Higher Education Governance Structures and Tuition: A Quantitative Analysis

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ABSTRACT

For years, higher education governance and the amount of state funding have been continuous issues in the state-institution relationship. Institutions want more funding and less state control over their activities. From the state’s perspective, legislators want to ensure that state resources are used wisely thereby creating governance structures to oversee higher education. The purpose of the current study is to examine whether the amount of control within the governance structure of a state affects state-level tuition at public 4-year institutions.

This dissertation employs a mixed-method approach, consisting of two parts: a linear regression model with tuition as the dependent variable and a case study using the method of difference framework comparing the higher education governance structures in South Carolina and North Carolina. Contrary to my hypothesis, I find no effect of governance structure on the level of tuition in a state. The fiscal variables in the model (per capita income, higher education enrollment, Medicaid spending per enrollee, corrections spending, highway spending and if a state has a lottery) are significant but in the opposite direction from the hypothesized relationship. Specifically, I find that as spending on higher education and preK-12 increases, tuition increases.

One important finding from my quantitative research concerns the tuition setting authority: if the legislature sets tuition, then average tuition is significantly lower in the state. In addition, the partisan composition of the legislature matters. When Democrats control the state legislature, tuition is significantly lower.
From my case study, I conclude that the organizational structure of the state higher education system matters with tuition levels. Several other factors that weigh heavily in the different tuition rates between the states is language in the North Carolina State Constitution and the appointment process for the different governance systems. The North Carolina State Constitution states that tuition should be “as free as practicable.” While tuition has never been free, this language has played prominently in debates over the tuition levels. The differences in the appointment process to the two governance systems also shape the role played by the different structures. In South Carolina, the governor appoints members, with advice and consent of the state Senate, while in North Carolina the State General Assembly elects the Board of Governors.

Taken together, this research shows that policymakers design systems that suit the needs of their respective states. Many differences exist between the state systems due to our federalist system of government and policymakers will continue to make changes to serve the educational needs of their citizens.
DEDICATION

To all of the teachers who have influenced my journey on this planet, I say thanks. A few of particular note are the late Drs. J. S. Lytle and Larry L. Bauer. Dr. Lytle saw potential and persuaded me to pursue a Master’s degree. I am forever grateful that he took a chance on a student who definitely did not reach their academic potential as an undergraduate.

Dr. Larry L. Bauer was my “second” father and a great friend despite the several years difference in our age. He was quite the contrarian, but he challenged me to think about things and not just regurgitate what others said. I miss our discussions while sipping a good rye after a Clemson Tiger baseball win.

Lastly, I want to recognize my parents, John and Dorothy, who guided me and supported my education while they were alive. I know you both will be with me in spirit as I walk across the stage to accept my Ph.D. a mere 34 years after you both watched me earn my bachelor’s degree. I will always love you both.
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I hope that my children, Forrest and Elizabeth, have learned the lesson of perseverance and lifelong learning. May they always have a desire to learn and never give up on their dreams. I look forward to seeing where your education leads you. Thanks also to Forrest for reviewing this manuscript for errors.

I want to thank my dissertation committee: Joe Stewart, Jeff Fine, Lori Dickes, and Ken Robinson. Each of you brought a very different perspective and talent to this endeavor given your diverse backgrounds and strengths. Words cannot ever adequately convey my appreciation.

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TABLE OF CONTENTS

TITLE PAGE ........................................................................................................................... i
ABSTRACT .............................................................................................................................. ii
DEDICATION ........................................................................................................................ iii
ACKNOWLEDGMENTS ......................................................................................................... iv
LIST OF TABLES .................................................................................................................. viii
LIST OF FIGURES ................................................................................................................ viii

CHAPTER

I. INTRODUCTION ............................................................................................................... 1
   Historical Perspective of Higher Education Funding .................................................... 1
   History of Higher Education Governance .................................................................. 6
   Research Topic ............................................................................................................... 8
   Plan for the Dissertation ............................................................................................... 10

II. LITERATURE REVIEW .................................................................................................. 12
   Fiscal Variables ............................................................................................................ 14
   Political Variables ....................................................................................................... 20
   Higher Education Governance Variables .................................................................. 23
   Tuition-Setting Authority Variables ......................................................................... 29
   Literature Review Summary .......................................................................................... 31

III. DATA, METHODOLOGY, AND RESULTS
    OF QUANTITATIVE MODEL ...................................................................................... 33
    Dependent Variable ................................................................................................... 33
    Independent Variables ............................................................................................... 34
    Model .......................................................................................................................... 45
    Hypotheses .................................................................................................................. 46
    Results ......................................................................................................................... 51
    Discussion of Results ................................................................................................... 56
Table of Contents (Continued)  

IV. CASE STUDY .............................................................................................................. 58

  Comparative Study Design .................................................................................. 58
  Why South Carolina and North Carolina? ......................................................... 61
  The South Carolina Commission on Higher Education .................................. 65
  The University of North Carolina System ......................................................... 70
  Comparison ........................................................................................................... 74
  Summary ............................................................................................................... 78

V. CONCLUSION ........................................................................................................... 80

  Policy Implications .............................................................................................. 85
  Future Research .................................................................................................. 89
  Final Thoughts .................................................................................................... 92

APPENDICES .................................................................................................................. 94

  A: South Carolina Public Institutions of Higher Learning ............................. 95
  B: Mission, Goals, Roles, and Functions of the South Carolina Commission  
    on Higher Education ....................................................................................... 96
  C: The University of North Carolina System Organizational Chart .......... 97
  D: Mission Statement for the University of North Carolina System .......... 98

REFERENCES ............................................................................................................... 99
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Higher Education Governance (most control to least control over higher education)</td>
<td>41</td>
</tr>
<tr>
<td>3.2 Tuition Setting Authority within the States</td>
<td>44</td>
</tr>
<tr>
<td>3.3 Regression Results of Average Tuition</td>
<td>52</td>
</tr>
</tbody>
</table>

LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Average U.S. Tuition, Adjusted for Inflation</td>
<td>4</td>
</tr>
<tr>
<td>1.2 Net Public Enrollment in Higher Education</td>
<td>4</td>
</tr>
<tr>
<td>1.3 Government Appropriations per FTE, Adjusted for Inflation</td>
<td>5</td>
</tr>
<tr>
<td>1.4 Percent of Total Education Revenues Paid by Students</td>
<td>5</td>
</tr>
<tr>
<td>4.1 Average Tuition at 4-year Degree Granting Institutions in South Carolina and North Carolina</td>
<td>78</td>
</tr>
</tbody>
</table>
CHAPTER ONE
INTRODUCTION

During Mark Sanford’s tenure as Governor of the State of South Carolina from 2003 to 2011, he often submitted policy proposals and advocated ideas that went against conventional thinking and upset the established governing class. During his second State of the State Address in 2004, he formally proposed the radical idea of creating a Board of Regents to ensure that the state had a “true statewide vision for higher education” (Sanford, 2004). The governor’s proposal would have given more power to the South Carolina Commission on Higher Education to provide additional oversight responsibility and to allow the Commission to eliminate duplicative programs offered at institutions in the state. The previous year, leaders from Clemson University, the University of South Carolina, and the Medical University of South Carolina had lobbied lawmakers to free their universities from oversight and regulation of the South Carolina Commission on Higher Education, which has relatively little power over the institutions besides approving program curriculum and capital projects (Stensland, 2003). Higher education officials and the Governor staked positions and drew battle lines for confrontation that continued throughout the Sanford gubernatorial administration.

HISTORICAL PERSPECTIVE OF HIGHER EDUCATION FUNDING

This tension between higher education institutions and government has occurred since the establishment of higher learning institutions in the colonies during the 1600s. Harvard, Yale, and William and Mary were three of the earliest higher education institutions established in the colonies. These institutions were “adjuncts of their respective churches,” which were
interconnected with the colonial governments where they were located (Altbach, et al., 1999: 39). The colonies granted a charter of organization, which recognized their existence and outlined their governance as well as the scope of their educational authority. Along with granting charters, the respective colonies partially contributed financially to their operations, even though Harvard and Yale were private institutions outside of normal state governance, oversight, and funding (Altbach, et al., 1999: 40). Thus, from the beginnings of higher education in the U.S., the colonies, now states, have helped fund higher education.

For decades, states continued providing large portions of higher education funding. In the 1969-70 school year, almost half of the revenue for higher education derived from federal, state, or local sources. This began to change in the late 1970s and early 1980s, when the percentage of funding from government sources began to decrease due to worsening economic conditions. By 1995-96, only 38 percent of the revenue for higher education came from government sources. The remaining 62 percent originated from tuition, fees, and other nonpublic sources (Altbach, et al.: 203). This trend has also manifested itself in South Carolina. For example, the Clemson University Budget and Financial Planning Office reports that for FY 2013-14, only 16.5 percent of the unrestricted operating budget originated from state and federal funds, while almost 49 percent came from student tuition and fees (2014 Budget, Clemson University, 2014: 3). The overall trend is for government support to diminish continually over time, at Clemson University and other institutions, unless economic conditions allow state legislature more fiscal resources to increase funding in the future.

A major contributor to this problem was the poor economic conditions in the early 1990s, which reduced tax receipts to the states and forced state legislatures to reduce funding for higher education. As state contributions to higher education decreased, tuition at public institutions rose
by 77 percent from 1990 to 2000. These higher tuition costs were also the result of lower state appropriations, which shifted the costs of an education away from the taxpayer towards the students and parents (Altbach, Berdahl, and Gumport, 1999:378). Figure 1.1 shows the steady increase of average U.S. tuition from 1990 to 2014.

During this same time period, a host of other factors affected higher education and caused fiscal pressures. Enrollment in higher education across the United States was increasing. In 1992, college enrollment was about eight million students and this number increased to a high of approximately 11.62 million in 2011. While current enrollments are indicating a slight decline, (Figure 1.2) increased demands on facilities and instructors in higher education remains an issue for higher education.

As tuition and enrollments increased, the fiscal contributions from state and local governments trended downward. Increases in state appropriations did occur from 1993 to 2001, but since then state and local governments’ contributions towards higher education have decreased (Figure 1.3). With the amount of funding received from governments’ decreasing, students have borne a greater percentage of the total costs of higher education (Figure 1.4).
Figure 1.1 – Average U.S. Tuition, Adjusted for Inflation

Source: National Center for Education Statistics, U.S. Department of Education

Figure 1.2 – Net Public Enrollment in Higher Education

Source: State Higher Education Executive Officers Association
Figure 1.3 – Government Appropriations per FTE, adjusted for inflation

Source: State Higher Education Executive Officers Association

Figure 1.4 – Percent of Total Education Revenues paid by Students

Source: State Higher Education Executive Officers Association
While funding has been a major component of the state-higher education relationship, it has not been the only one. Like funding, governance of higher education has been another key component of the relationship between higher education and state governments. Colonies granted charters that outlined the institution's authority (Altbach, et al., 1999: 40). These were non-controversial until the early 1800s, when the New Hampshire state legislature tried to exert control over the appointment of trustees to the private Dartmouth College. The state legislature and Dartmouth College argued over control of the College after the trustees fired President John Wheelock, who was more favorable to the Democratic-Republicans in power. In 1816, the legislature passed a law changing the school’s corporate charter to allow the governor to appoint trustees to register their disproval of President Wheelock’s removal. This action effectively transferred Dartmouth’s charter from a private institution to a public institution with state control. Ultimately, the arguments reached the U.S. Supreme Court (Dartmouth College v. Woodward), with Daniel Webster representing Dartmouth in the case. While the Court ruling centered on the contracts clause of the U.S. Constitution, the Court held that states could not control private entities (Vile, 2016). This court case started building a firewall between the legislatures and higher education over some areas of governance.

In the 1950s, New Hampshire again became the focal point of government control over higher education. Paul Sweezy, an economist, refused to answer questions regarding his lectures and ties to subversive groups, so police arrested him. While the central point of the case related to due process of the law, the U.S. Supreme Court, in Sweezy v. New Hampshire outlined the four essential freedoms of a university: “to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study.” (Sweezy v.
New Hampshire, 1957) Sweezy v. New Hampshire established academic freedom and limited the powers of state legislature over the day-to-day operations of higher education.

While Dartmouth v. Woodward and Sweezy v. New Hampshire restricted areas where the state government could intervene in higher education, it did not eliminate all control. State governments play an integral role in providing a legal structure under which both public and private institutions exist. This structure extends to creating governance systems that are responsible for planning and coordinating higher education. Additionally, state legislatures are the primary financier of higher education through direct subsidies (Altbach, et al., 1999: 200).

The “power of the purse” adds a layer of control over higher education institutions, as the legislature can use funding to persuade universities to behave in a certain manner. For example, the now defunct South Carolina Budget and Control Board, whose membership included the Chairman of the Senate Finance Committee and the Chairman of the House Ways and Means Committee, issued a moratorium on new capital projects if the universities did not reduce the rates of tuition increases (Greenville News, 2010). However, members of the legislature and college administrators have often disagreed over the funding levels of higher education. In turn, college presidents and chancellors have blamed tuition increases on the lack of funding provided by the legislature. During the summer of 2003, when the Clemson University Board of Trustees voted to increase tuition by 19 percent, then university President Jim Barker was quoted as saying, “It’s regrettable to request such a significant increase, but in the face of an unprecedented funding cut, there is no other option. We have lost a fourth of our state funding in two years” (Drake, 2003). During the 2019 fiscal year, the South Carolina General Assembly increased spending for higher education by $40 million a year with the stated intent to reduce tuition increases (Wilks, 2019). Clemson responded by only increasing tuition by one percent for the
2019-2020 academic year (Galbraith, 2019). Tuition increases have leveled off over the last few years and state appropriations for higher education have increased (State Higher Education Executive Officers Association).

For much of the 2000s, Clemson University officials would increase tuition often blaming the legislature for not funding higher education appropriately. When Governor Sanford promoted the idea of a Board of Regents, he implied that a connection existed between the governance structure that existed in South Carolina and the tuition charged by the state’s institutions. Would a Board of Regents or a governance structure with more centralized control help reduce duplication, increase efficiency, and lead to lower tuition? Alternatively, are there other factors that affect tuition, such as spending on other state priorities, the wealth of a state, and the fiscal resources of a state? Or perhaps funding for higher education today is the same as one Oklahoma legislator stated in 1957, “money for higher education is not really determined by the legislature until the large appropriations for other agencies have already been determined, and higher education more or less gets what’s left” (Glenny, 1957: 197).

RESEARCH TOPIC

This dissertation examines the factors that drove tuition levels from 1993 to 2014 across the American states. As previously outlined, the main independent variable for this dissertation is the governance structure of higher education in each state. This dissertation seeks to determine whether and how the structure affects state-level tuition. Research on this subject (Hearn, Griswold, and Marine, 1996; Lowry, 2001; Nicholson-Crotty and Meier, 2003; and Calhoun and Kamerschen, 2010) generally agrees that the more higher education centralized governance is
concentrated then tuition rates will be lower. This study builds upon this general finding, including variables such as whether a state has a lottery, who has tuition setting authority in the state, and whether the partisan composition of the state legislature has an effect on tuition levels.

Previous research related to lotteries has examined whether they influence funding for education in general and more specifically higher education (Borg and Mason, 1990; Stark, Wood, and Honeyman, 1993; Land and Alsikafi, 1999). Another area that lottery research has focused on is whether the revenue adds to or replaces other funding models for education (Erekson, DeShano, Platt and Ziegert, 2002; Garrett, 2001; Spindler, 1995; Stanley and French, 2003). However, none of these previous studies examined lotteries and their relationship to tuition. This research effort will include this variable to test the effect of lotteries alongside other factors that might drive state higher education tuition levels.

