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Paul Brown

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**POLITICAL IDEOLOGY AS DETERMINATIVE OF HIGHER EDUCATION
FUNDING: EXPLORING THE DISTINCTIONS BETWEEN COMMUNITY COLLEGE
AND UNIVERSITY FUNDING UNDER DIFFERING POLITICAL REGIMES**

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A Dissertation Submitted in Partial Fulfillment of
the Requirements for the Degree of Doctor of Political Science

Department of Political Science
In the Graduate School
The University of South Dakota
May 2024

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The members of the Committee appointed to examine
the dissertation of Paul S. Brown find it
satisfactory and recommend that it be accepted.

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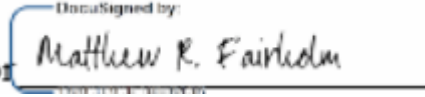
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ABSTRACT

Adequacy of funding for public institutions of higher education in the United States is significantly important to an array of stakeholders, including, state legislative bodies, decision-makers in the arena of higher education, and notably, consumers of higher education. State allocation of resources for higher education demonstrates variability, complicating accurate programmatic planning and budgeting. To assist higher education officials in the task of budget forecasting and resource adequacy, this study will help fill the void in understanding the connections between the political composition of the states' legislative bodies and funding levels for differing types of higher education institutions. While significant prior research has delved into questions surrounding higher education funding from the vantage point of political considerations, the question of differential impacts predicated upon institutional type remains underexplored. To address this problem, this study examines political factors influencing higher education funding while differentiating between institutional types according to a grouped Carnegie Classification framework. State funding and legislative data derived from educational, governmental, and professional sources provide the basis for quantitative examination of the relationship between legislative party majority and absence or preference for funding a specific type(s) of higher education. The research results indicate that contrary to some prior research, no partisan preferences for higher education funding across institutional categories is discernable during this study's period. This finding is consistent with hypotheses emanating from the literature of comparative political science wherein the argument is advanced that under conditions of mass higher education partisan differences will be diminished. This study also confirms that two-year colleges inhabit a modestly favorable policy space, as logics for their support transcend partisan preferences, and that these institutions comport more closely to the underlying assumption of the neoliberal ideology undergirding current societal values. The findings suggest that a reversal of the longstanding weakening of support for higher education involves more than the ascendancy of one political party, but rather, a recalibration of the purposes and values of higher education, realized by returning to the tenets of classic liberalism.

Dissertation Advisor 
 Dr. Matthew R. Fairholm

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Above all, I would like to thank my wife Kay for her untiring support during my academic career. In both success and setback, she has remained supportive and committed to my efforts even at the costs of time, finances, and the foregoing personal objectives. I simply would not have accomplished this without her help.

DEDICATION

This study is dedicated to the American system of community colleges and the democratic ideals upon which their founding rests.

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CHAPTER 1

Introduction to the Study

Background of the Study

The United States over the course of its history has developed a system for higher education that, arguably, is the envy of the world. The societal contributions of this system are in many respects incalculable, both in terms of scientific advancement, but also in undergirding and extending our democratic ideals and in improving the quality of life for millions of individuals. In recognition of the beneficial effects of this endeavor, both Federal and State resources have been invested into higher education in the belief that such monies served well societal advancement and human flourishing. But as the recent trends in the funding of higher education reveal, legislative support for higher education has been waning, a trend that has had serious implications for the future of higher education in the United States Archibald & Feldman (2006). The perceptions of the social value of higher education and the political will to fund it represent an intriguing paradox.

Political considerations have exercised significant influence upon higher education, both in the United States and abroad. Why this is so, and the ramifications of these political influences form the basis of this research project. The scope of extant investigation into the field of higher education is massive, and covers arguably, every facet of the enterprise. The corpus of research testifies to the importance of the activities and outcomes of higher education, indeed even to the core societal expectations placed upon the institution writ large. Certainly, since the inception of the university at Bologna in 1088, societies, predominately of the west, have anticipated the university would provide the clergy, barristers, physicians, scientists, and a myriad of other

learned professionals essential to the functioning of complex society. But increasingly, especially within the previous seventy-five years, societal expectations as to the role of the university have expanded.

This expansion has placed higher education at the forefront in ameliorating societal challenges. Instead of educating a relatively few members of the elite class, higher education has been expanded, particularly in the United States, into an education for the masses, indeed, elevated in rank from privilege to a right. As such, higher education is expected to address issues of social mobility, provide redress for educational disparity among underrepresented and marginalized groups in society, and improve the quality of life for millions of people. These aspirations have not been unrealized, as higher education has made significant impacts in each of these areas. Indeed, societal aspirations and faith in the promise of higher education has precipitated the investment of trillions of dollars of federal, state, local, corporate, and philanthropic support.

Added to this plethora of aspirations is an increasing expectation for maintaining and enhancing the economic well-being of society. The scale of the anticipated contribution of higher education toward economic advancement is extraordinary. In addition to the provision of a highly skilled work force, the institution of higher education is increasingly tasked with becoming the driver of economic growth through scientific and technological advance. In this role, higher education becomes an instrumentality of government activity, and plays a crucial role in partnership with industry in fostering research and development. While these matters are worthy of investigation, they are mentioned here, not as a mere footnote, but in part, to establish a context for the project herein.

Simultaneous with these increases in expectation, and in contradiction to them, has been the roughly fifty-year trend of decreasing financial support for higher education. This phenomenon is well documented in the literature of higher education finance (Archibald & Feldman, 2006; Delaney & Doyle, 2011; McLendon, Hearn, & Mokher, 2009). Indeed, multiplicities of factors have been investigated, including influence of political party majority (Boix, 1997; Dar, 2012; Dar & Lee, 2014; Holbeck, 2017; McLendon, Hearn, & Mokher, 2009), divided or unified government (Alt & Lowry, 2000; Ortega, 2020), tax and spending reform efforts (Archibald & Feldman, 2006; Kramer, 2011), type of higher education governance (Tandberg, Fowles, & McClendon, 2017), the effects of special interest groups (Tandberg & Wright-Kim, 2019) competition with other budgetary priorities (Delaney & Doyle, 2011) and economic performance of the states (Kramer, 2011; McLendon, Deaton, & Hearn, 2007; Tandberg D. A., 2010b) and state demographics (Rizzo M. J., 2006).

From this literature, a picture emerges which portrays a milieu of correlated factors serving to suppress expenditures in public higher education. Of primary concern is the reduction in legislative direct support for higher education relative to inflation, and in comparison, with other budgetary priorities. This declension stands in direct contrast to the United States' position as the leader in higher education as pertaining to levels of financial support, breadth of opportunity for a large percentage of the population, and reliance on higher education's inherent improvement in human capital as a driver of economic opportunity (Callan & Finney, 2005; Crookston & Hooks, 2012; Zumeta, Breneman, Callan, & Finney, 2012).

An unfortunate dichotomy exists in the arena of higher education in the United States, wherein as the purported essentiality of higher education for economic competitiveness is increasingly touted, financing for public colleges and universities has declined, often

precipitously (Kramer, 2011). The results of this decline are evidenced by increased tuition costs and student indebtedness, as well as a growing impetus by colleges and universities to seek funding from external sources. This blurs the public/private distinction of state institutions, leading some to refer to state universities as privately funded public universities (Zumeta, Breneman, Callan, & Finney, 2012). Several societal trends are instrumental drivers in funding decreases, among which have been the generalized tax-revolt of the previous four decades (Archibald & Feldman, 2006); as well as the growing demands for social services given an aging demographic, which are funding areas that compete with higher education for state resources. As noted in the literature, higher education often is seen as a balancing wheel between competing state budget demands, and since higher education can raise at least some of its own support, it often suffers in relation to other budgetary areas in times of financial constraint (Hovey, 1999), and has declined in relation to personal income within the state (See Figure 1).

Figure 1

State Higher Education Allocations per \$1,000 of Personal Income



Source: SHEEO (2021)

Interwoven among these realities, is the debate about the instrumentalities of higher education as to whether it constitutes a societal or private good. To the extent the predominance of opinion favors higher education as a private good, a trend of growing proportion, public funding for higher education comes under increasing pressure for reduction (Archibald & Feldman, 2018; Callan & Finney, 2005; Zumeta, Breneman, Callan, & Finney, 2012).

Contributing to this perspective of education as a primarily a private good is the erosion of trust in institutions within American society, whether schools, unions, courts, or universities. In short, the role of the university in providing a place where moral questions are debated, and a role in shaping societal direction has been diminished. Thus, the University's function is viewed

through a more pragmatic lens of providing training for careers, and in expanding knowledge relative to economic growth. As Weerts (2016) argues, this environment of pragmatism, in combination with a majority view of education as a private good while contending with multiplicity of competing budget demands, has led to a reconceptualizing of the relationship between state and higher education with lower commitments to higher education the result.

Amidst these dynamics of legislative funding priorities and tacit measures of societal favor, higher education governance systems require accurate funding information to make informed decisions about academic programs and levels of financial support. Higher education funding comes from a multiplicity of sources including federal, state, and local appropriations, tax exemptions, and to a growing degree, private entities, trusts, and grants. Compounding an already complex funding landscape are the legislative decisions that affect funding levels and restrict funding to specified uses. In efforts to bring clarity to these issues, many studies have undertaken to explore the higher education funding arena, and routinely consider economic, demographic, and political factors (Crookston & Hooks, 2012; Doud & Sheih, 2014; Ness & Tandberg, 2013; Ortega, 2020; Rabovsky & Ellis, 2014; Tandberg, Barakat, & Hillman, 2014; Weerts & Ronca, 2012; Zerquera & Ziskin, 2020).

To treat the funding of higher education as a monolith is to overlook the variegated nature of higher education and the significant distinctions that occur between institutional types. While this study will intentionally preclude private nonprofit and private-for-profit colleges as they are not recipients of state or local funding appropriations, this study will delve into specifics of community college funding, an area of inquiry largely absent in the extant literature. Closely allied with the purposes of this proposal, are studies that have examined the relationship between political ideology and funding levels (Dar & Lee, 2014; McLendon, Deaton, & Hearn, 2007;

McLendon, Hearn, & Mokher, 2009; Tandberg, Fowles, & McClendon, 2017; Weerts & Ronca, 2006). In review of these studies, inconsistencies between findings and a lack of focus on community colleges specifically, underscores the need for further research to uncover greater details. Such information would prove helpful to leaders in higher education as they seek data necessary for accurate economic forecasting, especially in times of political uncertainty in ongoing efforts to manage costs of tuition and retain the historical affordability of public higher education.

Statement of the Problem

A mature capitalistic society such as the United States depends on its institutions of higher education to produce knowledge and prepare its workforce to hold jobs requiring expanded technical competence (Barrow, 2010). Increasingly, higher education is tasked with research productivity, while also expanding the number of degreed individuals prepared to make meaningful contributions to an advanced society. The recognition of the essentiality of an educated populace to national prosperity has long been recognized by thought leaders and governmental entities, and as such, has served as the impetus for major legislative actions. Perhaps the most significant of these, and the one that set the stage for the array of world-class institutions of higher education was the Morrill Act of 1862 (and subsequent 1890 legislation for the states of the former Confederacy). Inarguably, this action propelled the United States toward world leadership in education and corresponding economic development. As the hostilities of the second world war ended, the Serviceman's Readjustment Act of 1944 (G.I. Bill) with its provisions for educational assistance set the stage for the massification of higher education which is credited with significantly enhancing the Nation's stock of human capital and facilitating long-term economic development, and in so doing, became the another highly

significant component in the Nation's developing system of higher education (Krendle-Gilbert & Heller, 2013).

After the passage of the G.I. Bill was the report of the President's Commission on Higher Education released in 1947 entitled Higher Education for American Democracy and hereafter referred to as PCHE (Higher education for democracy, 1947). The findings of the PCHE became the basis of a significant pivot in US higher education and became the impetus towards the establishment of America's system of community colleges (Dougherty K. J., 1994). The PCHE contained recommendations in two significant arenas of educational policy since it advocated for improving access and equity to higher education and expanding the role for community colleges (Krendle-Gilbert & Heller, 2013).

Although, in keeping with the aims of the commission, issues of access were increasingly addressed, funding sources for students ran counter to initial recommendations. Increasingly, federal student aid came in the form of student loans, rather than grants, thereby shifting the burden of college financing to students (Mettler, 2014). While the existence and expansion of the student loan program helped ensure access for large numbers of students, achieving the Commission's goal of mass higher education would not be realized without commensurate expansion in the numbers of students participating in higher education. The Commission's recommendation to alleviate the lack of availability came in the form of expanding the community college system given the belief that such schools could be built quickly at a cost savings. In addition to the expansion of the two-year college system, the role of these colleges was expanded to include vocational education. The Commission also advocated these colleges become integrated into their respective communities.

This brief history of governmental action in establishing higher education demonstrates a significant commitment to the education of the next generation's cadre of leaders and skilled individuals. Against this backdrop stands the current environment of waning support. In acknowledgement of the environment of higher education funding, numerous studies have examined a taxonomy of factors related to the decline of funding. These studies have variously examined demographic, economic and political factors (Archibald & Feldman, 2006; Dar & Lee, 2014; McLendon, Hearn, & Mokher, 2009; Tandberg, 2010a; Weerts & Ronca, 2006). These studies have focused primarily on higher education as a monolith, leaving undistinguished funding trend differences between community colleges and four-year institutions. Given the variance in founding charter and objectives between community colleges and four-year institutions, as well as differences in funding strategies, the extant studies blur important distinctions in funding levels and trends between differing institutional types.

This study focuses on the limited amount of knowledge about funding differences across institutional types. Specifically, this study will address gaps in knowledge related to how political partisanship affects funding levels at differing types of two-year colleges and in comparison, with four-year and higher institutions. What will emerge from this study is greater clarity for administrators and executives within the system of higher education system to understand factors that influence state higher education funding levels, calculate the anticipated trajectory of funding through trend analysis, and implement actions corresponding to funding level changes.

Purpose of the Study

Due to the acute problems associated with reductions in funding for higher education in the United States, the topic has received significant popular and academic attention.

Notwithstanding the abundance of studies that have provided understanding as to what has transpired in higher education funding generally, few studies have addressed the specifics of funding for the community college sector, especially in relationship to funding in other institutional levels. While many commonalities exist between funding sources for community colleges and four-year and higher institutions, significant differences are present. Chief among these are the presence and impact of local funding sources, which vary between states, as well as states' response to community college funding needs, based on the limited ability of these institutions to raise outside sources of funding. At present, contradictory information is present relative to higher education funding, particularly as community college funding may trend differently than four-year institutions.

The design of this study is intended to clarify some of the distinctives of community college funding by examining the predictive characteristics of states' which affect state support. Combining various political factors with economic indicators and demographic variables and analyzing their relationship will add to the knowledge of what factors are influencing states' variability in funding higher education. Another purpose of this study is to determine how state support of community colleges has changed from 2005 to 2020, a time in which economic and political factors have shifted dramatically. Finally, this study will focus on how changes to the legislative majority and party of the governor influence community college funding levels.

Research Questions

The primary focus of this study is to determine what, if any, state characteristics influence funding allocations to public higher education. This line of inquiry is located within the literature of higher education funding where multiple causal factors have been explored to determine their influence on state allocations. While building from these efforts, this study is

differentiated from them by its focus on differential impacts between institutional category, and specifically in distinguishing between two-year and four-year colleges and universities. Further delineation is made by distinguishing two-year colleges into a Carnegie classification-based grouping which distinguishes two-year colleges by institutional objective along a continuum from vocational to academic transfer emphasis. In essence, two primary questions guide this effort. The first is to determine if four-year colleges and universities occupy a more favored position from the standpoint of legislative funding allocations under Democratic majority governments. The second question is connected to the first and attempts to distinguish if a discernable pattern of funding advantage exists between types of two-year colleges when also under Democratic governing majorities.

The research questions that will guide data collection and analysis are summarized into four categories. The first question concerns the political factors of the individual states influence state funding for higher education across the institutional categories. Specifically, what effect does the party affiliation of the governor, and the legislative bodies have on the level of state funding for higher education by institutional category? Relatedly, does the presence of a unified government or the existence of tax and expenditure limitations in a state influence legislative allocations to higher education? In keeping with prior research, other state characteristics related to higher education funding are incorporated as control variables in the study. These variables incorporate measures of economic activity and the regulatory environment, characteristics of the state's higher education system and participation rates, and state demographic factors influencing higher education funding.

Organization of the Study

Chapter 1 contains the introduction, statement of the problem, research questions, significance of the study, definition of terms, and limitations of the study. Chapter 2 contains a review of literature related to the historical development of higher education funding, and more specifically to the history of the community college and the uniqueness of its mandate and funding sources. Chapter 3 outlines the specific research methodology in terms of variable choice and methods of data analysis. Chapter 4 provides the results of the data analysis and the findings from the research questions. Chapter 5 summarizes the study findings, conclusions drawn from them, as discussion, recommendations for practice and suggestions for further study.

Definition of Terms

Carnegie Classifications: The Carnegie Classification is the leading framework for recognizing and describing institutional diversity in U.S. higher education. The Carnegie Commission on Higher Education developed the classification in 1973 to support its program of research and policy analysis. The framework is used in the study of higher education and is intended to be an objective, degree-based lens through which researchers can group and study similar institutions. Carnegie Classifications are used in research study design to ensure adequate representation of sampled institutions, students, or faculty (Education A. C., 2023).

Fulltime Equivalent (FTE): Is the measurement used to calculate the estimated number of students equivalent to the number of students carrying a full load of coursework. Full-time is 12 or more credits per semester for baccalaureate and below students, 9 credit hours or more for graduate students.

Gini Coefficient: The Gini coefficient is the most common measure of income inequality, used domestically and internationally. The Gini coefficient expresses the expected absolute gap between people's income relative to the mean of the population. Values are expressed along a continuum from zero to one, with zero representing perfect income equality, and one absolute inequality.

Higher Education: Refers to education beyond the secondary level that is provided by colleges, universities, community colleges, vocational or trade schools that award academics degrees or professional certificates. In this study, this term is limited, and references only publicly supported educational institutions. Including graduate, undergraduate, and professional schools.

IPEDS (Integrated Post-Secondary Education Data System) - IPEDS is a survey of colleges, universities and vocational institutions conducted annually by the U.S. Department of Education (DOE). The Higher Education Act requires postsecondary institutions to participate in IPEDS to retain eligibility to administer Federal Title IV student aid (Pell Grants and Stafford Loans). IPEDS collects information on student enrollment overall and by race, gender, age, and student status, and degree completion by level and field of study. IPEDS also collects information on institutional finances, including revenues and expenditures by source. Financial data are collected as of the fiscal year, which usually begins in July. Enrollment data are counted for the fall-to-spring academic year.

Neoliberalism: Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve

an institutional framework appropriate to such practices.... State interventions in markets (once created) must be kept to a bare minimum because, according to the theory, the state cannot possess enough information to second-guess market signals (prices) and because powerful interest groups will inevitably distort and bias state interventions (particularly in democracies) for their own benefit (Harvey, 2007).

Net State Appropriations for Core Teaching and University Overhead: Net State Appropriations for Core Teaching and University Overhead was defined using the IPEDS definition for state appropriations less any state appropriations not directly related to core teaching or university overhead. IPEDS defines state appropriations as the amounts received by the institution through acts of state legislative bodies, excluding grants, contracts, and capital appropriations. Funds reported in this category are for meeting current operating expenses, not for specific projects or programs (Education U. D., 2023).

New Public Management: New Public Management (NPM) is a significant development in the management of public services. Its increase is linked with the rise of the New Right, apparent since the 1980's. NPM emphasizes the growth of markets and quasi-markets within public services, empowerment of management, and active performance measurement and management. NPM is informed by the intellectual streams of public choice theory and agency theory (Ferlie, 2017).

Partisan Regime: A partisan regime may be understood as a political coalition organized under a common party label that challenges core tenets of the established political order, secures effective national governing power, defines broadly the terms of political debate, and maintains sufficient power to thwart opposition efforts to undo its principal policy, institutional, and ideological achievements (Polsky, 2012).

State Support: The general fund state appropriations and other state funds earmarked for higher education. The level of state support includes state tax revenues, local state support, state endowment earnings, and income from non-tax sources such as state lottery income.

Time series: A time series regression analysis is obtained by measuring a variable (or set of variables) regularly over a period of time. Time series data transformations assume a data file structure in which each case (row) represents a set of observations at a different time, and the length of time between cases is uniform.

Significance of the Study

The United States has developed a system of higher education that is emulated by much of the world, no small feat given the comparatively short history of the country relative to many of its counterparts. Inarguably, the vibrancy of higher education in the United States is due to the diversity of societal and intellectual streams from which it springs, but also the significant role of governmental action towards its establishment and continuation. Not least of these actions is the financial means of support for higher education which historically centered on the allocation of public monies in support of state supported colleges and universities. Recent decades have witnessed a reduction in state appropriations for higher education in part due to fiscal constraints, philosophical debates regarding the public versus private benefits of higher education and constricted tax revenues. These reductions in state support intensify pressures on higher education finance with concurrent reductions in services, increased tuition costs, reduced affordability, and increasing corporatization of the academy.

In 2009, then President Barak Obama proposed spending an additional 12 billion dollars (about \$37 per person in the US) on the nation's community colleges to increase the number of

degree-holding Americans by 5 million individuals (ARRA, 2009). Such an emphasis was made in recognition of not only the chronic neglect of community colleges, but also the need to enhance American economic competitiveness. While previous studies have proven insightful in identifying correlations between states' characteristics and funding levels, these studies have tended to treat higher education as monolithic, thereby potentially overlooking factors unique to the community college setting. The Nation's community colleges, in aggregate, educate a significant percentage of the US college population, and arguably, possess demonstrable flexibility in adapting to evolving economic conditions particularly at the local level. It follows then that obtaining more accurate knowledge of contributory funding factors is essential for community college officials and state policymakers. This study is designed to investigate state factors influencing the funding levels for community colleges versus baccalaureate and higher institutions. This distinction is illuminated by utilizing Carnegie institutional categories to distinguish higher education allocation levels by institutional type.

Previous studies have discovered a linkage between political factors and state higher education allocation levels, as party preferences are enacted through budgetary means. Nonetheless, these studies have not evaluated the differential effects of these preferences. To provide a more accurate assessment of the impacts of partisanship on funding, this study employs a unique grouped model of the Carnegie Classification system to evaluate funding differences by institutional type under differing political regimes, thereby providing decisionmakers with more accurate funding information as political majorities shift within the respective states.

CHAPTER 2

Review of Relevant Literature

The chapter's purpose is to review the literature relevant to higher education funding and previous research that will provide the background for further study. This chapter is divided into four sections that address the emphasis areas of the research study. The first section provides an overview of the history of higher education funding in the United States. The second section provides an overview of the history and development of the U.S. community college as a component within the American higher education system. The third section focuses on two theoretical frameworks for higher education funding. The first theory examines the impact of neoliberal philosophy on the funding trends in higher education. The second examines the political preferences that affect the major political party's willingness to fund public higher education through the lens of comparative political philosophy. The final section identifies previous research studies focusing on higher education funding and the influencing variables examined.

Higher Education Funding

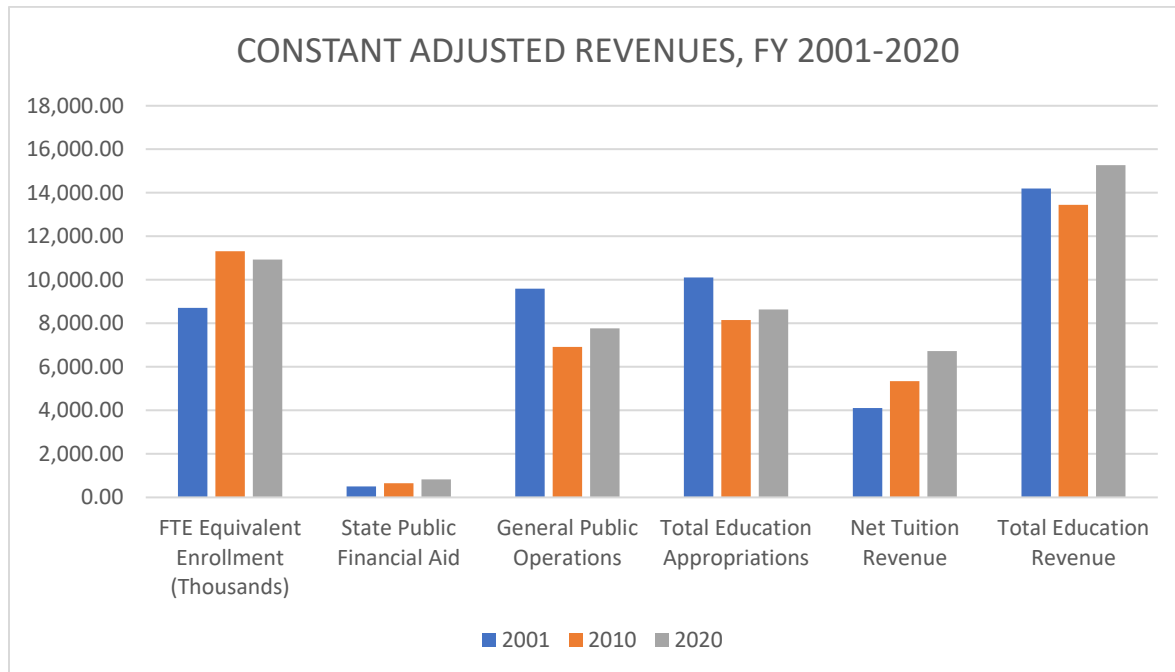
Background: Understanding the funding of higher education in the United States is a complicated task. Even when private institutions are removed from consideration, revenues from federal, state, and local sources must be considered. As each state has its own derivation of funding formulas, institutions, and local taxation provisions, speaking definitively about the provision of support for higher education is likely unachievable. Rather, what many studies have undertaken is to focus on one or more variables of interest, while holding other influencing

factors constant. In this respect, this study is indistinguishable. However, even to achieve a more accurate, yet myopic focus, requires an understanding of the history, political antecedents, and social and demographic factors which have shaped the landscape of higher education. The review of literature aims to provide this overview.

Budgetary Constraints: Adding complexity to this generalized concept of political orientation and higher education funding is the phenomenon of budgetary reductions in higher education funding in the United States. While studies such as Boix (1997) demonstrate the existence of a strong preference for public higher education funding, recent research has highlighted the effects on both institutions and students of declining levels of state funding for higher education. As noted by Hovey (1999) and Delaney and Doyle (2011) higher education serves as a budgetary stress relief mechanism during periods of fiscal constraint, with higher education receiving a disproportionate share of funding cuts. As noted in the State Higher Education Executive Officers (SHEEO) report regarding the impacts of state appropriations, these disproportionate cuts occur more rapidly and are restored less completely than other budgetary categories (SHEEO, 2021). As a result, since 2000, forty-two states have undergone expenditure declines relative to student FTE. According to Zhao (2018) state appropriations per FTE student decreased by 44% between the years 2001-2013. Given that state appropriations constitute most budgetary resources for public institutions of higher education, the implications of budget reduction are significant. Similarly, as detailed in Figure 2, higher education appropriations per Full-time Equivalent Student (FTE) have declined 19% (in constant dollars) in the 2001-2020 period SHEEO (2021). Even when the increased net tuition of 63% is factored into the revenue amounts available to institutions of higher education, an overall increase in revenues of a modest 7.6% is indicated.

