payne, 2004; McLendon, 2003b; McLendon et al., 2009; McLendon & Ness, 2003; Volkwein & Tandberg, 2008; Young et al., 2005), researchers (McLendon, 2003a; McLendon & Cohen-Vogel, 2008; Volkwein & Tandberg, 2008; Young et al., 2005) have continued to call for models that explore the role of power and the social and political environment in which decisions are made. This study sought to expand upon existing models of state higher education policy innovation using strategic choice theory. Strategic choice theory suggests that power structures and decision-making environments work together with structural realities to frame the decisions that may be viewed as acceptable by decision makers at a given time.

The relationships between policy predictors and policy adoption in this study sometimes contradicted prior literature. Most notably an increase in the number of neighboring states that had previously passed similar legislation decreased the risk of the adoption of the targeted polices. Historically, policy migration has encountered criticism because of the difficulty in determining which states share the kinds of connections that would influence policy imitation (McLendon et al., 2009; Sponsler, 2010, 2011). Although states with contiguous borders have been widely used since the 1990s (Berry & Berry, 1990, 1991; McLendon & Cohen-Vogel, 2008; McLendon, 2003b; McLendon et al., 2006; Walker, 1969; Young et al., 2005), state higher education policy innovation literature has also explored the applicability of regional accrediting agencies and
interstate compacts with mixed findings (Sponsler, 2011). In an increasingly mobile and
global world, the question of determining which states serve as bellwethers for others
seems to be an increasingly difficult task, especially in quantitative research that ignores
the micro-realities of agenda setting and policy entrepreneurship.

Recent research (Sponsler, 2010) has also called for the need to explore negative
relationships between policy migration and policy adoption. Interstate policy migration is
based on the idea that states learn from each other and build upon what was learned in
other states. It appears that a bias has existed in policy migration research toward learning
resulting in policy passage. It is equally possible that states have learned from each other
when negative relationships exist between interstate policy migration and policy adoption
in some policy arenas. In these cases perhaps by watching early adopting states, other
states have learned which policies they do not want to adopt. This might be a result of the
political, social, or fiscal ramifications of policy passage. In the case of policies which are
restrictive in nature, this negative policy migration may also have resulted from a desire
to maintain or achieve access to that which is restricted in another state and thereby
gaining some sort of competitive advantage. These findings of this study support the need
for additional research into negative influences of policy migration on policy adoption.

Future research in this arena should examine policy migration’s multi-faceted
relationship with policy adoption. Research should explore whether the physical
proximity of states has continued to be as relevant an indicator of policy influence in an
increasingly interconnected world or whether, in specific policy arenas, states have come
to rely on other factors. Many groups such as SHEEO and the National Council of State
Legislatures have promoted new and deeper relationships between policy leaders across
jurisdictional and geographic boundaries. These relationships have likely resulted in broader exposure of policy makers to a variety of policy innovations. Conversely, as media attention on higher education grows, policy leaders may be increasingly influenced by those stories that “make headlines” like the recent challenges to Minnesota’s regulations posed by MOOCs. By their headlining nature, these stories appear to provide avenues for the policy decisions of a small number of key states to play a significant role in shaping public and legislative opinion nationwide. Therefore, future research focused on policies that have been viewed as contentious or controversial would be especially valuable.

The strategic choice predictors of power structures and the decision-making environment demonstrated applicability to the state policy innovation model used in this study. This study’s findings indicated that power structures and the decision-making environment significantly influenced the adoption of policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education. Moreover, the findings indicated that those groups affected by policy adoption in this setting may have more influence over policy adoption than those in formal policy implementation or recommendation roles.

In this study, the centralization of state higher education systems and the presence of organized non-public higher education institutions demonstrated significant influence on policy adoption when formal state governance bodies did not. Those whose actions were controlled by the regulation had a greater and more consistent influence on policy adoption than those in formal agenda-setting roles within the scope of this study. These findings indicate the need for future researcher to consider reframing traditional
definitions of power structures beyond those holding formal power to those stakeholders who may hold considerable in-formal power in a given policy arena. While this approach is often seen in qualitative approaches to policy innovation, it is not common in quantitative studies of state policy innovation. This finding supports the need for policy innovation models that attempt to include the influence of those in both formal and informal roles in shaping policy decisions in a variety of policy arenas.

**Policy Implications**

This study’s findings have significant implications to current policy issues and offer interesting insight into the role of groups effected, directly or in-directly, by on-going efforts to establish cross-border distance higher education reciprocity policy. The American Association of State Colleges and University’s (AASCU) Top Ten Higher Education State Policies Issues for 2013 (Hurley, Harnisch, Moran, & Parker, 2013) brief notes that state legislatures face historic obstacles in the next legislative session. State legislatures are less experienced and are more polarized than those seen in recent decades. In light of these obstacles, higher education policy advocates will have a great deal of work to do educating legislatures about the complex issues facing higher education. This study’s findings indicate that in-state institutions, both public and non-public, may be in the best position to play a critical role in educating and influencing the adoption of policies, especially those policies that restrict the actions of out-of-state public institutions providing cross-border distance higher education.

In 2011 several significant efforts were launched to draft model legislation for interstate reciprocity agreements that would allow institutions to operate across state lines (Hill, 2012; State Higher Education Executive Officers, 2012). The State Authorization
Reciprocity Agreement developed in partnership between the Council of State Governments, the Lumina Foundation and the President’s Forum received national attention (Hill, 2012) as one approach to easing regulatory burden on institutions and state regulators. However, to be successful any interstate reciprocity movement would require legislative adoption in each state. In-state institutions may be in a unique position to influence adoption of such policies within their states.