In most states, several components of governance authority are to oversee, regulate, and set tuition for member institutions. However, in some states the governance structure does not include tuition setting authority. This subject has been studied in the context of reorganization of higher education in Virginia (McBain, 2010; McLendon, Deaton, and Hearn, 2007), but the literature on its relationship with tuition is non-existent. Research in this area can begin the discussion on the value of where this authority lies and its influence on tuition.

Another section of this research will investigate whether the partisan composition of the state legislature affects tuition. Previous work in this arena (Jones, 1974; Winters 1976; Alt and Lowery, 1994; Dilger, 1998) examines the influence of political parties on state spending. Some conclude that Democrats spend more on (Jones, 1974; Alt and Lowry, 1994) welfare and education, while others (Winters, 1976; Digler, 1998) find no discernable difference in spending
between political parties. Again, the literature concerning the effect of political party on tuition is lacking.

PLAN FOR THE DISSERTATION

Considerable research on governance structures of higher education exists. However, the conclusions about its effects are varied. In Chapter Two, this dissertation covers an examination of the literature related to factors hypothesized to affect tuition. First, the literature on the fiscal variables of per capita income, student enrollment in public 4-year institutions, state spending on Medicaid, corrections spending, highway spending, state per student spending on higher education, state spending on preK-12 education, and the effects of state lotteries will be reviewed. The second section of the literature review examines research on governance of higher education and its influence on tuition. The third segment of the literature review assesses the political influences on higher education, while the final section of this chapter will examine the tuition setting authority as it exists in higher education.

Chapter Three of this dissertation describes the data collection methods, the model used for analysis, and the results. The model uses ordinary least squares regression to estimate whether the hypothesized variables have an effect on tuition. This chapter also includes a summary of the results of the quantitative analysis.

The next chapter, Chapter Four, consists of a case study reviewing the governance structures of higher education in South Carolina and North Carolina to determine why their tuitions are different given that the two states are similar, except for their higher education
governance structure. The final chapter will include a summarization of the findings, discuss the policy ramifications of my research, and offer several potential avenues for future research.
CHAPTER TWO

LITERATURE REVIEW

Since the establishment of higher education in the United States, issues of funding and governance have been a consistent source of conflict between universities and state government. During the earliest days of higher education, the colonies supplemented private institutions with public funds (Altbach, et al., 1999: 39). Historically, states have been the primary source of government funds for higher education (Altbach, et al., 1999: 165). Higher education is the largest discretionary spending item in states’ budgets, so state funding tends to increase when the economy and resulting state revenues are thriving and decreases during recessionary periods (Altbach, et al., 1999: 117).

While states may have an important role in funding higher education, a perception exists for many policymakers that a college degree is a private good primarily benefiting the individual earning the degree instead of society as a whole. In traditional economic terms, a private good is something consumed and enjoyed by only one person. On the other end of the spectrum, a public good is something that consumed by an individual that does not exclude others from enjoying the same thing, such as a concert (Schiller, et. al, 2013: 72). Marginson (2011: 416-417) argues that public goods can benefit individuals or society. Educated individuals contribute spillover effects (knowledge and skills) benefiting the development of human capital that contributes knowledge and information to society. Therefore, while education has positive societal benefits, policymakers see education benefiting the individual and not society. As such, this argument compounds the problem of adequately funding higher education since legislators maintain that a majority of the costs should be borne by students, the individuals directly
benefiting from the education, and donors to the university rather than with state resources (Selingo, 2003). However, even with these arguments states have continued to be a prominent actor in funding higher education, so most of the factors that determine support for higher education reside at this level.

In 1937, Stewart Stoke conducted one of the earliest studies related to the costs of higher education. He argued that (1) the costs of providing the education, state, and endowment resources, (2) the traditions of the geographic area the institutions serve, (3) the wealth of the potential students, and (4) the ability to attract a large portion of students that are able to pay the tuition, determines the tuition charged to students (Stoke, 1937: 297). Further, he stated that institutions must decide whether they are going to streamline their course offerings or “incline toward the country-club version of higher education (Stoke, 1937: 302).” Concluding, Stokes argued that if universities decide to provide the “country-club” version of higher education, then they must seek students who are able to pay for these services (Stoke, 1937: 302). Renowned economist Milton Friedman argued in the 1950s that higher education produces “three main products: schooling, research, and monuments (the “Smith” library, the “Jones” professorship, the “Robinson” fellowship) (Freidman, 1968: 108).” Friedman states that the middle and upper class have “conned” the poor into subsidizing education and that individuals should receive assistance to fund their education instead of directing resources towards subsidizing educational institutions (p. 108). As a free market economist, Friedman would argue that the market should decide tuition rates and the government should regulate higher education as little as necessary. While the funding model for higher education continues to evolve, public universities have historically sought additional funding from state governments to help close the gap between the
costs of providing education and the amount that student’s pay, which is contrary to the arguments of Friedman.

The focus of this study is the relationship between governance structures and the tuition for public four-year degree granting institutions. This chapter examines the factors related to higher education by concentrating on fiscal variables that affect funding higher education, higher education governance structures, the entity responsible for setting tuition rates, and the political factors that affect tuition in the various states. The findings in this literature review will serve as a guide to formulate the quantitative model outlined in Chapter Four of this dissertation.

FISCAL VARIABLES

States face statutory and constitutional constraints in budgeting. Sometimes the limitations are included in the states’ constitution, while some have been added using voter driven ballot initiatives. These provisions are typically in place to limit state spending and discourage the states from creating large amounts of debt (Gray, Hanson, and Kousser, 2018: 332). All state have some type of restrictions in the budgeting process. By statute or with language included in the state’s constitution, 46 states have provisions that require policymakers to balance the budget, with 39 states prohibited from running a deficit. Twenty-eight state have tax and expenditure limitations that restrict overall spending or growth of revenues or spending and often correspond with the growth of personal income, population, or inflation (White, 2017: 321). Given these boundaries, states typically work under a zero-sum budget concept where more money allotted to one area means there is less money available for other budget functions. Often, since higher education has non-governmental sources of revenue, tuition and fees, it is easier for the legislature to justify reducing their budget allocation when other state programs are competing for limited funding.
As studies of higher education have progressed, scholars began to examine the specific budgetary variables to measure their effects on state higher education spending. Hovey (1999: 2) argues that the national economy is the critical factor in determining state fiscal conditions, since state spending on means-tested safety net programs, such as cash welfare and Medicaid, comprise a large portion of a state’s budget. When a fiscal downturn occurs in the national economy, states must expend more resources on these mandatory programs. He further contends preK-12 education, school choice, programs for the aged, health care (including Medicaid), and law enforcement all affect a state’s ability to spend on higher education (Hovey, 1999: 32-39).

In studying fiscal factors affecting tuition, Koshal and Koshal (2000) hypothesized that tuition per full-time equivalent (FTE) is a function of state appropriations per FTE, the affluence of the families in the state, and out-of-state enrollments. Further, state appropriations for higher education are a function of tuition rates, the state’s resources (measured by per capita income), current enrollment in higher education, enrollment at two-year institutions, and the weighted average of party composition of the state’s legislature. They reach several conclusions from their model. First, as tuition increases, the state will appropriate less money for higher education. Second, the more resources a state must direct towards higher education, the lower the tuition in the state. Finally, they conclude that state appropriations are greater with more students enrolled in post-secondary education, higher enrollment at two-year institutions, and with Democratic control of the state legislature (Koshal and Koshal, 2000: 88).

Another stage in the development of the tuition literature is using the relationship between tuition and state spending in a supply and demand model to determine the equilibrium (Kim and Price, 1977; Rusk and Leslie, 1978). Kim and Price (1977) determine that tax revenue, per capita income, and federal aid to the states are significant determinants of tuition. Rusk and
Leslie (1978) conclude that tuition is higher where state funding is insufficient and that tuition prices tend to increase incrementally and evolutionary instead of being planned. Using a principal-agent model framework, Kim and Ko (2015) find that as state appropriations decrease, tuition increases were greater which supports the argument that state appropriations and tuition are related (p. 826).

Adding the policy climate for higher education into a model, along with economic variables, demographic variables, and political variables, McLendon, Tandberg, and Hillman (2014) use a forty-nine-state panel dataset covering 1990 to 2010 to test how these factors affect three dependent variables: state spending on need-based aid, state spending on merit-based aid, and state appropriations for higher education. Their two-stage least squares framework finds that higher levels of per capita wealth in a state are positively associated with higher spending on higher education appropriations. They further find that the higher levels of wealth within a state, measured using per-capita state gross product, the more a state spends on higher education appropriations (McLendon, et al., 2014: 157).

In examining both fiscal and political variables, Okunade (2004) uses the percentage of the total state budget spent on higher education as the dependent variable. The independent variables include annual expenditure per inmate, Medicaid spending, per capita income, per capita enrollment in higher education, average tuition and fees, number of years until the next gubernatorial election, political clout of the Democratic governor, and state financial aid per student. State Medicaid expenditures, criminal justice spending, and Democratic state governors with a majority Democratic legislature were statistically significant. Of note, Okunade states that increased enrollment in higher education is significant, but the amount of revenue gained by increasing enrollment is not substantial enough to warrant justifying increasing student
matriculation in tough economic times to benefit the institutions (p. 132). Further, Okunade (p. 137) finds a strong and positive relationship with prison expenditures (p. 137). Conversely, Rizzo (2004: 38), in his panel data analysis from 1977-2001, concludes that higher education enrollments are not significant in determining higher education’s share of a state budget.

In examining the literature regarding whether Medicaid spending is a significant factor in higher education funding, Hovey (1999) was one of the first to investigate its effect on higher education. He determines that Medicaid spending by the state is significant and negative. In other words, as the amount spent of money spent on Medicaid increases, the percentage of the state budget spent on higher education decreases. Others (Okunade, 2004, Tandberg, 2010a, Tandberg, 2010b) also found Medicaid spending to be a factor in higher education spending. Webber (2018: 55) states that, “Medicaid has been the single biggest contributors to the decline in higher-education support at the state and local level.” Webber, in his analysis of the relationship between higher education appropriations and spending in other budget functions in each state, argues that as policymakers reduced spending on higher education from 1987 to 2015 the increased spending on public welfare accounted for half of the decline in appropriations for higher education. Additionally, spending on police and fire protection accounted for 13 percent of the decline and spending on corrections, highways, utilities, sanitation, and interest on debts accounted for another 11 percent of spending (Webber, 2018: 55). In viewing budgeting as a zero sum gain exercise, states were shifting money from higher education to other budget categories.

When reviewing the research literature regarding K-12 spending, Hovey (1999) argues that the level of dissatisfaction with primary and secondary education spending is placing pressure on state governments to fund new instructional programs. Additionally, he states
“higher education must hope that state officials turn down every one of these initiatives or fund them only by increases in taxes (p. 32).” In updating Hovey’s analysis, Boyd (2002) uses a revenue-expenditure model to estimate spending trends for higher education, and projects slower growth in K-12 enrollment but increased spending, that places more downward pressure on higher education spending. In examining the effect of K-12 spending on higher education, Webber (2018) finds that state-level changes in K-12 spending are positively associated with changes in spending on higher education. Therefore, he suggests that states do not favor K-12 over higher education, such that these programs are competing for resources, but rather generally value all forms of education.

To determine the effect that higher education enrollment, median income, tax revenues per capita, and average full professor salaries on appropriations, Toutkoushian and Hollis (1998) use the dependent variable state appropriations for public higher education. They conclude that enrollment is positive and statistically significant, but the effect of increased enrollment on state appropriations, stated in elasticity of demand, is considerably smaller (+.40) than expected. For example, if enrollment increased by 1,000 students, then state appropriations would increase by $400. In economic terminology, this means that increasing enrollment is inelastic, so the state appropriations are not very responsive to increases in enrollment (Schiller, 2016: 119). The authors caution higher education administrators to be aware of this as enrollments grow (Toutkoushian and Hollis, 1998: 149).

Another dimension that researchers have examined is the effect that lotteries in general, and, more specifically, education lotteries, have on appropriations for higher education. Proponents of lotteries argue that they provide additional revenue for a state. Even though lotteries, such as those in Georgia, North Carolina, and South Carolina, were marketed and won
approval from voters with the argument that they are beneficial to education, the literature does not overwhelmingly substantiate this claim. Lotteries do provide positive educational spending effects for some states, while the consequences are negative in others. In 2009, twenty-five states allocated at least some portion of their lottery revenues directly to support higher education, state financial aid, or for capital improvements on campuses (Bell, Wehde, and Stucky: 3).

Some studies regarding lotteries question whether education, either K-12 or higher education, benefits from the additional revenue or whether the increased receipts become fungible and end up being used for other budgetary obligations. Borg and Mason (1988: 81) find that the Illinois lottery that is intended to provide funds for K-12 and higher education needed the legislature to pass additional legislation after enactment of the lottery to ensure the original spending intentions of the lottery. Their conclusion was that the lottery funds were a substitute, instead of a supplement, for state spending on education. In a later study, Borg and Mason (1990: 291) compared the lottery states of New York, New Jersey, Michigan, New Hampshire, and Illinois to the non-lottery states of California, Florida, Idaho, Ohio, Texas, and Wisconsin and determined that earmarking does not benefit the statutory recipients (p. 301). They find that several lottery states had spending increases for education, but the pattern was not different from non-lottery states. Borg and Mason state that lawmakers may use lotteries to hide behind their lack of ability to raise adequate revenue for education. Others (Spindler, 1995; Garrett, 2001; Erekson, DeShano, Platt and Ziegert, 2002; Stanley and French, 2003) find similar results, indicating that without specific spending requirements on lottery receipts, the proceeds merely replace normal state funding on education.
Several studies (Land and Alsikafi, 1999; Stark, Wood, and Honeyman, 1993) examine lottery spending in Florida after enactment of the state’s education lottery. Land and Alsikafi find that the implementation of the state lottery coincided with lower spending on public community colleges. However, given the decline of the economy during the study period, they felt that this could be a contributing factor. In their study of spending on K-12, Stark, Wood, and Honeyman (1993) conclude that lottery funds did not enhance funding for K-12 instead the lottery revenue was used as a substitute for previous funding streams.

Conversely, Novarro (2002: 17) finds that states with earmarked lottery funds show increased education spending more so than when lottery revenue is directed to the general fund. Miller and Pierce (1997) determined that in the early years after state lottery adoption, per capita spending on education increased. However, they questioned the long-term sustainability of this effort. Similarly, Georgia lottery revenue has not been diverted to other spending needs since the underlying statutes authorizing the lottery expressly state how the funds may be used (Lauth and Robbins, 2002). Bell, Wehde, and Stucky (2018: 31) examine the impact of lottery earmarks on state higher education funding levels and find that using earmarks is associated with an increase in state appropriations to higher education. Since lotteries typically do not constitute a large portion of a states’ revenue, the increased revenue may not be stable and the amount of the revenue can be limited (Brady and Pijanowski, 2007; Land and Alsikafi, 1999; Mikesell and Zorn, 1986; Miller and Pierce, 1997; Stanley and French, 2003).