Figure 2

Inflation Adjusted Higher Education Revenues 2001-2020



Source: SHEEO (2021)

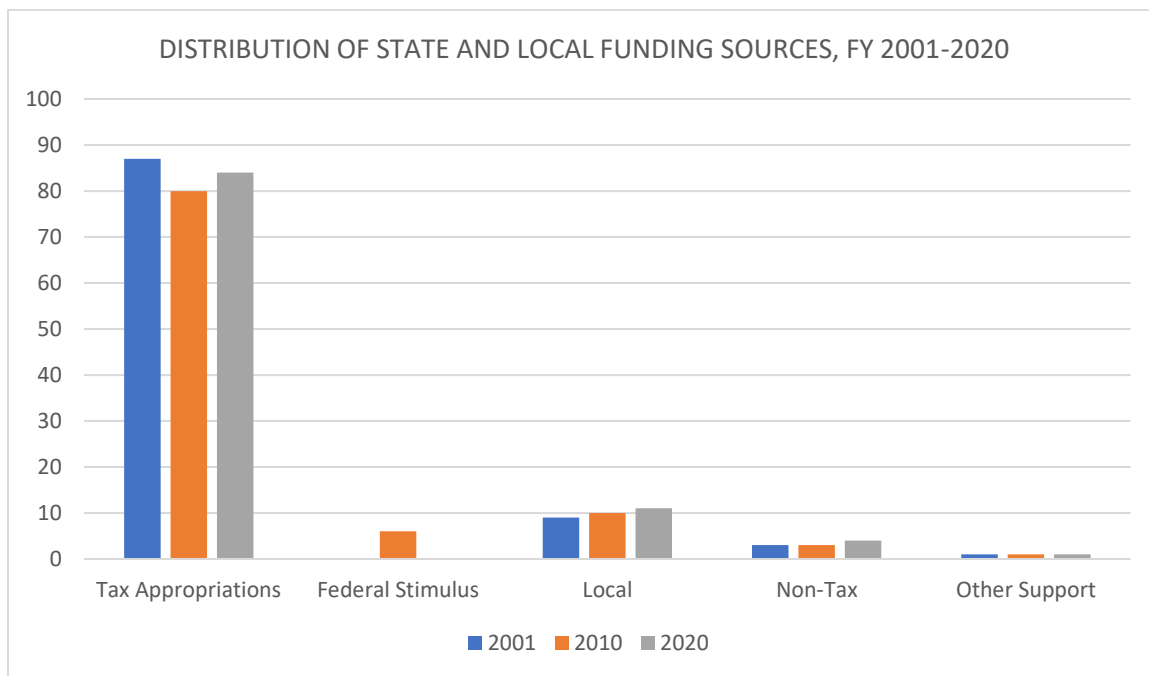
This data shows that the trends in higher education finance follow in general the model first posited by Hovey (1999) that during difficult economic circumstances, higher education funding undergoes disproportionate funding reductions. The logic behind this reality is the supposition that higher education can raise its own revenue sources through increases in tuition or the attraction of outside contributions. This assumption, however, is untrue for community colleges which are constrained in raising tuition, which in many cases covers but a small portion of their cost of operation (Goodman & Henriques, 2015). When evaluating state appropriations differences between two and four-year colleges during the 2005-2020 period, a greater

consistency is found in two-year funding levels, which reveals a measure of accommodation for this situation (NCES, 2023).

Although state funding has been static or reduced, depending upon institutional level, total tuition revenues have increased from 33.6 billion in 2005 to 75.9 billion in 2020. With this increase was a corresponding increase in student share of college expenses from 35.7% in 2005 to 44.9% in 2020. Federal funding remained negligible during this period, consisting primarily of direct support through PELL grants to students, and emergency funds to alleviate tax revenue shortfalls via the American Recovery and Reinvestment Act of 2009. Figure 3 below delineates the distribution of higher education funding sources.

Figure 3

Distribution of Higher Education Funding Sources 2001-2020



Source: SHEEO (2021)

These declines are measurable in their impact. Goodman and Volz (2020) find an inverse relationship between funding levels and tuition costs at four-year public institutions. Similarly, Webber (2017) found that a 1,000-dollar cut in FTE funding resulted in a 25.7% pass through expense to students at four-year institutions through tuition and fees increases. While Zhao (2018) did not find an impact on community college tuition rates resulting from allocation reductions, he noted a decrease in instructional resources, student services and academic support, which corresponds to Goodman and Volz's (2020) findings at the four-year level. In Zhang's (2010) research, he reported that funding levels directly impact graduation rates and student borrowing. Similarly, increases in tuition and fees are directly related to decreased appropriations, transference of enrollment from public to for-profit institutions, increases in the percentage of part-time faculty, and decreases in full-time faculty to student ratios (Goodman & Henriques, 2015; Zhao, 2018). Zhao (2018) also reported that a one standard deviation reduction in funding resulted in a decrease in instructional faculty per FTE student of .42, .36, and .70 for public doctoral, masters, and associates' institutions respectively.

Historical Context: In the U.S. context, the funding of higher education followed an inconsistent path. Early in the nation's history, many colleges were privately funded, or in an arrangement uncharacteristic in contemporary experience, obtained both private and public funding through religious and philanthropic support, as well as state charter (Thelin, 2004). Over time, some institutions, formerly private or religious, transformed into public universities. Thelin notes as exemplars of this phenomenon the University of Pennsylvania as well as Clemson University. Presidents of colleges were frequently involved in the securement of funds for their

institutions, and legislative bodies proved recalcitrant in the provision of funds for supporting institutions.

The Morrill Act of 1864 provided a source of funds for the establishment of agricultural and mechanical institutes in the states through the provision of western lands that states could sell or otherwise manage towards the creation of new colleges. A growing conviction of the social value of higher education and its contribution to economic development emerged during the early years of the twentieth century and became ascendant in the minds of policymakers as the significance of higher education's contributions to the World War II became apparent. These contributions, and with a pressing need to provide returning veterans with a meaningful activity while an economy transitioning from a wartime status that required time to produce peacetime employment led to significant federal intervention in the form of the G.I. Readjustment Act or G.I. Bill which encouraged young men to attend college. By the 1950's, significant and generous funding through state appropriations became normative throughout the United States (Thelin, 2004).

In tracing the history of the US higher education, it is noted that academe has actively produced knowledge for use by both the state and business, and by as early as the 1850's industry leaders were fashioning partnerships with institutions as a means of developing a skilled workforce. As much as eighty years ago, Harvard had a school of business; and New York University had a Macy's endorsed retail school for example (Pietrykowski, 2001). Indeed, Pietrykowski cites Veblen when he decries these trends towards academic commercialization in early 20th century as Veblen intones:

It appears then that the intrusion of business principles in the universities goes to weaken and retard the pursuit of learning, and therefore to defeat the ends for which a university

is maintained. The result follows, primarily, from the substitution of impersonal, mechanical relations, standards, and tests in the place of personal conference, guidance and association between teachers and students ... To offset against this work of mutilation and retardation there are certain gains in expedition, and in the volume of traffic that can be carried by any given equipment and corps of employees. (Veblen, 1954, pp. 223-224).

These developments continue as relationships with and contributions to higher education from the corporate world are encouraged as partnerships for innovation. It should then come as no surprise given these realities; American universities are increasingly taking on the characteristics of business-like entities. As Barrow (2010) notes, these changes progressively include the adaptation of business-driven models designed to enhance efficiency, assurances of quality through measures of student performance, and providing stakeholders with data relative to performance akin to corporations briefing their shareholders on corporate performance.

Adequacy in the funding for higher education has long been of concern in the US, even predating the founding of the country. Colleges such as Harvard, William and Mary, Yale, Princeton, the University of Pennsylvania, Columbia, Rutgers, Brown, and Dartmouth all owe their existence to a mix of public and private funding (Mettler, 2014). Significant to the development of higher education were legislative enactments such as the Northwest Ordinance of 1787 which set aside lands for the purposes of education, and by 1802, the federal government granted land to every state entering the union for the purpose of establishing a university. In 1862 the Merrill Land Grant College Act further broadened this effort, the stated emphasis of which was “to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life” (Mettler, 2014, p. 17). In total, the Act resulted in the

transference of some 17 million acres of land to the various states for the purpose of establishing institutions of higher education.

Although states vigorously pursued the development of universities, lack of tax receipts and limited numbers of eligible young people restricted efforts. As only about 5% of the population ages 18-21 enrolled in higher education in 1900 (Mettler, 2014). This statistic rapidly changed as the high school graduation rate increased significantly. Further federal legislation in the form of the GI Bill and the President's Commission on Higher Education (PCHE) of 1947 opened college attendance to all who desired to take advantage of the opportunity and ushered in the zenith of higher education in the United States. The period between 1960 and 2010 witnessed a burgeoning in college enrollment from 3.5 million in 1960 to roughly 12 million in 2010, with states bearing roughly 77% of the cost of higher education during this period (Mettler, 2014). From this peak, state budget appropriations to higher education declined from an average of 8% of general fund expenditures to 4% in 2010 (Dar, 2012; Mettler, 2014).

In tracing the history of federal funding for higher education St. John (2006) outlines three distinct periods of public support for higher education. Initially, state support consisted in the granting of public lands for largely private religious institutions. In later developments, or second era, initiated in the late eighteenth century, states began to direct tax revenues in support of private colleges and universities. Beginning thus, an era of expansive public support for public higher education ensued. As indicated previously, the Morrill Act of 1862 stimulated the development of institutions of higher education, as well as significantly increased the numbers of students attending them. The passage of the Serviceman's Readjustment Act in 1944 ushered in an increase of federal involvement in higher education. This third era of expansive funding of higher education occurred roughly during the years 1950 through 1980, as state appropriations

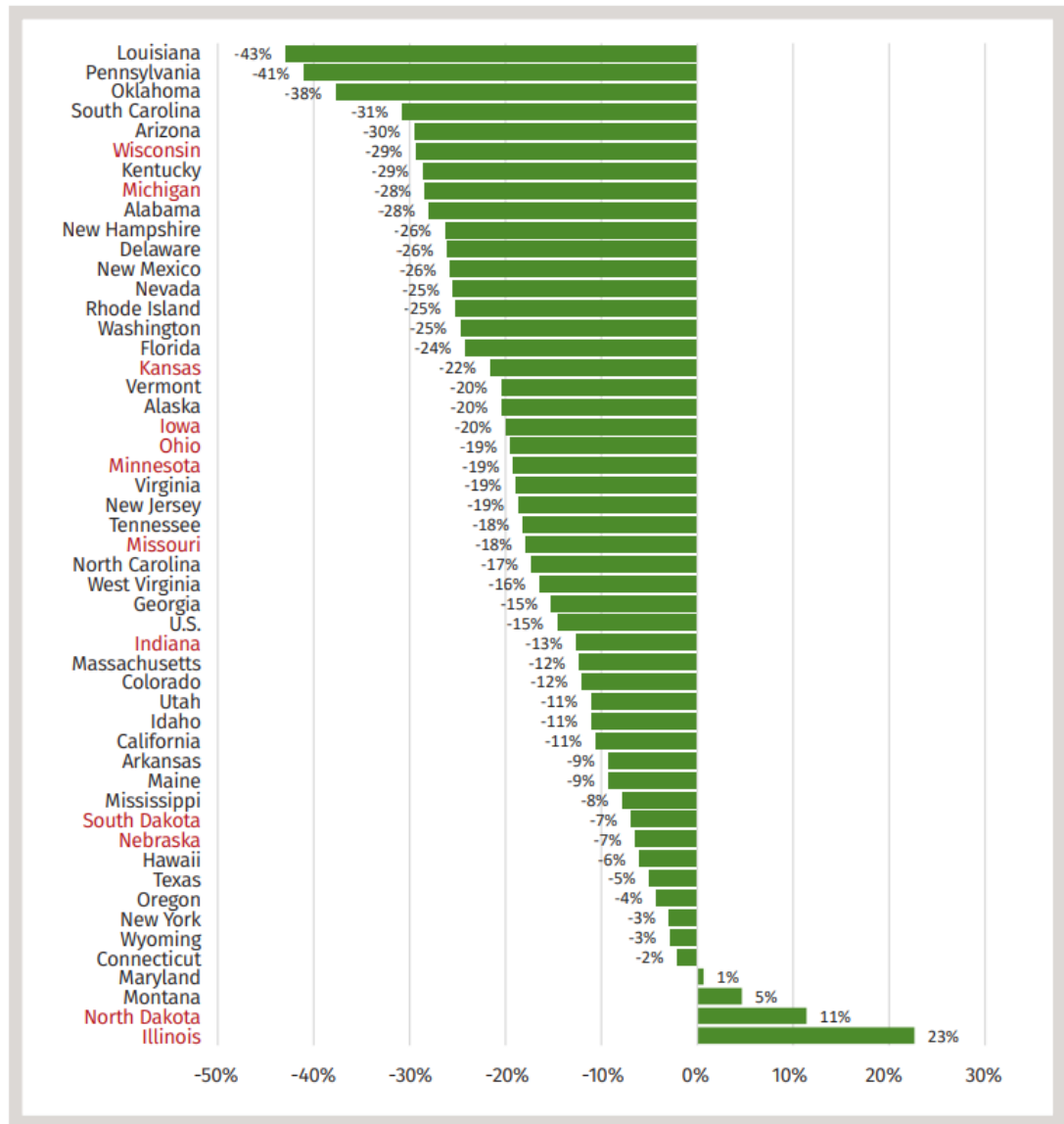
increased some forty-fold as state colleges and universities witnessed rapidly expanding enrollments (Heller, 2006). The rationale for this level of federal investment in higher education cohered around arguments that education fostered social mobility which appealed to liberals and enhanced economic activity which appealed to conservatives (St. John & Wooden, 2006). The decade of the 1970's witnessed an increased presence of the federal government in the financing of higher education, through the provision of support for programs in the federal interest such as agriculture and health care, through funding for research and development, and significantly, through extensive programs for student financial aid, grants, and work-study programs (St. John & Wooden, 2006).

The progressive period came under severe pressure beginning in the late 1970's, culminating in the election of Ronald Reagan in 1980 which ushered in a new era of fiscal conservatism which entailed spending reductions across the board for social programs. This combined with erosion of the tax base due to offshoring and reductions in tax rates resulted in fewer federal resources for higher education. Increasingly, loans replaced grant monies as the primary form of student aid, and in the face of reduced state appropriations, spiraling tuition costs became the norm for higher education (Heller, 2006).

Funding Declension: The funding of U.S. higher education is a complex and dynamic topic since funding sources are diverse and subject to change. Despite this variability, certain trends are observable. The first, and perhaps most troubling is the downward trend in state budget appropriations demonstrating higher education has lost status in terms of a budget priority for states (Dar, 2012). This trend is detailed in the decline in funding per 1,000 dollars of personal income in Figure 4 below:

Figure 4

Higher Education Support per 1,000 of Personal Income 2007-2017



Source: (Tandberg & Ladermand, 2018)

Concurrent with these reductions is the rapidly rising cost of tuition at all institutional levels and a larger share of college costs being borne by students and their families (McLendon, Hearn, & Mokher, 2009; Zumeta, Breneman, Callan, & Finney, 2012). In part, the trend toward reduced support for higher education belies an increasing perspective that higher education constitutes a private rather than public good (Kramer, 2011; Mettler, 2014). The net effect of these trends entails individual and societal consequences in the form of increased student indebtedness, and decreased college participation rates among lower income groups in society (Doud & Sheih, 2014; Phelan, 2014; Zerquera & Ziskin, 2020). Unchecked, further declines in college participation rates, particularly among underrepresented groups, and decreased economic productivity are certain outcomes, depriving individuals of opportunities for societal advancement and the United States of human capital development.

Because the declines in state appropriations for public higher education represent a significant threat to the viability of these institutions, explorations of causal factors have become a significant area of academic research. These studies can be roughly grouped into the following arenas: Direct competition for resources, changing demographics of the US population, larger economic trends affecting overall state budgets, and philosophical considerations regarding the public/private good of higher education.

State appropriations over the prior thirty years have not kept pace with the rise in costs for educating students. As a result, several negative consequences are readily observable, including higher tuition rates, reductions in student aid and declining faculty salaries (Weerts & Ronca, 2012). The pressures on state budgets have grown significantly with increased expenditures on areas such as K-12 education, welfare and Medicaid have reduced the financial resources available for discretionary spending (Dar, 2012; Mettler, 2014). The arena of higher

education has come to serve as a “balance-wheel” for state budgets, with higher education often becoming one of the first expenditure areas to incur reductions (Hovey, 1999). A notable trend in appropriations funding is the tendency to follow economic cycles. During cyclic economic downturns, states reduce higher education appropriations, or are unable to increase appropriations to meet inflationary pressures and increases in student enrollment which frequently accompany recessionary periods (Delaney & Doyle, 2011).

In addition to reduced state expenditures, changes have occurred to state financial aid policies. Beginning in 1972 the reauthorization of the Higher Education Act provided for matching federal funds for states to establish or expand state funded needs-based scholarship programs. This State Student Incentive Grant (SSIG) program, later renamed Leveraging Educational Assistance Partnership (LEAP), was designed to promote access and choice to students with limited financial means. This program was influential in providing opportunities for many lower SES students, as this student demographic demonstrates high sensitivity to costs when making post-secondary education decisions (Education U. D., 2024). However, beginning in the mid 1990’s states began to change the basis for grant awards, electing to use academic merit as the basis for grant awards rather than exclusively financial need. As a result, state awards, while continuing to assist students with college costs, now disproportionately benefit higher income students who typically demonstrate higher grade point averages and scholastic achievement test scores. Thus, students least likely to be awarded a merit scholarship come from populations traditionally underrepresented in higher education (Doud & Sheih, 2014). This change in state financial award criteria is indicative of a major change in higher education financing, to one reflective of a market driven perspective, marking a third era of higher education funding in the United States.

Partisan Preferences in Higher Education Funding

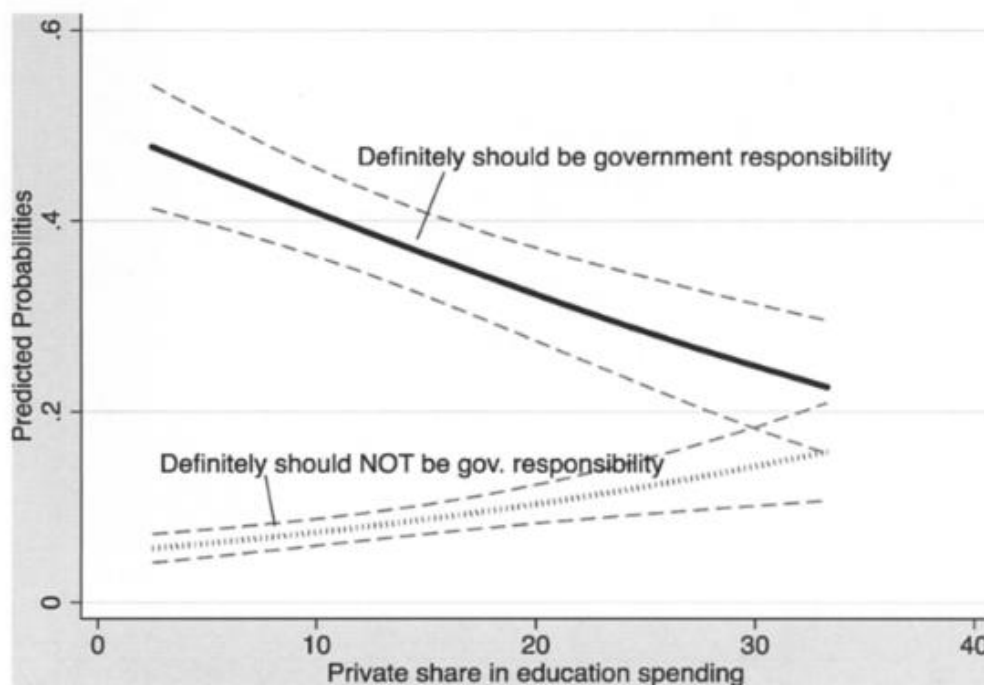
Higher education in the United States is ensnared in a complex web of dynamics ensuing from a mature capitalistic society. Barrow (2010) postulates that the state is caught on the horns of dilemma in attempting to balance two competing demands within a mature capitalistic system: those of continuing economic growth through heavy investment in physical, human, and intellectual capital; while simultaneously attempting to meet the demands of the populace to participate in economic growth and to ameliorate the costs of capitalistic economic growth. In relation to higher education this dilemma results in two contradictory phenomena; that of reducing expenditures to higher education, while simultaneously expecting higher education to significantly contribute to economic growth and the development of human capital (Barrow, 2010; Jungblut, 2015). How political parties attempt to balance these demands is reflected in their preferences for funding higher education.

As previous research has indicated, higher education is a political issue (Ansell B. W., 2010; Boix, 1997; Rizzo M. J., 2006). Typically, higher education is not a first order political policy area, since parties do not craft policy positions to attract voters per se, rather, higher education policy platforms often reflect the preferences of the constituency. Busemeyer (2013) evaluated the effects of individual preferences for higher education funding among individuals and discovered that public acceptance of, or bias against, public funding for higher education was predicated upon the educational experience of the respondent. Individuals in nation states with high levels of governmental subsidies viewed these subsidies through the lens of their own experiences and believed that these subsidies were properly governmental responsibility. Conversely, individuals in nations with high shares of private contribution demonstrated a stronger preference for limited government responsibility for higher subsidization. The

proportionality of governmental subsidies determines attitudinal preferences for funding and can increase or suppress the extent of subsidization as displayed in Figure 5 below. Busemeyer's findings suggest the presence of a feedback mechanism, in that individuals internalize regime values and adopt the existing higher education subsidization preferences of their societies.

Figure 5

Redistribution Preferences for Higher Education Spending



Source: Busemeyer (2013)

Traditional left to right distributions on the political spectrum often precedes significant changes in higher education structure, and to this study, financial support. These concerns have precipitated substantial research into partisan preferences for higher education funding in the field of comparative politics. These findings are applicable within the context of U.S. public higher education and are therefore summarized in the following sections.

Ideology and Spending Priorities: Frequently, studies on partisanship capture redistributive effects through measures linking the ideological composition of the government to changes in spending (Boix, 1997; Busemeyer, 2013; McLendon, Hearn, & Mokher, 2009). Jensen (2011), reported linkages between parties of the left and increased spending on higher education. Conversely, other studies find contradictory evidence. As an example, Ansell (2010) posits that parties on the right, once in power, increase public spending on higher education. Jungblut (2015) advances this reasoning, arguing that since higher education participation is skewed toward the wealthier segment of the population, public funding for higher education predominantly benefits the wealthier electorate of right-wing parties. Further nuancing these findings is evidence that right-wing parties will favor education when participation rates are less than 33%, with left-leaning parties favoring higher education spending when participation rates exceed 50% (Ansell B. W., 2010).

Left Wing Party Spending Preferences: Traditionally, the left has the support of the poorest third of the electorate, and the right, the wealthiest third, with both parties competing for the middle, although these divisions appear to be changing in the US currently. Under conditions of elite enrollment, right-wing parties will prefer higher subsidization if enrollments stay at levels below a threshold where left-wing constituents' benefit (Ansell B. W., 2010; Boix, 1997; Busemeyer & Trampusch, 2011). Conversely, under conditions of mass enrollment, left-wing parties will advocate for higher subsidies and per-student spending. Left-leaning parties will also advocate for increases in enrollment as long as the chief burden of increases in taxation is imposed on the wealthy (Ansell B. W., 2010). However, when a system of higher education is less income dependent the partisan patterns of spending preferences become less pronounced.

Parties seeking to reduce income dependence can offset costs by class-based affirmative action or through income sensitive grants and loans.

As argued by Boix (1997) and Ansell (2008), left-wing governments fund higher education at levels higher than do right-wing governments in pursuit of the dual goals of redistribution and market economy development. As these authors maintain, the first goal is unobtainable absent the second. Higher education is requisite towards the acquisition of high-level skills, and thus exhibits the positive complementarities of economic and skilled labor development. As Ansell (2008) maintains, education allows for the long-term economic and social advances of the lower classes. In this way, individuals from the lower socio-economic strata, as present-day beneficiaries of redistributive policies, are also future recipients through this intertemporal effect. Nevertheless, the poorer component of the constituency of the left only favors an increase in higher education spending as the system becomes more subsidized. In continuation of Ansell's work, he found that at enrollment levels of thirty-two percent or more of the age cohort, then left-wing parties increase spending on higher education relative to parties on the right. Indeed, in his research, he found that at enrollment levels of 60% or more, right-wing party higher education subsidization decreased on average by one standard deviation (Ansell B. W., 2010).

Left-wing governments will favor the expansion of public funding for education since it favors both income redistribution and economic development. However, this argument fails to account for the poor redistribution effects of higher education, as the benefits derived are disproportionally allocated to higher income segments of society. Rather than viewing left-wing government spending as a redistributive social policy, Jensen (2011) argues that deindustrialization and the subsequent skill development required for high skill employment in a

market economy is the primary driver of public investment in higher education. The general findings are that left-wing governments promote redistributive policies according to the tenets of Keynesian fiscal policy. However, Jensen (2011) argues that redistribution depends on the general redistributive capacity of the government and the policy area of concern. Pfeffer (2008), notes that since higher education is an inferior means for redistribution because the preponderance of utilizers come from the higher income sectors of society it does not follow that left-wing governments will necessarily fund it in greater magnitude than right-wing governments.

This evidence, while compelling, does not represent a fait accompli in the funding of higher education which would appear to demonstrate greater Democratic party support. First, because the redistributive potential of education is less than other redistributive policies, parties of the left should not be expected to expand education at any cost (Ansell B. W., 2008; Jensen, 2011). Second, the following scenarios address conditions where high levels of support by right-leaning parties is anticipated, that of low levels of participation (an elite model of higher education) or high levels of participation when accompanied by income independence (the State pays a predominate share of costs).

Right Wing Party Spending Preferences: Doyle (2007) notes the Republican emphasis on efficiency in higher education, results in Republican lawmakers introducing bills that emphasize the role of enhancing efficiency in the interests of reducing expenditures maximizing results. Conterminous with the increase in Republican representation among the states during the study period has been the rise of neoliberal ideals in higher education, introducing New Public Management (NPM) initiated practices including performance-based budgeting, performance

monitoring and outcome measurement (Doughtery & Natow, 2019; Ferlie, 2017). Arguably, these market-based management techniques suppress higher education spending.

Recent research has demonstrated beyond traditional concerns with limited governmental expenditures and an emphasis on individual contributions to tertiary education, Republicans are displaying a growing anti-institutional bias against higher education. Indeed Republican-dominated states have tended to provide lower levels of support for higher education than did Democratic or divided governments (McLendon, Tandberg, & Hillman, 2014). Further, studies have uncovered a pattern of Republican funding differentials across institutional mission, in disfavoring colleges with high minority enrollments or high research activity (Ortega, 2020; Weerts & Ronca, 2006). Accordingly, given its lower costs and emphasis on vocational education, the community college should occupy a favored policy space under Republican majority legislatures. Echoing this observation, Rizzo (2006) finds that legislatures are more supportive of higher education as the proportion of students attending two-year colleges increases. Busemeyer and Trampusch (2011) observed a connection between the strength of a nation's system of vocational education and its willingness to respond to economic downturns by expanding spending on vocational education to a greater extent than those countries with weaker provision for vocational education. In the United States, the community college system is the primary means for vocational education, and as such has been the center of efforts to expand higher education enrollments to enhance labor market participation and skill acquisition.

Partisan Effects in the United States: From this discussion, it can be asserted that with the expansion of higher education in the United States, that party preferences for higher education have become diluted. However, left-wing parties will prefer higher subsidization levels particularly as higher education becomes increasingly income independent. Yet, with the

constriction of state allocations to higher education and an increasing percentage of college costs imposed on participants, Democratic majority legislatures may elect to support other policy areas where redistribution efforts prove more fruitful. As higher education descends from its favored status, lawmakers will prove hesitant to fund the enterprise as liberally as in times past, while simultaneously holding higher expectations for solutions from higher education to other policy issues.

In adding to this perspective, McLendon, Tandberg, & Hillman (2014) examined the factors influencing three forms of public funding for higher education: need-based aid, merit-based aid, and general appropriations. These areas are interdependent of one another, and collectively, demonstrate more clearly political preferential effects for spending on higher education. Consistent findings among several researchers indicate a negative result regarding general appropriations for higher education with the presence of a Republican governor and a negative correlation between appropriations and the strength of the Republican majority in the state legislature (Ansell B. W., 2008; Biebricher, 2018; Boix, 1997; Dar & Lee, 2014). Given the policy preferences of conservative parties in general, it was found that Republican majorities were associated with lower support for need-based aid and higher levels of support for merit-based aid.