While in the past in-state public and non-public institutions may have had divergent state higher education policy agendas (Thompson & Zumeta, 2001; Zumeta, 1996), interstate reciprocity for distance education delivery has the ability to bring both industries together with common purpose. The emergence of national awareness of the need to be authorized in each state in which a school serves students and the rapid expansion of distance education has resulted in urgent calls for interstate reciprocity from both private and public institutions. Both public and non-public institutions stand to substantially benefit from a reduction in the regulatory burden of state-by-state authorization requirements (Hill, 2012).

Recent events have indicated that states’ regulatory agencies and laws have struggled to keep up with the rapidly developing technologies resulting in significant ambiguity about where, when and how regulations should be applied. In October, 2012, Minnesota gained national attention (Mangan, 2012b) when it required one of the nation’s largest operators of Massively Open Online Courses, Coursera, to exclude Minnesota students from enrolling in its courses. Massively Open Online Courses (MOOCs) are an immerging trend in higher education in which courses are offered free and without credit to the public through individual institutions or groups of institutions.
Within days, in the face of significant public outcry, the state reversed its decision to claim jurisdiction over Coursera’s offerings citing a misunderstanding of the nature of the offerings and the application of Minnesota state law (Mangan, 2012a). Because the courses were offered free and students did not receive credit, Minnesota determined that they did not meet the requirement for registration, but reiterated its right to regulate all higher education offerings to students within their state and the providers’ obligation to ensure they were aware of the location of their students. Minnesota lawmakers and regulators called for new regulations which clarified the role of the state in overseeing MOOC offerings.

While this incident was resolved fairly quickly, the huge variation in state higher education laws means that MOOCs and other emerging modality providers may face issues in other states. This is set to become increasingly problematic as models move towards establishing even minimal fees for participants, and/or institutions make moves to recognize and grant credit for work completed in alternative modalities (Wukman, 2012). This is just one example of the tension between state legislation, regulators, technology and institutions.

When this web of regulation is multiplied over 50 states and 14 US territories, the advantage of comprehensive interstate reciprocity for educational providers becomes clear. Yet, for some states, the perceived risks would appear to outweigh the benefits. States with strict regulations and significant oversight will likely be reluctant to accept that the regulations of states with less rigorous standards can adequately monitor and fulfill the stricter states legislative intent. This seems especially relevant in states like
Minnesota and Arkansas where higher education regulations include strict adherence to specific thresholds such as general education and faculty standards.

While there have been no published studies on the effectiveness of state distance higher education regulations, their continued existence and growth for more than 40 years indicates that many states believe their regulations have met an ongoing need. It is yet to be seen whether states view interstate reciprocity agreements as an acceptable alternative to their current systems, though early signs of cooperation are promising. In order for such efforts to succeed, proponents will need to clearly address how the proposed agreements will provide equal or greater protections to those provided by the states’ current regulations. It is clear that a firm understanding of both intent of the existing regulations and how interstate reciprocity agreements will allow a state to uphold that intent will be essential to widespread adoption.

This study’s findings indicate that both public and non-public institutions have the potential to play a powerful role in influencing wide-spread adoptions of interstate reciprocity legislation. This influence could potentially be even more significant if public and non-public institutions worked together to shape and support legislation passage. By playing an active role in shaping and building support for policy adoption, institutions can strengthen public and legislative perceptions of the intuition’s interest and commitment to establishing high standards for distance higher education nationwide. This is a vital role for institutions to play in this rapidly changing industry which has the potential to influence state distance higher education policy development and adoption for decades to come. Based on the findings in this study, early adoption efforts might fair best in states with highly centralized higher education systems and active, organized
advocacy groups for non-public education that commit to working together to support reciprocity measures.

**Conclusion**

The findings of this study indicate that cross-border distance higher education policy adoption is the result of a complex combination of internal and external state factors. Both reinforcing and contradicting prevalent models of state higher education policy adoption, this study offers new evidence regarding the need to reexamine the role of traditional policy adoption models. Some of the factors that influenced policy adoption in this study lie beyond the influence of policy makers and advocates. However, through the application of strategic choice theory, this study provides additional insight into the role that power structure and decision-making environment play in shaping policy adoption.

Given the significant variance that exists in cross-border distance higher education policy, state characteristics demonstrated limited influence on the adoption of targeted policy. When such influences were identified, they appeared to align well with the stated purpose of the legislation. While states have consistently framed these policies as consumer protection, distance higher education institutions have been reluctant to accept this premise. Instead providers have speculated, at least privately, that policies were designed to protect in-state higher education markets and increase state revenue. While the findings of this study do not necessarily preclude those motivations, no evidence was found to support these conclusions.

Cross-border distance education policy appears to be at a significant crossroads. Large scale interstate reciprocity movements are progressing while at the same time a significant shift in individual state polices has been seen in many states. Since 2010, half
of US states have revised their cross-border distance education policies. While some states, like Texas, have moved to reduce their role in overseeing out-of-state distance institutions, most moves have been to increase the reach and nature of cross-border regulation. In the midst of this transition, the distance higher education industry has continued to experience significant growth, and emerging modalities like MOOCS are challenging the very definitions of what is and is not higher education.

Through the application of strategic choice theory this study’s findings indicate that in-state public and non-public institutions have the potential to play a significant role in shaping cross-border distance higher education policy. The informal power structure that these institutions create through lobbying and advocacy places them in a unique position to influence decisions. While in the past public and non-public institutions may have had divergent policy agendas in this arena, it would appear that current trends would facilitate organized cooperation to shape policy that would both provide for consumer protection and reduces the regulatory burden on institutions.
REFERENCES


Mangan, K. (2012a, October 20). *Facing backlash, Minnesota decides to allow free online courses after all* [Web log post]. Retrieved from


State authorization § 600.9(c) C.F.R. (2010a).