POLITICAL VARIABLES

Political parties heavily influence our system of government on most levels, including state governments. Party labels are attached to the candidates and the issues for which they advocate (Winters, p. 629). All states except for Nebraska, organize their legislative bodies by
parties. Even in Nebraska, where no party affiliation appears on the ballot, voters know the party affiliation of their state legislators (Walton, 2019). Given our reliance on political parties, several researchers have examined party influence on state policy change and state spending (Jones, 1974; Winters 1976; Alt and Lowery, 1994; Dilger, 1998). When examining the party influence on spending, Jones (1974) argues that Democrats are noted for positive spending shifts in welfare and education program. Alt and Lowery (1994) determine that political parties do matter and that Democrats spend more and support larger government (p. 823). Conversely, Winters (1976) and Dilger (1998) argue that party is not a major factor in determining policy changes, especially on spending decisions. In examining political party effects from 1950 to 1980, Dye (1984) obtains mixed results. When a Republican governor was elected in the South, the amount of spending on education and welfare was not significantly altered. However, in Northern and Midwestern states, the election of a Democrat governor did lead to more social spending (Dye, p. 1107). After examining the political party of governors and their influence on spending, McLendon, Hearn and Mokher (2009) find that when Republicans control the governorship and the legislature, funding for higher education is lower than if Democrats control these offices.

With regards to the party effect on education spending, McLendon, Tandberg, Hillman (2014: 158) determine that the strength of Republican representation in state houses is associated with increased spending on need-based financial aid, while at the same time states with strong Republican representation have lower state appropriations for higher education. Tandberg (Sept 2010: 764) finds that as the number of Democratic legislators serving the legislature increases, state appropriations increase for higher education. As hypothesized in their model, McLendon, Hearn, Mokher (Nov 2009: 701) find that Republican legislative strength increases coupled with
a Republican governor state spending on higher education is suppressed. Tandberg (2013) finds that consolidated governing boards magnify the effect of Democrats in the legislature (p. 525).

Another approach to studying the partisan effect on spending is to examine spending changes after a shift in political power. Garand (1985: 371) examines the effect of partisan change on shifting state spending priorities from 1945 to 1978 and determines that highways and education spending are most sensitive to partisan shifts in the legislature, with welfare, health and hospital spending lagging somewhat behind. A partisan change in the state Senate (upper chamber) has more of an effect than a partisan change of the governor or the House (lower chamber). He hypothesizes that during the period of his study, this variation is due to more partisan shifts occurring in the state Senates than in the governors’ offices.

In seeking to find the relationship between divided government and state spending, Alt and Lowery (1994: 812) attempt to determine the effect of a partisan legislature on spending. Their research concludes that divided government, institutional constraints on spending, and party control of the legislature matters as Democrats spend more than Republicans do. Additionally, they argue that partisan differences exists between Democrats and Republicans, but the data does not reveal a simple explanation that Democrats tax and spend more. They argue that parties have different political goals, and spending decisions reflect these goals (p. 823). Knot and Payne (2004: 24) find that tuition is lower in states with a Democratic governor and in states where a large degree of political competition exists in the state legislature. Additionally, they find that appropriations for higher education do not benefit from either political party controlling the governorship nor the state legislature.
The governance structures of higher education have changed over time. Harvard College, as it was initially called, and William and Mary operated under a dual governance system where a corporation and a board of overseers, or visitors, made policy for the institutions. Yale, on the other hand, had a board, consisting of ten ministers that governed the school (Altbach, et al., 1999: 39-40). The organizational structure of higher education has continued to evolve as the number of institutions grew and as state policymakers began to take a more active role in higher education.

In one of the earliest works on higher education governance, Paltridge (1965) created a typology for classifying the organizational characteristics of public higher education. This consists of the following five general typologies, with one governance structure having several sub-types:

Type 1. No coordinating organization nor voluntary association performing a coordinating function.
Type 2. Voluntary coordination of inter-institutional activities.
Type 3. Consolidated governing or a single board with authority over all public higher education, except “junior colleges.”
Type 4. Coordination by a governing-coordinating board. This category places the legal responsibilities on one board to govern and to coordinate certain polices for several institutions.
Type 5. Coordination board without power over the institutional boards or governance structure.
Type 5a. Advisory board composed of representatives from institutions.
Type 5b. Advisory board composed of representatives from the general public.
Type 5c. Regulatory board, which has legal responsibility to manage certain policy areas such as planning, budgeting or programming (Paltridge).

Since Paltridge’s work, scholars (e.g., Waller, et al., 2000) have further refined the typologies of governance given the changes that have occurred in higher education over time. Waller, et al. (2000) describes three distinct categories of governance:

1) Planning Agency System
2) Coordinating board systems, with two sub-categories – regulatory and advisory

3) Consolidated Governing Boards

Only two states use the planning agency system, Delaware and Michigan, and this structure primarily “coordinates communication among institutions and performs a voluntary planning function (Waller, et al., 2000: VIII)”. This structure has the least amount of regulatory power within higher education, and essentially has no authority or influence over institutions. Planning agencies have a decentralized governance structure with no official agency responsibility for coordination (Waller, et al., 2000).

Coordinating board systems are regulatory or advisory in nature. The coordinating regulatory/advisory institutions, which exists in 24 states, typically acts as an intermediary between the individual institutional boards and the state government. The coordinating boards lack any governance power or authority over the individual institutions, as their own internal boards govern the different institutions. If the state has a regulatory coordinating board, then their authority generally extends only to approving and eliminating academic programs, and a few of the states’ boards present a consolidated budget to the governor and legislature. Advisory coordinating boards have few stated powers, if any, but may have influence given their status in the policy-making process (Waller, et al., 2000).

Under the coordinating boards systems, the individual university boards retain the power to set policy, budgets, and other administrative roles over the university. Further, they retain considerable power and responsibility over the governance of the institution. By not giving coordinating boards the responsibility to govern individual institutions, they are free to focus their attention on planning and coordinating postsecondary education within the state. Some typical responsibilities are approving or disproving new academic programs proposed by the
state’s institutions, the coordinating boards also seek to identify educational needs of the state and develop priorities surrounding these needs, gather and disseminate data for state government, its citizens, and for policy-makers. Coordinating boards are overlaid on the existing governance structures and do not supplant any authority the institutional boards powers (Waller, et al, 2000).

Consolidated governing boards are the most authoritative and controlling over the education system of a state. Some of the major functions of these boards are to advocate on behalf of the entire higher education system of the state to the governor and the legislature; choosing or removing the president/regent of the individual institution and determining their compensation; and hiring and firing other institutional officers and faculty, determining compensation, and granting tenure. Along with these roles, consolidated boards also develop the state’s overall education policy and set priorities, set tuition and fees, and prioritize budget requests from the individual institutions. Glenny (1959) argues that consolidated boards are more effective in negotiating budgets with state legislatures, while coordinating boards are generally better at preserving institutional autonomy.

When governments on any level fund an activity, the policymakers responsible for expending the funds are wont to have a say in how those monies are used. Higher education is no different. In the previously discussed Dartmouth College v. Woodward case, legislators wanted to have input in appointing trustees to run the College. Currently, policymakers want to have control over spending and therefore typically place conditions on those receiving state funding. State governments play a central role in higher education as they provide the legal framework within which public and private institutions operate, and the state primarily finances higher education through direct subsidies (Altbach, et al., 1999: 200). While states chartered and funded higher education, prior to World War II, most states had little formal control over higher
education. This began to change in the 1950s and 1960s due to the social and political upheaval experienced, both in society and in higher education. Some of the primary factors were a “historic surge in college enrollments, increasing sprawl in state systems of higher education, trenchant interinstitutional rivalries, and the growing regulatory capability of state governments (McLendon, 2003a: 479-480).”

In *Autonomy of Public Colleges*, Glenny (1959) concludes that regardless of the governance structure used to organize higher education, little evidence exists that any one system is “better,” as all systems have benefits and deficiencies (p. 244). He further argues that the main reasons for more governance are economy, efficiency, and reducing competition among institutions for state funds (p. 263). He concludes that it is possible to accomplish effective coordination without encroaching on the freedoms of individual institutions (p. 267). Governing boards seek to ensure the fiduciary responsibility of institutional assets, recruit and retain academic leaders, protect academic freedom, and employ the institutions assets to address the public’s needs (Lingenfelter, 2006: 4). Ultimately, the issue of accountability of public institutions distills down to the argument that universities should be accountable to the taxpayers that provide financial support (Altbach, et al., 1999: 75).

The levels of autonomy within universities may be a factor in public financing of higher education. Volkwein (1986) examined autonomy of universities using an organizational theory framework and has several interesting findings. First, he determines that external control of universities reduces campus efficiency and adaptability as well as educational effectiveness. From a financial standpoint, he finds that with external control monitoring costs increase and institutions, which are relatively free of state controls, are less dependent on state appropriations. Additionally, Volkwein finds that the less regulatory control a state has over institutions a larger
portion of their funds come from non-state sources, such as tuition and fees (p. 510). Volkwein concludes that great savings in operational costs would occur with deregulation of higher education (p. 511).

Using tuition as the dependent variable, Hearn, Griswold, and Marine (1996: 268) hypothesize that tuition is a function of the region where a state is located, the state’s social and economic resources, and the postsecondary governance structure. They argue that a more centralized governance structure leads to a higher level of tuition and state aid. Their results find a modest association between governance and tuition levels. States with planning agencies and strong coordinating boards have higher tuition, while states with a weak controlling board have lower tuition. Also examining the effect of governance on tuition, both in state and out-of-state, Calhoun and Kamerschen (2010) find that planning agency states and advisory coordinating states have the highest tuition. On the contrary, states with consolidated governing boards, which exert the most control over higher education, have the lowest tuition (p. 328).

In a study to examine the effects of governance structure in higher education, Nicholson-Crotty and Meier (2003; 87) test whether structure and autonomy insulates higher education from politics. Using four dependent variables - the total dollar cost per student of public higher education, tuition per student, need-based scholarships and financial aid per student, and state/local appropriations per student – their results are unable to determine whether governance structure shields higher education from political influence as the results are mixed and not consistent among all variables. However, they determine that states with coordinating boards have tuition costs that are fifty-two percent lower than states without coordinating boards (91) and if the board is elected instead of appointed, then tuition is fourteen percent lower (93).
Taking the governance research further to determine how much control the system has on higher education, Knott and Payne (2004) use time-series, cross-sectional data from 1978 to 1998 to study the effects that governance constraints have on universities’ ability to allocate resources, decide on tuition rates, and seek other sources of revenue such as research funding. They find that states with lower levels of centralized control over higher education have higher total revenue, tuition revenue, state appropriations, endowment and total research funding, while states with a more controlling governance structure have higher values of these variables (p. 21). Further, they find that state appropriations show little difference between the states that have high-regulation versus low-regulation. Further, the authors argue that legislatures do not use appropriations to subsidize institutions with lower tuition rates (p. 24). Knott and Payne conclude that higher education governance structure matters and that decentralized systems tend to move public universities to act more like the private university model that relies on more tuition revenue and research dollars than state appropriations for funding (p. 28).

While examining the effect governance structure has on state spending for higher education, Tandberg (Sept. 2010) found that centralized higher education governance structures have a negative effect on state support. He argues that centralized systems isolated individual institutions from the political process exhibited in centralized systems. In states with less centralized systems, universities have more access to policymakers and engage more in the political process therefore increasing access and knowledge of their legislators. Additionally, in states with centralized governance the system becomes part of government bureaucracy and therefore is less of an advocate for higher education (p 763).

In studying the influence of political actors on the support of higher education, Tandberg (July 2013) examined whether the presence of a consolidated governing board alters their
support of higher education. Using the dependent variable personal income, he finds that a consolidated governing board has a negative impact on budgeting (p. 525). He argues that as consolidated governing structures represent and advocate for institutions, the effect may be less than if each institution advocated on their own behalf. The consolidated governing board weakens the power of each university to receive state appropriations (p. 530).

In a follow up to their original work, McLendon, Tandberg, and Hillman (2014) use state appropriations per full-time student as the dependent variable and hypothesize that states with consolidated governing boards invest less in merit-based aid. Their main finding was that consolidated governing boards seek to influence policy outcomes that advance the interests of the public systems of higher education, rather than any particular segment of that system. Additionally, the state’s postsecondary governance system can hold important implications for the design of policies that promote or hinder college affordability (p. 158).


TUITION-SETTING AUTHORITY VARIABLES

While the literature on higher education tuition-setting authority is not well developed, a few scholars have examined the effect this variable has on higher education. Tuition-setting authority is not uniform across the states. Carlson (2013) in a report prepared for the State Higher Education Executive Officers Association (SHEEOA), surveyed institutions on their
tuition setting philosophy and found that tuition increases were primarily related to the institutions’ budgetary needs. Other factors found to be important were that tuition should promote access and affordability, should consider the different institutional missions, it should be balanced relative to financial aid, and be comparable to peer institutions (p. 7). His survey also reveals that institutions with little oversight attempt to keep tuition low to stave off future legislative intervention and influence in the process. Often, the public, legislators, and the governor notice and seek action when tuition increases are significant. Additionally, he finds that state appropriations are a key incentive to lower tuition. Finally, the survey reveals that excessive tuition compared to other in-state institutions can often lead to universities losing students to peer institutions (p. 11).

In examining a partisan change in a state’s legislature and its effect tuition setting, McLendon, Deaton, and Hearn (2007) find that states are more likely to revise the governance structure of higher education possibly altering who has the authority to set tuition when party control switches. This is especially prevalent when Republicans gain control of the legislature (p. 664-665).

The primary study on tuition-setting authority was conducted by Kim and Ko (2015) Using tuition as the dependent variable, they find that institutions that set their own tuition have an increase of approximately $4,193, compared to roughly $2,500 for institutions that have tuition set by legislatures over the time frame of 1997 to 2007 (p. 826). Their study also indicates an increase in state appropriation leads to a decrease in tuition increases and an increase in enrollment positively affects tuition (p. 830).
LITERATURE REVIEW SUMMARY

In reviewing the literature of the fiscal variables, most of the variables (students enrolled in higher education, state spending on Medicaid, state spending on corrections, highway spending, and preK-12 spending by the state) were generally found to be significant in the various models with regards to funding higher education. Other fiscal variables, whether a state has a lottery and per capita spending, have mixed results in the literature. Kim and Price (1977) determined that per capita income was significant, while Okunade (2004) did not find it significant in his model. The literature on lotteries generally shows that having one does not increase spending on higher education, but Novarro (2002), Miller and Pierce (1997), and Bell, Wehde, and Stucky (2018) determine that lotteries have a positive effect on education spending.

The literature regarding what role political variables play in spending decisions is also mixed. Some find that Democrats spend more and support larger government (Alt and Lowry, 1994), while others such as Winters (1976) and Dilger (1998) find that party affiliation is not a major component of spending decisions. McLendon, Tandberg, and Hillman (2014) find that Republicans spend more on need-based financial aid and appropriate less for higher education.

In reviewing the higher education governance variables, the literature generally finds that governance structure does matter (Calhoun and Kamerschen, 2010, Hearn, et al. (1996), Lowry, 2001) in higher education. When examining governance structure and higher education funding, Lowry (2001April; 2001October), and Knott and Payne (2004) show a positive relationship with tuition rates. The lone contrarian in the higher education governance literature is McLendon (2003 September), who finds no evidence that the structure affects state spending on higher education. He argues that since governance structures rarely change, they are stable and become institutionalized.
With so little research conducted on the entity that sets tuition, Kim and Ko (2015) set the standard and find that institutions that set their own tuition have rates almost double of those set by legislatures. While this research is limited, the guiding factors for higher educational institutions is to balance their budgets and that often requires increased tuition rates. Political considerations drive legislative behavior, so they are more inclined to keep tuition lower to satisfy their constituents.
CHAPTER THREE
DATA, METHODOLOGY, AND RESULTS OF QUANTITATIVE MODEL

In this chapter, data will be presented that attempts to answer the general research question of what, if any, effect does the governance structure of a state’s higher education system has on the average tuition of the state. Does a strong governance system lead to lower tuition? Does a weak governance structure lead to higher tuition? These, and other questions, are some of what I hope to answer in this dissertation.