These results align with *a priori* assumptions of political party preferences. Left-leaning parties prefer need-based aid as a function of redistributive policy in general, and as an incentive for their lower income constituency specifically (McLendon, Tandberg, & Hillman, 2014). Conversely, right-leaning parties prefer merit-based aid consistent with the approach of rewarding accomplishment, and secondly, with the knowledge that such aid typically flows to students in middle- and upper-income demographics who constitute the bulk of these parties'

constituency. Further, the net effect of merit-based aid is not redistributive since these students would attend and pay for college without these benefits.

What McLendon, Tandberg, & Hillman (2014) also found in relationship to aid patterns an inverse effect for four-year and higher colleges and universities over against two-year colleges. When tuition in each state is high or increasing, the level of general fund appropriations declines for the four-year institutions and increases for two-year institutions. The authors conjecture that this result might be reflective of a belief among the state legislatures that four-year schools used tuition increases as a means of funding and thereby can function with lower appropriations. Conversely two-year schools, with limited ability to raise tuition, might require stronger appropriations to keep tuition low in keeping with the initial philosophy of community colleges. The research did not present data supporting this hypothesis, but it does point to an assumption that differing types of institutions fare differently in terms of state appropriations.

Boix's (1997) research demonstrated the existence of a strong preference for public higher education funding. Through this, parties on the left by expanding publicly subsidized higher education can increase higher education participation among their electorate and thereby leveraging higher education as a means of income redistribution. Conversely, other studies have found the opposite result. These studies have found that once in power, right-wing governments will increase public higher education spending, since higher education primarily benefits the wealthy segment of the population. Accordingly, Jungblut (2015) postulates the existence of a contradiction regarding partisan preferences and higher education funding. Party preferences are diluted given the tradeoffs necessitated by balancing economic realities, redistributive preferences in competition with other demands, and constituency expectations. Further, governments can expect to face a trilemma regarding higher education policy as they can only

reasonably expect to achieve two out of three desirable policy objectives: mass enrollment, full public subsidization, and low total public expenditures. Compounding these constraints is the role of path dependency which narrows the scope of possible actions based on the extant composition of the system of higher education (Jungblut, 2015). These situational realities may prove explanatory towards understanding the conflicting study results.

Higher Education and State Priorities

The second analysis of the effects of state policy on higher education reflects the power of the state in shaping outcomes according to its policy prerogatives. Spicer (2001) provides an elaborate description of what he terms the “purposive state”, which describes the managed cooperation of common and substantive objectives. What is most important in a “purposive state,” Spicer contends:

is that the ends of such a state must be sovereign over all other purposive associations, and that the state can tolerate such other organizations to the extent that its ends and activities are in harmony with its own (p. 15).

Thus, the state will not accommodate purposeful associations that are eccentric or indifferent to its own. What are the ends of the state in such an arrangement? There are any number of possibilities, from economic development through the exploitation of resources, both natural and human, to a commitment toward ameliorating social ills and promoting physical well-being and health. Spicer continues by describing that whatever the ends, the purposive state cannot be viewed as only providing for the environment where individuals may pursue their own diverse interests. Instead as Oakeshott (1993) argues, that the role of government is:

to determine, to choose the pattern of activities, the condition of human circumstance to be imposed upon its subjects, to choose the ‘common good’ and to organize the activities of its subjects so that each shall make a specific contribution to the achievement of the human circumstance believed to be good (p. 91).

This perceived legitimacy of determining ends naturally gives rise to an increasing prescription of means, or as Foucault (1991) entitles “governmentality”. He details this concept as the prerogative for the state to exercise:

a right manner of disposing things to lead to an end which is ‘convenient’ for each of the things to be governed.” Thus “with government it is a question not of imposing law on men, but of disposing things.....in such a way that, through a certain number of means, such and such ends may be achieved (p. 95).

But this government does not have as its purpose the act of governance per se, but rather the betterment of the citizenry, through increases in wealth, longevity, or other measures of well-being. To achieve these ends, a government must have a sufficient concentration of political power and a willingness to exert the same, which it will exercise when justified by the requirements to achieve the desired ends (Spicer, 2001). The effect of governmentality in the sphere of American higher education is readily observable. As Miller (2003) notes:

The history of U.S. universities is characterized by an expansion of governmentality, in the sense of research undertaken for the public weal, and the teaching that reaches into the lives of the populace to train it in self-regulation; and the expansion of commodification, as research becomes animated more and more by corporate needs, and

students are increasingly addressed as consumers of education, and paymasters and administrators accrete authority over academics (p. 898).

This development is anticipated. As noted by Habermas (1975) that during the normal course of capitalistic development, “the political system shifts its boundaries not only into the economic system, but also into the socio-cultural system. While organizational reality spreads, cultural traditions are undermined or weakened” (p. 47). According to Barrow:

The contradictory imperative that universities respond to the challenges of building a globally competitive post-industrial society, and the demand for increased access to higher education, while simultaneously coping with a fiscal crisis has generated a rationality crisis in college and university administrative systems that is leading to their disorganization and functional collapse (2010, pp. 322-323).

Therefore, governments increasingly face a trilemma as they cannot meet all expectations for their systems of higher education. They must choose between high enrollment, high subsidization, or low public expenditures. Increasing the challenge of fashioning a higher education system responsive to political preferences are the effects of path dependency which limits the choice of actions due to the composition of the existing system (Jungblut, 2015). This analysis of simultaneous demands precisely fits the current situation in higher education and demonstrates significant explanatory power for fitting recent efforts of the federal government relative to higher education policy initiatives into a cogent framework.

The demand to achieve more with less, and to redefine achievement to fit the policy needs of the state, places higher education in a precarious bind. Given the ongoing financial crisis, especially since the recession of the early 1990's, state appropriations per full-time student

have decreased substantially while dependence on tuition and fees as a source of revenue has markedly increased (Weerts & Ronca, 2006). During this period, and continuing to the present, colleges have been increasingly pressured to assume a greater role in the maintenance of economic expansion by increasing their support of business through emphasis on workforce development and technology transfer (Barrow, 2010). Further, the state has increased its demands for colleges and universities to reorient their teaching and research activities toward the problems of economic competitiveness, while simultaneously becoming more efficient in their use of resources (Education U. D., 2006). In this way the problems of capitalism are displaced onto colleges and universities, which are now rigidly attached to the state, whether legally, politically, or financially, thus becoming an integral component of the ideological and economic state apparatus (Baker, 2002). In this way, colleges and universities become instrumental in the production and maintenance of regime values.

Effects of Political Influences on Higher Education

To compensate for reductions in funding, institutions of higher education must seek additional resources to defray reduced appropriations. This matter proves to be a complex process which involves more than simply raising tuition and fees as several constraints impede an institution's ability to increase revenues. An institution faces potential political backlash when seeking to impose significant tuition increases, exacerbated by elevated needs during periods of economic downturn (Zhao, 2018). Second, states' governing structures determine that colleges and universities have limited control over tuition setting. Increasing competition for students in the higher education arena may also serve to inhibit increases in tuition (Zhao, 2018).

Another area of research into the distinctives of higher education finance relates to political considerations given the significant effect budget allocations have on higher education

finance. Prior research has delved into how personal characteristics of legislators (e.g., race, gender, parental status) affect policy outcomes (Tate, 2003; Washington, 2008). Research has also been conducted into the relationship between state legislators' educational attainment and their predisposition for funding higher education, wherein Theile, Shorette, & Bolzendahl (2012) found significant positive correlation between higher education attainment and funding levels, which assumes an attitudinal connection between a legislator and higher education, specifically in connection to their alma mater. Other legislative characteristics have been found to be correlated with funding levels, such as legislative professionalism (as measured by compensation, incumbency, support staff and session length) with increased professionalism positively correlated with increased higher education funding (McLendon & Hearn, 2007; McLendon, Hearn, & Mokher, 2009; Mettler, 2014).

A third significant factor that has served to depress state allocation to higher education has been the trend towards tax reductions. Two of these factors are significant. Tax and Expenditure Limitations (TEL's) and supermajority requirements. Archibald and Feldman (2006) studied the relationship between states' higher education effort and the tax revolt that began in the 1970s. Archibald and Feldman focused on the impact on higher education of TEL's imposed in 23 states and supermajority requirements on tax increases in another 13, as of 2001. The data panel used included all 50 states from 1961 to 2001. The research demonstrated that both limitations proved to be robust predictors of the variation in state funding effort, with a negative relationship between the two revolt provisions and higher education tax effort. More recent data from the Bureau of Economic Analysis (BEA) indicated that currently 20 states have some form of TEL's in place (Bureau, 2023).

McLendon et al. (2009) found that Democratic party majorities correlate with increased levels of funding for higher education and Ortega (2020) found a positive correlation between Democratic governorship and higher education funding but conditioned by institutional level. Further, the Democratic correlation is contingent on other variables such as state wealth and previous spending patterns indicative of path dependency effects (McLendon & Hearn, 2007; Phelan, 2014). Path dependency effects funding levels as it appears that states whose private universities predate public institutions (primarily in the northeast) demonstrate lower levels of support for public allocations for higher education (Mettler, 2014). Additionally, Tandberg, Fowles, & McClendon (2017) found a positive correlation between higher education expenditure levels when a state's higher education executive officer was appointed by the governor, versus serving at their pleasure.

Hypothesized in the literature is a correlation between the level of higher education institution and the priority of its funding. As noted by Rizzo (2006) and Weerts and Ronca (2012) associate's colleges enjoy the most consistent level of state appropriations support. These researchers hypothesize the existence of this phenomenon is based on open access, comparatively low costs, and higher dependency on tax support. Conversely, the same studies point to inconsistency in funding, particularly among research universities due to their selective admittance policies, overall higher costs, and greater ability to raise their own support in the form of gifts and grants are accordingly targeted for funding reductions during economic strictures. Overall, the inconsistency of findings between the political parties funding preferences are uncertain and require further investigation to better understand the phenomenon of higher education funding as differentiated by political party. Further, Weerts and Ronca (2012) report in their findings that differences in funding levels are influenced by state factors rather than

institutional category, thereby necessitating the inclusion of states' characteristics as control variables in any study of higher education funding.

In addition, institutional mission appears correlated with the relative funding support an institution receives. Given the funding stability for community colleges evidenced by Weerts and Ronca (2012) and Dar and Lee (2014) a preference for institutions that emphasize workforce training seems apparent as states face economic constraints and the need to improve the skills of their respective workforces.

In summary, the conceptual framework for this study is based on several areas of investigation regarding state funding of higher education and governmental behavior. The framework constructed for evaluating the assumption that governmental investment in higher education is predicated upon political, demographic, economic and policy distinctives of the individual states. As distinct from previous studies, this project focuses on distinctions between four-year and community college funding, specifically by political majority, an arena either unexplored or undifferentiated in previous studies on factors influencing the funding of higher education.

Community Colleges

Community College History and Development: With the cessation of WWII, large numbers of service members returned to an economy insufficiently prepared to receive them. As a response, the need for massification of higher both to provide skills training, and as a to avoid a possible depression given the prospect of 15 million unemployed serviceman, Congress passed the Serviceman's Readjustment Act of 1944, or GI Bill (Congress, 1944). Emanating from this legislation, the community college system officially began in 1947, as introduced in the

President's Commission on Higher Education (PCHE) alternatively known as the Truman Commission (Baum & Kurose, 2013; Hutcheson, 2007). Although junior colleges and forerunners of the modern community college can be traced to the start of the 20th century, federal actions initiated an expansive new chapter in American higher education (Doughtery K. J., 1994).

The Commission envisioned each state developing its own system for community colleges, located geographically so that most states' residents had reasonable access to them. In addition to being geographically accessible, the Commission advocated that the system would be tuition free, like the nation's K-12 school systems (Hutcheson, 2007; Meier, 2008). The provision for free tuition was not to be accomplished through federal support, but rather through local efforts supplemented by aid provided by the state. In general, the concept of the community college was met with enthusiasm, even by the academic community who believed such colleges would contribute to the overall educational attainment of the nation (Hutcheson, 2007). As of 2022, there were 1,047 community colleges in the nation and are utilized by millions as their means to college education, with currently an approximate forty-seven percent of all students enrolled in higher education attending a community college (Education U. D., 2024). In addition, community colleges enroll a proportionally higher percentage of students of color, lower socioeconomic status, and lower GPA's and first-generation college attenders, making them essential contributors toward education for all of society (Smith-Morest, 2013).

The findings of the PCHE relative to access centered around two considerations. The first of these related to equity in college access, and the second, the capacity of the higher education system in terms of available seats and geographic location of the institutions. Accompanying this were the Commission's concerns that financial constraints were the primary decisional factor in

who was able to attend college. Concerning this matter of financial impediments to college access, the commission was emphatic regarding the removal of such barriers (Hutcheson, 2007; Krendle-Gilbert & Heller, 2013). As propounded by the Commission:

It is the responsibility of the community, at the local, State and National levels, to guarantee that financial barriers do not prevent any able and otherwise qualified young person from receiving the opportunity for higher education. There must be developed in this country the widespread realization that money expended on education is the wisest and soundest of investments in the national interest. The democratic community cannot tolerate a society based upon education for the well-to-do alone. If college opportunities are restricted to those in higher income brackets, the way is open to the creation and perpetuation of a class society which has no place in American life (Education P. C., 1947, p. 23).

To achieve the goals of access, the Commission recommended ending discrimination based upon race, religion, sex, and financial barriers. On the issue of access based on gender, race, or religion, access issues were improved by the passage of the 1964 Civil Rights ACT of 1964, which although did not specifically address college attendance, did foster a climate of improved access. While the GI Bill provided financial assistance for college to veterans, it was not until 1965 with the passage of the Higher Education Act that the federal government made a comprehensive effort to eliminate cost-based barriers to college (Krendle-Gilbert & Heller, 2013; Phelan, 2014).

The emphasis on the community college intensified with the Eisenhower Administration's Committee on Education Beyond the High School in 1957, in part a cold-war response to perceptions of Soviet technical superiority (Crookston & Hooks, 2012). With the

successful Soviet launch of the Sputnik satellite (Dougherty K. J., 1994). It was in this context, that President Eisenhower's Committee on Education beyond the High School called for an expansion of community colleges. During the decades of the 1960's and 1970's, the number of community colleges doubled, and enrollment increased four-fold (Kane & Rouse, 1999). As the baby boom generation reached adulthood, postsecondary educational opportunities were sought by an unprecedented number of people (Crookston & Hooks, 2012). In this environment of expansion, community colleges were seen as a cost-effective way to "ingest the bulk of the enrollment wave" (Dougherty K. J., 1994, p. 149). Additionally, changes in the economy resulted in the creation of new jobs, but workers required retraining to perform them. The community college proved an ideal vehicle for the provision of vocational training, helping to ensure a more highly trained work force and reducing unemployment and helping to ensure a higher standard of living for many (Dougherty K. J., 1994; Phelan, 2014). Third, spurred by federal inducements, state governments increased funding. With the passage of the 1965 Higher Education Act, states drafted master plans for expanding the roles for community colleges. Additionally, the era of robust community college expansion was spurred forward through special interest group lobbying. As noted by Dougherty (1988) labor unions leveraged community colleges as a means for reducing apprenticeship program costs, and businesses valued the employee training programs.

Concordant with the economic development aspects of the community college, the institutional form was perceived as central to the democratic process. The rationale for the development of an intermediary institution between public high school and four-year college were centered around democratic ideals of inclusion irrespective of socio-economic status, race, ethnicity, sex or national origin and upon the belief that the nurturing of a democratic society

was dependent upon the enculturation of thoughtful and tolerant people, developed in part through the educational process (Crookston & Hooks, 2012). To espouse such claims uncritically would be an oversimplification, as the formation of the modern community college was the result of numerous actors with diverse motives (Dougherty K. J., 1994). Divergence in thought and interest between the local educators, state-funded flagship universities, business interests, and elected officials explains the divided aims of the American community college and its bifurcated mission of academic and vocational education (Dougherty K. J., 1994). The American community college was tasked with achieving an array of societal objectives. Considering these aspirations for “democracy’s college,” community colleges enjoyed a period nostalgically referred to as the ‘golden age of the community college’ (Crookston & Hooks, 2012). As Katsinas writes, “higher education enjoyed a ‘favored position’ in states, and community college leaders looked optimistically to state legislatures for badly needed support” (Kastinas, 2005, p. 19).

This “golden era” for the community college movement began to wane by the late 1970’s in measure due to a larger societal reassessment of government programs. As an example, during the period of 1960-1980 the United States built 253 new community colleges in rural American counties. Comparably, in the subsequent two decades, only 31 colleges were constructed. As noted by (Crookston & Hooks, 2012), other societal priorities such as the increase in building incarceration facilities eclipsed new community college construction. Beginning in the early 1980’s public opinion increasingly evidenced skepticism regarding the outcomes of higher education which ushered in the extant ‘era of accountability’. Importantly, community colleges were not evaluated solely based on educational opportunity for disadvantaged students but also through proving their contribution toward the enhancement of economic development.

In addition, community colleges came under increased scrutiny for their perceived role in perpetuating societal inequities. Dougherty, In his (1988) work, explores two distinct perspectives on the role and functioning of community colleges. Functionalism, the first of the two perspectives, relates to the benefits accrued by the community college system as previously described, particularly in terms of vocational and economic enhancements. The second perspective outlines the perceived role that community colleges play in perpetuating class distinctions through chilling out students' academic aspirations by an emphasis directing students to vocational rather than academic programs of study. Another criticism leveled at the community college is the low percentage of degree completion, as approximately 68% of community college students fail to complete an associate degree within six years from initial enrollment (Dougherty K. J., 1994; Smith-Morest, 2013).

The functionalist view envisions the idea that the American community college represents a hybridization of ideals both democratic and economic. Envisioned to serve the educational needs of both students and society, community colleges were tasked with the multifaceted mission of providing post-secondary educational opportunities within a reasonable geographic distance, at minimal or no cost for students, and making provision for both vocational and academic education including the possibility of transfer to four-year institutions. Additionally, many university officials supported community college development in the interest of maintaining the academic exclusivity of existing private and public universities, through providing opportunities for less proficient students to participate in higher education without diluting the higher admissions standards of the university. Conversely, as Dougherty (1988) posits, the class-reproduction view contends that the primary function of the community college is to maintain the extant class system via redirecting the baccalaureate achievement desires of

lower SES students into vocational programs, thereby assuring more of an achievement of social maintenance rather than advancement.

Despite these concerns, enhancement to and support for community colleges continues, albeit with significant adjustments. Exemplary is the American Graduation Initiative (AGI) of 2009. Consisting of a \$12 billion package of Federal funding for American community colleges designed to:

reform and strengthen community colleges from coast to coast so they get the resources that students and the schools need – and the results workers and businesses demand. The intention of the program is to increase the number of Americans receiving associate degrees or higher, and the quality of their educations, to meet the needs of a labor market in which an increasing proportion of jobs will require advanced degrees Obama (2009) as cited in Frederick, Schmidt, & Davis (2012, p. 909).

To belay concerns over poor academic successes, community colleges have undertaken to provide measurable outcome measures and enhance academic persistence as the community college environment strives to enhance outcomes and accountability.

Community College Funding: Despite its notable accomplishments, the community college movement is in increasing jeopardy as it faces ongoing challenges to its viability (Katsinas & Tollefson, 2008). The first relates to the funding sources for community colleges. By design, community colleges are more dependent on aid, both state and local, than are other types of higher education institutions, and as of 2009, aid accounts for fifty-eight percent of community college revenues (Baum & Kurose, 2013). These appropriations, initially construed as a means toward keeping tuition rates low, have eroded through the decades-long decline in

state and local funding levels resulting in a disproportionate impact on community colleges (Baum & Kurose, 2013; Phelan, 2014). Noteworthy also is the tumultuous nature of funding sources, as economic vagaries, enrollment cycles and federal governmental programs such as the 2009 American Graduation Initiative (AGI) designed to increase community college graduation rates by 5 million individuals by 2020. Community colleges responded correspondingly, hiring faculty, expanding facilities, and increasing program offerings (Phelan, 2014). By 2012 however, as funding dried up, and people returned to the job market, community colleges found themselves in an overleveraged position, and were forced into making reductions in multiple areas to restore financial balance (Phelan, 2014).

The community college sector has not been immune to the reduction in state funding that has befallen all other categories of institutions of higher education. In contrast to the ideals of the PCHE which advocated providing community college education without cost in the manner of K-12 education, community college tuition costs have increased by 215% in the 1988-2015 period, costs which now represent roughly 27% of revenues (Feldman & Romana, 2019). In addition, the increase in tuition costs is driven by factors in the college environment including cost increases inherent to low productivity growth industries, colleges' highly educated work force and what Archibald & Feldman (2018) refer to as a "high and rising standard of educational care" (p. 9). These factors influence costs similarly at four-year institutions, but community colleges have been disproportionately affected by reduced state appropriations (Crookston & Hooks, 2012).

The disproportionate effects of budget reductions for community colleges are a function of the greater dependency these colleges have on state and local appropriations combined with a reduced ability to offset costs with tuition increases, research grant funding or endowment

income (Crookston & Hooks, 2012). To offset funding declines while still attempting to maintain modest tuition costs have forced community colleges to reduce costs by increasing the percentage of contingent faculty. Studies have drawn the connection between educational quality and the increased use of adjunct faculty, and notably a corresponding decline in graduation rates (Xu, 2018). Additionally, community colleges may also reduce services in student support, an unfortunate trend given the greater support typically required by economically disadvantaged, first generation, and minority students. An increasing number of students entering community colleges have higher levels of financial need and greater gaps in their academic preparation, a combination that requires community colleges to provide additional resources and expenditures (Feldman & Romana, 2019).

The reductions in revenue from state and local government allocations coupled with increasing costs have led community colleges into a funding crisis, exacerbated by flattened or declining enrollments, particularly at rural colleges, and those located in the Northeast and Midwest (Crookston & Hooks, 2012; Phelan, 2014). In addition to funding, community colleges face pressures that threaten the viability of maintaining their unique mission. As noted by Dougherty & Natow (2019); Favero & Rutherford (2020); Zerquera & Ziskin (2020) neoliberal philosophy-driven performance funding initiatives have served to disrupt funding appropriation patterns and have effectively advantaged some institutions while simultaneously disadvantaging already under-resourced institutions.

In contrast to these findings of limited funding levels for community colleges, other studies point to the phenomenon of an ideological overlap between Democrats and Republicans regarding community college funding levels. Dar (2012) notes the relative stability of community college funding and postulates that both liberal and conservative legislatures favor

community college funding, albeit for disparate reasons. In the former case, this may be due to constituent support and promoting upward social mobility, and in the latter, perceptions of cost-effectiveness and workforce development. Similarly, Rizzo (2006) contends that community colleges may garner more reliable support from state legislatures given their relatively low instructional costs and greater dependency on state resources for support. Indeed, Weerts and Ronca (2012) found Republican legislatures to be associated with increased percentage of state support for higher education, hypothesizing this phenomenon is related to Republican support for community colleges. Alternatively, Ortega (2020) found positive correlations between Democratic gubernatorial incumbency and community college funding. These noted discrepancies demonstrate that further research is still necessary to clarify these connections.

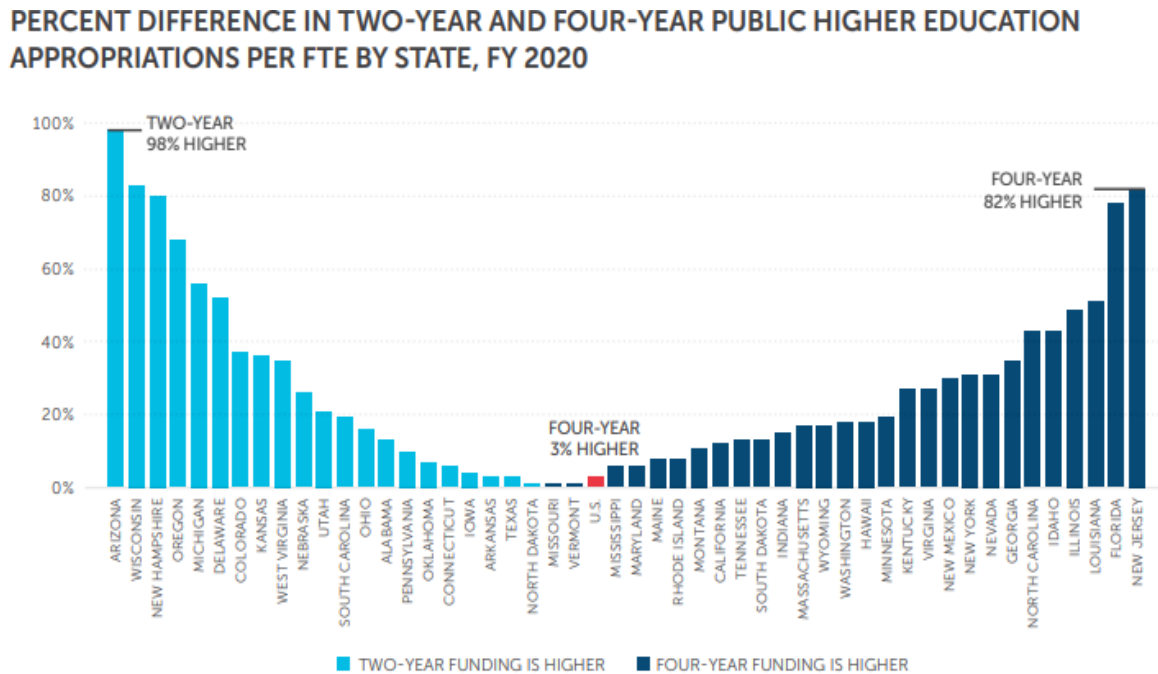
The variations within the community college systems between states compound researchers' efforts to isolate all the variables that impact funding sources for these institutions. While charitable contributions, grant monies, and significant tuition increases are less impactful for community colleges than four-year institutions, community colleges also benefit from Federal funding for community colleges provided through the auspices of the Vocational Education Act of 1963, the higher Education Act of 1965, and the Carl D. Perkins Vocational Education Act of 1984 and its various re-enactments contemporaneously entitled The Strengthening Career and Technical Education for the 21st Century Act of 2018 (ACTE, 2024; Meier, 2008).

In the initial conceptualization of the community college, local control and impact was intended. As developed, local tax support was included in funding formulae across the country. The variation in local tax support for community colleges is significant, but overall, an increase of four percent was recorded over the 2008-2016 period (SHEEO, 2021). This data is

supplemented by information that indicates that in 2022, 28 of 49 states (Alaska is excluded from analysis since it has no two-year public colleges) provided greater FTE funding to their two-year colleges than to their four-year institutions, inclusive of legislative appropriations, local tax receipts and state financial aid (SHEEO, 2024). Consistent with the variations in state higher education funding, the funding differentials ranged from 111% higher funding for two-year colleges (Arizona) to 73% higher funding for four-year colleges (Florida) with a U.S. average funding of \$10,141.00 for two-year colleges in comparison with \$9,596.00 for four-year colleges thereby reinforcing Dar's (2012) contention that two-year colleges inhabit a favored policy space. The differences between funding levels for two-year and four-year colleges between the states is demonstrated in figure 6 below. The diagram demonstrates the wide diversity of funding priorities evident between the states between two-and four-year institutions. Although the data points to a mixed landscape of funding, and marginally favors four-year colleges, it does not account for local tax provisions, which tip the balance in favor of two-year colleges when considered at the national level.

Figure 6

Funding Differences Between Two and Four-Year Colleges FY 2020



Source: SHEEO (2020)

Complicating this matter further, funding sources, while primarily state originated, also include federal funding in support of research through the auspices of the National Science Foundation (NSF) and through direct student aid in the form of PELL Grants. In this differentiated system, state appropriations vary from under five percent of GDP per capita to a maximum of thirty percent. Irrespective of these variations, the patterns exhibited in the international countries holds in the United States as well. When enrollment rates are less than three percent of the state population, right-leaning parties demonstrate greater funding support for higher education. This observation reverses when enrollment levels increase above five percent of the overall state population.