Federal government agencies and educational associations were the sources for most of the data used in this analysis. The originating government agency provided most of the data for this chapter. Some of the variables were obtained from secondary government agencies that obtained the original data and then organized the information into a more usable format. I also employ data from associations or groups specializing in education and/or political research. The model includes data for the years 1993 to 2014 inclusive, and all financial data were adjusted to 2014 dollars using the annual Consumer Price Index (CPI), as report by the U.S. Bureau of Labor Standards.

DEPENDENT VARIABLE

The dependent variable is the average tuition per student rounded to the nearest dollar for the academic year for full-time, in-state undergraduate students at public four-year institutions for each state. The U.S. Department of Education collects this information annually and the National Center for Education Statistics publishes the information (U.S. Department of Education). Average tuition used in the model includes tuition and mandatory fees for the years

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1 Given that the District of Columbia is a federal entity with its own peculiarities regarding higher education, the District was excluded from analysis in this model.
1993 to 2014. Excluded from the average tuition is room and board since these costs vary depending on the type of dorm, whether the student lives on-campus or off, and if the student participates in meal plan. While tuition may vary greatly from institution to institution in each state due to each institution’s characteristics, the average tuition approximates whether the state has high or low tuition since all public schools located within the state face the same fiscal constraints, governance, political culture, and challenges with respect to tuition.

INDEPENDENT VARIABLES

The four categories of independent variables used in the analysis are fiscal variables, political variables, higher education governance structure variables, and tuition setting authority variables. The fiscal variables indicate the monetary resources that a state has available to spend on the various functions of government, such as per capita income, whether the state has ancillary money, such as funds from an education lottery to spend on general obligations, and the level of spending in other budget categories that compete with higher education for the states’ limited funding. The fiscal variables included in this model are state spending per enrollee on Medicaid, per capita state expenditures on corrections, per capita spending on highways, per capita spending on higher education, per student spending for preK-12 education, and the number of students enrolled in higher education. Political variables include whether the legislature has the ability to set tuition, the percent of seats held by Democrats in the upper legislative body, and an interaction term created by multiplying these two variables.

Over time, each state’s legislature has molded its higher education system governance structure to fit the needs of the state. Some states have a consolidated governing board, which has a great deal of control over the institutions of the state, while others have a system with little or no central governance. Some states have various agencies, boards, and commissions that
regulate higher education, but this control may be limited to oversight of the academic components of higher education, such as the programs of study that are available and the degrees that each institution in a state may offer. The governance variables in the model capture the body in charge of higher education in the state: a consolidated governing board, a regulatory coordinating board, an advisory board, or a planning commission. The final subset of variables is the entity responsible for setting tuition. In some states, the governance body may also set tuition, while in other states these bodies only govern the academics of higher education. Tuition may be set by the state legislature, the state system, a board of education, a state system/campus, a multi-campus board, campus board, or by an individual campus. Following, I describe the operationalization of each of the independent variables in my model, and discuss the sources used to collect each of these variables.

**Fiscal Resource Variables**

**Per Capita Income** – The U.S. Bureau of Economic Analysis calculates per capita income on an annual basis and the U.S. Census Bureau reports this information. It is derived by dividing the total income for all residents of the state by the number of people in a state (US Census Data, Income Data Tables). Per capita income has been adjusted to 2014 dollars using the CPI as reported by the U.S. Bureau of Labor Statistics (U.S. Bureau of Labor Statistics). Per capita income does not measure wealth or income distribution; however, it does indicate the fiscal resources of a state since higher per capita income should produce more tax revenue for the state and wealthier residents. Higher per capita incomes are usually associated with states that have more resources and larger state fiscal expenditures. Therefore, they would have a larger capacity for state spending on education and other programs.
**Higher Education Enrollment** – Each fall, higher education institutions across the United States report enrollment to the U.S. Department of Education. The enrollment figure used for this research is the total number of students attending all public four-year degree granting institutions in each state (U.S. Department of Education, Integrated Post-Secondary Education Data). Increased enrollment in higher education would provide more fiscal resources from tuition for a university. Economies of scale indicate that, to a certain level, it is less expensive to educate an additional student (Bowen, 1980: 192; Schiller, Hill, and Wall: 155).

**Medicaid Spending** - State Medicaid expenditures per enrollee are reported by the Centers of Medicare and Medicaid Services within the U.S. Department of Health and Human Services and are published annually (Centers for Medicare and Medicaid Services). Medicaid is a cost-sharing program, between the state and the federal government, for low-income individuals and families that meet certain eligibility guidelines to assist with health care costs. Medicaid spending covers such items as hospital care, physician and clinical services, dental care, home health care, prescription drugs, medical products, and nursing home care. The data used in this model is the total amount spent by each state per enrollee on all categories of Medicaid spending, and was adjusted to 2014 dollars using the CPI (U.S. Bureau of Labor Statistics). More spending on Medicaid could indicate that a state has a larger number of people needing assistance or can indicate that particular state has high medical costs. Additionally, given the cost sharing nature of the program where states contribute to funding Medicaid, states that spend more on this program are more likely to have fewer resources to spend on higher education. This is consistent with the work of Okunade (2004), Tandberg (Aug 2010, Sept 2010), and Webber (2018) where they show that increased Medicaid spending decreases spending on higher education.
PreK-12 Spending - State expenditures per student for preK-12 education are reported annually to the U.S. Department of Education. The National Center for Education Statistics compiled the data and the National Science Foundation reported this data. Data were adjusted to 2014 dollars using the CPI (U.S. Bureau of Labor Statistics). This information includes local, state and federal spending on preK programs, elementary, and secondary education. The data covers approximately 100,000 public elementary and secondary schools (National Science Foundation). All states have compulsory school attendance laws that require all individuals between certain ages, or until a student reaches a certain grade level, to attend school. State law generally sets this age level (Diffey and Steffes, 2018). Therefore, elementary and secondary education spending constitutes mandatory spending within the state budget.

Criminal Justice Spending – Officials at the U.S. Census send questionnaires to state officials who have primary responsibility over state finances to request data on state expenditures for police protection, judicial and legal services, and corrections (U.S. Census Annual Survey of State Government Finances). Total spending for these justice categories is divided by the state’s total population to determine per capita criminal justice spending for each state (U.S. Census Bureau). This level of spending is adjusted for inflation to 2014 dollars by using the CPI as reported by the U.S. Bureau of Labor Statistics (U.S. Bureau of Labor Statistics). Like preK-12 and Medicaid spending, the criminal justice system is a mandatory state spending priority that competes with higher education for limited state fiscal resources (Hovey: 20).

Highway Spending – Spending on highways is another large commitment of state fiscal resources and state expenditures are often linked to receiving matching federal highway funds for roads construction and mass transit projects. Additionally, the U.S. Census Bureau collects the total highway spending from the states. The total spending amount is divided by the state’s
population to determine per capita spending for highways for each state (U.S. Census Bureau), and adjusted to 2014 dollars by using the annual CPI (U.S. Bureau of Labor Statistics).

**State Higher Education Spending** – State appropriations are one of the primary funding sources for higher education, along with tuition and fees, investments, and government grants and contracts (National Center for Education Statistics). The State Higher Education Executive Officers Association collects data from the U.S. Department of Education and reports total state expenditures on higher education. Per capita spending is determined by dividing the total state population as reported by the U.S. Census Bureau (U.S. Census Bureau), and is adjusted for inflation to 2014 dollars using the annually reported CPI (U.S. Bureau of Labor Statistics). Per capita spending on higher education indicates the amount of resources that higher education has in a particular state. The higher per capita spending on higher education, the more resources institutions should have to meet their financial obligations. Typically, university Presidents and Chancellors argue that as the state increases its share of funding to higher education, the lower the universities need to charge for tuition. Therefore, the more each state appropriates towards higher education, the less that universities would need to charge and tuition should be lower.

**Lottery** - Lotteries add revenue to the states’ budget, and 24 of the 44 states with a lottery directly earmark a portion of the proceeds for education. Beyond education, states direct revenue proceeds to such items as to the general budget, parks and recreation, environmental projects, municipalities, and economic development. This information was determined by researching the website of each state that has a lottery. Increasing the overall state budget allows more money for education spending, but a lottery that directs money to education indicates a favorable climate for education spending in the state. The lottery variable is coded as a dummy variable with zero (0) indicating that no lottery exists for a state and a one (1) if the state has a
lottery. When lotteries are implemented in a particular year but do not start operations until later, the year in which the lottery begins to distribute money is the year that will be coded as a one (1).

**Political Variables**

The National Conference of State Legislatures (NCSL) maintains a database of the number of seats held by Democrats and Republicans in the House (the lower chamber in most of the states) and the Senate (upper chamber) of each state. Using the NCSL date, the party strength was calculated by determining the percentage of seats held by Democrats and Republicans in the upper legislative chamber (National Conference of State Legislatures). In this model, the percentage of Democrats is used since including both parties’ seat percentage introduces multicollinearity, as one party’s seat percentage is effectively a linear transformation of the other. The resulting variable shows the overall strength of the Democratic Party within a state and not whether one party the majority of seats in the legislature. Typically, Democrats tend to be more favorable towards spending on education, including higher education (Alt and Lowery, 1994; Jones, 1974). Given that the model uses the partisan composition of the legislature, Nebraska is omitted from consideration in the analysis, as it is the only state with a non-partisan and unicameral legislature.

The data also includes a variable capturing whether the legislature is the tuition setting authority within in the state. This is seen as the most restrictive means of setting tuition, as legislators typically are driven by a political agenda, their constituency, and the desire to be re-elected (Mayhew, 2004). This is operationalized as a dummy variable where one (1) indicates that the legislature has the authority to set tuition and zero (0) indicates that the legislature does not have the power to set tuition.
I also test for the possibility that the effect of party strength in the legislature on state-level tuition is conditional on whether the legislature sets those tuition levels directly. An interaction term was created by multiplying if the legislature has tuition setting ability by the percentage of Democrats in the upper legislative chamber.

**Governance Variables**

Each state has a unique history and different funding policies consequently; governance structure in each state is varied to meet the state’s political and post-secondary education needs. Therefore, the governance structure is diverse but generally falls under four different systems: a statewide governing board, a coordinating board, a coordinating advisory board, and a planning commission. Table 3.1 lists the governance structures of public four-year higher education institutions within each state. Most states have a governing board while the second most common structure is a coordinating board.

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2. Within the higher education governance, some states have a combined structure that also includes community/technical colleges and two-year institutions. Conversely, some states have separate governance for the different institutions. The current research is focused on the governance structure of public four-year institutions.
Table 3.1  Higher Education Governance (most control to least control over higher education)

<table>
<thead>
<tr>
<th>Consolidated Governing Board (24)</th>
<th>Regulatory-Coordinating Board (21)</th>
<th>Advisory Coordinating Board (3)</th>
<th>Planning Commission (2)</th>
</tr>
</thead>
</table>

Source: North Carolina Center for Public Policy Research, page ix

Twenty-four states have a consolidated governing board that serves to coordinate public post-secondary educational institutions within a state. Typical responsibilities include: 1) advocating on the institutions’ behalf before the governor and the legislature; 2) appointing, determining the compensation of, and removing the chief executive(s) of the system and the member institutions; 3) appointing, determining the compensation of, and removing the institutional officers and faculty; 4) operating as a corporate body with such powers as the ability to approve a corporate seal and owning property; 5) establishing policy and priorities for institutions under their control; 6) setting tuition and fees or establishing the policies and procedures regarding how they are set; and 7) prioritizing budget requests submitted by the institutions and disbursing state appropriations to member institutions (Waller, Coble, Scharer, and Giampportone: 9).

Coordinating Board systems govern higher education in twenty-one states. Under this system, the Board does not have the ability to govern the individual institutions. Coordinating Board systems are further subdivided into regulatory coordinating boards and advisory coordinating boards. Under the regulatory coordinating board, the system approves or denies
new academic program proposals and eliminates outdated programs. The regulatory coordinating board regulates the substance of academic policy at specific institutions and within the state (Waller, Coble, Scharer, and Giamportone: 19). The advisory coordinating board may review academic programs and make recommendations regarding academic programs with no certainty that these recommendations will be implemented. Four additional functions of coordinating boards, in general, are: 1) identify higher education needs of the state; 2) collecting and disseminating higher education information to benefit the institutions, state government, and the state’s citizens; 3) review institutions’ budgets and make non-binding recommendations; and 4) present a consolidated higher education budget to the governor and legislature.

The final category of governing structure is the planning commission, which is used only in Delaware and Michigan. Planning commission primarily collect data on higher education and facilitate discussions between the institutions and state government. They have no authority to govern and no official coordination powers. Governance primarily resides within the institution (Waller, Coble, Scharer, and Giamportone, 2000: 31). The governance structure variable is coded as a dummy variable with multiple levels. The consolidated governing board is the comparison variable that is not included in the model. Since governing boards are the most restrictive and controlling within the governance structures, the other variables which have less central control over higher will be compared to this structure. In the model the coordinating board will be coded as a one (1), the coordinating advisory board will be coded as a two (2), and the planning commission will be coded as a three (3).

**Tuition-Setting Authority Variables**

As outlined previously, states have a varied set of structures to govern higher education and some of these structures include the ability to set tuition. However, some of the structures
have more academic program responsibility and leave tuition setting to the institution and in some cases the state legislature. Table 3.2 outlines the entity responsible for setting tuition in each state. The Education Commission of the States collected this information. In twenty-nine states, the legislature, the state system board or a board of education sets tuition. This takes the authority away from the individual institution and places it with a group outside the individual university board. For the remaining twenty-one states, the control over tuition setting resides closer to the institution in a campus system, a multi-campus board, a campus board, or with the individual campus (Zinth and Smith, 2012: 1). For this model, the variables coincide with the table except for the state system combined; the state system variable includes the state system/campus, campus boards and the single campus. These groups are combined into one variable as tuition setting resides at the institution level and not in the hands of an outside entity.
Table 3.2 Tuition Setting Authority within the States

<table>
<thead>
<tr>
<th>Legislature (2)</th>
<th>State System (26)</th>
<th>Board of Education (1)</th>
<th>Multi-campus Board (1)</th>
<th>State System/Campus (2)</th>
<th>Campus Boards (14)</th>
<th>Single Campus (4)</th>
</tr>
</thead>
</table>

Source: Zinth and Smith, Tuition-Setting Authority for Public Colleges and Universities, Education Commission of the States

3 State System/Campus, Campus Boards, and Single Campus are combined for analysis since the campus has primary influence in tuition setting.
MODEL

Since each state appears multiple times in the model, the data are cross-sectional and time-serial (CSTS), also referred to as panel data. The use of panel data set, which covers 1993 to 2014, provides a larger number of data points that increases the degrees of freedom and reduces the collinearity of the independent variable while enhancing the efficiency of the estimates. Further, the model analyzes questions that cannot be addressed by cross-sectional data or time-series data by using the longitudinal data (Hsiao, 2003: 3). CSTS therefore allows us to observe the factors that determine average tuition in any given year across states while also studying the factors that shape variation in tuition levels within a state over multiple years. Further, the twenty-one years covered by the data include years with a variety of conditions of the national economy. This therefore should minimize the effects of expansions and contractions in the economy on my ability to draw causal inferences about tuition levels.