Irrespective of ideology, what emerges is a picture of rapid expansion of an institutional form that served an important function towards the goal of massification of higher education in the United States. At the local and state level, community college development was spearheaded by heads of state universities, state superintendents of schools, state departments of education, state education associations, and in the 1960's specifically, by state legislatures and governors. Reasons that compelled legislative and gubernatorial support for developing community colleges is they provided a vehicle for expanding higher education access without attendant budgetary expansion. Further, community college development was viewed as integral to states objectives for economic development and job creation and retention (Doughtery K. J., 1988). Although occupying the lowest tier in the United States' system of higher education, in part due their operational context and characteristics of their student populations, community colleges possess inherent advantages due to accessibility, industry responsiveness and lower costs (Meier, 2008). Indeed, a multi-decade tendency in the community college environment of adaptation to the societal context can be observed. Increasingly, community colleges have embraced and promoted the idea of not merely a local institution preparing individuals for the local market but have entertained ideas regarding training for globalized economy (Ayers & Palmadessa, 2015).

Neoliberalism

Introduction: As previously defined, neoliberal philosophy espouses the value of free market enterprise and an accompanying policy intervention to safeguard the same.

Neoliberalism, when considered as the overarching framework in the organization of governmentality, provides an insight into the current structural and organizational realities of higher education in the United States. Antithetical to the constructs of the sweeping social

progressivism of the post-war America of the 1940's through the 1970's, is the philosophical ideal of marketization. As Harvey further elucidates:

Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices... State interventions in markets (once created) must be kept to a bare minimum because, according to the theory, the state cannot possibly possess enough information to second guess market signals (prices) and because powerful interest groups will inevitably distort and bias state interventions (particularly in democracies) for their own benefit (2007, p. 2).

In practice, neoliberal ideals have shifted the previous focus on inputs to higher education, to outputs from higher education. Included in these outputs are the current emphases on standards, outcomes, transparency, and an underlying belief that tertiary education represents, foundationally, a private good, and thus should be obtained with primarily private resources. It is clearly not within the scope of the project to delve deeply into the intricacies of neoliberal thought, save to detail how the tenets of neoliberal thought determine the scope of the field in which higher education operates (Menashy, 2011). Concurrent with this are the ideas of the fiscal constraint, increased marketization, and economic development over and against cultural enrichment, all factors influencing the essential character and funding of higher education.

As noted by Lucal (2015) neoliberalism is the intertwining of an ideology, a means of governance, and a comprehensive set of policies. As a political ideology, it stresses free-markets, competitiveness, and self-interest. As a means of governance, it supports the “devolution of central state power to smaller localized units” and “adopts the self-regulating free market as the model for proper government” (Steger & Roy, 2010, p. 12). Public policies are predicated upon a trifecta of deregulation, a liberalization of trade and industry, and the privatization of public enterprises (Steger & Roy, 2010). Under neoliberalism, the individual is reconceptualized less as a member of a social order, but rather as self-interested competitor and consumer (Ward, 2012). Its greatest impact on higher education has been through reducing the funding available to colleges and universities and the corresponding increase in student expenditures (Lucal, 2015).

History of Neoliberalism: Neoliberalism as a movement or an intellectual tradition has a rather obscure origin, particularly considering an absence of specific individuals who would assume the title of neoliberalist. Rather, the term is typically applied, and often in derision by its critics, to those associated with the core ideals of market-based capitalism. Biebricher (2018) identifies the year 1938 as the birth of modern neoliberalism at the *Institut International de Cooperation Intellectuelle* in Paris, although doubts exist as to whether the term was adopted by the participants or added later as a descriptor in the records of the colloquium’s proceedings. The concern of the participants was the fear of the demise of classical liberalism, and the formulation of a successor ideology. It is from these concerns that neoliberalism’s intellectual premise was formulated (Biebricher, 2018).

Significant pressures were exerted on the tenets of liberalism by World War I followed by the great depression, leading to fears of capitalism’s demise and the growth of governmental activism in management of the economy. Similarly in Europe, the forces of anti-liberalism were

widely evident as liberalism was superseded or threatened by fascism and communism. As Biebricher (2018) notes, neoliberals were responding to what was perceived as an existential threat, and this response grants significant insight into the resultant framework of neoliberalism. What started as a fringe group within the field of economics from the Austrian School, proponents of free markets such as Friedrich Hayek became important contributors to the field. What Hayek, a thought leader in the neoliberal movement, perceived as the mission of neoliberalism the defense against all forms of collectivism by the development of an “individualist civilization” (Hayek, 2001, p. 14). Once Hayek joined the faculty of the University of Chicago in 1950, neoliberalism established a significant beachhead in America (Gross, Medvetz, & Rupert, 2011).

To assume that neoliberalism is, as popularly construed, simply a philosophy of the dominance of market-based capitalism and limited government is to discount the intellectual nuances of the theory. While inarguably it contains those elements, the reality is that the political thought of neoliberalism is centered around the nature and scope of the contributions of the state towards the enablement of functional market systems (Biebricher, 2018). This concern is far from the perspective of laissez-faire economics, nor arbitrarily reducing the scope of government intervention, but rather through the enhancements of elements that, in neoliberal thought, assures the prosperity of the nation-state. In the United States, neoliberalism was employed as a counterweight to the perceived excesses of New Deal social liberalism and the ensuing liberal project that dominated U.S. politics for some forty-five years (Gross, Medvetz, & Rupert, 2011). Hitherto, the U.S. federal government had primarily concerned itself with providing national defense, enforcement of laws and the provision for a modest infrastructure. Subsequently, the federal government’s role included provisions for socioeconomic welfare, especially regarding

the adverse effects of capitalism. Through a thoroughgoing reconceptualizing of the role of the state in internal affairs and the adoption of Keynesian economics, the federal government became the dominant shaper of economic policy and interventionist activity in the nation's economy (Gross, Medvetz, & Rupert, 2011).

Against the challenges of this growing collectivism, the intellectuals of neoliberalism construed the need to create a modernized liberalism that addressed the deficiencies of classic liberalism and successfully engaged with Keynesian economics. This modernization involved responding to internal aberrations contributing to its demise in the early 20th century. Biebricher (2018) numerates three aberrations of classical liberalism comprised of a quasi-religious belief in self-correcting economic laws, an adherence to a belief in a laissez-faire role for the state in relationship to the economy on one hand, and an embrace of a moderate liberalism/socialism on the other. To regain legitimacy in the realm of ideas, neoliberalism had to shed these older concepts and replace them with ideas suitable to modern realities. The neoliberal modernization resulted in a realization that effective maintenance of a vibrant market economy required not an economic solution per se, but rather a political one centering on state policy and interventions directed toward the market (Biebricher, 2018).

This politic of state engagement emerged in the public sphere beginning in the early 1970's concurrent with the modern American conservative movement (Gross, Medvetz, & Rupert, 2011). As early as 1964, the candidacy of Barry Goldwater for president, although unsuccessful, signified that the control of the Republican Party had shifted from its traditional base of the northeastern establishment to the conservative movement. The establishment of several conservative organizations and legal foundations, as well as strong linkages with the business community assured those conservative ideals were broadly dispersed (Gross, Medvetz,

& Rupert, 2011). With the discrediting of welfare capitalism, coupled with fears of governmental overreach, political traction for neoliberalist ideas advanced, culminating in the election of Ronald Reagan as president in 1980. As Shumar (2014) contends, these developments point out the transformation of neoliberalism from an economic policy idea to a form of governmentality.

Expanding the idea of the neoliberalism as governmentality, Pierson & Skocpol (2007) document the rise of conservative government and propose that this phenomenon can be attributed to a reaction to the activist American state in the 1960's. A widening chasm between the New Deal liberal state and more conservative Americans was exacerbated by the new left and counterculture of the 1960's. Resultantly, a political realignment began in America. Southerners and ethnic whites withdrew from the Democratic coalition for a multiplicity of reasons. Sociologists Gross, Medved & Rupert (2011) identified the civil rights movement, the expanded welfare state, immigration issues and criminal justice as factors contributing to this divide.

Activities of conservatives and neoliberal intellectuals also contributed to the rise of neoliberalism to a position of hegemony. The political mobilization of American evangelicals and fundamentalists resulted in a swelling of the ranks of conservatives, who perceived changes in marriage, the legalization of abortion, gay rights and other issues as significant moral concerns requiring resistance (Gross, Medvetz, & Rupert, 2011). Often dismissed as anti-intellectual, neoliberal academics provided the intellectual framework for the economic theory underpinning conservative economics, which proved the equal of the political left and helped elevate and disseminate neoliberal ideas (Biebricher, 2018; Gross, Medvetz, & Rupert, 2011). This coupled with linkages to the business community and the establishment of conservative thinktanks, lobbying groups and new media outlets helped to secure neoliberalism as the dominant political

force in America (Biebricher, 2018). Collectively, these influences signaled that America had entered into a new partisan regime defined by the ideals of neoliberalism (Polsky, 2012).

Neoliberalism and Higher Education: Inevitably, neoliberalism began to exert considerable influence in the higher education arena. Previously, in the post-World War II environment, higher education was perceived to be the primary responsibility of the national government as a component of achieving broader development goals. This perspective legitimized governmental actions to expand access to higher education and public sector funding was considered an essential component of societal development (Buckner, 2017). However, as Buckner (2017) indicates, notions of state support began to cede to greater emphasis on market-based approaches in conceptualizing higher education and its funding. Correspondingly, a shift occurred toward a commodification of the educational enterprise with a corresponding understanding of education as a vehicle for knowledge production with economic gain as the primary goal. In short, the market began to transcend the state as the primary driver of higher education whose goal increasingly was defined as the production of workers in a knowledge-based economy. From this perspective term academic capitalism emerged, which has changed the role of the institution, not only in the United States but across the developed world (Buckner, 2017).

As indicated by Buckner (2017) in her comparative analysis of 700 UNESCO conference proceedings, academic articles, and conference reports, dialogue about the role of higher education shifted dramatically from the previous term of national planning dominant in the 1960's-1970's to that of strategic planning in the 1990's to 2000's, indicative of the changed role of higher education in the life of nation-states across the globe. This trend demonstrates a changing cultural environment with a greater emphasis on marketization and a blurring of the

line between the public and the private sphere (Menashy, 2011; Meyer & Bromley, 2013). Previously, emphasis tended to be on the inputs provided to higher education such as funding, insuring access through funding mechanisms, credentialing, and facilities. Indicative of neoliberalism, emphasis shifted to outputs including quality and accountability, which were assumed to be measurable and to which standards higher education institutions could be compared. Neoliberal agendas can be broadly described as marketisation of higher education, i.e., restructuring its form and content according to market models and imposing accountancy and deliverables on the enterprise (Levidow, 2005).

Newson (2021) chronicles four areas of influence exerted on higher education by neoliberalism. Neoliberalism affects higher education through a process of corporatization, or the increased influence by corporations over teaching and research. Corporatization is followed logically by commercialization, where corporations gain a measure of control or ownership of knowledge products they funded at least in part. The third of Newson's categories is valorization, where monetary values are assigned to processes or activities through the application of quality assessment measures. In this effect, a monetary value can be assigned to the contributions of a discipline which shapes teaching and research activities. Lastly, through financial disinvestment, states have paved the way for the process of financialization through a heavy reliance on the student loan system.

Private Versus Public Good

Significantly, through neoliberal influence, the emphasis shifted from higher education representing primarily a common good, to that of a private good (Buckner, 2017). In the post-WWII era, the opposite view dominated as societal benefits were held as outweighing the benefit to the individual. Today, in the entrepreneurial and market-driven atmosphere of the university,

the fundamental purpose of the university is to prepare the individual for a career (Bullough, 2014; Krause-Jensen & Garsten, 2014). In the market driven higher education economy of neoliberalism, education transitions from a cultural to an economic concern wherein efficiency and effectiveness become paramount measures, and where competitiveness for “brand prestige” earmarks institutions and students compete for the private benefits accrued through higher education (Buckner, 2017).

This emerging view of higher education as primarily a private good is a new phenomenon, as historically higher education has been viewed as both a public and a private good (Menashy, 2011). As noted by Marginson (2007), higher education inherently serves both private and public interests and indeed “The public or private character of higher education is a policy choice” (Marginson, 2007, p. 313). It serves private interests by enhancing the capacity of the individual to secure economic and social benefits. Public values are served as more highly educated citizens are more likely to contribute meaningfully to society. Levin describes the peculiar nature of education:

It addresses public interests by preparing the young to assume adult roles in which they can undertake civic responsibilities, embrace a common set of values, participate in a democratic polity with a given set of rules, and embrace the economic, political, and social life which constitute the foundation for the nation. All of this is necessary for an effectively, functioning democracy, economy, and society...At the same time, education must address the private interests of students and their families by providing a variety of forms of development which will enhance individual economic, social, cultural, and political benefits for the individual... Embedded in the same educational experience are

outcomes that can contribute to the overall society as well as those which can provide private gains to the individual (Levin, 2000, p. 3).

As state-supported higher education functions as an extension of the state, it is subject to political forces and is altered or repurposed over time in response to shifting state values and desired outcomes (Menashy, 2011). As American political values have shifted from the democratic ideals of equity and access to an emphasis on economic and prestige gains through higher education, the individual as primary benefactor assumes dominance resulting in an emphasis on private goods (Marginson, 2007). As it is apparent that significant benefits would derive from increased participation in higher education, it would prove advantageous for the state to make sufficient subsidies available to achieve a theoretically optimized level possible. However, political power relations inhibit achieving an idealized level of social efficiency, as societies are organized around asymmetric power relations. As economically powerful groups disproportionately define the externalities of higher education in ways advantageous to their interests, state higher education policy follows suite.

In Flyvbjerg's (1998) study of the interrelationship between rationality and power, he argues that contrary to the thought prevalent in western democracies that reason and law - that is rationality defines reality, the opposite is true - that power defines rationality. While rationality has power, rationality is best expressed under circumstances of stable power relations because it too readily relinquishes ground in the face of conflict. Alternatively, power is best exercised under conditions of conflict as evidenced within the political arena. As Codd (1988) describes: "Fundamentally, policy is about the exercise of political power and the language that is used to legitimate that process" (p. 235). Ubiquitously, power not only supersedes rationality but defines

reality. Power defines truth in accord with the values of the dominant group or stated differently “*auctoritas non veritas facit legem*, ” that is, authority, not truth, makes law. In the asymmetrical power relations of politics, the hegemony of neoliberalism defines the realpolitik of higher education funding by forcing acceptance of market-based mechanisms to define the truth of how institutions of higher education perceive their *modus operandi*.

It should not be surprising that neoliberal policy makers conclude that primarily, higher education is naturally a private good and therefore should be marketized, thus downplaying the collective goods in higher education. It is construed from a neoliberal perspective that private sector orientation and involvement in higher education is a desirable outcome, given that a competitive market will serve to improve quality, efficiency, and accountability (Busemeyer, 2013; Doyle, 2007). From this presupposition, it becomes easier to assign higher education funding to a lower budget priority, and easier to justify permitting the student to bear a greater share of the cost of attaining an education. This demonstrates that societal values constitute expressions of the power elite, which may suppress the social efficiency obtained by increasing the number of college graduates, or in reducing the costs of such education. If the political decision process is truly democratic and pluralistic, the value of externalities would mirror the values of the individuals living in a society. In most societies, however, economic power and state power are closely entwined. The state (the political system) places a value on externalities that reflect the preferences of economically powerful groups in defining the value of the externalities associated with higher education (Lorenz, 2012). If a society values fairness and places social and political value on ensuring desired levels of equity, the public aspect of education would include financing it in ways that mitigate such disadvantages (Koski & Reich, 2006).

The distinctions between the perspective of education as a public good and a private good are detailed in Table 1 below:

Table 1

Public Versus Private Goods

	Public Goods	Private Goods
Educational Assumptions	As a public good, education equips individuals to play constructive roles in a democratic society contributing to nation building and informed citizenship.	As a private good, the primary aim of higher education lies in the provision for educational credentials required for economic advancement in a capitalistic society.
Values	Democratic equality and equal access.	Social mobility and attainment of individual status.
Higher Education	Higher education produces universal knowledge and information which are public goods.	Higher education produces students with specific credentials which confer status.
Social Construct of Higher Education	Higher education is integral to an egalitarian world composed of communication, collegial partnerships, and global linkages.	Higher education is an economic market, where outputs of education and research are products utilized in international competition, and the university is perceived as a business firm subject to competition.

Source: Adapted from Menashy (2011)

Inherent to the philosophy of neoliberalism is a change in the mode of knowledge production from one of searching for truth through focused disciplines towards solutions-based information essentially replacing older liberal ideals as sources of human betterment (Bullough, 2014; Krause-Jensen & Garsten, 2014; Newfield, 2008). Universities are increasingly organized in the mode of private companies, with research that can be converted into sources of revenue, and an emphasis on brand competitiveness by which universities attempt to retain or enhance

their “market share.” In essence, the modern university’s postulates of diversity are overlain on the bedrock of neoliberal capitalism (Winslow, 2015). Instead of challenging students to search for truth and foster intellectual curiosity, the measure of success has become employability among their graduates and flexibility essential to institutional survival (Krause-Jensen & Garsten, 2014). The market forces of finance and technology have subsumed older liberal ideals as the true sources of the betterment of humankind (Newfield, 2008).

Measurement and Evaluation

Neoliberalism brings with it the assumption that what is valued can always be measured and compared. This measuring results in continual auditing of people, performance, and process. While measurement and evaluation have always been part of academe, what once was perhaps more subjective, is now replaced with what is estimated to be transparent, impersonal, and objective measures (Krause-Jensen & Garsten, 2014; Lorenz, 2012). This transparency of process hypothetically makes the institution and students more “observable” to stakeholders normalizes the accountability measures now ubiquitous in higher education. This accountability leads naturally to a culture of verification, control, and possible sanction. Higher education is not the only arena in which such performance and accountability measures have been deployed, in fact, their arrival was delayed, deferred by accreditation systems that retained institutional accountability and appeals to academic freedom (Lorenz, 2012).

Commodification

As private good ascends to the forefront of higher education values, a shift is observed in education from fostering democratic ideals to a viewpoint of education as a commodity to be obtained. Indeed, scholars of neoliberalism’s impact on higher education have argued that the

advent of neoliberalism initiated the era of economic outcomes and the ensuing educational commodification (Lorenz, 2012; Lucal, 2015; Shumar, 2014). In response, universities in the U.S. responded to declining state funding by adopting the view of education as a product marketed to the public. The main private goods produced in higher education are status benefits as individuals are provided with opportunities to achieve higher income and social standing as neoliberalism restructures higher education from a cultural to an economic concern (Bullough, 2014; Krause-Jensen & Garsten, 2014). Buckner (2017) contends that such transformation refashions higher education into a competition for coveted externalities such as grades and identification with “brand prestige” institutions, driving students into a sense of perpetual competition for these status rewards.

Higher Education Funding

Despite measures indicating the high quality of American higher education, “the American polity has paradoxically decided to slash federal, state, and local funding for education. Public spending on education, infrastructure, and basic research dropped from 12 percent of GDP in the 1970’s to less than three percent in 2010” (Winslow, 2015, p. 202). In our current political climate, legislative bodies nationwide have allowed for the transference of burden for funding higher education from taxpayers to the individual student and their families. In Winslow’s (2015) analysis as to the reason for the existence of such a funding paradox is the allowing of neoliberalism to frame higher education as wasteful of states’ resources. This discursive framing is used as justification for the restriction of higher education. Beginning in the 1970’s the growth of neoliberal thinking ushered in a new political climate that justified social and governmental programs based on market logic above societal benefits. This thinking now forms the lens through which higher education is viewed, and provides much explanation as to

the paradox found in higher education funding (Bullough, 2014; Krause-Jensen & Garsten, 2014; Levidow, 2005). Viewing higher education as inefficient has permitted neoliberalism the opportunity to introduce changes into the system and justify funding decreases. When an institution is deemed inefficient or ineffective and loses prestige, accountability mechanisms to monitor are viewed as necessary, and can explain the introduction of neoliberal labor relation methods of performance measures and contractual labor into higher education (Biebricher, 2018; Bullough, 2014; Krause-Jensen & Garsten, 2014).

Germane to this study is evidence that a neoliberal perspective is more favorable to community college or associate level higher education than to four-year institutions. Rizzo (2006) finds that legislatures are more supportive of higher education as the proportion of students attending two-year colleges increases. The plausible explanation for this observation is the lower costs associated with these colleges, and by extension, the ability to serve a larger pool of state residents projects a measure of efficiency. This evidence suggests that the objectives of community college in short-term occupational education are congruent with neoliberal ideology. Biebricher (2018), in discussing the nature of employment from a neoliberal perspective utilizes the term “flexicurity” in defining a market-responsive labor force that maintains employment security via responsiveness to changing skill demands in a dynamic capitalistic economy. Rapid skill training opportunities are essential to the maintenance of a workforce able to respond to changing occupational demands, and in this provision, the community college is more favorably positioned relative to its four-year counterparts. Critical to this analysis is the metaphor of the state functioning in the capacity of enabling, but not directing the conditions required for the continuance of the “economic game.” Enabling the ongoing development of a skilled labor force is viewed as a legitimate state function (Biebricher, 2018).

Considered in total, a rising conservatism in the United States, as well as the attendant neoliberal philosophy has significantly altered the landscape of higher education. Tax and spending limitations restrict available funds, demands for higher education to extensively contribute to economic development, and research activities undertaken for, and funded by, private sector companies have fundamentally altered the relationship between government and higher education. Prioritizing short-term career education over traditional liberal arts has disadvantaged certain institutional types over against others, and a belief in the primacy of the private versus public benefits of higher education has led to an increased financial burden for students and their families. It is in this constrained environment that higher education funding is to be considered.

Previous Research Studies

In acknowledgement of the importance of higher education funding, studies have examined a taxonomy of factors related to the decline of funding. These studies have variously examined demographic, economic and political factors, and over time, an array of variables indicate correlations with variances in state appropriations for higher education. One of the earlier studies, conducted by Harold Hovey (1999) found a pattern of trade-offs occurred in state government appropriations between higher education, K-12 education, and Medicaid. States facing deficits and unable to maintain current funding levels will favor one expenditure area over another. Given the discretionary nature of higher education funding, Hovey found that higher education suffered disproportionately greater spending reductions than did K-12 education and Medicaid, prompting him to hypothesize that higher education served as “balance wheel” in maintaining budget expenditures. Absent tax increases, the expectation from state-decision makers that higher education deficits could be offset by increases in tuition.

Another significant study conducted by Archibald and Feldman (2006) examined the relationship between states' appropriation levels and the tax revolt that began in the 1970's. Their study focused on the effects of Tax and Expenditure Limitations and supermajority requirements on tax increases imposed as of 2001. The Archibald and Feldman study found a strong negative correlation between the imposition of these provisions and the higher education tax effort. The study also found a positive correlation between states with more liberal political ideology and higher education funding levels.

Tandberg (2009) examined the relationship between higher education and political attributes of the states and found that trade-offs were occurring between higher education and other funding areas. His research uncovered positive correlations connected to higher education interest group activity, states' political ideology, legislative professionalism, and democratic legislative majority. His work confirmed that of Hovey (1999) of evidence of trade-offs with other budgetary areas, specifically Medicaid. In a continuation of his work, Tandberg (2010b) used the percentage share of state's budgets devoted to higher education as the dependent variable, and using stepwise regression evaluated the effects of twenty-five independent and control variables over a nineteen-year period, from 1985-2004. The cumulative average percentage of states' budgetary support for higher education decreased from 17% to 14% at the end of the study period. As with similar studies, Tandberg found percentage of college-age population, percentage of elderly population, unemployment rate and legislative professionalism to be statistically significant with the higher education budget share. Unlike other study results, no finding of statistical significance was evident with either state political ideology or presence of a state funding formula for higher education.

Ansell (2008) examined the role of political party majority on subsidization rates for tertiary education among twenty-two OECD member states during the period 1980-1997. Among his findings was the connection between the type of higher education system and political party support. Specifically, when a nation states' education system is elitist and characterized by low enrollment, specifically among the poor, leftist and conservative governments will disfavor high subsidization rates for higher education. Conversely, when higher education transitions into a mass system with greater than a 50 percent participation rate, then left-leaning governments display greater affinities for subsidization of tertiary education, with more limited support from conservative governments who display greater support for mixed systems of public and private education. Since higher education infrequently attains the level of major policy position as a vehicle to attract voters, party position is defined according to the preferences of their respective constituencies. Among the OECD countries included in the study, Ansell discovered that in general, higher subsidization and participation rates existed among socialist-leaning countries over their conservative counterparts. One possible limitation of the study lies in the fact that Ansell did not distinguish between levels of higher education to evaluate political preferences, if any, for the various divisions of higher education.

Ansell (2010) in a continuation of his 2008 study, expands his research findings to include more than one hundred countries to corroborate the findings obtained in the analysis of twenty-two OECD countries. His findings confirmed his prior research, which enabled him to postulate a grounding theory for the relationship between political ideology and funding for higher education. Stated succinctly, the theory contends that left-leaning governments favor the expansion of higher levels of funding when participation rates exceed fifty percent of the age

cohort. With participation rates at roughly thirty percent or less, right-leaning governments will demonstrate higher levels of support for higher education over left-leaning governments.

Two additions to the previous work prove noteworthy for the purposes of this study. First, right leaning governments demonstrate a greater affinity for supporting vocational education. This is clearly apparent in nation states such as Germany, where students are streamed into academic or vocational tracks early in their school careers but is also apparent in nations where students are not similarly tracked. As Dougherty (1988) notes, in the United States, the community college can be perceived not as a means of social advancement, but rather as a means for social reproduction and the maintenance of the social status quo. Through the advising of students into vocational rather than academic tracks, it can be argued that America's community colleges function in much the same way as does the educational streaming practiced in certain other countries. Secondly, Ansell analyzes the funding of higher education in the United States, which he indicates does not fit into defined system of higher education given the existence of both privately funded and public institutions of higher education.

McLendon, Hearn and Mokher (2009) likewise examined political factors to ascertain the impact of characteristics of states' political environments on higher education funding. Their study used state funding per \$1,000 of personal income as the dependent variable and regressed this against a variety of political, economic, and demographic variables. The study confirmed findings of previous studies that found statistically significant relationship between legislative professionalism and funding increases, while Republican control of the state legislature and the governor's office associated with funding reductions. Measures of increased gubernatorial power were associated with lower appropriations for higher education. Higher unemployment numbers,

as well as higher elderly and college-age populations were also associated with declines in higher education funding.

Weerts and Ronca (2012) conducted a longitudinal study on the factors influencing the funding of higher education, during the period 1984-2004. Like other studies, they incorporated variables of interest drawn from previous studies, which they grouped into five constructs: “state fiscal health, demographic factors, competing state priorities, state political climate, and institutional characteristics.” (p.156). Differentiating from prior studies, Weerts and Ronca evaluated funding differences across institutional types, using the Carnegie Classification schema as the means to distinguish between institutions. Two findings of the study shed important insight into the characteristics of higher education funding. Their analysis indicates that funding for associate’s level colleges tends to be more consistent than funding for universities and graduate institutions, perhaps in part to the greater reliance these institutions have on state and local means of support. Second, and in contrast to other findings, Weerts and Ronca identified Republicans with higher levels of higher education appropriations than Democrats. They offer the explanation that Republicans are more likely to support associate’s colleges due to their emphasis on workforce training and their lower costs. Given the unexpected nature of this finding, they suggest more research be conducted in this area. Further, they suggest future studies evaluate funding based on Carnegie classification as the variable of interest, contending that a state-by-state analysis may yield unrefined results.

Dar (2012) does indicate that community colleges tend to fare better in terms of budget allocations than do four-year institutions because they occupy an overlap position between ideological opposites of liberals and conservatives. She posits that liberals support community colleges because they deem these institutions to be instruments of access to higher education and

hence social mobility. In contrast, because community colleges are more cost-effective and have a significant focus on workforce development, they tend to be supported by conservatives. This position of combined preferences for community college funding differs from the standard hypothesis that liberals are more likely to spend on higher education as a share of states' budgets. Her argument is centered on the idea that legislators' preferences may deviate from those of the electorate and determining legislators' preferences within a two-dimensional policy space is critical toward understanding their support for higher education. The two dimensions of policy are redistributive from equality of access to merit-based redistribution and public good (higher education improves social outcomes) to private good (benefits accrue primarily to the individual). She further argues that legislative gridlock precipitates unidimensional thinking, reducing the debate over higher education funding to primarily the redistributive axis of policy space, which suppresses funding levels, and in so doing introduces a new variable into the discussion. Running a pooled regression analysis, she found increases in tuition, unemployment rates and legislative polarization to be significant factors in legislative support.

Dar and Lee (2014) posit that Democratic strength in the state legislative bodies will, as evidenced by McLendon, Hearn, & Mokher (2009) result in increased funding for higher education. However, their findings suggest that this effect is moderated by measures of polarization in the legislature and the economic conditions of the state. Utilizing state appropriations per \$1,000 of personal income as their primary dependent variable, they evaluated the funding levels by calculating Democratic party share in both upper and lower legislative chambers. Further, they utilize DW-Nominate scores as a proxy measure for polarization in the various states' legislative bodies, and state unemployment rate as a measure of economic robustness in the state. Results indicate that the degree of polarization and economic activity are

strongly correlated with impacts to higher education funding, more robust higher education funding under Democratic majorities declining as Democrats shift priorities to other policy areas that result in clear benefits. One of the net effects of the decline in state funding under conditions of decreased Democratic legislative majority and lower economic activity is a trend toward the “privatization” of public education.

Li (2017) makes a substantial contribution to the literature of higher education finance by employing a unique perspective on the nature of change in higher education appropriations. Instead of evaluating appropriations as a continuous variable subject to only minor annual changes, she evaluates changes through the lens of Punctuated Equilibrium Theory (PET) and finds that systemic shocks precipitate major funding changes. Her findings indicate that these significant adjustments proceed financial setbacks including recession or spikes in state unemployment levels. Specifically, she noted increases in unemployment to be a substantial predictor of significant decrease in appropriations at $p < .001$, tax revenue changes at $p < .01$, and increases in state measures of income inequality negatively correlated with large appropriations changes, likely associated with the redistributive impact of higher education. Concordant with Hovey (1999) and Delaney & Doyle (2011), Li finds that other budget priorities take precedent over higher education, and that large reductions are restored only over long periods of time, and rarely to the level of the previous support levels.

Ortega (2020) conducted a study of the effects of gubernatorial party on higher education outcomes. His outcomes point to significant, but differential effects on budgetary outcomes. Specifically, he finds Democratic governors to be associated with higher revenues for Historically Black Colleges and Universities (HBCU's) and associate's level colleges, with insignificant effects for public universities, master's and doctoral level institutions. This effect

likely exists due to catering to traditional Democratic constituency comprised of significant numbers of black and hispanic voters, or alternatively, outcomes reflect Democratic governor's pursuit of a policy of social justice in eradicating past injustices.

The studies reviewed, Hovey (1999); Archibald & Feldman (2006); Dar & Lee (2014); Dar (2012); McLendon, Hearn, & Mokher (2009); and Tandberg (2010b) have focused primarily on higher education as a monolith, leaving undistinguished funding trends differences between community colleges and four-year institutions. Given the variance in founding charter and objectives between community colleges and four-year institutions, as well as differences in funding strategies, the extant studies blur important distinctions in funding levels and trends between differing institutional types. In the case of Weerts & Ronca (2012) the authors contend that their longitudinal study of funding by individual institution was too granular, and that a state-by-state comparison by institutional category was warranted as a continuation of their research. Dar (2012) and Dar & Lee (2014) found relative strength in associate's level funding relative to other institutional categories, without distinguishing between political majorities. Ortega (2020) found Democratic governors to be associated with higher funding levels for associate's level colleges but did not connect these findings with conditions of unified or divided states' governments.

It is to the limited and conflicting results of community college funding knowledge that this study is focused. Specifically, this study will address gaps in knowledge related to how political partisanship effects funding levels under conditions of unified and divided state governments in comparing appropriations between associate's level and four-year and higher institutions. What will emerge from this study is greater clarity for administrators and executives

within the community college system to ascertain their extant funding levels, calculate its anticipated trajectory, and implement changes designed to improve funding levels.

CHAPTER 3

Methodology

This chapter will serve to provide an overview of the purpose of the study, the research questions that will drive the data collection and analysis, the sources used for developing the review of literature, rationale for the selection of variables, as well as the techniques used for the analysis of the data.

Purpose of the Study

In the literature related to the funding of higher education in the United States, a substantial amount of research has examined factors related to state appropriations. Political, socio-economic and demographic factors have been variously evaluated, providing insights into the phenomenon of funding for various states' systems of higher education (Dar, 2012; Doyle, 2007; McLendon, Hearn, & Mokher, 2009; Rizzo M. W., 2004; Tandberg, 2010a; Weerts & Ronca, 2012). Those relatively few studies Dar (2012); Tandberg, Barakat, & Hillman (2014) and Ortega (2020) that have addressed two-year college funding distinctives have left unaddressed the categorization of two-year colleges as to their predominant mission in terms of educational focus. However, the bulk of this information considers higher education monolithically, failing to distinguish between associate degree-granting institutions and four-year and higher colleges and universities. This results in a significant gap in the knowledge of higher education funding, given that community colleges are funded differently than baccalaureate and higher degree granting institutions, due in part to local community college funding provisions in many states. Additionally, Dar (2012) contends that community colleges may inhabit a policy preference space for both Republican and Democratic legislators alike, which may entail more

favorable funding allocations. Similarly, Weerts and Ronca (2012) projected that more robust higher education funding by Republican majority legislative bodies was due to a tendency toward favoring community colleges. However, a lack of replication of Dar's and Weert's and Ronca's findings suggests further investigation is warranted.

This study will add to the knowledge of the field by illuminating the funding differences between associate degree-granting institutions and their baccalaureate counterparts by evaluating how a range of factors differentially affect differing categories of institutions. Second, this study will provide insight into how the constitutive majority in states' legislative bodies and gubernatorial offices under conditions of divided and unified leadership impact differing types of institutions of higher education. By means of this information, this study will address the variant findings of previous research as to funding preferences of Democratic and Republican legislative bodies and governor's offices, and thereby contribute to a more precise understanding of funding patterns. Third, by analyzing data from the period 2005-2020, higher education decision-makers will be provided with more recent trend data than previous studies regarding legislative funding which will enable them to make decisions informed by current funding information.

Theoretical Framework for State Funding per FTE by Carnegie Classification

State funding per FTE by Carnegie Classification is a tool used to estimate the influence of the political party majority on higher education allocations within states across different institutional categories. It is theorized that partisan policy preferences will result in funding differences based on the assumptions of classical political theory as detailed in the previous chapter (Ansell B. W., 2010; Boix, 1997; Busemeyer & Trampusch, 2011). It is further theorized that intervening conditions will limit the ability of a political party to implement its preferred policy positions given interparty competition and alternative budgetary requirements. Conditions

within the higher education system also influence funding preferences. Predicated upon research findings, factors related to higher education participation rates, and the level of higher education cost subsidization by the state prove influential to party policy preferences.

Consistent with the model of Weerts and Ronca (2012), this study will use utilize the Carnegie Classification system to delineate funding based on institutional type to distinguish partisan funding preferences between institutional types. Although the Carnegie model divides institutions of higher education into over thirty distinct categories, this study will collapse this atomized model into four categories based on the rationale that subgroupings would more accurately capture the phenomena of interest. Resultantly, four subgroupings were created; the first, four year and higher institutions which incorporates both undergraduate and graduate (including doctoral) institutions; and the second, third and fourth subgroupings; those of two-year transfer dominant, two-year technical dominant, and mixed transfer-technical colleges respectively. These subgroupings are predicated upon the rationale that first, the question of the distribution of state appropriations between baccalaureate and higher and two-year colleges based on political majority would be brought into sharper focus, and secondly, whether an academic or vocational focus results in a funding preference by either political majority.

This study will use the measure of state funding allocations per FTE student as the outcome measure for state higher education support. To obtain comparable state appropriations for a peer group of universities, all state funds not directly related to core teaching or university overhead are removed from the analysis. Examples of offices or programs excluded from funding calculations include Agricultural Experiment Stations, Cooperative Extension Services, Animal Disease Research and Diagnostic Labs, medical schools, and other programs unrelated to core university activities. Once these units' state general funds are removed from the IPEDS

reported state general funds, the remaining state general funds should be comparable for peer universities.

While other options for the comparison of state support for higher education, such as funding per capita, funding per 1,000 of personal income or funding as a percentage of total state allocations, these measures contain greater limitations than funding per FTE. Funding per capita fails to account for demographic differences between the states, and funding based on personal income does not account for differing levels of demand for higher education. Using any of these measures limits a more accurate picture of funding since they do not compensate for actual demand for higher education, which involves a measure of per student allocation. This factor provides the rationale for using the funding per FTE measure.

Higher education in the United States is a diverse enterprise, with significant variation between institutional forms and purposes. To measure funding to higher education monolithically insures missing important detail. Monies allocated to higher education are intended to achieve specific policy objectives. While both Democrats and Republicans advocate for funding higher education, the manner and extent differ between the parties, and it is theorized that these distinctions will appear in differing levels of support by institutional type. As discussed, the current hegemony of neoliberal ideology which aligns more closely with Republican Party emphases on efficiency, cost reduction and marketable skill attainment as proper educational objectives is theorized to favor Republican support for two-year colleges. Similarly, the Democratic Party ideals of redistribution benefiting lower-income, minority and first-generation constituents are theorized to favor funding allocations for two-year colleges. Alternately, it is theorized that the perceived inefficiencies of four-year colleges and universities will disfavor funding allocations under Republican majorities (Lorenz, 2012).

Further, higher education participation rates influence party funding preferences. Given that participation rates among the college-age demographic in the United States is mass rather than selective participation, sharp partisan distinctions become muted, as neither party is particularly advantaged by increasing its support for higher education. Equally determinative are the effects of higher tuition costs which effectively increase income dependence for higher education through higher cost shares borne by the student. Higher tuition costs impose a certain calculus upon left-leaning parties. First it suppresses participation by the lower income individuals typically represented by parties on the left, and alternatively, has little impact on higher income constituents of right-leaning parties, since these students attend college even when costs increase. Higher tuition costs combined with mass participation rates are theorized to disincentivize state higher education funding increases by parties on the left, who perceive that the costs outweigh the redistributive benefits obtained through greater subsidization. Based on these assumptions, it is theorized that differences between partisan support levels will be minimal yet with both parties demonstrating higher levels of support for two-year institutions.

Plan of the study

This study will use a *post facto* design, relying on existing data collected from nationally recognized professional and governmental sources. Initially, this study plan involved incorporating data from the years 2000-2020. However, issues with data availability for the years 2000-2004 necessitated reducing the period of the study to the years 2005-2020. Integrated Post Secondary Research Data System (IPEDS) data was utilized to develop categories by state and Carnegie classification to obtain legislative appropriations by year for each of the forty-nine states included in this study. General fund allocations and twelve-month enrollments were obtained for each college in each of the Carnegie classifications to derive the FTE funding value

by category. For comparison purposes, all values were reported in 2020 constant dollars. As a result of completing these steps, it is theorized that a comparable state appropriations per student FTE was obtained. As mentioned, these data will produce accurate indicators of both the level of state appropriations and of the year-over-year trends in state support of higher education by state.

A change in accounting practices, implemented in the year 2000 from Governmental Accounting Standards Board (GASB) to Financial Accounting Standards Board (FASB), resulted in significant data loss due to states non-reporting or incomplete reporting financial information. When evaluating the IPEDS data, it was evident that this problem was resolved by the year 2003, which allowed for the use of the data from that year forward. In contacting IPEDS directly, it was determined that no further information was available, as IPEDS depends on the information provided by the individual state on a voluntary basis.

To obtain information on the percentage of people aged 25 years and older in each state (except Nebraska) who possessed an associated degree as their highest level of education, data was collected from the U.S. Census Bureau. Specifically, this information was drawn through two population survey instruments, the American Community Survey (ACS) instrument and the Community Population Survey (CPS). The ACS was utilized beginning in the year 2005 by the <https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx> Census Bureau, and educational attainment data was obtained for each year 2005-2020 inclusive. Prior to 2005 the CPS form contained the same educational attainment data was incomplete and in combination with the missing information from IPEDS made adjustment in the inclusive years necessary. The unavailability of complete data for the years 2000-2005 necessitated a change in the years included in the study.

Limitations of the Study

This study of community college funding levels is complicated by the myriad types of higher education funding systems, the unique state circumstances under which the various community college system evolved, and the differing types of governance under which they operate. Furthermore, because state funding schemas are highly variable and complex, and definitions of terms are inconsistent across categories, sources of error due to misrepresentation may be present in the findings. In addition, this study will use data reported by states and institutions to higher education professional organizations and governmental agencies. Thus, the possibility that data could be misreported by a third party introduces another source of error.

This study is also limited by variations in funding mechanisms that exist but are not accounted for by this study. For instance, community colleges in various states are in part supported by local tax appropriations, the amount of which is highly inconsistent between the states as indicated previously in figure 6. These local taxes are used in conjunction with general fund allocations and may impact allocated amounts. States also vary in their provision of direct student aid. This funding may also supplant general fund allocations to colleges and universities, thereby reducing FTE values as utilized in this study. For these reasons, FTE funding data should not be used for comparison purposes between the states, but only as intrastate measures of change over time.

This study will use data from 2005-2020 to present findings on the trends in higher education funding. While this period is extensive, it reflects only these years, inclusive, and does not evaluate changes in funding, or previously established state allocation percentages against funding in earlier periods of American history. Two distinctives of the 2005-2020 period, the “great recession” of 2007-2008 which constrained state tax revenues, and the introduction of

American Recovery and Reinvestment Act (ARRA) federal funds during the 2010-2012 fiscal years to support state higher education budgets, both factors that impacted state funding efforts. The ARRA funds were utilized by states to augment reduced tax revenues, albeit differentially, so total higher education funding numbers may be skewed during those years depending on funds distribution choices made by individual states.

Research Questions

The following research questions will serve to guide data collection and analysis. The first question concerns the political factors of the individual states influence state funding for higher education across the institutional categories. Specifically, what effect does the party affiliation of the governor, and the legislative bodies have on the level of state funding for higher education by institutional category? Relatedly, does the presence of a unified government or the existence of tax and expenditure limitations in a state influence legislative allocations to higher education? In keeping with prior research, other state characteristics related to higher education funding are incorporated as control variables in the study. These variables incorporate measures of economic activity and the regulatory environment, characteristics of the state's higher education system and participation rates, and state demographic factors influencing higher education funding.

Population

The 50 U.S. states comprised the unit of analysis for the and the population of for this study with the omission of Nebraska with its unique unicameral legislative arrangement. Each of the factors identified in the research questions will be analyzed for each state for the years 2005-2020 inclusive, to ascertain the nature and significance between the factors and differential

funding levels for higher education among the respective states. The time frame was selected based on the availability of data through IPEDS and the US Census Bureau.

Variable Selection

The selection of variables in this study was based upon substantiation in the literature review findings. The evaluation of the literature involved evaluating more than thirty variables for their potential impact upon higher education funding levels. The variables selected for this study reflect choices based on demonstrated statistical significance, degree of fit with the specific inquiry of this study which is distinguishable from allied studies, and variables specific to the community college environment to provide further insight into the distinctives within that subset of the higher education arena. Independent variable selection was predicated upon usage within previous studies, demonstrated significance, and explanatory effect. The selected variables are subsequently grouped into political, higher education, demographic and economic groupings as outlined below in Table 2.

Dependent Variables

Table 2

Carnegie Classification System Variables Description and Source

Variable	Description	Source
State appropriations to two-year vocational dominant colleges per Full-time Equivalency.	Annual state aid allocated to two-year vocational colleges on a FTE basis. Inflation adjusted values. (<i>Two-year vocational FTE</i>)	Data from the Integrated Postsecondary Education Data System (IPEDS) https://nces.ed.gov/ipeds
State appropriations to two-year mixed transfer dominant colleges per Full-time Equivalency.	Annual state aid allocated to two-year mixed transfer colleges per FTE. Inflation adjusted values. (<i>Two-year mixed transfer FTE</i>)	Data from the Integrated Postsecondary Education Data System (IPEDS) https://nces.ed.gov/ipeds
State appropriations to two-year transfer dominant colleges per Full-time Equivalency.	Annual state aid allocated to two-year transfer colleges on an FTE basis. Inflation adjusted values. (<i>Two-year transfer FTE</i>)	Data from the Integrated Postsecondary Education Data System (IPEDS) https://nces.ed.gov/ipeds
State appropriations to four-year and higher colleges/universities per Full-time Equivalency.	Annual state aid allocated to four-year and higher college/universities on an FTE basis. Inflation adjusted values. (<i>Four-year and higher FTE</i>)	Data from the Integrated Postsecondary Education Data System (IPEDS) https://nces.ed.gov/ipeds

To determine the allocation of funds among the differing institutional types as denoted by the Carnegie classification typology necessitated new dependent variables for this study. Data drawn from the IPEDS website for each of the forty-nine states formed the basis of this study for the years 2005-2020. The Carnegie classification system delineates institutions of higher education by institutional type, resulting in thirty-one distinct categories. To answer the primary question about political party preferences for higher education funding by institutional type, new subsets of Carnegie categories were created. Private institutions, both for and non-profit, when

removed from the data, limited the institutions to only recipients of state allocations. Through restricting alternative sources of funding including allocations for capital improvements, supplemental federal funds, local tax receipts, and restricted funds, only general fund allocations for comparison purposes remained. Second, institutions were grouped by Carnegie descriptor into subgroups of similar institutions. Third, the summed total of state general fund expenditures allocated to each institution provided a total dollar value of higher education funding by each state by year. Finally, the summed total of twelve-month FTE enrollments for each state by Carnegie classification was divided by the dollar value of the appropriation to compute support by student FTE. This procedure resulted in the creation of four dependent variables.

Two Year Vocationally Dominant Colleges FTE: This variable, constructed by collapsing all public two-year colleges dominantly offering predominantly vocational studies into one category, including colleges that served traditional students, mixed traditional /non-traditional students, and non-traditional dominant colleges. Funding allocation data came from IPEDS for each institution, as well as the twelve-month FTE enrollment figures for each college. This data was computed into a dollar value per FTE for this institutional type by state/year from 2005-2020.

Two Year Mixed Transfer Colleges FTE: The comprehensive community college is the best example of this institutional category, in offering both academic and vocational programs. This variable, constructed by collapsing all public two-year colleges offering associate degrees in vocational and academic subjects into one category, included colleges that serve traditional students, mixed traditional /non-traditional students, and non-traditional students. Funding allocation data originated from IPEDS for each institution, as well as the twelve-month FTE

enrollment figures for each college. As computed from this data, a dollar value per FTE was established for this institutional type by state/year from 2005-2020.

Two Year Transfer Dominant Colleges FTE: This variable was constructed by collapsing all public two-year colleges offering primarily associate degrees in academic subjects with an emphasis on transferability to baccalaureate colleges subjects into one category, including colleges that serve traditional students, mixed traditional /non-traditional students, and non-traditional dominant colleges. Funding allocation data came from IPEDS for each institution, as well as the 12-month FTE enrollment figures for each college. From this data a dollar value per FTE was computed for this institutional type by state/year from 2005-2020.

Four Year and Higher College/University FTE: The construction of the Four-year and higher variable was developed by collapsing all public four-year and higher colleges and universities into one category. This variable includes baccalaureate as well as master's and doctoral level institutions. Funding allocation data, as well as the 12-month FTE enrollment figures for each college, as retrieved from IPEDS for each institution served as the basis for this variable. From this data, a dollar value per FTE was computed for this institutional type by state/year from 2005-2020.

Independent Variables

To evaluate the hypothesis indicated previously, specific characteristics of the states' political, educational, economic, and demographic environment function as control variables, as found to be statistically significant in previous research. The first category of these variables evaluates the influence of political factors on higher education and are indicated below in Table 3.

Political Variables

Table 3

Political System Variables Description and Source

Variable	Description	Source
% Democratic Senate	The percentage of state senators who are Democratic. (<i>Percentage of senators Democratic</i>)	US Bureau of the Census: Statistical Abstract of the United States (through 2011) ncls.org thereafter
% Democratic House	The percentage of state representatives who are Democratic. (<i>Percentage of house Democratic</i>)	US Bureau of the Census: Statistical Abstract of the United States (through 2011) ncls.org thereafter
Democratic Governor	Whether governor was Democratic (1=yes 0=no) (<i>Democratic governor</i>)	US Bureau of the Census: Statistical Abstract of the United States (through 2011) ncls.org thereafter
Divided Government	State Government Divided (1=yes, 0=no) (<i>Divided government</i>)	National Conference of State Legislators, ncls.org

Political ideology is a “coherent and consistent set of orientations or attitudes toward politics” (McLendon, Hearn, & Mokher, 2009, p. 691). Classic political theory locates political ideology along a liberal to conservative continuum, with noted policy differentiations separating them. In the context of the United States, Democrats are associated with liberal policy preferences, and Republicans, conservative. As noted previously, liberal governments typically support greater direct funding for public services and societal interventions (Ansell B. W., 2008; Boix, 1997; Jungblut, 2015). Previous studies find a positive correlation between Democratic governors and support levels for higher education as well as findings supportive of a connection between Democratic legislative strength and increased higher education support (Alt & Lowry, 2000; Archibald & Feldman, 2006; McLendon, Hearn, & Mokher, 2009). Given that the two major parties hold differing preferences with respect to other policy arenas, a reasonable

assumption is that the two major parties may hold substantive policy differences toward the public subsidization of higher education. Consistent with these findings the first set of controlling political variables include: the party affiliation of the governor, the presence or absence of a divided government and the percentage of Democrats in both chambers of the legislature.

Democratic Governor: Previous research found that a Democratic governor is positively correlated with appropriations per \$1,000 for higher education (McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2010b). Conversely, studies have indicated mixed results on funding impacts if the governor is Democratic or Republican, with Weerts & Ronca (2012) finding greater levels of funding support for higher education among Republican governors and Ortega (2020) the opposite result. A distinguishing feature of this study is the delineation of gubernatorial party affiliation and funding preferences across the grouped Carnegie institutional categorization framework. The resultant hypothesis is that the mixed results indicate differential funding preferences with Democratic governors demonstrating stronger support for four-year and higher institutions, with lesser support for two-year institutions, proportionally decreasing with increasing vocational emphasis.

Democratic Legislature: This variable entails two cases: the percentage of the state's senators that are Democratic; and the percentage of state's representatives that are Democratic. The percentage of Democratic legislators indicates the relative strength of each party in both houses of the state legislative bodies. The use of this measure is central to the study in linking state expenditures for higher education with political identity. Previous research indicates a positive correlation between Democratic party majorities and higher education funding (Kramer, 2011; McLendon, Deaton, & Hearn, 2007; McLendon, Hearn, & Mokher, 2009). Dar and Lee

(2014) find that funding for community colleges is higher under Republican majorities given that the institutional form supports lower cost structure and a business and industry emphasis. Based on these conflicting findings, the hypothesis projects that increasing Democratic percentages will not result in statistically significantly higher funding levels for either four-year and higher institutions or two-year colleges.

Divided Government: The condition of either unified or divided government is incorporated into the study given the hypothesis that a divided government possess lower ability to enact their legislative agenda because of the increase in roadblocks to passing legislation and the “bargaining costs that political actors must pay to reach agreement on policy tend to be higher” (McLendon , Deaton, & Hearn , 2007, p. 653). Similarly, Alt and Lowry (2000) developed a model demonstrating that a unified government reaches its budgetary preferences more efficiently. In relationship to higher education funding, Dar (2012) reports findings that suggest divided government to be correlated with decreased state appropriations. Similarly, Rizzo (2006) reported that competitive multiparty states were more likely to cut funding for higher education. Weerts & Ronca (2012) postulate this phenomenon reflects lower costs of reaching political consensus in a non-competitive environment or increased reluctance among elected officials to take actions unpopular with the electorate given a heightened sense of political vulnerability.

Alternatively, Li (2017) demonstrates that states with unified control by either party were likely to impose larger cuts on higher education. In hypothesizing the existence of this phenomena, Li posits that unified governments, either Republican or Democratic, are equally willing to cut higher education funding to balance state budgets, an action that divided governments less willingly employ. One possible explanation is that when facing fiscal

shortfalls, unified governments are more able to shift funding priorities and readily pass the governors proposed budget, “Otherwise, divided government introduces bargaining and compromise since neither party has unilateral control” (Alt & Lowry, 2000, p. 1039).

Given the contradictory findings of previous research regarding a specific partisan effect in the funding of higher education either favoring higher education funding by Democrats as indicated by (Archibald & Feldman, 2006; McLendon, Hearn, & Mokher, 2009) or Republican-controlled legislators as detailed by (Weerts & Ronca, 2012), I hypothesize no significant difference will be found between unified and divided governments in their relative support of higher education.

Economic Variables

Economic factors such as per capita income, tax capacity, and available revenues all serve to guide state appropriations for higher education and collectively, have demonstrated significant effects on higher education spending by the states (McLendon & Hearn, 2007; Weerts & Ronca, 2012). The economic variables included in this study are outlined in table 4 below and further detailed in the subsequent section.

Table 4*Economic Variables Description and Source*

% Unemployment	Annualized state unemployment rate. (<i>Unemployment rate</i>)	US Bureau of Labor Statistics http://www.bls.gov/data/
State Gross Domestic Product	Annualized percentage of change in state GDP. (<i>Change in GDP</i>)	US Bureau of Economic Analysis https://www.bea.gov/data/gdp/gdp-state
Gini Coefficient	Income inequality measure: (0 to 1) where zero is perfect equality and one is maximum inequality. (<i>Gini coefficient</i>)	Bureau of Economic Analysis Distribution of Personal Income U.S. Bureau of Economic Analysis (BEA)
Tax and Expenditure Limitation	Presence of Tax and Expenditure Limitation in the state. (<i>Tax and Expenditure Limitations</i>)	American Enterprise Institute State tax expenditure limitation and supermajority requirement: New and updated data. (2017) Kallen-WP-Sept-2017.pdf (aei.org)

Unemployment Rate: State unemployment rates were calculated by utilizing data from the Bureau of Labor Statistics for the period of this study. Previous studies have indicated that higher rates are associated with lower levels of funding due to legislative anticipation of weaker economic activity (McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2010b). Both studies illustrate the importance of economic stability on higher education funding levels. Similarly, the Weerts & Ronca (2012) model found that for every one percent increase in states' unemployment rate, state higher education funding decreased by an average of seven percent. The unemployment rate, as a countercyclical variable, increases during economic recessions but declines during economic expansion. As State higher education appropriations are discretionary,

they become less competitive with other key policy items during budgetary contraction (Dar & Lee, 2014). Therefore, the hypothesis is to anticipate that state unemployment rates will be negatively correlated with state higher education funding. Following McLendon (2009), lagging the unemployment variable for one year allows time for the increase or decrease in unemployment to effect tax revenues.

Percentage Change in Gross State Product: State higher education spending is likewise sensitive to changes in the states' economic conditions. Tandberg (2010a) found that gross state product (GSP) has a significant influence on state funding. Specifically, as state GSP increases, legislatures anticipate higher tax revenues and greater amounts for appropriation spending. A more precise measure is GSP per capita, which measures economic output on a population proportioned basis, and is therefore sensitive to both population growth and decline, as well as changes within the population demographic.