Policy researchers frequently use regression analysis since the results describe if, how strong, and under what conditions the independent and dependent variables are associated. The general formula for linear multiple regression is:

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 \ldots + \beta_kX_k + \varepsilon \] (Johnson and Reynolds, 2007: 515)

Given that, the model used in this research hypothesizes an interaction variable with whether the legislature has control over setting tuition and percentage of Democrats in the upper chamber of the state legislature, the general formula is more specifically:

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4(X_4 \ast X_5) \ldots + \beta_kX_k + \varepsilon \] (Kahane, 2008)
Specifically to this study, the equation would be:

\[ Y = \alpha + \beta_1(\text{per capita income}) + \beta_2(\text{higher ed enrollment}) + \beta_3(\text{Medicaid spending}) + \beta_4(\text{corrections spending}) + \beta_5(\text{highway spending}) + \beta_6(\text{higher ed spending}) + \beta_7(\text{preK-12 spending}) + \beta_8(\text{lottery}) + \beta_{12}(\text{Legislature}) + \beta_{13}(\text{Upper Dems}) + \beta_{14}(\text{Legislature*Upper Dems}) + \beta_9(\text{Consolidated Governing Board}) + \beta_{10}(\text{Regulatory/Advisory Board}) + \beta_{11}(\text{Planning Commission}) + \beta_{15}(\text{state system combined}) + \beta_{16}(\text{multi-campus board}) + \beta_{17}(\text{state system}) + \beta_{18}(\text{board of education}) \]

**HYPOTHESES**

The following hypotheses have been formulated for this model to test the variables that are significant in determining average tuition. Following each hypothesis is a brief basis for this expected observation. The first group of hypotheses relate to a state’s fiscal ability to pay for higher education and programs that directly compete with higher education for a state’s limited funds. The variables for this section are per capita income, higher education enrollment, Medicaid spending per enrollee, per capita criminal justice spending, per capita spending by the states on highways, per capita higher education spending, per capita spending on preK-12 education, and whether a state has a lottery. The second group of variables relates to the governance structure of higher education within each state. States have either a consolidated governing board, a regulatory coordinating board, an advisory coordinating board, or a planning commission that regulates higher education policies within each state. The third set of variables is the
partisan political composition of the state legislature. Finally, variables capturing the actor who has tuition setting authority for universities in the state are included.

**Fiscal Variables Hypotheses**

The hypotheses for the model are:

- **H$_1$**: States with higher per capita income will have lower average tuition costs.

  It is expected that states with higher per capita income will have greater resources and a greater tax base that would allow the state to spend more on higher education, which should reduce the costs of tuition. Further, states with higher per capita income are expected to have a more educated workforce and therefore be more willing to be pay more taxes to fund higher education.

- **H$_2$**: The greater the number of students enrolled in four-year public higher education, the lower average tuition costs.

  More students in higher education will generate more tuition revenue and economies of size indicate that costs per student for an education should be lower. Therefore, a greater number of students should lower the average tuition cost in the state.

- **H$_{3a}$**: The more a state spends per enrollee on Medicaid, the higher average tuition costs will be for the state.

- **H$_{3b}$**: The more a state spends per capita on criminal justice spending, the higher average tuition costs will be for the state.

- **H$_{3c}$**: As state spending on highways increases, the average tuition will be greater.

  The more money the state allocates towards Medicaid, corrections, and highways, the fewer resources available for higher education. While the states have many spending
priorities, these three items typically constitute a large percentage of state funding. Additionally, these spending categories are typically compulsory spending based on program requirements and therefore certain levels of spending must occur.

H4: The greater amount that the state spends per student on higher education, the lower tuition costs for students.

State appropriations, along with student tuition and fees, investments on endowments, and government grants and contracts are the primary funding sources for public higher education. When states appropriate more, then universities should have more resources and need to charge less for tuition. Higher per student spending should therefore cause tuition to be lower in the state, as the universities have more financial resources that should allow them to charge less in tuition. Conversely, when the state spends less per student, tuition should be higher.

H5: The more a state spends per student for preK-12, the higher average tuition costs for the state.

State spending for preK-12 education is in competition with higher education for state resources so the more a state spends the fewer resources available to fund higher education. Additionally, as explained with the previous fiscal variables, eligible students under ages determined by each individual state are required to attend school, so states are obligated to fund these activities.

H6: States with a lottery should have lower tuition costs.

States that have lotteries will have greater fiscal resources to devote to all budgetary items. Therefore, more money will be available for higher education. More
state resources for higher education will allow institutions to charge lower tuition. Some states' lotteries direct the proceeds to education spending, while other states use their lottery revenue for special earmarked projects, such as environmental projects, and some states merely use lottery funds to supplement the states’ general revenue fund.

**Political Variables Hypotheses**

H$_7$: If the Legislature has power to set tuition, then average tuition should be lower.

H$_8$: The greater the percentage of Democrats in the upper house of the legislature, then average tuition should be lower.

H$_9$: If the Legislature has the power to set tuition and Democrats control a greater percentage of seats in the upper house, then average tuition should be lower.

Individually, the lower legislative chamber, the upper legislative body and the governor are major participants in the budgetary process. The upper chamber was chosen to represent the policymaking role, since those serving in the upper chamber typically represent more constituents than members of the House, but less than the governor does. Therefore, they represent some of the different political and economic influences across a state. Since Democrats are more inclined to spend on education than Republicans are, Democratic control of any part of the process should lead to lower tuition.

**Governance Variables Hypothesis**

H$_{10}$: States where higher education has more coordination and control from a centralized governance structure will have lower tuition.
Over time, governance of higher education in the United States has divided into four main structures: a consolidated governing board, a regulatory coordinating board, an advisory coordinating board, and a planning commission. The consolidated governing board has the most control over higher education within the state, while the planning commission has the least. Tuition should be lower as a board has more control over higher education, since a consolidated board will advocate for all institutions instead of one. Conversely, the more freedom that individual institutions have, the higher one would expect tuition to be in a state.

**Tuition-Setting Authority Hypotheses**

- $H_{11a}$: The more control the individual institution has over setting tuition, the higher tuition will be.

- $H_{11b}$: Conversely, the more centralized control over setting tuition, the lower tuition will be for the state.

When control over setting tuition resides in a state centric organization, the individuals charged with determining tuition are more likely to be considering the state and its needs as a whole instead of focusing on the individual institution. Therefore, the tuition setters will more than likely consider social equity when setting tuition. Conversely, when individual institutions determine tuition, they primarily are focused on their needs and not the needs of the state that can lead to tuition setting policies that benefit the specific university and not the state.
RESULTS

Table 3.3 shows the results of the regression analysis. The independent variables explain about 44 percent \( r^2 = .4423 \) of the variation in the average tuition for public higher education across all states from 1993-2014. All of the fiscal variables (per capita income, higher education enrollment, Medicaid spending per enrollee, corrections spending, highway spending, higher education spending, preK-12 spending, and if a state has a lottery) are statistically significant in this model explaining state tuition levels. While they are significant, some of the expected relationships were not as hypothesized prior to running the model.
Table 3.3 – Regression Results of Average Tuition

<table>
<thead>
<tr>
<th>Tuition Setting</th>
<th>Coefficient</th>
<th>Std Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Capita Income</td>
<td>0.140***</td>
<td>-0.0165</td>
</tr>
<tr>
<td>Higher Education Enrollment</td>
<td>0.00616***</td>
<td>-0.00113</td>
</tr>
<tr>
<td>Medicaid Spending</td>
<td>-0.0573*</td>
<td>-0.0294</td>
</tr>
<tr>
<td>Corrections Spending</td>
<td>-9.548***</td>
<td>-1.365</td>
</tr>
<tr>
<td>Highway Spending</td>
<td>-1.116***</td>
<td>-0.383</td>
</tr>
<tr>
<td>Higher Education Spending</td>
<td>-0.0634***</td>
<td>-0.0141</td>
</tr>
<tr>
<td>preK-12 Spending</td>
<td>0.537***</td>
<td>-0.0407</td>
</tr>
<tr>
<td>Lottery</td>
<td>712.2***</td>
<td>196.6</td>
</tr>
<tr>
<td>Political</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legislature</td>
<td>-5,933***</td>
<td>1,441</td>
</tr>
<tr>
<td>Democrats (%) in Upper House</td>
<td>-1,452***</td>
<td>450.3</td>
</tr>
<tr>
<td>Legislature* Democrats (%) in Upper House</td>
<td>5,149***</td>
<td>1,738</td>
</tr>
<tr>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidated Governing Board</td>
<td>-875.4</td>
<td>533.6</td>
</tr>
<tr>
<td>Regulatory/Advisory Coordinating Board</td>
<td>-1,291</td>
<td>1,051</td>
</tr>
<tr>
<td>Planning Commission</td>
<td>839.6</td>
<td>1,158</td>
</tr>
<tr>
<td>Tuition Setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State System</td>
<td>-414.6</td>
<td>-1,151</td>
</tr>
<tr>
<td>Multi-Campus Board</td>
<td>0</td>
<td>omitted</td>
</tr>
<tr>
<td>State System Combined</td>
<td>-224.7</td>
<td>1,184</td>
</tr>
<tr>
<td>Board of Education</td>
<td>-159.6</td>
<td>1,516</td>
</tr>
<tr>
<td>Constant</td>
<td>-1,820**</td>
<td>718</td>
</tr>
<tr>
<td># of Observations</td>
<td>1,078</td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>.4423</td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable – Average Tuition
Regression Coefficients and panel-corrected standard errors are reported
*p < .10  ** p < .05  ***p < .01
Fiscal Variables Results

The results of the regression showed that a $1,000 increase in per capita income would increase, instead of decrease tuition as hypothesized. However, the dollar amount of the effect was negligible since it would only increase tuition by $140. This was opposite the effect predicted in H₁. Instead of decreasing tuition with states having a greater tax base, universities may be responding to the marketplace and individuals ability to pay. Essentially, tuition in states with higher per capita income may be higher since individuals who earn higher incomes may value education more and be willing to pay higher tuition. I expected that economies of size would lead to lower tuition costs as higher education enrollment increased (H₂). However, the opposite result occurred in the model. As enrollment increases by a thousand students, tuition would also increase by $6.16. Given the small change in tuition, this is a negligible effect.

One of the more unexpected results from the model is finding that tuition decreases with more spending on Medicaid, corrections, and highways. For a $1,000 increase in Medicaid spending, tuition decreases by $57.30. Spending $1,000 more on corrections and highways leads to a decrease in tuition by $9,548 and $1,116, respectively. While tuition with the increased Medicaid spending is not a substantively meaningful amount.

The model confirmed H₆, that an increased spending on higher education leads to lower tuition, and H₇, increasing spending on preK-12 leads to higher average tuition. Increasing spending for higher education by $1,000 leads to tuition decreasing by $63.40
and increasing spending the same amount for preK-12 education increases average tuition by $537. More state spending on higher education reduces the need for universities to charge students higher tuition to ensure the needed resources to operate a university. Likewise, when states spend more on preK-12, this directs resources away from universities and therefore leads to higher average tuition.

The last fiscal variable was a dummy variable capturing whether a state had a lottery. In states that have a lottery, it was postulated that tuition would be lower since lotteries increase the fiscal resources that are available for programs ($H_8$). However, the model revealed that states with a lottery have average tuition costs about $712 higher than states that do not have a lottery. While this is not as expected, it is reasonable since many states that have a lottery, especially a lottery where proceeds go towards scholarships, the money goes directly to the student as financial aid and not to the university. For example, in the first full year after the South Carolina General Assembly approved an education lottery, Clemson University increased tuition to students by 13 percent. As a result, the tuition costs to students decreased somewhat, but the overall tuition increased. The universities were opportunistic and saw an occasion to increase revenue by increasing tuition.

**Political Variables Results**

The political variables, whether the legislature sets tuition, the percent of Democrats in the upper legislative chamber, and the interaction variable of the percent of Democrats multiplied by the percent of Democrats in the upper legislature, are all
statistically significant. Brambor, Clark, and Golder (2006: 2) argue that researchers should include all of the constitutive terms in their model, but cautions researchers that “scholars should not interpret the constitutive terms as if they are unconditional marginal effects.” Given this specification, the interpretation of the results for this term is that if the legislature has the authority to set tuition and the upper legislative body does not have any Democrats, then tuition would be $5,149 higher. With the legislature in control of setting tuition, more Democrats in the upper chamber would lead to lower tuition.

**Governance Variables Results**

One of the primary goals of this research was to determine if the governance structure of a state’s higher education system would influence the average tuition. A more centralized coordinating structure was expected to provide for lower tuition since the agency would serve as one voice to the governor and the legislature to advocate for all of higher education and not just for one institution (H9). Conversely, it was thought that a planning commission, which has little if any control over higher education, would lead to increases in tuition (H10). Interestingly, the governance variables were found not to be statistically significant. The results of this model demonstrate that governance structure does not significantly affect the average tuition in states during the time period examined.

**Tuition-Setting Authority Variables Results**

For the final set of variables, tuition-setting authority, it was hypothesized that the less control that each individual institution has to set tuition the lower average tuition
would be \( H_{12} \). While the coefficients have the expected sign, none of the variable are statistically significant. The results of my model demonstrate that a centralized authority does not affect average tuition levels.

DISCUSSION OF RESULTS

This model confirmed that competition for fiscal resources and political factors influence average tuition. However, while my results demonstrate that per capita income, higher education enrollment, Medicaid spending, corrections spending, and highway spending all significantly affect tuition rates, the direction of these relationships are all in the opposite direction than my hypotheses. Only increasing spending on higher education and preK-12 matched the hypotheses. States with additional fiscal resources may have more wealth overall and have more money to spend on all budget categories, including education. With increased wealth, individuals may also be willing to spend more on higher education at the same time the state policymakers allocate more.

The major premise of the quantitative analysis in this research was that the organization of higher education matters and that a central control over governance and tuition would lower tuition rates. Conversely, the results of the model showed otherwise. None of the governance or tuition setting variables is statistically significant and thus does not affect state tuition levels. However, when reviewing tuition setting authority in the context of a political sphere if the legislature has control over this process, then tuition is approximately $6,000 lower. Additionally, in a hypothetical state where there
are no Republicans in the upper legislative body, then tuition would be lower by about $1,500. This confirms the work of others (Jones, 1974; Alt and Lowery, 1994; Koshal and Koshal, 2000; Okunade, 2004) that parties matter in higher education spending decisions.
CHAPTER FOUR

CASE STUDY

Referencing the location of North Carolina between South Carolina and Virginia the state is often described as a “vale of humility between two mountains of conceit” (Powell, 2006). As the tongue-in-cheek saying implies, the comparisons between South Carolina and North Carolina have occurred for years. This chapter will examine in more depth the governance structures that exist in these two states. South Carolina and North Carolina have different governance structures and their tuition rates differ greatly. South Carolina has one of the highest average tuition rates for its universities among all 50 states, while its neighbor to the north has one of the lowest tuition rates in the country over this study period. In the previous chapter, the quantitative research determined that the governance structure does not affect tuition. If the governance structure does not affect tuition nationally, could it explain the difference between these two states? This chapter will begin with a brief discussion on the methodology of a comparative case study. The chapter will conclude with a case study of the higher education governance structures in North and South Carolina, while delving further into the factors that shape tuition levels in both states.

COMPARATIVE STUDY DESIGN

Studies conducted using small-N samples often explore, describe, or explain circumstances and help us understand the relationship between variables. This chapter will use a descriptive case study, not to describe the phenomena, but to explore further
the differences between the higher education governance structures in South Carolina and North Carolina. According to Johnson, Reynolds, and Mycoff (2008: 150), descriptive studies are often used to “describe what happened in a single or select few situations with a view toward finding avenues for further research.” Given the results of the previous chapter, the intent of the case study is to determine if more details can be gleaned regarding governance and tuition that are not apparent in the quantitative analysis.