Gini Coefficient: Another factor influencing the funding of higher education is the degree of income inequality in the state. To evaluate income inequality, the Gini coefficient is utilized with response values between 0 and 1, with 0 expressing perfect equality and 1 expressing maximum inequality. Li (2017), consistent with Tandberg (2010b), found statistical significance when regressing higher education appropriations against measures of income inequality. Li hypothesizes that this finding may be due to a desire to facilitate higher education opportunities among poorer residents as a means of facilitating income equality. As Boix (1997) and Ansell (2008) found when analyzing partisan preferences in funding higher education, left-leaning governments favor redistribution, which suggests that states with Democratic majorities would advantage higher education funding, especially in states with high income inequality. Conversely, De Oliver & Briscoe (2011) found the opposite result. Ward (2012) posits that states

with increasing income disparity appropriated less to higher education on an FTE basis. Funding decreases coincided with decreases in manufacturing employment and reduction in corporate tax receipts especially noticeable in the manufacturing belt of the Northeast and upper Midwest (De Oliver & Briscoe, 2011). Based on this information, it is hypothesized that higher education funding will decline in relationship to increased Gini coefficient values.

Tax and Expenditure Limitations: The final political variable is the presence or absence of tax and expenditure limitations (TEL's) within each state. TEL's is a dummy variable indicating whether a state has a constitutional provision limiting the increase of state expenditures. Currently, thirty states have a form of TEL's regulations in force Bureau (2023). Primarily enacted beginning in the 1970's, TEL's have remained a stable part of the landscape for higher education funding and have contributed to the erosion of state support for public higher education. As a result, institutions of higher education increase tuition above the inflation rate to compensate for inadequate appropriations. In their analysis of the impacts of TELS on state appropriations, Archibald, and Feldman (2006) found a statistically significant relationship between the presence of TEL's and state allocations for higher education. Kallen (2017) who undertook to classify TEL's according to their restrictiveness, ease of override, and level of specificity observes the limiting effects of TEL's are potentially mixed, due to their varied nature among the states. Given the variegated nature of TEL's, a dichotomous variable reporting on the presence or absence of TEL's in a specific state is used to test the hypothesis that TEL's suppress state higher education allocations. In concert with previous findings, it is hypothesized the presence of TEL's will be associated with reduced funding for higher education.

Higher Education Variables

Higher Education variables serve as controls for specifics of each states' higher education environment. Previous studies support the idea that higher enrollment numbers will exert pressure on legislatures to increase funding (McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2010b). Since state funding of higher education is frequently tied to enrollment projections, variations in enrollment figures influence legislative support. Tandberg (2010b) found support for increased state expenditures in higher education as enrollment figures increased but decreased funding support for higher education as two-year enrollment increased, presumably upon the assumption of lower costs per student. As data from the past eight years indicate, enrollment declines at all levels of higher education have not corresponded with decreases in FTE funding. Therefore, this variable displays limited utility in this study. Rather, by means of measuring funding by FTE equivalent, compensation is made for enrollment decreases and increases, while simultaneously capturing the differential funding effects (Tandberg D. A., 2010b). The higher education variables incorporated into this study are outlined in table 5 below, and further detailed in the subsequent section.

Table 5*Higher Education Variables and Source*

Variable	Description	Source
Percentage of population with associate degree.	The percentage of adults aged 25+ years with associates as highest degree. (<i>Percent associates</i>)	US Bureau of the Census http://www.census.gov
Percentage of population with bachelor's degree.	The percentage of adults aged 25+ years with bachelor's or higher as highest degree. (<i>Percent bachelor's</i>)	US Bureau of the Census http://www.census.gov
Percentage of change in state appropriations to higher education	Annualized percentage change of state appropriations to higher education. (<i>Percent change in funding</i>)	Integrated Postsecondary Education Data System (IPEDS) https://nces.ed.gov/ipeds
Percentage of change in tuition revenue	Annualized percentage change in tuition and fees revenue, (<i>Tuition change</i>)	State higher Education Executive Officers (SHEEO) SHEEO_SHEF_FY22_Report_Data
Percentage enrolled in private colleges.	Percentage of the college population enrolled in private colleges/universities. (<i>Percent private enrollment</i>)	Integrated Postsecondary Education Data System (IPEDS) https://nces.ed.gov/ipeds

Educational Attainment: Busemeyer (2013) posits that individual educational experience forms an essential component in determining educational preferences. Under this assumption, a correlation should exist between higher levels of postsecondary education and stronger support for higher education at a level corresponding to the attainment of the individual. Based on this supposition, one variable was developed to measure the percentage of the population aged twenty-five and older possessing an associate degree as their highest level of education, and a second, measures the percentage of the population aged twenty-five and older holding a

baccalaureate degree or higher. As the percentage of the population with post-secondary degrees increased over the period of this study, stronger support for higher education is anticipated. These variables are used to test the hypothesis that higher attainment levels of educational attainment are significantly correlated with higher FTE funding for higher education at corresponding educational levels.

Change in State Appropriations: This variable, utilizing IPEDS data, traces the annualized changes in higher education allocations during the 2005-2020 period. Total state funding for higher education is simply the total dollar amount appropriated or expended on higher education (McLendon, Hearn, & Mokher, 2009). The intent behind tracking this number is to examine for the presence of differential funding impacts across Carnegie classifications. The hypothesis is that no differential impacts in funding preferences will be observable across institutional types.

Private Enrollment: This variable utilizes IPEDS data to report the percentage of college attenders enrolled in private institutions. The percentage of college students who attend private institutions in each state is presumed to impact legislative budget allocations to higher education. Previous studies have found reduced appropriations for public higher education in states with higher private college enrollments numbers (McLendon, Hearn, & Mokher, 2009; Rizzo M. J., 2006). The assumption that reductions in appropriations are less damaging because they impact a smaller percentage of the population is perhaps contributory to this result, or that states' political climate reflects lower prioritization for higher education. The working hypothesis for this variable is that higher education appropriations will be negatively correlated with increased levels of private college enrollment.

Change in Tuition Revenue: This educational variable of interest measures tuition revenue change expressed as the percentage difference from the year previous. This variable utilizes SHEEO data to report the percentage change in tuition and fees revenues for each state over the 2005-2020 period. A connection has been observed between tuition increases and funding levels, wherein it is hypothesized that increases in tuition revenue will result in decreases in funding given legislative proclivity to reduce funding to higher education when tuition revenue increases (Dar & Lee, 2014; Tandberg D. A., 2010b). Inversely, Li (2017) anticipates that states with high tuition or rapid growth in tuition prices are less inclined to cut appropriations given concerns this will trigger even further tuition increases. To evaluate which outcome is correct, the annual percentage change in tuition costs is included as a higher education variable. Given the contradictory findings, it is hypothesized that a no significant correlation will exist between tuition revenue increase and state allocations for higher education.

Demographic Variables

Demographic factors within the states bear upon higher education funding allocations. The share of the population receiving a sizable portion of state resources will affect appropriations as a function of competition between higher education and other interests. Specifically, as have others McLendon, Hearn, & Mokher (2009); Tandberg (2010a); Weerts & Ronca (2012) I hypothesize that an increased percentage of a state's population in the 5–17 age range will lower spending on higher education as K–12 education diverts state allocations away from higher education. Similarly, demand for higher education is sensitive to the size of the 18–24-year-old cohort of the population. Although increases in this demographic would seemingly result in higher appropriation levels for higher education, prior research has reported this relationship to be negative (McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2010b). Based

on these prior findings, it is hypothesized that a finding of a negative correlation between an increase in the percentage of this demographic and funding for higher education. Likewise, an aging population will reduce higher education funding through competition with Medicaid and with other health related costs associated with older populations (Li, 2017; McLendon, Hearn, & Mokher, 2009). Increases in Medicaid spending, anticipated as the population over 65 expands, exerts pressure towards reducing higher education appropriations (Tandberg, 2010a; Weerts & Ronca, 2012). The demographic variables included in this study are outlined in Table 6 below, and further detailed in the subsequent section.

Table 6

Demographic Variables and Source

Variable	Description	Source
% Population 5-17 years	K-12 population age 5-17 years. (<i>Percent of population 5-17</i>)	US Bureau of the Census http://www.census.gov
% Population 18-24 years	College age population age 18-24 years. (<i>Percent of population 18-24</i>)	US Bureau of the Census http://www.census.gov
% Population 65+ years	Population 65 years and older. (<i>Percent of population 65+</i>)	US Bureau of the Census http://www.census.gov

Analytic Method

This study defines state support as unrestricted state appropriations for public research universities. This definition emanates from the annual finance survey conducted by the National Center for Education Statistics (NCES). The Center’s Integrated Postsecondary Education Data System (IPEDS) survey defines unrestricted state appropriations “as state dollars received by the

institution through acts of a legislative body, except for gifts and contracts” (NCES, 2023, p. 943). The provision of state funds to an institution contains no limitations or stipulations placed on them by the legislature. Typically, utilization of these funds is for meeting current operating expenses, not for specific programs or projects or capital improvements. This definition excludes facilities budgets, special research programs, and exceptional units, such as university hospitals and clinics (NCES, 2023). Alternative definitions for state support might include restricted state appropriations earmarked for funded projects tied to specific legislative objectives (NCES, 2023). In addition, appropriations for capital and faculty salaries could be another indicator of state support. However, these alternative indicators of appropriations are not incorporated into this study due to data related issues. First, institutions do not uniformly report certain budgetary indicators. For example, faculty salary data is incomplete for the fiscal years reviewed in this study. Second, and most important, the unrestricted state appropriations definition represents support common to all public colleges and universities and avoids the inclusion of special units, entrepreneurial activities or business partnerships, facilities costs, or other expenditures that are unique to a specific institution (Weerts & Ronca, 2006).

Given that significant changes to higher education funding levels have occurred over the previous four decades, an investigation that incorporates a substantive time is appropriate. The period 2005-2020 allows for changes to occur in state governance and for funding trends to emerge. Significantly, the reductions in state higher education funding are not uniformly observed across states, nor consistently over time. After steep declines were observed in the 1980’s, marginal improvements in funding levels have occurred in some states, especially after the recessionary period of 2008-2009, suggesting factors are influencing higher education

funding outcomes. To better understand these phenomena. A time-series fixed effects regression analysis will be conducted to evaluate correlation with the majority political party in each state.

Four dependent variables are incorporated into the design for this study. As outlined previously, these variables include the level of state support per FTE student dedicated to two-year vocational colleges, the level of FTE support for two-year mixed-transfer institutions, the level of FTE for two-year transfer dominant colleges, and finally, four-year, and higher colleges and universities. Regression analysis will be utilized to identify relationships with the independent variables: *Democratic governor, divided government, percent of senate Democratic, percent of house Democratic, unemployment rate, annual change in state GDP, Gini coefficient* measure of income inequality, presence or absence of state law or constitutional *tax and expenditure limitations, percentage of state population with associate degree, percentage of state population with bachelor's degree or higher, percentage annual change in tuition revenue, percentage annual change in higher education funding, percentage enrolled in private colleges, percentage of population ages 5-17, percentage of the population ages 18-24, and percentage of the population 65 and older*. The variable missing category was created as a dummy variable to control for a state missing a specific Carnegie classification category.

Data will be collected for the forty-nine states for each of the years covered by this study. Data for the four dependent and fifteen independent variables were collected for a sixteen-year period resulting in 13,230 individual points. This large number of data points improves the predictability and explanatory power of the model. These data points were used to create a panel data set. Drawing samples repeatedly from the same subjects over time allows for the analysis of variance at various points of time, as well as changes within each subject (Zhang L. , 2010). The use of panel data is appropriate in this case because it allows for the estimation of variance

within each state longitudinally rather than measuring variance between states and yields a historical analysis of individual states and higher education.

In addition, panel data allows for the control of individual heterogeneity and produces more rigorous findings (Kennedy, 2008). A fixed-effects regression analysis was utilized to assess the relationships between the independent variables and state budget for the pooled Carnegie classifications by higher education institutional type. The regression analysis yields coefficient values which describe the estimated relationship between predictor and outcome variables expressed as the change in the outcome variable predicted by a one unit increase in the predictor variable. Utilizing fixed-effects analyses facilitates the evaluation of change within entities over time, enabling the analysis of the effects of changes in independent variables within states on the dependent variables. Control for omitted variables which vary between states but are assumed to remain constant over time is provided by the state fixed-effects model. Examples of these variables include political climate, path dependent development of higher educational systems, and federal regulation.

Panel data exhibit characteristics that challenge Ordinary Least Squares (OLS) assumptions, which if uncorrected, can lead to inaccurate results. First, panel data demonstrate the tendency to exhibit correlation regression disturbances, known as heteroskedasticity, which violates one tenet of the Gauss-Markov Theorem in regard to the assumption of equally distributed errors (or homoscedasticity), and produces invalid confidence intervals and τ statistics (Wooldridge, 2009). Generally, heteroskedasticity exists if the variance of the error term is not constant across the values of the independent variables. To control this tendency, robust standard errors adjustments were made to the model to control for heteroskedasticity. Autocorrelation or serial correlation is also present in panel datasets. Simply defined,

autocorrelation is the correlation of a time series model with its previous versions in time. Specifically, the independent variables are positively correlated over time, violating another tenet of the Gauss-Markov Theorem of serially uncorrelated error terms. This results in inaccuracy and results in understated variances of the OLS estimator (Wooldridge, 2009). Using the xtreg procedure in Stata fits regression models to panel data and adjusts the model to account for the presence of autocorrelation and provides more accurate variance estimates by using the within regression estimator.

Regression Equation and Data Interpretation

This study will employ a cross-sectional times-series analysis. In this case, the use of a fixed effects model for both state and year is appropriate, since the variable values were determined *a priori* to the study, and the specific point of interest is the response of the dependent variable to those specified levels. Using this approach can result in an accurate predictive model given that multiple states are examined over multiple points in time. This approach enables the researcher to increase the sample size and thereby the predictive power. Additionally, the fixed effects model controls for unobservable or omitted variables (Kennedy, 2008). Further noteworthy advantages for fixed effects models are the provision for arbitrary correlation between the dependent and independent variables which yields unbiased estimates (Zhang L. , 2010). The general cross-sectional time-series model is as follows (Equation 1):

$$Y_{it} = \alpha + b_1x_{it} + b_2x_{it}... + u_i + v_{it} \quad (1)$$

where Y is the dependent variable, x represents the independent variables, α is the intercept coefficient and b_1 represents the coefficients for the various political variables, b_2 represents the independent variables, and i and τ are indices for individual states and time. The error terms, μ_i

represent the fixed effect and, v_{it} is the pure residual. Assumptions about the first error term determine whether the model is a fixed effects or random effects model. Fixed effects models control for omitted variables that differ between states but are constant over time which is common in panel data designs. Using a fixed effects model is the same as generating dummy variables for each case and including them in a standard linear regression to control for fixed ‘case effects’. Therefore, fixed effects models allow the researcher to observe primarily the effects of changes in independent variables within states on the dependent variable. The use of fixed effects is appropriate given the robust statistic in each model indicating the presence of significant variation within the state influencing higher education funding. Specifically, the Spearman’s rank correlation coefficient values of .912 for the 2yrvocfte category, .866 for the 2yrmixfte category, .820 for the 2yrtrffte category, and .916 for the 4yrfte category reflect strong positive correlations within the models.

The coefficients describe the size of the effect each of the independent variables is having on the dependent variable. The interpretation when looking at a variable with a significant relationship, is to answer the question, when holding all other factors constant, what is the expected change in the state support of higher education within a state if the observable factor increases by one unit? (Princeton, 2024). A two-tailed significance level was established at the 95% confidence level with a p of <.05 indicating that the probability under the null hypothesis of the observed effect not being attributable to a random result (Princeton, 2024; Wooldridge, 2009). While a p value may indicate a strong relationship between the independent and dependent variable, it does not explain the overall effect of the independent variable on the dependent variable given a one unit change in the independent variable. There could be a statistically significant result, but it could have a minimal or negligible impact on the dependent

variable. The magnitude of change and whether its effect is important or negligible is a function of the correlation coefficient (Princeton, 2024; Wooldridge, 2009). The robust standard error (RSE) is an estimate of the standard deviation of the coefficient. In essence it represents the precision in measuring the regression coefficient. The R^2 of the model denotes the fraction of the variation in the dependent variable that is predicted by the independent variables and is useful when using the regression equation to make accurate predictions. Lastly, the constant represents the value that the dependent variable will take on when all independent variables are equal to zero (Princeton, 2024).

To evaluate the effects of the independent variables on each of the four institutional categories, the following equation was constructed: the Carnegie classification FTE, was regressed against the independent variables: Democratic governor + divided government + percent Democratic senate, + percent Democratic house, + unemployment, + state GDP, + income inequality, + tax and expenditure limitation, + associate degree percentage, + bachelors and higher percentage, + change in state appropriations, + percentage increase in tuition revenue, + percent enrolled in private institutions, + missing category + population 5-17, + population 18-24, + population 65 and older, + u_i , + v_{it} . This basic model was repeated for each of the four dependent variables used in this study. Some of the independent variables did not vary over time for a given state. To legitimately include these variables, dummy variables were created for tax and expenditure limitations, divided government, missing Carnegie classification values and presence or absence of state coordinating commission.

Model 1

Model 1 investigates the distinction between funding per FTE in each of the four Carnegie classifications of higher education while considering political effects. The model

accounts for percentages of Democratic legislative representation in each legislative body across the forty-nine states included in the study. Similarly, the model also assesses the effect of gubernatorial party affiliation on higher education allocations as suggested by (Dar, 2012; McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2009). The effects of divided government on higher education funding are also investigated.

Model 2

Model 2 distinguishes between funding per FTE in each of the four Carnegie classifications of higher education when considering political effects with the addition of economic factors including unemployment rates, changes in state GDP, Gini measures of income inequality, and whether the state has tax and expenditure limitations legislation.

Model 3

Model 3 distinguishes between funding per FTE in each of the four Carnegie classifications of higher education when considering political and economic factors with the addition of higher education variables including percentages of the population holding either associate of baccalaureate or higher degrees as highest level of education, the annual change in state appropriations for higher education the annual change in tuition revenues, and the percentage of college students attending private institutions. Tracking the changes in state allocations across the four Carnegie classifications represents an effort to determine if funding increases are distributed equally, or if a particular institutional category is receiving preferential treatment. Using the data on educational attainment represents an effort to assess whether educational levels translate into voter preferences for funding higher education at the level of

institution corresponding to their educational level. Private college enrollment is an important determinant of state higher education funding (McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2009), however in this study, the effect is evaluated for differential effects across institutional type.

Model 4

Model 4 distinguishes between funding per FTE in each of the four Carnegie classifications of higher education when considering political, economic, and higher education factors with the addition of the demographic factors of percentage of the population between 5-17, 18-24 and 65+. Each of these age groups were included given prior research studies that found statistically significant relationships between them and state funding for higher education (Dar, 2012; Delaney & Doyle, 2011; McLendon, Hearn, & Mokher, 2009).

CHAPTER 4

Results

This chapter will provide the results of the statistical analysis of the developed regression models and the respective descriptive statistics. The first section provides an evaluation of the results between the dependent and independent variables related to the impact of political party majority on higher education funding. The second section examines in specific detail the impact of economic factors on funding across four specific grouped Carnegie classification system categories of higher education. The third section will report the impacts of specific state demographics on the funding of higher education and the influences that bear on state appropriations for higher education.

Descriptive Statistics

Basic descriptive statistics for each of the variables included in the study demonstrate the changes occurring between 2005 and 2020 are indicated in Table 7 below. The statistics indicate a slight increase in Republican representation in state senates, state houses of representatives and gubernatorial offices. More pronounced is the marked decrease in divided government reflective of the growing polarization of American politics. Noteworthy also is the differences in state allocation outcomes between the differing categories of higher education institutions, demonstrating the preferences for two-year funding.

Table 7*Descriptive Statistics 2005 and 2020*

Descriptive Statistics for Variables in the 49 States in the Analysis, 2005 and 2020			
Variable	2005 Mean	2020 Mean	% Change
<i>Percent Democratic Governor</i>	46.9	44.9	- 4.5
<i>Percent Divided Government</i>	55.1	20.4	-63.0
<i>Percent Democratic Senate</i>	49.0	47.4	-3.3
<i>Percent Democratic House</i>	49.0	47.2	-3.7
<i>Percent Unemployment</i>	4.6	7.4	60.9
<i>Percent GDP Change</i>	6.44	-1.6	-124.8
<i>Gini Coefficient</i>	.429	.464	8.2
<i>Percent Associate Degree</i>	8.20	9.21	12.3
<i>Percent Bachelor Degree</i>	26.14	34.09	30.4
<i>Percent Age 5-17</i>	17.3	16.2	- 6.4
<i>Percent Age 18-24</i>	11.6	9.2	-20.7
<i>Percent Age 65+</i>	12.2	17.5	30.3
<i>Percent Private Enrollment</i>	20.6	25.1	21.8
<i>Four-Year FTE Allocation</i>	\$9957.0	\$7848.0	-21.2
<i>Two-Year Transfer FTE Allocation</i>	\$3959.0	\$4467.6	13.1
<i>Two-Year Mixed Transfer FTE Allocation</i>	\$4592.0	\$4980.1	8.4
<i>Two-Year Vocational FTE Allocation</i>	\$4756.7	\$6031.9	26.8

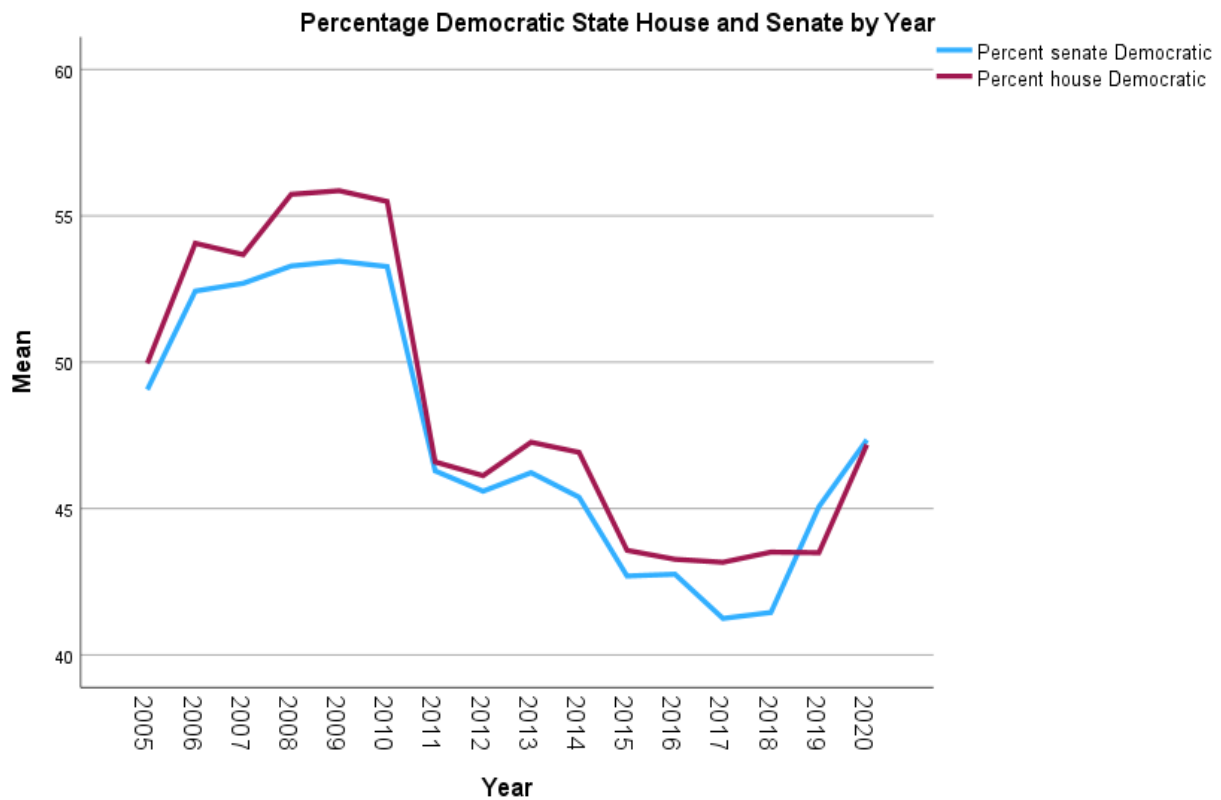
All dollar values are computed in 2020 constant dollars.

Attention is drawn to selected variables in the study that reflect important trends that potentially affect higher education funding. First, among the states, when considered in total, a modest decrease in Democratic representation is observed with a net result of 4.5 percent decline

in Democratic governors, 3.3 percent decline in Democratic senators, and 3.7 percent decline in house of representative's Democratic membership. These declines are not uniform as suggested in Figure 7 below, but evidence strong growth in Democratic representation after the 2008 election cycle, and significant declines through the mid 2010's, before modest gains during the 2020 election year.

Figure 7

Percentage Democratic State House and Senate by Year

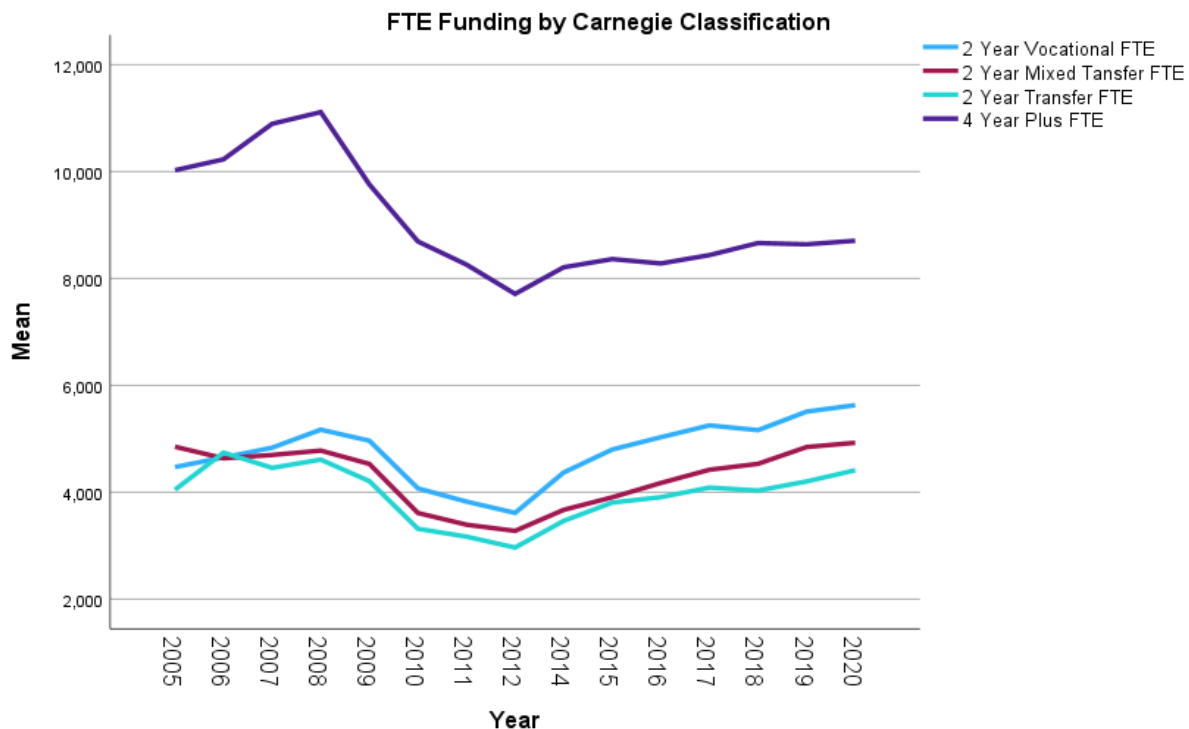


The funding of higher education across the four Carnegie classifications is the primary focus of this study. Alarm over the precipitous declines in the funding of higher education led to

a flurry of academic studies attempting to identify the causal mechanisms underlying this decline. Extending from these initial efforts, researchers delved into other potential factors including the types of governance structures, special interest groups influence and taxation structures. The distinguishing characteristic of this study is in its delineation of higher education classifications and how various factors influence funding across these classifications. Figure 8 visually depicts the funding trends in each category of higher institution during the 2005–2020 period. Upon examination it is evident that funding showed modest increases in the years 2005-2008, followed by marked decline coinciding with a recessionary period in the United States. Recovery in funding per FTE commenced with economic recovery in the later 2010’s, with more robust recovery evidenced among two-year colleges.