The use of case studies originates out of the desire to understand complex social phenomena, as these types of inquiry can provide more detail to aid in understanding the interaction of variables. Yin states that case studies are appropriate in answering “how” and “why” questions (Yin, 1984: 19), such as how does the governance structure affect tuition and why is North Carolina’s tuition so much lower than South Carolina’s? Researchers present several cautions regarding using case studies. The first is that some scholars perceive that case studies can lack rigor. The caution is not to allow biased views to impact the findings and the conclusions. Secondly, they often provide little foundation for generalizing scientific conclusions. Yin argues that single experiments rarely create facts and therefore case studies are another step in the experimental process. Finally, case studies typically take longer than empirical studies and result in large quantities of documents (Yin, 1984: 21-22). While some of these concerns may exist with general case studies, the current case study seeks to examine the relationship between governance and tuition in more detail than in the previous quantitative chapter.

One approach to case studies is John Stewart Mill’s method of differences approach. Mill’s states that “if an instance in which the phenomenon under investigation
occurs, and an instance in which it does not occur, have every circumstance in common save one, that one occurring only in the former; the circumstance in which alone the two instances differ, is the effect, or cause, or a necessary part of the cause, of the phenomenon” (Mill; 455). Three conditions are necessary to satisfy Mill’s criteria. The first is the causal relationships under consideration must involve conditions that are either necessary or sufficient for a specific outcome. Secondly, all causal variables to the outcome would have to be included in the study. Finally, the “cases that represent the full range of all logically and socially possible causal paths must be available for study” (Bennett, 2004; 32). Given these strict conditions and the difficulty meeting them, using Mill’s difference of methods methodology hampers the ability to conduct a case study. One of the basic problems of using Mill’s method is the lack of criteria “to select among the limitless supply of attributes that might be introduced as controls or explanations for any given phenomenon” (Meckstroth, 1975: 134). Bennett suggests using “process tracing” to overcome the weakness of Mill’s techniques (Bennett, 2004: 32). Process tracing is an analytical tool used to create descriptions and causal conclusions from evidence as part of observed occurrences. This methodology requires finding “diagnostic evidence that provides the basis for descriptive and causal inference” (Collier, 2011: 824).

In this case study, just as in the quantitative analysis in the previous chapter, the dependent variable of interest is tuition. King, Keohane and Verba (1994) suggest that variation should exists in the selection of the dependent variable in order have something to explain. While this is obvious, they argue many researchers make this mistake in
research design. Further, they contend that anomalies need to be explained (129). The independent variables are the factors that affect tuition. One of the most important criteria in a case study is to choose your research subjects to avoid selection bias (Brady and Collier, 2004: 86). Selection of explanatory variables is important as to not predetermine the outcome of the study (King, et al.: 137). Case studies consist of two primary styles, the method of agreement and the method of difference. The method of agreement typically matches the dependent variable in the cases and differs on many of the explanatory variables. On the other hand, the method of difference uses dependent variables in the cases that are differ and the explanatory variables generally agree (Brady and Collier, 2004: 295).

In this chapter, I plan to use a method of difference research design. South Carolina will be used as one of the states since this research originated from an idea proposed by the former Governor Mark Sanford to help create a more accountable centralized higher education governance structure for the state. In choosing the second state, I will examine the states’ location, political culture, tuition, and governance structure to choose a state that has different tuition and several explanatory variables that are similar.

WHY SOUTH CAROLINA AND NORTH CAROLINA?

The original idea for this dissertation centered on a proposal by former SC Governor Mark Sanford to create a Board of Regents to govern higher education in South Carolina. In his 2004 State of the State Address, he proposed that the legislature create a
Board of Regents or a strengthening of the current Commission on Higher Education (CHE) to ensure that the state had a “true statewide vision for higher education” (Sanford, 2004). If policymakers in South Carolina create such a centralized governing system, what effect would it have on higher education in the state? Given this original focus, I explore the case of South Carolina and then select another state to use for comparison.

In his seminal work on policy diffusion, Walker (1969) states that policymakers are constantly reviewing the actions of other states to seek guidance on policy issues, especially in the area of “organization and management of higher education, or the provision of hospitals and public health officials” (p. 890). Additionally, Berry and Berry (1990) argue that one of the primary reasons states adopt new policy is regional diffusion, where states are influenced by the actions of surrounding states. Therefore, it is natural for South Carolina policymakers to review surrounding states, such as North Carolina, when evaluating and considering policy.

Not only do policymakers benchmark other states, but university administrators also choose peer institutions to gauge their growth and accomplishments. Clemson University administrators have identified one peer institution to be NC State University, which is part of the University of North Carolina System (Gouch, 2009). Additionally, the leadership at the University of South Carolina considers the University of North Carolina-Chapel Hill in a group of “peer-aspirant” universities (Pastides, 2013). Interestingly, neither the North Carolina State University nor the University of North Carolina General Administration, which is a sub unit of the University of North Carolina
System, considers Clemson nor the University of South Carolina as peer institutions (Peer Institutions). Nevertheless, the current study bases its analysis from the South Carolina perspective, and our neighbors to the North are institutions used as benchmarks for the two largest institutions in South Carolina.

Another area where the states are similar is their political culture. Elazar (1966) defines political culture as “the particular pattern of orientation to political action in which each political system is embedded” (78). Elazar further subdivides political culture into individualistic, moralistic, and traditionalistic typologies. In the individualistic political culture, the government serves the functions demanded by those who create it (86). The moralistic political culture exists under the notion that government serves the advancement of the public good (90). Lastly, the traditionalistic political culture views government as a system that secures and maintains the existing social order. From Elazar’s work, he classifies both North and South Carolina as traditionalistic states (93). Johnson’s (1976) later research validates Elazar’s earlier classification of both North and South Carolina and considers them traditionalistic. Johnson argues that political culture should be included as a variable when attempting to explain characteristics of the states’ political systems (Johnson, 1976: 507). Elazar and Johnson’s work on political culture further indicate that North and South Carolina are comparable on many levels and able to be used in a method of difference case study.

With the focus of this study on governance, South Carolina and North Carolina have different governance structures overseeing higher education. South Carolina higher education institutions exist under a coordinating advisory board, whose main function is
to approve/regulate curriculum changes. Essentially, the institutions’ individual boards have control over their governance. On the other hand, the North Carolina University System, a consolidated governing board, administers the institutions and has great regulatory control over academic programs, hiring, and tenure and promotion. Along with variances in governance structures, the tuition setting authority also differs. In North Carolina, the University System sets tuition rates, while in South Carolina, the individual institution’s board of trustees set tuition.

As briefly discussed in the introduction of this chapter, South Carolina and North Carolina are on opposite ends of the spectrum of average tuition levels during the 1993-2014 study period. South Carolina had the seventh highest average tuition at $8,906 over the study period. Only Vermont ($11,278), New Hampshire ($9,968), Pennsylvania ($9,842), New Jersey ($9,404), Delaware ($8,261), and Michigan ($8,258) had higher average tuition over the same time. These states are generally located in the northern part of the United States and have many political and cultural differences between themselves and South Carolina, therefore making the most similar comparisons impossible. On the other end of the tuition spectrum, North Carolina was the fifth lowest during the study years at $4,240, which is less than half of the average tuition in South Carolina.

In summary, South Carolina and North Carolina are states that share a border and are similar in their political cultures and their economies. However, the governance of their higher education institutions are on opposite ends of the spectrum regarding centralized control. South Carolina’s higher education system has little oversight and control over the educational institutions in state, while the North Carolina system has a
great deal of control over higher education. Additionally, the tuition at the institutions in South Carolina and North Carolina vary greatly over the study period. South Carolina has some of the highest tuition rates in the United States with the least amount of centralized oversight, while North Carolina has some of the lowest tuition with the greatest amount of institutional oversight. Are these factors related in ways that the quantitative data do not show? Are variables missing from the empirical study? The following case study seeks to examine in more detail the factors that determine tuition at the public four-year institutions in South Carolina and North Carolina.

THE SOUTH CAROLINA COMMISSION ON HIGHER EDUCATION

The South Carolina General Assembly created the South Carolina Commission on Higher Education (SC CHE) in 1967 to serve as a coordinating board for the 33 public institutions located in the state (see Appendix C for a list of the institutions). According to the Commission, they act “both as an oversight entity on behalf of the General Assembly and as an advocate for higher education (About CHE).” The Commission’s four major roles are coordination and planning of higher education within the state, conducting research and providing information related to higher education, ensuring reporting and accountability of the institutions, and administering programs, such as the academic common market (About CHE). Appendix D has more detailed information on the mission, goals, roles, and functions of the SC CHE.

The authors of a 2007 SC CHE report state that new program approval is one of the most important functions performed by this coordinating agency. Initially established
in the 1967 Act that created the SC CHE, Act 359 of 1996 further reinforced the program approval mission. The Commission examines the programs at each public college and university in South Carolina with respect to the programs that other institutions offer to check for need and duplication. Additionally, this Act stated, “no new programs may be undertaken by any public institution of higher learning without approval of the Commission (Policies and Procedures for New Academic Program Approval and Program Termination).” When examining new program proposals, the SC CHE seeks to answer the following five questions (Policies and Procedures for New Academic Program Approval and Program Termination):

- “What are the objectives on the proposed program?”
- “Does the state need the program, and if so, are there alternative means of accomplishing the desired objectives?”
- “Is the program compatible with the mission, role, and scope of the institution?”
- “How much does the program cost?”
- “Does the institution have the necessary personnel, facilities, library holdings, and other essentials necessary to conduct a program of high quality; and if not, is there a plan for acquiring these essentials?”

In addition to approving new academic programs, the SC CHE maintains data for reporting to national sources and approves capital projects, leases, and land purchases for public higher education institutions. The SC CHE also manages the state financial aid programs to ensure impartiality of awards, attempts to increase student access to and
achievement in higher education, and increase awareness of the importance of higher education in South Carolina (About CHE). With the exception of the approving capital purchases, etc. these function of the SC CHE provide information so taxpayers can access the accountability of higher education and generally have little in the way of enforceability.

The South Carolina Commission on Higher Education is composed of 15 board members appointed by the Governor. Included in this number are one at-large member who serves as Chair, one representative from each of South Carolina’s Congressional districts (7), and three statewide at-large members. Additionally, three members of the Commission serve as college and university trustees for one of the research universities, the four-year comprehensive teaching institutions, or from the technical college ranks; and one member, a president, who represents the independent institutions of the state. The “majority of the State Senators and House members comprising the District’s legislative delegation recommend the Congressional District appointees (About CHE).” The advice and consent role of the State Senate confirms the balance of the commissioners. Terms are on a staggered basis for four years for all members, except for the institutional representatives who serve two-year terms (About CHE).

The SC CHE has three subcommittees: Committee on Academic Affairs and Licensing, Committee on Access and Equity and Student Services, and the Committee on Finance and Facilities. The Committee on Academic Affairs and Licensing has six members, while the other two committees have five members each. In reviewing the SC CHE committee meetings for 2018, the Committee on Academic Affairs and Licensing
met seven times and agreed to thirty-six new programs at twelve of the state’s institutions. During the year, the committee tabled only three programs and one of these programs gained approval at the next committee meeting. For the year, only two programs met their demise (CHE, Meeting and Events). For the 2018 year, the approval rate of proposed new programs was approximately 95 percent. In reviewing the minutes from the Finance and Facilities Committee meetings for 2018, the committee considered and approved twenty capital projects and several lease agreements all by unanimous vote. The 2018 minutes for the Committee on Access and Equity were not publically available so they were not reviewable for this analysis (CHE, Meeting and Events). However, if the minutes from the other two committees are any indication, little debate likely occurred and any actions taken were probably by unanimous vote. The universities and technical colleges argued the merits of the programs and the capital projects and without further detailed analysis of the campus infrastructure, it is difficult to determine the need for these requests. One could argue two reasons for the high approval rate. First, the institutions work well with the staff at the SC CHE to seek input on programs and projects before submitting them for approval to ensure that everything is order when being considered by the committees and the full Commission. Another more cynical view of the low rejection rates and the lack of dissension found in the meeting minutes would be that the committees and the CHE, in general, serve more as a rubber stamp in the process and have little real power to oppose new academic programs and capital projects.
The institutions in South Carolina have their own boards of trustees that are appointed according to state statute. These boards of trustees have wide-ranging powers over the academic polices, administrative/faculty hiring and firing decisions, and internal budgeting authority. All institutions, except for Clemson University, have a majority of trustees elected by the General Assembly. Clemson University, under state laws accepting the provisions of Thomas G. Clemson’s will, allows the University Board of Trustees to select seven life trustees, and six additional trustees are elected by General Assembly. Trustees for most of the state’s institutions represent the different geographical regions of the state and according to state law, the selection should be “based merit regardless of race, color, creed or gender and shall strive to assure that the membership of the board is representative of all citizens of the State of South Carolina (Alacbay and Poliakoff, 2011: 25).”

In South Carolina, the state motto most people are familiar with is “Dum Spiro Spero”, meaning “While I Breathe I Hope.” However, the state has a second motto that appears on the state seal - "Animis Opibusque Parati," which means “Prepared in Mind and Resources” (Seals, Flags, House and Senate Emblems). The state seal dates back to the 1770s, so while higher education never received a place of prominence in the state constitution like other states, being “prepared in mind” has been an ideal to strive for in our state. Walter Edgar, in “South Carolina: A History,” frequently mentions that while constituent support has existed for higher education, the legislature has continuously underfunded it throughout the state’s history (Edgar, 1998).
The governing boards of the higher education institutions in South Carolina set their own tuition. Since 1993, average tuition across the state’s four-year degree granting institutions has increased from about $4,700 to almost $11,500 in 2014 (National Center for Education Statistics). This amounts to approximately a 245% increase. One likely cause of this dramatic increase is the decrease in state funding due to some of the slow economic conditions in the state and the Great Recession that affected the U.S. economy. The growth in South Carolina tuition tracked the national trend where tuition increased more than inflation.

THE UNIVERSITY OF NORTH CAROLINA SYSTEM

The University of North Carolina was authorized by the state’s 1776 constitution and chartered by the General Assembly in 1789, with the first class of students being admitted in 1795 (Wilson and Ferris, 1989). For the next 136 years, the University of North Carolina at Chapel Hill was the only institution in the “system.” In 1931, the state legislature redefined the University of North Carolina to include the Chapel Hill campus, North Carolina State College (currently North Carolina State University), and Women’s College (now University of North Carolina at Greensboro). At the time, the governance structure consisted of one president and one Board of Trustees for the system. In 1969 and 1971, the legislature added additional universities, bringing the total number to 16. In 2007, the legislature also included the NC School of Science and Mathematics, a two-

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4 The 16 universities and one high school under governance of the UNC system are: Appalachian State University, East Carolina University, Elizabeth City State University, Fayetteville State University, North Carolina A&T State University, North Carolina Central University, North Carolina State University, UNC-Asheville, UNC-Chapel Hill, UNC-Charlotte, UNC- Greensboro, UNC-Pembroke, UNC-Wilmington,
year public residential high school, under the University of North Carolina System (UNC System) structure (220 Years of History). An organizational chart of the UNC System is included in Appendix C.

The UNC System Board of Governors makes policy for the system institutions and supports “the general determination, control, supervision, management, and governance of all affairs of the constituent institutions” (220 Years of History). The Board has six standing committees – Committee on Budget and Finance; Committee on Educational Planning, Policies, and Programs; Committee on Personnel and Tenure; Committee on University Governance; Committee on Public Affairs; and the Committee on Audit, Risk Management, and Compliance. Special committees exist on an ad hoc basis to handle specific tasks. Currently, the Board has four Special Committees: Committee on Strategic Initiatives, Committee on Historically Minority-Serving Institutions, Subcommittee on Laboratory Schools, and the Committee on Military and Veterans Affairs (220 Years of History). In reviewing the minutes from the UNC System for 2018, the detailed information provided on approving programs, capital projects, and policy changes is significant. A review of the 2018 minutes of the full Board of Governors found that all of the new degree programs proposed meet approval. Most of them were approved by a process call “consent agenda items,” which allows for the approval of a block of items with little or no debate on the issues under consideration. The public is also allowed time to speak on higher education related topics and their

UNC School of the Arts, Western Carolina University, Winston-Salem State University, and the North Carolina School of Science and Mathematics.
comments are summarized in the meetings minutes. For example, the January 26, 2018 meeting had nine different speakers whose remarks related to the Silent Sam statue on the campus of the University of North Carolina - Chapel Hill (Burris-Floyd, 2018).