Figure 8

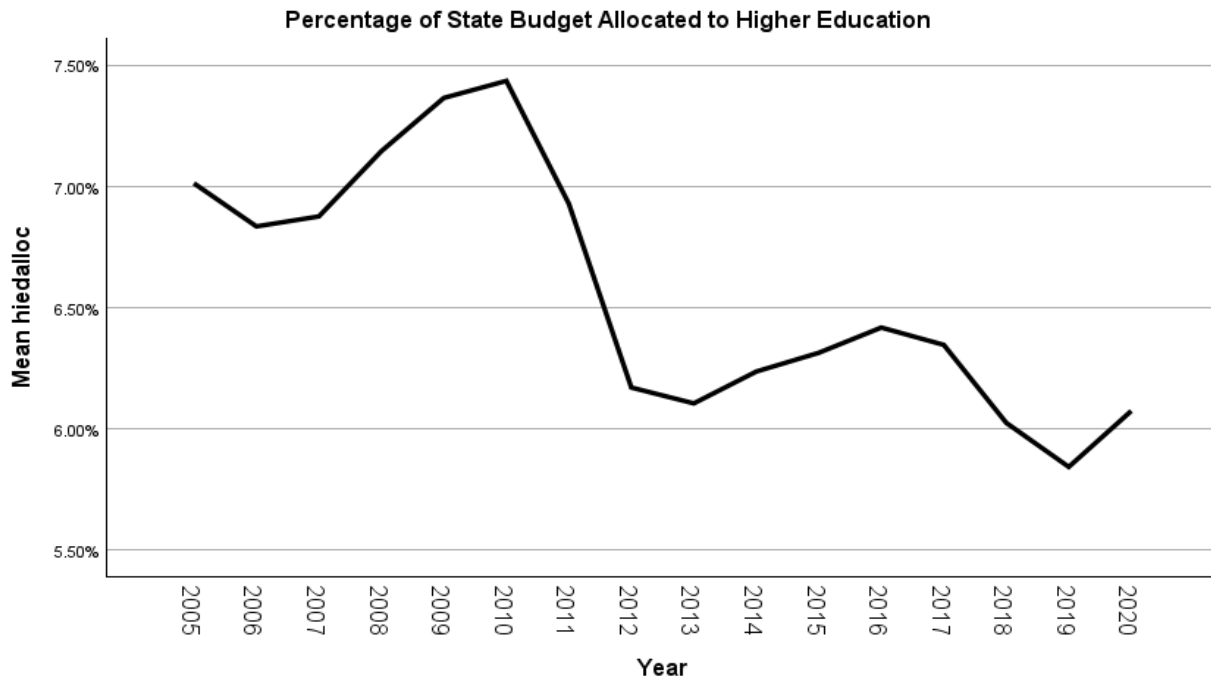
FTE Funding by Carnegie Classification



The increase in funding per FTE that has occurred since 2012 informs only a portion of the current trend in higher education funding. As the FTE funding increase would suggest a reversal of the fifty-year trend in decreased state higher education allocations, other relative measures of funding suggest a mixed picture at best. As indicated in figure 9, the percentage of the state budget allocated to higher education continues to decline, albeit with a reversal in the 2019-2020 budget year. This trend is also confirmed by Tandberg (2009) who noted that higher education funding did not keep pace with increases in personal income among the states. Additionally, and as noted elsewhere, the funding level per FTE does not compensate for declining college enrollments noted across all levels of higher education since 2011 which increases FTE values without increasing the allocated amounts.

Figure 9

Percentage of State Budget Allocated to Higher Education



Source: SHEEO (2024)

Case wise diagnostics were utilized to examine the data set for the presence of outlier observations. The value of the standardized residuals for each observation demonstrated that for each dependent variable, the total number of outliers was at or slightly below .05 which corresponds to the standard .95 confidence interval. With $n=554$ for observed cases, the total number of exceptional cases was for the four-year and higher FTE variable was 30, the two-year transfer FTE was 16, the two-year mixed transfer FTE was 22, and the two-year vocational FTE was 28. Cases with values exceeding 3.0 were evaluated, and in two instances of values exceeding 7.0, errors in computation were discovered and corrected since they were simply computational errors.

Dependent Variables

Two-Year Vocational Dominant Colleges: This variable was derived from Integrated Post Secondary Education Database System (IPEDS) data. The three Carnegie classifications of traditional, mixed, and non-traditional for high career and technical associate's colleges were combined into one category for the vocational dominant designation. Institutions included in this category included all publicly funded colleges offering an associate degree (n=214), excluding Nebraska. In evaluating the mean value for FTE funding on this measure, it is indicated that during the period of this study, this category of institution occupied a more favorable policy space relative to state appropriation for higher education, as evidenced by a net increase in student FTE funding. The FTE funding does not demonstrate a linear increase, as significant declines in per student funding are observable during the recessionary period of 2009-2012. This decrease is accompanied by a sharp increase in student enrollment which was witnessed by an increase in FTE enrollment from 521,950 students in the 2005-2006 academic year to a maximum of 698,392 students during the 2011-2012 academic year. Since that year, two simultaneous trends appear, that of steadily decreasing enrollments in that enrollments in the category declined to 535,075 in the last year of this study, and steadily increasing FTE funding levels. Funding per FTE demonstrated trends like the mixed-transfer and transfer-dominant categories with higher initial funding in the 2007-2008 academic year at \$5,701.00 per FTE and decreasing to \$4,094.00 in 2011-2012. FTE funding has subsequently increased to \$6,031.00 in the 2019-2020 academic year. Table 8 presents the statistical relationships between the two-year vocational colleges and the independent variables included in the study.

Table 8*Allocations to 2-Year Vocational Colleges**State Higher Education Allocations to 2-Year Vocational Dominant Colleges.*

	(1) 2 Year Vocational FTE Funding	(2) 2 Year Vocational FTE Funding	(3) 2 Year Vocational FTE Funding	(4) 2 Year Vocational FTE Funding
Democratic Governor	-184.03 (169.61)	-143.64 (144.42)	-164.25 (128.51)	-174.57 (126.63)
Divided Government	196.36 (117.58)	205.43 (115.12)	220.92* (100.77)	228.88* (105.05)
Percent Senate Democratic	2.50 (11.54)	-5.95 (10.03)	-4.88 (8.67)	-5.89 (9.27)
Percent House Democratic	0.03 (13.20)	38.36* (14.72)	38.96** (13.46)	39.91** (14.04)
Unemployment Rate		-245.86*** (35.91)	-199.72*** (33.51)	-205.46*** (34.01)
Annual Change in State GDP		-84.97*** (22.60)	-63.45*** (14.98)	-66.73*** (13.77)
Gini Coefficient		32173.48* (14754.52)	13651.00 (15042.02)	4893.27 (16617.54)
Tax and Expenditure Limitation		-1.14 (164.45)	-186.93 (198.54)	-223.53 (216.04)
Percentage of Population >25 Associates			231.18 (130.08)	250.76 (137.57)

Table 8 Continued – Allocations to 2-Year Vocational Colleges

Percentage of Population >25 Bachelors+ Highest		80.96		64.98
Percent Annual Change in Higher Education Funding		2.61*		2.60*
		(1.00)		(0.98)
Tuition Revenue Change Percentage		-92.46		-138.18
		(283.35)		(291.98)
Percent Enrolled in Private Colleges		1176.67		830.48
		(1298.53)		(1294.63)
Percent of Population age 5- 17				-16678.55
				(19356.49)
Percent of Population age 18- 24				-27.74
				(235.71)
Percent of Population age 65>				-2.57*
				(0.99)
Constant	5000.47*** (494.48)	-9529.46 (6915.39)	-6039.71 (7045.66)	1270.41 (9592.60)
Sample Size	594	593	593	593
States	39	39	39	39
R^2	0.0114	0.2558	0.2917	0.2943
Adj. R^2	0.0047	0.2456	0.2758	0.2747

Standard errors in parentheses

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

The dependent variable, *two-year vocational FTE*, displayed statistically significant correlations with several independent variables in model 4. The statistics for divided government 228.88, RSE (105.05), $p < .05$ indicate that the existence of a divided government results in a funding increase of \$228.88 per FTE. The statistics for Democratic percentage in the house of representatives, 39.91, RSE (14.04), $p < .01$ demonstrate a result in the hypothesized direction. The statistics for unemployment rate demonstrate a significant negative correlation -205.46, RSE (34.01), $p < .001$ with a one percentage point increase in unemployment rate being correlated with in FTE funding of \$-205.46. The statistics for the annual change in state GDP, -66.83, RSE (13.77), $p < .001$, indicate that a one percentage point increase results in \$ -66.73 decrease in funding per FTE. The statistics for change in overall state funding for higher education indicate a significant relationship of -2.60, RSE (.098), $p < .05$. Holding all other variables constant, the coefficient indicates that a one percent increase in private college attendance suppresses state funding for vocational dominant colleges \$-2.60. The final variable demonstrating significant relationship with vocational FTE funding is the percentage of the population ages 65 and older, -2.57, RSE (.99), $p < .05$.

Two-Year Mixed Transfer Colleges: This variable was derived from Integrated Post Secondary Education Database System (IPEDS) data. The three Carnegie classifications of traditional, mixed, and non-traditional for mixed transfer/career associate's colleges were combined into one category for the mixed transfer dominant designation. Institutions included in this category included all publicly funded colleges offering an associate degree ($n=293$), excluding Nebraska. FTE enrollment in this category evidence the same pattern as noted in the vocational dominant category, with a peak in the academic year 2011-2012 at 1,529,832 students, declining steadily to 1,224,408 during the 2019-2020 school year. Funding per FTE in

this category has followed the pattern noted in the other two-year categories, averaging \$4,956.00 in 2008-2009, declining to a low of \$3,443.00 in 2011-2012, and subsequently recovering to \$4,980.00 in 2019-2020. Table 9 presents the statistical relationships between the two-year mixed-transfer colleges and the independent variables included in the study.

Table 9

Allocations to 2-Year Mixed Transfer Colleges

	(1) 2 Year Mix Transfer FTE Funding	(2) 2 Year Mix Transfer FTE Funding	(3) 2 Year Mix Transfer FTE Funding	(4) 2 Year Mix Transfer FTE Funding
Democratic Governor	-140.91 (157.93)	-125.49 (133.73)	-153.80 (129.99)	-143.95 (134.18)
Divided Government	-13.05 (147.26)	3.21 (131.50)	21.25 (121.50)	-9.90 (118.49)
Percent Senate Democratic	-8.18 (12.87)	-9.69 (11.96)	-8.38 (10.58)	-7.07 (10.71)
Percent House Democratic	19.53 (20.44)	38.38 (19.10)	36.39* (16.48)	35.09* (17.19)
Unemployment Rate		-197.05*** (28.25)	-154.55*** (30.27)	-145.92*** (30.84)
Annual Change in State GDP		-65.81*** (15.15)	-44.17*** (12.12)	-38.52** (11.66)
Gini Coefficient		11770.49 (9908.39)	5377.31 (13522.93)	21699.20 (16035.34)

Table 9 Cont. – Allocations to 2-Year Mixed Transfer Colleges

Tax and Expenditure Limitation	-471.99** (170.83)	-692.47*** (155.81)	-627.89*** (149.90)
Percentage of Population >25 Associates Highest Degree		189.88 (122.82)	141.79 (125.63)
Percentage of Population >25 Bachelors+ Highest Degree		53.09 (44.09)	86.35 (43.29)
Percent Annual Change in Higher Education Funding		-0.65 (1.22)	-0.62 (1.27)
Tuition Revenue Change Percentage		-632.12 (402.72)	-541.83 (391.67)
Percent Enrolled in Private Colleges		-3394.64 (2077.68)	-2847.87 (2326.83)
Percent of Population age 5- 17			30632.03 (15419.07)

Table 9 Cont. – Allocations to 2-Year Mixed Transfer Colleges

Percent of Population age 18- 24				-78.79 (373.86)
Percent of Population age 65>				-3.76** (1.38)
Constant	3808.46*** (541.12)	-840.45 (4616.62)	-430.84 (5317.05)	-13896.58 (8581.02)
Sample Size	636	635	635	635
States	40	40	40	40
R ²	0.0128	0.1704	0.2167	0.2282
Adj. R ²	0.0065	0.1598	0.2003	0.2082

Standard errors in parentheses

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

The dependent variable, *two-year mixed transfer FTE*, displayed statistically significant correlations with several independent variables in model 4. The statistics for percentage of the house Democratic, 35.09 RSE (17.19) $p < .05$ indicates that a one percentage increase in Democratic representation results in a funding increase of \$35.09. The statistics for unemployment rate, -145.92, RSE (30.84), $p < .001$ indicate that a one percentage point increase in this variable results in a funding decrease of \$-145.92 per FTE. The statistics for the annual change in state GDP, -38.52, RSE (11.66), $p < .01$, indicate that a one percentage point increase results in \$-38.52 decrease in funding per FTE. The statistics for the TEL variable, -627.89, RSE (149.90), $p < .001$ demonstrate that the presence of TEL legislation in a state results in an FTE funding reduction of \$-627.89. The final variable demonstrating significant relationship with mixed transfer FTE funding is the percentage of the population ages 65 and older, -3.76, RSE (1.38), $p < .01$.

Two-Year Transfer Dominant Colleges: This variable was derived from Integrated Post Secondary Education Database System (IPEDS) data. The three Carnegie classifications of traditional, mixed, and non-traditional for high transfer associate's colleges were combined into one category for the transfer dominant designation. Institutions included in this category included all publicly funded colleges offering an associate degree (n=291), Nebraska excluded. FTE enrollment in this category evidence the same pattern as noted in the vocational dominant and mixed transfer categories, with a peak in the academic year 2011-2012 at 1,840,522 students, declining steadily to 1,570,618 during the 2019-2020 school year. In terms of funding, a maximum of \$4,681.00 per FTE occurred during the 2005-2006 academic year, and after falling to a minimum of \$3,025.00 per FTE in 2011-2012, rebounded to \$4,468.00 per FTE in the 2019-2020 academic period. Table 10 presents the statistical relationships between the two-year transfer dominant colleges and the independent variables included in the study.

Table 10

Allocations to 2-Year Transfer Dominant Colleges

	(1) 2 Year High Transfer FTE Funding	(2) 2 Year High Transfer FTE Funding	(3) 2 Year High Transfer FTE Funding	(4) 2 Year High Transfer FTE Funding
Democratic Governor	110.08 (159.93)	85.46 (137.91)	53.22 (130.46)	18.52 (115.77)
Divided Government	220.62 (128.73)	200.38 (117.94)	206.29 (109.18)	133.91 (97.81)
Percent Senate Democratic	-13.37 (10.46)	-13.98 (8.32)	-12.07 (7.58)	-11.06 (7.34)

Table 10 Cont. – Allocations to 2-Year Transfer Dominant Colleges

Percent House Democratic	22.86 (16.83)	30.30 (15.43)	28.97* (12.64)	28.52* (12.99)
Unemployment Rate		-208.40*** (32.01)	-163.71*** (34.91)	-148.38*** (33.77)
Annual Change in State GDP		-100.10*** (24.82)	-68.86** (22.45)	-61.54** (21.81)
Gini Coefficient		-12501.89 (11336.71)	-17726.44 (12610.36)	11103.48 (13276.47)
Tax and Expenditure Limitation		-577.45** (180.70)	-804.29*** (162.51)	-671.83*** (165.45)
Percentage of Population >25 Associates Highest Degree			241.74 (163.32)	147.54 (165.62)
Percentage of Population >25 Bachelors+ Highest Degree			49.00 (33.12)	131.96** (43.28)
Percent Annual Change in Higher Education Funding			-2.21 (1.35)	-2.94* (1.36)
Tuition Revenue Change Percentage			41.48 (395.13)	160.98 (407.53)
Percent Enrolled in Private Colleges			-3172.14 (1909.73)	-3251.78 (1791.62)

Table 10 Cont. – Allocations to 2-Year Transfer Dominant Colleges

Percent of Population age 5-17				61033.09** (17965.86)
Percent of Population age 18-24				-728.00* (298.54)
Percent of Population age 65>				-2.47 (1.22)
Constant	3341.63*** (509.16)	10682.05 (5277.25)	10114.65 (5364.59)	-15345.58 (7897.64)
Sample Size	502	502	502	502
States	34	34	34	34
R ²	0.0244	0.1515	0.1806	0.2122
Adj. R ²	0.0165	0.1377	0.1588	0.1862

Standard errors in parentheses

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

The dependent variable, two-year transfer FTE, displayed statistically significant correlations with several independent variables in model 4. The statistics for Democratic percentage in the house of representatives, 28.52, RSE (12.99), $p < .05$ demonstrate a result in the hypothesized direction. The statistics for unemployment rate demonstrate a significant negative correlation -148.38, RSE (33.77), $p < .001$ with a one percentage point increase in unemployment rate being correlated with in FTE funding of \$-148.38. The statistics for the annual change in state GDP, -61.54, RSE (21.81), $p < .01$, indicate that a one percentage point increase results in \$ - 61.54 decrease in funding per FTE. The statistics for the TEL's variable, -671.83, RSE (165.45) $p < .001$ demonstrate that the presence of TEL's legislation in a state results in an FTE funding reduction of \$-671.83. The statistics for the percentage of the population holding a bachelor's or

higher degree is significant at 131.96, RSE (43.28), $p < .01$. The statistics for change in overall state funding for higher education indicate a significant relationship of -2.94, RSE (1.36) $p < .05$. The statistic for change in tuition and fees revenue is 160.98, RSE (470.53) but not statistically significant. Holding all other variables constant, the coefficient indicates that a one percent increase in private college attendance suppresses state funding for transfer dominant colleges \$-3,251.78 but does not achieve statistical significance. The statistic for the percentage of the population age 5-17 is 60633.68, RSE (17965.86), $p < .01$ indicates that a one percent increase in this variable is associated with an increase in FTE funding of \$61,033.09. The final variable demonstrating significant relationship with vocational FTE funding is the percentage of the population ages 18-24 and older, -728.23, RSE (298.54), $p < .05$.

Four-Year and Higher Colleges and Universities: Enrollment and financial data were derived from IPEDS in an analogous manner to the other dependent variables outlined previously. The search was confined to state supported colleges and universities offering baccalaureate and graduate degrees with the omission of Nebraska ($n=591$). The Carnegie classification for baccalaureate, master's and doctoral colleges were combined to create the four-year+ FTE variable. Funding per FTE dropped significantly from the maximum value of (10,827.00) in 2008 to a recessionary period low of (8,051.00) in 2012, with only moderate growth until the year 2020 when it reached (8,758.00). Unlike the data observed at the associate's level, enrollments at both the undergraduate and graduate levels increased steadily throughout the period of the study. Table 11 presents the statistical relationships between the two-year mixed-transfer colleges and the independent variables included in the study.

Table 11*Allocations to 4-Year Colleges*

	(1) 4 Year and Above FTE Funding	(2) 4 Year and Above FTE Funding	(3) 4 Year and Above FTE Funding	(4) 4 Year and Above FTE Funding
Democratic Governor	240.51 (325.48)	280.98 (277.75)	265.55 (273.24)	268.48 (273.16)
Divided Government	369.36 (273.68)	236.65 (210.94)	252.54 (213.33)	251.43 (212.20)
Percent Senate Democratic	21.18 (20.97)	15.94 (16.06)	16.02 (16.11)	16.75 (16.02)
Percent House Democratic	27.26 (25.19)	16.03 (20.95)	16.77 (22.04)	15.34 (22.05)
Unemployment Rate		-283.74*** (31.01)	-261.54*** (30.73)	-261.90*** (32.19)
Annual Change in State GDP		-114.76*** (21.32)	-103.55*** (21.35)	-104.48*** (21.45)
Gini Coefficient		-84787.81*** (14573.72)	-82427.82*** (15536.51)	-81560.54*** (15412.05)
Tax and Expenditure Limitation		-240.84 (182.47)	-332.38 (199.80)	-334.34 (196.68)
Percentage of Population >25 Associates Highest Degree			168.15	174.22

Table 11 Cont. – Allocations to 4-Year Colleges

Percentage of Population >25 Bachelors+ Highest Degree	-4.44	-8.92		
	(38.42)	(39.12)		
Percent Annual Change in Higher Education Funding	-2.38	-2.41		
	(2.38)	(2.42)		
Percentage Annual Change in Tuition Revenue	-272.31	-233.37		
	(526.45)	(522.70)		
Percent Enrolled in Private Colleges	-2009.86	-2142.72		
	(2571.34)	(2653.50)		
Percent of Population age 5- 17		-4.94*		
		(2.38)		
Percent of Population age 18- 24		1035.64		
		(604.74)		
Percent of Population age 65>		-7.20***		
		(1.64)		
Constant	6487.41*** (572.63)	48156.02*** (6783.66)	46112.18*** (6767.01)	45761.49*** (6634.96)
Sample Size	784	783	783	783
States	49	49	49	49
R^2	0.0982	0.3227	0.3330	0.3376
Adj. R^2	0.0936	0.3157	0.3217	0.3238

Standard errors in parentheses

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

The dependent variable, *four-year and higher FTE*, displayed statistically significant correlations with several independent variables in the study. Along with the other institutional categories, the statistics for unemployment rate demonstrate a significant negative correlation of -261.90, RSE (32.19), $p < .001$ with a one percentage point increase in unemployment rate being correlated with a decrease in FTE funding of \$-261.90. The statistics for the annual change in state GDP, -104.48, RSE (21.45), $p < .001$, indicate that a one percentage point increase results in \$ -104.48 decrease in funding per FTE. The statistics for change in Gini coefficient for income inequality indicate a significant relationship of -81560.54 RSE (15412.05) $p < .001$. The coefficient indicates that a one unit increase in income inequality suppresses state funding for four-year and higher colleges and universities \$-81,560.54. The statistic for the percentage of the population age 5-17 is -4.94, RSE (2.38), $p < .05$ indicates that a one percent increase in this variable is associated with a decrease in FTE funding of \$-4.94. The final variable demonstrating significant relationship with vocational FTE funding is the percentage of the population ages 65 and older, -7.20, RSE (1.64) $p < .001$.

Political Variables

As indicated previously, greater levels of support for higher education have been associated with the Democratic party (Alt & Lowry, 2000; Dar, 2012; McLendon, Hearn, & Mokher, 2009). While the results of this study modestly support this assertion, certain distinctions are evident. Stronger Democratic support for four-year colleges was demonstrated among states with Democratic governors, and stronger funding support for two-year colleges by Democratic majority state house of representatives. The condition of divided government was positively correlated with increased funding levels, but in only achieving a level of statistical

significance in the two-year vocationally dominant category with a coefficient of 228.88 RSE (105.85) $p < .05$.

Democratic Governor: The results for higher education under Democratic gubernatorial leadership do not follow precisely in the hypothesized direction. A definite bifurcation of support is indicated from strong support for four-year and higher institutions, with a nonsignificant but observable positive correlation coefficient of (268.48). However, this relationship weakens as institutions change to the two-year college categories, specifically vocationally oriented colleges. Democratic governorship results when correlated with higher education funding resulted in a coefficient of (18.52) for transfer colleges, (-143.95) for mixed transfer colleges, and (-174.57) for vocational dominant colleges.

Divided Government: Across all institutional categories, divided government is defined by either having mixed legislative body majorities or party division between either house or senate and gubernatorial office. As noted in Li (2017) a divided government is associated with higher allocations to higher education. Likewise, this pattern is observed in this study, but only achieving significance ($p < .05$) in the vocational institutional category. The alternative hypothesis of divided governments being associated with lower allocations indicated by Dar (2012) and Rizzo (2006) was not confirmed in this study. There is support for Li's assertion that both Democrat and Republican legislatures demonstrate equal willingness to cut higher education funding to achieve balanced budgets. While seemingly counterintuitive, weaker majorities invoke compromises with limited abilities to enact all desired policies. This result seems to indicate that legislative bodies trend towards cutting higher education funding in favor of other policy areas which may have greater redistribution benefits, and which may accrue in obtaining approval of their constituency.

Democratic House: This variable trended in the hypothesized direction in demonstrating a moderate Democratic house preference for higher education funding across all institutional classifications. An increasing percentage of Democratic house members indicated a level of statistical significance ($p < .01$) in the vocationally dominant two-year college classification, and ($p < .05$) in the two-year transfer dominant institutions. The pattern is interesting with slight increases in preference as two-year institutions were increasingly vocational in focus, with the smallest correlation evidenced in the four-year and higher category. Ranked from vocational through four-year institutions, the correlation coefficients values were (39.91), (35.09), (28.52), and (15.34) correspondingly.

Democratic Senate: Senatorial Democratic majorities demonstrate divided preferences for spending in higher education at the two-year level, with negative but statistically nonsignificant correlations except for two-year vocational colleges which registered a nonsignificant positive correlation. Conversely, positive funding effects were observed at the four-year and above institutional levels. This is an unexpected finding, as Democratic senates in general are associated with more robust public spending, and specifically higher education. Whether the differentiation of result is a product of longer-term lengths (the hypothesis that longer tenure legislators are more likely to support governmental expenditures) being associated with support for higher expenditures, or a bias towards public four-year education based on the educational attainment or the alumni status senators is unclear. The reported variable values were inconsistent with the hypothesized result.

Economic Variables

Unemployment Rate: In keeping with the hypothesized direction, states' unemployment rate has a significant effect ($p < .001$) on state funding for higher education across all

institutional categories. As unemployment increases, it is conjectured that in anticipation of increased spending necessitated by higher claims for unemployment benefits and reduced payroll tax receipts, lawmakers preemptively reduce allocations to higher education for budgetary reasons. This result appears to confirm the argument that politicians use higher education funding as a budget balancing mechanism, cutting funds quickly during times of austerity, followed by more gradual increases during prosperity (Delaney & Doyle, 2011; Hovey, 1999).

GDP Change: This variable tracks changes in GDP from the previous year. The mean GDP change over the period of the study is a positive 3.34 percent. Counterintuitively, the correlation of this change with FTE funding trends negative, given that a positive one percentage point in change in GDP is associated with a statistically significant decrease, ranging from $p < .001$ in the vocational, transfer dominant, and four-year and higher categories, and $p < .01$ in the two-year mixed transfer category in FTE funding. Presumably, higher education funding would increase correspondingly with economic growth, but as higher education funding per FTE has declined in the 2005-2020 period, a continued trend toward state disinvestment in higher education continues apace. The results are perhaps more nuanced given the sharp decline in funding observed in the 2005-2012 period, and the modest FTE funding increase in the subsequent period did reverse the previous decline.

Gini Coefficient: The Gini coefficient variable as a measure of income inequality within the states showed a variety of results. Across the spectrum of two-year colleges, an increasing Gini coefficient value was modestly positively associated with state funding per FTE but not at the level of statistical significance. Conversely, the Gini coefficient was negatively correlated with FTE funding levels for four-year and higher colleges and universities with a correlation coefficient of -81560.54 , RSE (15412.05), and a confidence interval of $p < .001$. One potential

hypothesis for this result is when facing increased income inequality, lawmakers favor education that focuses on workforce development for a lower income demographic or are attempting to shield institutions less able to offset allocation decreases by increasing tuition (Jensen, 2011). The strong significance level observed at the four-year level is in part reflective of the net decline in FTE values over the time involved in this study for this institutional category.