Membership on the Board of Governors requires approval by the General Assembly. The legislature elects the 24 voting members of the Board of Governors to staggered 4-year terms and former chairs may continue to serve several terms as non-voting emeriti for a limited number of terms (Palmiero, 2005: 11). The Board of Governors, after recommendation from the UNC System president, also has the responsibility of choosing the chancellor for each institution as well as the eight members of each institution’s Board of Trustees. The student body president at each of the state’s institutions serve in an ex officio capacity, along with the four additional members of the Board of Trustees chosen by the Governor (220 Years of History). The argument for the Board of Governors having the authority to select the institutions’ Board of Trustee members is to ensure some level of coordination and cooperation between the UNC System Board of Governors and the individual institutional boards (Palmiero, 2005: 11).

With respect to governance of each individual institution, the UNC System, not the legislature, outlines the specific duties of the Board of Trustees. Some university boards have authority over their institution’s academic and administrative personnel within the salary ranges set by the Board of Governors. However, the institutional boards do not have authority over “appointment, promotion, and compensation of faculty positions with permanent tenure or senior position (vice chancellors, provosts, deans, and directors)” (Palmiero, 2005: 9).
To conduct its business, the Board of Governors meets nine times a year, as well as in special meetings when necessary. In these meetings, most members typically limit their remarks to the issues from the committees on which they serve. As can be expected with such a large board, only a few members are fully prepared, so discussion on most topics is limited (Palmiero 2005: 15). A review of the minutes of the full Board of Governor meetings found a minimal number of active debates during the review period. One of the few debates that did occur related to a tuition increase initiated by the Board. Most of the discussion related to the costs of education to the students and not the costs to the taxpayers. As can be expected, a majority of the Board’s work happens at the committee level, since they typically consist of only six or seven members and debate can be concentrated on specific issues within the committees’ jurisdiction (Palmiero, 2005: 15).

The North Carolina State Constitution reads, in part, “The General Assembly shall provide that the benefits of The University of North Carolina and other public institutions of higher education, as far as practicable, be extended to the people of the State free of expense (North Carolina Constitution, Article IX, Sec. 9).” This has never meant that North Carolina students would receive free college tuition, but rather that a college education “should be as free as practicable (Worf and Tomsic, 2014).” The former Director of the UNC Institute of Government, John Sanders, states that “it was not seen as a mandate to set them (the universities) up and operate them without cost to the students, but rather to set them up to prepare teachers for the public schools or be citizens for other walks of life” (Worf and Tomsic, 2014). Obviously, a mention of higher
education in the state constitution speaks to its importance to the state. Thirty state constitutions mention either establishing or the governance of higher education in the state constitution, but only one, North Carolina, mentions the primary object is to keep down the costs of a college degree (Parker, 2016).

As previously mentioned, the NC System sets tuition under the guidance of the constitutional provisions that intend to keep tuition levels “as free as practicable.” From 1993 to 2014, average tuition at North Carolina institutions increased from approximately $2,300 to over $6,600. This was almost a 287% increase. While this was a dramatic increase, tuition levels at the North Carolina institutions were about half of those charged by South Carolina institutions.

**COMPARISON**

Before examining the governance structure, one thing that stands out as a major difference between North and South Carolina higher education is the sheer number of institutions under the purview of the governing body. The UNC System has sixteen universities under their jurisdiction, while SC CHE has thirty-three institutions under its authority. If only the four-year degree granting institutions are included, the UNC System has fourteen institutions and the SC CHE would have nineteen institutions. While this would even out the number of comparable institutions, when considering population between the states, the number of institutions in South Carolina stills seems to be large. As of 2014, North Carolina’s population was estimated to be almost 10 million, while the population in South Carolina was a little under 5 million (US Census). Even
though North Carolina has almost twice the population of South Carolina, the number of students enrolled in the institutions governed by each state's system in the Fall 2014 semester was remarkably close with NC having 221,878 students (UNC System Statistical Abstract) and SC enrolling 205,757 (SC CHE Data). While these issues are outside the scope of this study, creating a stronger system in South Carolina would have to account for this large number of institutions, and it could lead to policymakers in South Carolina to reduce expenses and overlap by eliminating some schools.

One of the big differences to examine when comparing the structures is the number of members that serve on the UNC System Board of Governors and on the SC CHE. Palmiero (2005) recommends a reduction in the number of board members to fifteen from the thirty-two during the study period. She argues that with the large number of individuals serving on the Board of Governors, the opportunity for debate is limited and a smaller Board could promote more consideration of issues. Since this 2005 study, the North Carolina General Assembly passed legislation (House Bill 39 of 2017) – signed into law by Governor Roy Cooper – that reduced the Board of Governors from 32 members to 24. Opposition to this measure centered around the possibility that smaller institutions such as the historically black colleges and universities would not have representation on the Board (Binker). Given the short time frame under this smaller Board of Governors, it is too early to draw conclusions as to whether this will help increase debate on the Board. The SC CHE has only fifteen members, which is a manageable size that allows the members many opportunities to debate and consider issues.
The two states’ systems also differ greatly in the selection of their membership. Individuals seeking to serve on the UNC System Board of Governors essentially have to campaign directly to the legislature to solicit their support for membership on the Board. Ultimately, the NC General Assembly votes on Board nominees without regard to the geographic or institutional representation of the people selected. Palmiero (2005) states that, given the selection process of the Board of Governors, the governor lacks the ability to direct the Board to address critical education issues within the state. With the staggered terms of the Board members, the governor would not likely be able to appoint the full membership of the Board of Governors during their tenure, but even a few members would increase the influence of the governor on the actions of the Board. South Carolina, on the other hand, selects the SC CHE membership through a process where the Governor appoints some individuals to represent congressional districts and others to represent the research, four-year teaching institutions, or the technical colleges. This appointment process of the SC CHE spreads representation among different interests to avoid concentration by region or institution. Like the UNC System, members serve staggered terms, so the SC governor would also not be able to appoint all of the members serving on the SC CHE at any one time. The legislature still has influence in the process as state legislators from each Congressional district form a legislative delegation. These legislative delegations then submit candidates to the Governor for consideration and appointment. Policymakers often see statewide governing systems as a means to ensuring that institutions are accountable to statewide priorities. Additionally, using a statewide system lessens the ability of individual institutions to approach the legislature
directly for funding (Knott and Payne, 2004: 14). The one negative to using a system approach is that sometimes the governance structure can become subsumed into the state’s bureaucracy and lose some of its ability to effectively advocate for higher education ((McLendon, Hearn, and Mokher, 2009: 704).

Organizational theory says that the structure of the organization matters. The UNC System has a direct role in hiring and firing within the different institutions across the state. In South Carolina, the SC CHE does not have such broad authority over individual institutions. This gives more influence to the centralized UNC System to have power over any tuition increases and policy changes. In South Carolina, the legislature has more control over tuition, as its members can threaten budgets cuts and other sanctions if the universities do not limit tuition increases. Additionally, the UNC System has more standing committees, which provides more opportunity to review issues in depth. Lastly, the missions of the two organizations is different in that the UNC System is one of mandated oversight and control, while the SC CHE is designed mainly to eliminate duplication of degrees and programs across the state’s institutions.

While the states are similar in many respects, a second major factor where they differ is the tuition. In 1993, the average tuition as South Carolina institutions was over $4,700, while in North Carolina it was less than half at $2,300. This was over 204 percent higher in South Carolina. By 2014, South Carolina tuition had increased to almost $11,500, while North Carolina average tuition was roughly $6,660, or almost 173 percent increase. Over the years, the difference, while still substantial, has narrowed
between the two states. Figure 4.1 shows the average tuition rates at the institutions on the two states from 1993 to 2014.

Figure 4.1 – Average Tuition at 4-year Degree Granting Institutions in South Carolina and North Carolina

Source: National Center for Education Statistics, U.S. Department of Education

SUMMARY

As previously stated, one reason for conducting a descriptive case study is to search for potential new variables to include in future research. One of the most obvious variables revealed in this analysis is the need for political culture. While the political cultures are similar based on the earlier work of Elazar and Johnson (Elazar, 1966; Johnson, 1974), one has to wonder if this research needs to be updated to include the study years. The framers of the North Carolina State Constitution included specific language stating that higher education should be as free as practicable (North Carolina Constitution, Article IX, Sec. 9). The constitutional language has driven the debate over
the costs of higher education over the years and will likely continue in the future. On the other hand, one of the mottos of state of South Carolina, which few people know, states that we should be “prepared in mind and resources” (Seals, Flags, House and Senate Emblems). This hardly gives higher education the standing in South Carolina as it does in North Carolina.

The examination of the two states also brings to light the differences in the appointment process between to the two states. In North Carolina, the General Assembly has a prominent role in the process, while in South Carolina the governor has a more prominent role. It is obviously easier to seek appointment through political connections with a governor than to seek votes from a majority of the General Assembly. One can imagine the political tradeoffs involved in waging a campaign with the state legislators as the electors. In future research, adding a variable to explore the appointment process of individuals to the boards/commission could provide insight into the governance structure and the levels of tuition. Do individuals have to run for the board? Who elects them, the legislature or someone else? Does the governor appoint? Do they need the advise and consent of the legislature? These important questions could shed additional light on the governance-tuition relationship in future models.
CHAPTER FIVE

CONCLUSIONS

The central focus of this dissertation is to examine the effect that the governance structure of higher education has on tuition charged to students. This research includes a mixed methods approach, with a quantitative model using panel data from 49 states for the years 1993 to 2014 to examine the factors that determine tuition, and a case study approach to examine the higher education governance systems in South Carolina and North Carolina.

This research was motivated by South Carolina Governor Mark Sanford’s 2004 State of the State Address, in which he proposed the establishment of a Board of Regents to bring more accountability and stronger governance structure to higher education in South Carolina (Sanford, 2004). Just prior to this proposal, tuition at South Carolina institutions had almost doubled from 1999 to 2004 (Hallman, 2005). This research examines whether a connection exists between a states’ higher education governance structure and tuition charged. In studying this issue, the quantitative model examines fiscal, political, higher education governance, and tuition-setting variables to test their relationship with tuition.

Fiscal Variables

Fiscal variables in this model are the major items in the state budget that compete for funding with higher education when state policymakers create a state budget. While not every possible budget item is included in this research, the major spending categories
are Medicaid, corrections, highways, and preK-12 education. Two other fiscal variables, the number of students in the state’s higher education system and the state appropriations for higher education, do not compete with higher education for funding but measure fiscal resources (state appropriations) and demand on those resources (number of students enrolled) facing higher education. Finally, the model investigates whether per capita income and the existence of a state lottery affect tuition. These variables also add to the fiscal resources available to each state.

It was hypothesized that spending more on Medicaid, corrections, and highways would lead to higher tuition, as this would divert resources away from higher education to other spending priorities. The literature (Hovey, 1999; Koshal and Koshal, 2000; Okunade, 2004) has found support for this hypothesis. However, the results of the model presented in Chapter 3 show a negative relationship. Therefore, as states spend more on these items, tuition would decrease instead of increasing as predicted. The one fiscal variable related to spending on competing programs that behaves as expected is preK-12 spending. In this case, as states spent more on preK-12 education, university tuition also increases. This is similar to what other scholars have found in their research (e.g., Hovey, 1999; Boyd, 2002; Webber, 2018).

The two fiscal variables that characterize the fiscal capacity of the state to spend on higher education, per capita income and whether a state has a lottery, also did not behave as hypothesized. As per capita income of a state increases, average tuition increases. This is the opposite of what some scholars have found (Kim and Price, 1977; Rusk and Leslie, 1978). However, my finding is consistent with the work of Kim and Ko
(2015), who found that tuition and state appropriations are positively related. The last fiscal variables, higher education enrollment and higher education spending, also are statistically significant. As higher education enrollment in a state increases, tuition is significantly lower. These results followed some scholars (Toutkoushian and Hollis, 1998; Okunade, 2004), but was the opposite of Rizzo (2004), who found that higher education enrollment was not significant. With regard to education spending, my expectation was that higher state spending on higher education would result in lower tuition. The model presented in Chapter 3 is consistent with several studies (Rusk and Leslie, 1978; Koshal and Koshal, 2000; McLendon, Tandberg, and Hillman, 2014) that find increased state spending has a negative effect on tuition.

**Political Variables**

One of the interesting findings of this dissertation is that tuition is significantly lower if the legislature sets tuition than it is when other actors have control, such as governing boards, coordinating boards, or individual institutions. The amount of this difference, approximately $6,000, is also substantively meaningful. Future research should explore this relationship further since the literature in this area is not well developed. Another political variable, the percentage of Democrats in the upper legislative body, significantly and negatively affects tuition. The literature shows mixed results with regard to the importance of political party on spending: some researchers finding that Democrats spend more on education and social programs (Jones, 1974; Alt and Lowery, 1994), while others (Winters, 1976; Dilger, 1998) find that party does not matter. In the model presented in Chapter 2, I include an interaction variable to test
whether the effect of the legislature setting tuition is conditional on whether Democrats control the upper legislative body. My results demonstrate that this interactive relationship exists. Furthermore, my results suggest that a hypothetical state with no Democrats in the state’s upper legislative body would have an expected tuition level that is over $5,000 higher than if Republicans controlled the upper chamber. Conversely, a hypothetical state with more Democrats in the upper chamber would have a significantly lower tuition.

**Higher Education Governance Variables**

Previous studies have examined the effect that governance structures have on tuition (Calhoun and Kamerschen 2010, Hearn, et al. 1996, Lowry 2001a, Lowry 2001b, Nicholson-Crotty and Meier 2003, and Knott and Payne 2004). The literature generally agrees that a stronger governance structure has an negative effect on tuition. My model from Chapter 3 includes whether the state employs one of three basic governance structures of higher education: a coordinated governing board, a coordinating board, or a planning commission. The quantitative research in this model suggests that governance structure does not affect tuition. Since governance structure does not influence tuition, other factors such as the budgeting process for each state and the current economic conditions may affect higher education more. Additionally, higher education institutions use tuition and fees to supplement shortfalls of funding from the states.
Tuition-Setting Variables

This final subset of variables examines the effect of the tuition-setting authority on average tuition. While in some states the governance structure includes tuition setting authority, other states separate this authority. The results of the model are in the expected direction, but none of the variables is statistically significant. From the results, I conclude that who sets tuition, outside of the legislature, does not matter. It is possible that other factors, such as the economy, lack of government funding, whether the state has many private intuitions, and the demand for higher education, tend to influence the tuition charged more than the which entity sets tuition.

Case Study

South Carolina and North Carolina share many similarities, but they differ greatly in the higher education governance structures and the tuition rates charged. South Carolina uses a coordinating system, while North Carolina uses a governing board. The main power of the SC Commission on Higher Education is to approve capital expenditures and new academic programs. From reviewing the minutes of the SC Commission, an overwhelming majority of the issues before the commissioners are approved with little debate and by majority vote. This lends credence to the idea that the Commission has little formal power over higher education in South Carolina.

While the SC Commission has very little formal power, the University of North Carolina System has more power and control over the state’s institutions. The UNC System, and its Board of Governors, has the ability to choose the chancellor, grant tenure,
and set the salaries of vice chancellors, provosts, deans and directors at the member institution. Not only does the UNC System have jurisdiction over tenure and salaries, but they also set tuition for the universities in the state (Palmiero, 2005). The second area of major difference between the governance between the two states is the appointment process of its members. In South Carolina, the governor has a prominent role in naming members, while in North Carolina the General Assembly has the power to elect members to the Board. By having appointment powers, the governor has more political influence in the Commission, than the North Carolina governor would have in the election process for serving in the UNC System.

A final major difference between the two states is that included in the North Carolina State Constitution is language requiring that higher education should be a free as practicable. Members of the UNC System Board of Governors have referenced this provision in debates related to tuition increases in the past. This provision seeks to maintain affordable education to the citizens of the state.

POLICY IMPLICATIONS

This dissertation has several policy implications for the higher education. As previously discussed, when legislators appropriate funds, they generally want to ensure that the use of these funds meets certain policy goals and objectives. Previously, state legislatures adopted policies to strengthen control over higher education though boards and commission, but my research failed to confirm that a strong centralized governance system helps lower tuition. However, one of the innovative findings is the effect that the
legislature has on setting tuition. While a primary function of the state legislature is to establish a state budget, including appropriating funds for higher education, they could also extend their power to take the responsibility of setting tuition away from other entities. State policymakers often decry when universities increase tuition. However, at the same time, state legislatures often do not live up to their commitments to higher education. For example, after South Carolina enacted a lottery designed to contribute financially to funding higher education in the state, the legislature has continuously underfunded its commitment to the tune of almost $2.1 billion. An audit by the South Carolina Legislative Audit Council showed that while the intent of the lottery was to increase education funding for the state’s institutions, funding has actually decreased. Since 2002, K-12 appropriations have seen an increase of $1.9 billion increase while during this same time the legislature has appropriated $4 billion less for higher education, thereby underfunding education $2.1 billion (Daprile, 2018). By taking responsibility for setting tuition, legislatures become accountable for tuition increases. While the public may like this concept, policymakers may find it problematic. Typically, legislatures have enough trouble enacting a budget; one can only imagine how many problems they would encounter if more state’s legislatures attempted to set tuition. Further, if a legislature begins to set tuition levels, constituents will have a readily identifiable source to direct their anger. With the current system, it is difficult for students and parents to hold fully the university responsible for tuition increases.

State spending on higher education has been a central issue post the Great Recession of 2009. Higher education took greater cuts in Arizona, Florida, Idaho, New
Hampshire, Oregon, Pennsylvania, and South Carolina compared to other states after the economic downturn. Only five states (Alaska, California, Hawaii, New York and Wyoming) have recovered their funding levels to pre Great Recession levels (State Higher Education Executive Officers Association). The policy implication of states lagging the recovery of state funding of higher education will lead to continuing tuition increases to bridge future funding gaps.

Another policy implication of this research is the importance of variation across the states. Individual states have been the primary funders of higher education and each state prioritizes higher education differently. As previously mentioned, the North Carolina State Constitution has language stating that “that the benefits of … higher education, as far as practicable, be extended to the people of the State free of expense” (North Carolina Constitution, Article IX, Sec. 9). While other states may mention higher education and its governance structure in their state’s constitution, North Carolina’s is the only state that lists the primary goal of maintaining affordable higher education. States fund, organize, and govern their higher education systems to fit the needs of their citizens and states. Amending any constitution can be difficult but modifying a state constitution to include higher education could be even more challenging since some perceive higher education to be a private good. As a private good, the argument exists that individuals and not the state should bear more of the costs of education.

With tuition levels increasing, more students have graduated with higher debt than past generations. According to Debt.org (2019), student debt skyrocketed “from $260 billion in 2004 to $1.4 trillion in 2017”. Much of this debt was due to lower state funding
and high tuition increases that occurred during the Great Recession. The age of debt holders has risen to a level where individuals are having their Social Security checks garnished to pay for past student loans (Fray, 2019). The economic ramifications of individuals having more student debt for longer periods can lead to delaying individuals from marrying, purchasing homes, cars, and other items (Noguchi, 2019). Further, financial insecurity may cause entrepreneurs to delay starting businesses. Longer term, individuals who have to divert money to paying off debt will likely delay saving for retirement. When policymakers balance budgets during tough economic times, they are more concerned with the short-term implications than they are with the long-term effects previously mentioned. When the economy falters again, those holding large amounts of student loan debt will feel the effects of a downturn more than others as even bankruptcy will not eliminate repaying this obligation.

Some of the results of the fiscal variables, even though the outcomes were different than others research, also have policy implications. For example, the fiscal variables that compete with higher education for funding, such as Medicaid spending, correction spending, and highway spending, were statistically significant but have a negative impact on tuition. Therefore, as spending on these budget items increases, tuition decreases. Previous research concerning these variables have had a positive effect, so as spending on these items increases so does tuition. It is doubtful that states will spend more on these fiscal variables with the intent of lower tuition. A substitution effect may occur in states that spend more on these fiscal categories where students may attend
community colleges or other educational institutions so the public four-year institutions have lower tuition in an attempt to maintain certain enrollment levels.

Another variable found to be statistically insignificant in this research was the higher education governance structure. State legislatures have often tried to centralize governance in state systems to coordinated or manage the institutions within a state. However, this research indicated that regardless of the structure it has no effect on tuition levels. Given this finding, a better use of the state legislatures’ time may be to work to find additional funding for both preK-12 and higher education funding as increases in fiscal resources for education were found to help lower tuition.

FUTURE RESEARCH

When reviewing the literature on higher education governance, it is apparent that since the Great Recession, researchers have directed their efforts away from higher education governance and towards other issues in higher education. In addition, since 2001, tuition rates have increased 67 percent in real terms, which is greater than the rate of inflation over this same time (Fox, 2019). The current research examines the determinants of tuition at the state level. A fruitful avenue for future research would be to examine the factors that affect tuition at the institutional level by collecting tuition rates for each of the public four-year institutions within a state. By including each institution, this could possibly provide more information about the variation within the
state as all institutions would face the same state conditions related to fiscal constraints, governance, tuition setting authority, and political factors.

While examining variation between institutions in the states may provide more information about the tuition rates, the level of the professionalization within state legislatures may provide additional information about the budget process and deliberations within each state. States with more professionalization in their legislatures have more resources to devote time to legislating and reviewing policies for possible improvements. Further, they are better able to act independently on their activities, such as making policy and appointing individuals to boards and commissions (Gray, Hanson, and Kousser, 2018).

Professionalization of the legislature allows for a deliberative policymaking body, but in states with a formula funding process, the funding allocation process may not be as important as in other states. This dissertation examines the four primary governance structures of higher education – consolidated governing boards, regulatory coordinating boards, advisory coordinating boards, and planning commission – and their effect on tuition. Additionally, I include a variable capturing the actor that has the power to set tuition in the state. The results of my model presented in Chapter 3 finds that these are not statistically significant in determining tuition. However, some states may have formula funding mechanisms that would not show up in using the governance variables and tuition setting authority. Currently, fourteen states use funding formulas to allocated fiscal resources to higher education (State’s Methods of Funding Higher Education,
2012). Funding formulas could increase the state resources provided to institutions and reduce the need for tuition increases.

Another fiscal policy issue that may be of interest in future research is whether a state has either a cap on tuition increases or incentives in place. To control tuition costs, thirty-seven states have caps on tuition increases, and twenty-one states have incentives to contain increases in tuition levels. Additionally, fifteen have both incentives and caps on tuition increases (Kim and Ko, 2014). Caps and incentives lower the ability to increase tuition and could factor into some states lower average tuition. Capturing this information could give further information about which factors affect tuition.

Who selects or appoints the board members and commissioners that serve on the higher education governance systems can influence the policymaking process of the governance systems. Examining whether the governor, the legislature, or another party has responsibility for appointing/selecting the members of the boards and commissions could offer insight into the effect on tuition. Within the governing structures of higher education, elections or appointments determine who serves on the higher education governing boards and commissions. Governors with appointment power should have more influence over the governance structure and education policy than the legislature. However, if the legislature is responsible for electing those serving on the boards or commissions, they should have more influence over higher education than other entities. Research in this area may provide insight into whether the legislature, who already has the power of the purse, would have more power over tuition rates with their input over these selections.
Another avenue of future research would be to examine more closely the relationship of lotteries to tuition. Many lotteries win approval from voters and policymakers by marketing them as a means to provide additional funding for lotteries. In South Carolina, the enacting legislation names the lottery the “South Carolina Education Lottery” (South Carolina Education Lottery). While the dissertation used a dummy variable for whether a state has a lottery or not, this variable could be further subdivided to indicate whether lottery revenue is earmarked for higher education. Since the research in this field consistently argues that lottery funds are becoming fungible (Borg and Mason, 1988; Spindler, 1995; Garrett, 2001; Erekson, DeShano, Platt and Ziegert, 2002; Stanley and French, 2003), it is important to examine whether and how education lotteries are benefiting education by increasing funding and lowering tuition.

A final area of research that was exposed in Chapter Four that examined the differences between higher education in South Carolina and North Carolina is the effect of including higher education in the state’s constitution. The North Carolina State Constitution has language that attendance at public institution should be as free as practicable. During debate related to increasing tuition, the UNC System Board of Governors mentioned this provision as a reason for limiting tuition increases in debate related to increasing tuition. The effect of this language needs to be explored to determine its effect on tuition over time.
FINAL THOUGHTS

In 1968, Milton Friedman stated, “the great problem with higher schooling today is not that we are spending too little, but that we are spending too much – and spending that so wastefully” (Friedman, 1968: 112). The debate over how much or how little the state spends for higher education has been ongoing for decades. University officials argue that policymakers need to spend more on higher education so that tuition will be lower. Policymakers counter this argument by stating that universities need oversight and governance to ensure the wise usage of state resources. This is a never-ending debate between policymakers and higher education. One solution to ending this impasse would be if higher education is privatized and given complete financial and governance freedom from the state. However, this is unlikely to occur given the enormous university infrastructure that the states have financed over the years. The debate will endure as long as universities receive less money than requested by their leadership and legislatures impose conditions on the funding provided.
Appendix A

South Carolina Public Institutions of Higher Learning
(Source – South Carolina Commission on Higher Education)

Research Institutions (3)
Clemson
University of South Carolina - Columbia
Medical University of South Carolina (MUSC)

Teaching Institutions (10)
Citadel
Coastal Carolina
College of Charleston
Francis Marion
Lander
SC State
USC Aiken
USC Beaufort
USC Upstate
Winthrop

University of South Carolina Two-Year Regional Campuses (4)
USC Lancaster
USC Salkehatchie
USC Sumter
USC Union

Technical Colleges (16)
Aiken Technical College
Central Carolina Technical College
Denmark Technical College
Florence-Darlington Technical College
Greenville Technical College
Horry-Georgetown Technical College
Midlands Technical College
Northeastern Technical College
Orangeburg-Calhoun Technical College
Piedmont Technical College
Spartanburg Community College
Technical College of the Lowcountry
Tri-County Technical College
Trident Technical College
Williamsburg Technical College
York Technical College
Appendix B

Mission, Goals, Roles, and Functions of the South Carolina Commission on Higher Education

MISSION

The South Carolina Commission on Higher Education is committed to promoting access, affordability, and quality in the state system of higher education through coordination, regulation, advocacy and oversight, as directed by the General Assembly.

GOALS

- High academic quality (§ 59-103-15.A.2a)
- Affordable and accessible education (§ 59-103-15.A.2b)
- Instructional excellence (§ 59-103-15.A.2c)
- Coordination and cooperation with public education (§ 59-103-15.A.2d)
- Cooperation among the General Assembly, Commission on Higher Education, the Council of Presidents of State Institutions, institutions of higher learning, and the business community (§ 59-103-15.A.2e)
- Economic growth (§ 59-103-15.A.2f)
- Clearly defined missions of institutions (§ 59-103-15.A.2g)

ROLES & FUNCTIONS

- To provide pertinent information about higher education to parents and students. (§ 12-1-1840, 59-103, 59-103-65 through 180)
- To review and approve new degree program proposals and evaluate the productivity of existing programs. (§ 59-101-150, 59-103-20, 59-103-55)
- To administer state, regional, and federal programs affecting South Carolina higher education. (§ 59-114-40 through 59-114-75)
- To maintain a statewide planning and institutional effectiveness system. (§ 59-103-30 through 59-103-45, 59-106-67 through 59-106-690)
- To monitor the implementation and evaluate the effectiveness of programs designed to provide minority groups with access to and equality of higher education opportunities. (§ 59-25-55, Provisions 1A & 112 of the Fiscal Year 2018-2019 Appropriations Bill H4550)
- To examine and license non-public educational institutions. (§ 59-58-40)
- To make recommendations by means of data collection, research, and studies to the Governor, S.C. Department of Administration, S.C. Revenue and Fiscal Affairs Office, and the General Assembly regarding policies, roles, operations, and structure of South Carolina's higher education institutions. (§ 59-11-75.1A, 59-103-350, 59-103-35 through 59-103-36, 59-103-43, 59-103-60 through 59-103-70)
- To establish procedures for the transferability of courses at the undergraduate level between and among two-year and four-year institutions. (§ 59-53-40 and 59-103-45)
- To coordinate with the State Board of Education in determining minimum academic expectations and requirements and approving appropriate secondary courses for prospective post-secondary students. (§ 59-103-45.2)
- To reduce, expand, or consolidate, and beginning July 1, 1999, close any institution which does not meet the standards of achievement enumerated in § 59-103-30 of the Code of Laws of South Carolina, as amended. (§ 59-103-45.5)
- To review and approve each institutional mission statement to ensure it is within the overall mission of that particular type of institution and is within the overall mission of the state. (§ 59-103-45)
- To evaluate the financial health of our public colleges and universities to ensure that, given national and state trends in higher education, current and proposed academic programs, construction and maintenance projects, leases, and land purchases, and other activities of those institutions are viable and that access, affordability, and excellence are sustainable. (§ 2, 24.1-40, 24.1-55, 11-51-125, 59-101-107, 59-103-340, 59-103-350, 59-103-360, 59-103-110)
- To serve as the State Approving Agency (SAA) to evaluate educational/vocational institutions and training establishments where veterans and others eligible for the GI Bill can receive those benefits. (50 CFR 21.4150 through 50 CFR 21.4155)
- To serve as the fiscal agent for the state electronic Library (FSCAL) system. (Provisions 3.6 of the Fiscal Year 2018-2019 Appropriations Bill H4550)

(Source – South Carolina Commission on Higher Education)
Appendix C

The University of North Carolina System Organizational Chart

(Source – The University of North Carolina System)
Appendix D
Mission Statement for the University of North Carolina System
(Source – The University of North Carolina System)

Mission Statement

The University of North Carolina is a public, multi-campus university dedicated to the service of North Carolina and its people. It encompasses the 17 diverse constituent institutions and other educational, research, and public service organizations. Each shares in the overall mission of the University. That mission is to discover, create, transmit, and apply knowledge to address the needs of individuals and society. This mission is accomplished through instruction, which communicates the knowledge and values and imparts the skills necessary for individuals to lead responsible, productive, and personally satisfying lives; through research, scholarship, and creative activities, which advance knowledge and enhance the educational process; and through public service, which contributes to the solution of societal problems and enriches the quality of life in the State. In the fulfillment of this mission, the University shall seek an efficient use of available resources to ensure the highest quality in its service to the citizens of the State.

Teaching and learning constitute the primary service that the University renders to society. Teaching, or instruction, is the primary responsibility of each of the constituent institutions. The relative importance of research and public service, which enhance teaching and learning, varies among the constituent institutions, depending on their overall missions.
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