Tax and Expenditure Limitations: The results of this variable coincide with the hypothesized results that the presence of TEL's affect higher education allocation levels (Archibald & Feldman, 2006; McLendon, Hearn, & Mokher, 2009). Across all four Carnegie classifications, state higher education was suppressed by the presence of TELs in the state. The results demonstrated statistical significance in the cases of two-year mixed transfer (-627.89, RSE 149.90, $p < .001$), and two-year transfer dominant institutions, (-671.83, RSE 165.45, $p < .001$) levels respectively. This result could be the product of the restraining effect of limitations imposed on legislators by state statute, or the result of a political climate averse to governmental expenditures, especially in a budgetary arena capable of raising some of its own revenue through tuition and fees.

Educational Variables

Percentage of Population with Associates or Bachelors or Higher as Terminal Degree: The results do not support the hypothesis that individuals would be supportive of higher education consonant with their level of education (Busemeyer, 2013). While an increasing percentage of individuals with associate degrees did reveal a positive association with FTE funding, no statistically significant results were obtained at either the bachelor's or associate degree levels. As for results at the baccalaureate level of attainment, funding for transfer dominant institutions was statistically significant, (131.96, RSE (43.28) $p < .01$) in the positive

direction with all other Carnegie classifications indicating no statistical significance. Given the inconsistency of findings, hypothesizing a connection between educational level and FTE funding is unsupportable.

Private Enrollment: As hypothesized, increases in the percentage of private college enrollment tended to suppress state higher education funding. However. In the two-year vocational classification, a positive, yet statistically insignificant relationship was observed. In evaluating the eight states with the highest percentages of private enrollment, a higher percentage of state monies were directed to vocational education than the other categories of two-year higher education in four cases. Given the lack of statistical significance of this finding, it can be argued at best that a general trend rather than specific conclusion is observed regarding preference for vocational education funding. This finding appears counterintuitive. If a state with a higher level of private college enrollment spends less on higher education, does it leverage extra funding for vocational education? While the linkage is indeterminant, states appear to earmark lower levels of funding for higher education in the presence of private college enrollment increases aside from the vocational education exception observed in the results.

Tuition and Fees Revenue: The results for average in-state tuition for 4-year institutions confirmed the hypothesis that increasing tuition may be related to decreases in HI ED Share (Dar & Lee, 2014; Tandberg D. A., 2010b). This may represent the “privatization” or “marketization” of higher education, as state policymakers have been moving away from the public funding model towards a private model of high tuition. In other cases where the state leaders are committed to the public approach to funding higher education, state policymakers may be punishing higher education for raising tuition by cutting appropriations. However, increases and decreases in tuition rates have been linked to increases and decreases in state

funding (less funding resulting in higher tuition) and therefore this result should be interpreted with caution (Tandberg D. A., 2009).

Demographic Variables

Age 5-17 Years: The results for this variable demonstrate statistical significance across three of the Carnegie classifications, excepting the vocational two-year college category which displayed a negative but statistically insignificant result. Contrary to the hypothesized findings of negative correlations between increases in this age demographic and reductions in higher education funding, the results in the two-year high transfer and two-year mixed transfer categories indicated significant positive correlations 61,033.09, RSE (17, 965.86), $p < .01$ and 30,632.03, RSE (15,419.07), $p < .05$ respectively. Factoring in the increase in higher education per FTE allocation since the 2011-2012 academic year, in contrast to a declining demographic of school age cohort over this same period, may account for these positive values. Stated otherwise, decreases in funding needs given enrollment declines in the K-12 population, potentially allows for differing allocations within other budgetary categories including higher education. Conversely, the level of decline in FTE funding at the four-year level -4.96, RSE (2.37), $p < .05$, results from levels of FTE funding decrease that eclipse the shrinkage in this demographic.

Age 18-24 Years: The results for this variable did not completely coincide with the *a priori* assumptions of positive correlation between the percentage of the state population in the college-age demographic and FTE funding levels across the states. The only institutional category that reflected the hypothesized relationship was at the four-year and higher level, but not at a level of statistical significance. The two-year high transfer category evidenced a statistically significant relationship, but with a negative correlation of -733.22, RSE (299.84),

$p < .05$. The results for the remaining institutional categories demonstrated weak negative correlations.

Age 65+ Years: In agreement with the hypothesized negative correlational relationship, statistically significant findings were evident between the percentage of the population in the 65-plus age demographic and FTE funding levels across three of the institutional categories. The fourth category, two-year transfer dominant institutions, also demonstrated a negative correlation, but not at a level achieving statistical significance. In concert with previous studies (McLendon, Hearn, & Mokher, 2009) which demonstrated statistically significant results, (Ness & Tandberg, 2013) whose analysis covered the same years, found similarly correlated directionality, but not at a level of statistical significance. An explanation can be reasonably attributed to the period of this study and previous explorations of this phenomenon. Studies from the mid to latter-2000's frequently tracked allocation patterns over previous decades when funding levels declined significantly, and the percentages of people in the 65+ age demographic were smaller. Conversely, aside from the early period of this study (2005 through the recessionary period of 2012) FTE funding levels stabilized and increased through the year 2020. Although the percentage of the elderly population increased nationally during the study period, the effect of this increase was tempered by stabilized FTE allocations.

Political Party Influence on State Appropriations

Considered *in toto*, the influence of party affiliation made only modest impacts on the funding allocations for state funded higher education. Democratic governors for instance were only moderately more supportive of higher education than their Republican counterparts, but this observation did not hold across the Carnegie classifications of institutions, with greater affinity for four-year colleges being evident among Democratic incumbents. In perhaps the most

significant finding, increased representation by Democrats in state houses was associated with higher funding for higher education in all Carnegie classifications of institutions. This finding stands in direct contrast to the results of increased Democratic representation in the states' senates, where a negative correlation with FTE funding was observed in all categories except four-year and above. However, the level of correlation was not statistically significant in any category and exhibits a trend inconsistent with the hypothesized direction of stronger Democratic senatorial support for higher education across institutional types.

If one were to selectively combine gubernatorial and representative characteristics comprised of an increasing Democratic government percentage in the house and senate, while holding the governor's office, then a hypothetically stronger level of allocation support would be observed at the four-year and above institutional level. Results among the two-year institutions demonstrate an absence of a consistently discernable pattern of relationship, save a modestly favorable position for vocationally dominant colleges when the governor's office is held by a Democratic incumbent and the lower chamber increases its level of Democratic representation. An assumption of an unambiguous preference for funding higher education by either political party across institutional types is negated by these findings.

CHAPTER 5

Discussion, Conclusions, and Recommendations

Discussion

The results of the inquiry into the funding of public higher education during the 2005-2020 period yield several helpful insights. Problematically, the results suggest, even with minor allocation gains experienced at the two-year college level, these gains have not erased the losses in funding levels since 2005, and have not come close in restoring funding to levels to those witnessed in the decades of the 1960's and 1970's. Higher education continues to serve as a sort of "balance wheel" undergoing significant budget reductions during recessionary periods and restoration in better times (Hovey, 1999). As the research of Li (2017) demonstrates, states are slow to recognize recessions, resulting in budget imbalances as expenditures outpace revenues. State legislatures are required to quickly adjust expenditures and do so by cutting appropriations to higher education. This "balance wheel" model identifies a disproportionate negative effect on higher education funding during weak economic times when compared to other budget categories such as Medicaid, K-12 education, or corrections. This effect is hypothesized to occur given higher education's ability to raise revenues through tuition increases or using endowment money to supplement budgets, or by increasing out-of-state enrollment levels. This phenomenon also entails disproportionate increases during better economic conditions, but rarely to preceding funding levels (Delaney & Doyle, 2011; Hovey, 1999). Tellingly, the position of public higher education as a legislative funding priority continues its decline relative to the overall expansion of states' economies and the noted increase in personal income. This is evidenced in the fact that

growth in state GDP is correlated with declines in higher education funding, insuring an ongoing struggle to adequately resource colleges.

If suspecting that one or other political party or ideology would demonstrate a more favorable position regarding higher education funding, one finds little support for that proposition. Despite some distinctions in funding preferences, such as Democratic governors stronger support for baccalaureate and higher education, or modestly stronger support for two-year education among Democratic house members, no statistically significant differences are demonstrated by party affiliation. This phenomenon was discussed by Ansell (2010) and Busemeyer (2013) who indicate that at conditions of mass higher education, ideological differences expressed in the funding of higher education would be negligible. Conversely, many factors affecting funding exist due to path dependency, such as the timing of the development of the states' system of higher education, the type of funding mechanisms that are in place such as cost-plus allocations which result in incremental budget increases, or the presence of tax and expenditure limitations which restrict either party from significantly increasing appropriations.

Furthermore, the hegemony of neoliberalism still determines the climate of higher education funding. The persistence of increasing costs for students, comparatively lower state support, and a stated expectation that colleges "fund their own way" via entrepreneurial activity or through pursuing "efficiency gains" to enhance cost effectiveness evidences the continuation of neoliberal ideology. Tax reductions, both at the personal and corporate level, have suppressed state budgets and restricted the availability of funds for higher education. Additionally, given the opportunities for financial profit for financiers, headwinds will exist when seeking significant restructuring (Lucal, 2015).

Clearly, higher education funding is subject to economic factors outside of its control. Previous studies have demonstrated that changes in state economic activity represent a significant factor in determining higher education allocations. These results have been confirmed in this study and suggest that state budget forecasts are the best predictors of future funding. Related measures of economic strength also provide higher education practitioners with data relevant to anticipated state allocations. For instance, the inverse relationship between unemployment rates and higher education funding is self-evident, but the continued decrease in funding per 1,000 in personal income, mirrored by the continued decline in higher education funding as a percentage of overall state budgets, is a surprising and disheartening finding. State disinvestment in higher continues despite measures suggesting states have greater resources available with which to support higher education.

Societal demographic shifts also serve to shape, and in certain cases, reduce allocations to public higher education. With generational shifts, the population of children the five-to-seventeen-year age group is declining in the United States. College administrators are aware that this results in lower enrollments in the future. Presently, the population of the traditional college age cohort is similarly declining, and enrollments are correspondingly dropping. Inversely, the 65 and older demographic is expanding, diverting resources away from colleges and universities via various social care programs. Few signals currently suggest a reversal in any of these trends, implying the future of higher education funding will remain problematic.

Confirmation of Prior Research

The findings of the study serve to confirm many aspects of previous research into the subject of funding in public higher education. The impacts of economic conditions within the states demonstrate statistically significant implications for public higher education. The finding

that changes in state unemployment rates suppress higher education funding coincide with findings in previous research (McLendon, Hearn, & Mokher, 2009; Tandberg D. A., 2010b). Unemployment rates are inversely connected with higher education funding and the impact on colleges is exacerbated by two coinciding phenomena. As unemployment rises, states, in anticipation of reduced tax proceeds and balanced budget requirements, cut higher education funding to alleviate budget shortfalls. Second, high unemployment levels are associated with increased college enrollment levels, particularly at the two-year level, as recently unemployed workers seek re-skilling in response to economic change. Given that tuition represents only a portion of operating expenses, colleges are caught in a funding conundrum, frequently forced to impose tuition increases to offset the cost of additional enrollment and/or reduce student services.

The findings also confirm the linkage between measures of income inequality and funding for higher education. While Tandberg (2009) found higher education funding improved with increasing Gini coefficient values, this study provides greater nuance. Indeed, higher income inequality was associated with increased FTE funding across the two-year college categories consistent with Tandberg, but negatively correlated with four-year and higher institutions at a $p < .001$ confidence interval. This differential result squares with the work of Jensen (2011) in his nuanced arguments regarding political party redistributive preferences. As he contends, in contrast to the predominant view of the extant literature, provision for public education is driven by deindustrialization and the need for re-skilling of the workforce more than political party redistributive preferences. The loss of industrial employment, which has been an economic bulwark for the middle class has resulted in increased measures of income inequality. As such, college education focused on workforce development assumes priority over four-year

and higher education. Gini measures of income inequality play an important role in the funding of higher education. The influence of the growing gap wealth is perhaps instructive here, as the shrinkage of the middle class, and the corresponding decrease in tax revenues erodes the dollars available for higher education, especially in the face of competition from other budgetary commitments.

The study also confirms that the downward pressure on higher education funding imposed by TEL's. This finding reiterates the work of Archibald and Feldman (2006) who found statistically significant decreases in higher education allocations in states with TEL's over those without such measures. Archibald and Feldman's results were confirmed by McLendon and Hearn (2007) and Tandberg (2009) in terms of higher education allocations per 1,000 of personal income. This study, while not differentiating between TEL's types, as did Archibald and Feldman, does distinguish impacts based on institutional type. Across institutions, the presence of TEL's was associated with a reduction in state funding efforts, demonstrating statistical significance at $p < .001$ within the two-year transfer and two-year mixed transfer institutional categories of higher education. Taken as a whole, these results are not unexpected, as legal limitations on taxes and expenditures affect higher education as well as other spending. As attitudes about government and legislative processes have changed, strong resistance to tax increases is present in states that do not have TEL's. Even in this environment, the presence of TEL's exerts significant effects towards funding limitations and complicates the prospects for increasing higher education funding.

This study also confirms the continued trend for states to divest from public higher education. The first, and perhaps most troubling observation is the downward trend in state budget appropriations demonstrating that higher education has lost status in terms of a budget

priority for states (Dar, 2012). Over the period of this study, in inflation adjusted dollars, higher education funding declined by nineteen percent (SHEEO, 2021). This decline occurred even though state annualized GDP growth over the same period averaged five percent per annum. Regarding higher education funding since the recessionary period of 2011-2012, FTE funding has recovered in terms of inflation-adjusted dollars suggesting some measure of recovery against the long-term trend of decline. The increase is relative however, as total numbers of students in higher education have declined since the 2011-2012 academic year, invalidating the suggestion of increased dollars being allocated to higher education while simultaneously confirming the ongoing erosion of state spending as a percentage of state budgets evident since roughly 1975 (Archibald & Feldman, 2006; Dar, 2012; McLendon, Hearn, & Mokher, 2009; Ortega, 2020).

The findings of this study suggest that if two-year colleges inhabit a more favorable policy space than four-year colleges and universities, the distinction is a modest one. In contrast to findings suggesting limited funding levels for community colleges, other studies point to the phenomenon of an ideological overlap between Democrats and Republicans regarding community college funding levels. For instance, Dar (2012) notes the relative stability of community college funding and postulates that both liberal and conservative legislatures favor community college funding, albeit for disparate reasons. Similarly, Rizzo (2006) contends that community colleges may garner more reliable support from state legislatures given their relatively low instructional costs and proportionally lessened ability to raise tuition rates. Indeed, Weerts and Ronca (2012) found Republican legislatures to be associated with increased percentage of state support for higher education, hypothesizing this phenomenon is related to Republican support for community colleges. Alternatively, Ortega (2020) found positive correlations between Democratic gubernatorial incumbency and community college funding.

Specifically, his findings indicate that under Democratic governors, two-year colleges benefit with a 6% increase in state allocations.

The mixed results in findings of political suggest that an unambiguous party preference for higher education funding is non-existent. While the results suggest stronger support for four-year colleges under a Democratic governorship, funding for two-year colleges was lower under the same condition. Democratic senators were associated with higher funding levels for four-year colleges, but such effect waned for two-year colleges, decreasing proportionally among colleges with an increasingly vocational focus. A Democratic majority in the house favored higher education funding across institutional types, but the findings did not achieve a level of statistical significance at the $p < .05$ level across any category of institution.

Curiously, the condition of a divided government was correlated with higher FTE funding levels, albeit not at a level of statistical significance. This is a counterintuitive finding, since divided governments are typically associated with difficulty in achieving legislative preferences given the inherent opposition in either the legislature or the gubernatorial office. Preceding budgetary commitments and the necessity of achieving budgetary balance, results in compromise where true party preferences are marginalized as legislators and governors accept reduction or expansion in government away from party ideals to achieve this balance (Alt & Lowry, 2000). More succinctly, Republicans might be willing to accept a larger budget, or Democrats a smaller, to prevent the political backlash that occurs when either surplus or deficits exist. It is hypothesized in this competitive environment, neither party wants to be associated with higher education budgetary reductions given the potential for negative election effects, and neither party perfectly achieves its policy preferences for higher education. This potentially

accounts for the slightly positive correlation between higher education funding and divided government.

This study indirectly supports the premise that neoliberalism retains its hegemony as the current underlying economic policy. In support of this assumption, a noted decline in participation rates in higher education among the college-age cohort and the continual increases in the cost of attendance suggest the belief that higher education is primarily of private value remain. In this environment, the noted reconceptualization of the relationship between the state and public higher education persists, as the state continues to disinvest in higher education. As Weerts (2016) argues, this environment of pragmatism has eroded traditional left to right funding preferences through systemic spending limitations imposed by the regime of neoliberalism and has served to shroud clear differences in political party higher education funding preferences.

Updating of Previous Research

As stated previously, the subject of higher education funding has been the focus of extensive research. In their work, Alt and Lowry (2000) examined funding differences between Democratic and Republican majority legislatures and confirmed that Democratic majority governments favor more expansive governmental activity, and correspondingly, increased spending. Although compelling, their findings addressed governmental spending in the aggregate, rather than offering specific analysis of higher education funding under differential partisan control. Delineating these findings within the context of higher education, the research of McLendon, Tandberg & Hillman (2014) demonstrated a negative relationship between Republican legislatures and higher education allocations, while acknowledging the caveat of stronger Republican support for merit-based aid which primarily benefits students from higher

income families. These findings suggest that partisan preferences do influence the extent and directionality of support for higher education.

However, this study disconfirms any presuppositions that party ideology strongly alters higher education funding differences as other factors overshadow the influence of partisan politics. The work of theorists such as Boix (1997) and Ansell (2008) in examining redistributive preferences of left- and right-wing political parties noted two notable differences. Parties on the left trended towards larger redistributive budgets, with those disbursements tending to favor their traditional constituency of lower SES individuals. When higher education allocations tend to primarily benefit these groups, usually under a high-high situation of high enrollment and high subsidization, left-leaning governments are associated with higher education spending. Alternatively, under conditions of low participation and low subsidization, or low participation and high subsidization, parties of the right trend toward higher subsidization as their traditional constituency of wealthier individuals is most benefited Ansell (2010).

However, under conditions of mass enrollment, that is, more than fifty percent of cohort participation, the differences in higher education funding priority between the parties' declines (Jungblut, 2015). With mass enrollment, parties of both left and right obtain lower constituency benefits via expanded support for higher education. Parties on the right, in attempting to restrain expenditures will prove reluctant to increase allocations, while parties on the left will shift their redistributive preferences to other social programs since increased higher education spending primarily benefits the traditional college population of middle-and higher-income individuals.

When viewed broadly, higher education exists within a complex milieu of competing and conflicting demands. Efforts to uncover causal factors shaping state allocations have led researchers to explore political, demographic, and economic factors. However, the effects of

many of these factors pale in comparison to the impacts of the economic well-being of the states, and the ubiquity of neoliberal ideology. Furthermore, one distinguishing mark of this study is the consideration of political theory and the composition of the higher education system. The system of higher education in the United States is one of mass participation, which as noted by Busemeyer (2013) indicates that political preferences for higher education funding are minimized, as the parties reduce investments in higher education and favor other policy areas with higher policy outcome potentials. It can be asserted that the research into higher education funding should develop away from continued detailed examinations of discrete contributory factors into an examination of the relationship between economic development and higher education funding. Given Barrow's (2010) insights regarding higher education increasingly becoming an agent of the state in achieving economic goals, this path of investigation appears warranted. Perhaps irrevocably, the fortunes of higher education are inextricably linked to its contributions to economic development,

Extension of Study Results

The findings of the study serve to extend our understanding of the characteristics of higher education funding through focusing on distinctions between vocational, mixed-transfer, and transfer-dominant two-year and four-year and higher institutions. The funding distinction between the two-year colleges is modest, but discernable. Of all the categories, the vocational category has regained and surpassed 2005 FTE funding levels, and the four-year and higher category undergoing the steepest decline in allocations and lowest overall recovery. From this, it appears that under the conditions or spending limitations and the continuation of the neoliberal regime that colleges that emphasize lower cost vocational training enjoy modest advantage over other two-year colleges. Given higher costs, the presumed ability to increase tuition more

readily, and a clientele of higher SES students expected to shoulder an increased financial contribution to their education, four-year institutions have not fared as well.

Limitations of the Study

The study is limited in part by the wide array of funding mechanisms, systems for direct state aid to students, such as Colorado's voucher system, and whether a state, as in the case of Alaska, even has publicly funded two-year colleges. Attempting to account for all the funding and systemic variations would be a daunting if not unrealistic undertaking. These complexities are reflected in the numerous studies designed to evaluate higher education funding mechanisms. Yet, these previous studies serve as a basis for this study through informing the selection of variables demonstrating potential influence on the funding of higher education (Archibald & Feldman, 2006; Dar, 2012; Li, 2017; McLendon, Hearn, & Mokher, 2009; Ortega, 2020; Weerts & Ronca, 2012). But since no singular study has claimed to unravel the totality of the mechanisms of higher education funding, this study is correspondingly limited in scope in its efforts to illuminate political preferences within defined institutional categories.

Another general limitation of this study is the potential bias present due to omitted variables. In any historical analysis, such as the panel data model used in this study, inadvertent omission of variables can impact the outcome leading to bias, especially if the omitted variable is strongly correlated with other variables included in the model. More categories of variables could be included in the statistical model such as spending categories outside of higher education to reduce this tendency. The variables incorporated into this study are drawn from a variety of sources and display inconsistent time periods and potential delayed effects. Examples of such factors include FTE enrollment numbers which are based on the academic year (typically August to July of the year following) do not coincide with the calendar year used to determine annual

unemployment rates, nor necessarily with the legislative budget cycle. Furthermore, changes in state budget priorities under new legislative majorities or gubernatorial incumbencies are not enacted immediately, suggesting the existence of a lagged effect on budgetary outcomes for higher education. These delayed effects potentially skew the statistical results in unforeseen ways and impact the veracity of the findings.

This study also faces challenges to content validity given the existence of significant economic disruptions during the 2005-2020 period. The mortgage crisis and ensuing “great recession” of 2007-2009 disrupted state budgets and is reflected in the noted decreases in FTE funding. This effect was exacerbated by the significant enrollment increases experienced by two-year colleges, which further suppressed FTE funding levels. The Covid-19 induced recession of 2020 also altered FTE funding through provisions in the Coronavirus Aid, Relief, and Economic Security Act (CARES) of 2020 which made available federal funding to institutions of higher education, thereby altering year to year comparisons in state higher education.

Additionally, this study is limited also by the nature and number of the intellectual streams informing it. Historical precedents of the contemporaneous higher education funding environment are examined, but here again, other factors could be examined. Theories of partisan political preferences invoke predictions of stronger Democratic or left-leaning party affinity for redistributive policies advantaging society’s underprivileged would predict Democratic party funding primacy (Ansell B. W., 2008; Boix, 1997; Busemeyer, 2013; Busemeyer & Trampusch, 2011). However, whether this primacy transfers directly to public higher education is contingent on other factors which Busemeyer (2013) illuminates, but for which further studies are required to form a well-established hypothesis. The inconsistency of findings regarding higher levels of Democratic party funding for higher education, while confirmatory of a component of

Busemeyer's work, leaves other question unaddressed. Similarly, presuppositions of neoliberalism's ubiquity in its effects on our public institution's provides salient insight into the declension of support for state sponsored higher education, but significant work remains to detail precisely how it has been operationalized, and this study does not undertake such analysis.

This study used data provided by states, governmental agencies, and professional organizations. The data may contain errors or omissions due to misreporting errors, incomplete data, or changes in reporting requirements throughout the fifteen-year time frame of this study. This may be especially the case when state higher education financial reporting to IPED's transitioned from the Government Accounting Standards Board (GASB) procedures to Financial Accounting Standards Board (FASB) procedures in the early 2000's, as well as when changes in {Citation}educational attainment data transitioned from the Community Population Survey (CPS) to the American Community Survey form DP02 (ACS) within the U.S. Census Bureau.

Recommendations for Future Research

Areas for future fruitful research into the funding of state supported higher education abound. Arising immediately from this study are three suggested avenues of inquiry into the impacts of divided government on funding across the grouped Carnegie classifications, a reconsideration of political party influence on higher education funding using dichotomous variables for legislative majorities, and suggestions for research into the relationship between economic factors and higher education funding.

As the findings in this research show that a divided government results in more favorable outcomes for allocations to higher education than a unified government contrasted with other research indicating the opposite finding, further investigation is warranted. Utilizing data from

this research, cases of states with unified governments could be identified. Additionally, cases could be grouped into Republican or Democratic majorities to analyze whether, as Dar (2012) suggests, both parties cut higher education spending to balance budget deficits in keeping with the balance wheel theory (Hovey, 1999). Since unified governments can more readily enact their policies, this investigation would yield a better estimate of party preferences for higher education. Using the same Carnegie classifications for higher education would also shed further light on party preferences for education at the differing types of institutions, elucidating whether parties prefer two-year versus four-year higher education, while controlling for the same factors in this research project.

A second possibility for future research closely allied with the preceding suggestion, would involve replacing the percentage of house Democratic and senate Democratic representation with a simple dichotomous measure of Democratic majority (1= yes, 0= no) in each chamber. Under this condition, an analysis of simple majority politics would yield a measure of party preferences for higher education spending that could prove more definitive than the variable scale measure used in the current project. This new analysis could employ the same variables to control for state economic, higher education and demographic variables, as well as examine preferences among the various Carnegie classification system grouped institutional types.

The third area of potential future research regards the relationship between economic factors and higher education funding. Consistent with this study, findings across several studies demonstrate that economic factors consistently rank as prime indicators of higher education funding (McLendon & Hearn, 2007; McLendon, Tandberg, & Hillman, 2014; Tandberg D. A., 2010b). With the advancement of technology and the globalization of economic activity, higher

education leaders have concluded that they cannot remain mere observers of state economic conditions but increasingly recognize the role they play in fostering economic prosperity. Examples of responses designed to strengthen economic activity include involvement with business, government, and education coalitions to better align higher education with economic growth goals and legislative advocacy.

Another venue for higher education involvement entails leveraging the research capacity of universities to enhance the respective states' economic strengths and applying findings in practice. In this way, colleges and universities adopt the stance of entrepreneurial partners in advancing economic activity. Relatedly, college and university leaders should become both students of their state's economic activity and cognizant of opportunities for growth, but also serve as sources of expert level knowledge towards attaining economic goals. Through efforts such as these, the college becomes an integral component of state economic development while simultaneously becoming guardians of their own future,

As a community college administrator, I would suggest engaging in several activities to advocate for funding at the community college level. As suggested previously, becoming involved in an economic development coalition, exemplified in Kansas by the Kansas Economic Development Alliance, provides an opportunity for higher education to be integrally linked to economic development efforts and engaged in legislative advocacy. Community college impacts on the public good and economic development are outlined in such publications as "The Economic Value of America's Community Colleges" (Colleges, 2022) and provide an opportunity to discuss the value of community colleges with stakeholders and state decisionmakers. Suggestions for implementing best practices regarding higher education's alignment with state economic and supporting educational goals as detailed in the Kansas Board

of Regents program entitled “Building a Future” provide structure for college administrators to align programs of study with state economic and employment goals, and thereby, helping to achieve programmatic goals (Board of Regents, 2023).

The adaptations required by globalism and the advances in information technology have precipitated the development of tertiary educational systems in many countries, perhaps unrivaled by China whose colleges specifically focus on stimulating economic development. Case studies by Chinese researchers such as Liu (2018) have been used to document both the symbiotic relationship between economic development and college programming. In addition to evaluating higher education funding using FTE allocation data to evaluate the effects that coordinated educational programs have on funding, similar case studies could highlight successes and best practices in context of the United States and demonstrate the value of higher education.

Conclusion

The funding of higher education in the United States is a subject of scholarly interest, as evidenced by the significant number of studies addressing the subject. Indeed, factors political, economic, demographic, and sociological have been analyzed for potential influence on American higher education. Given the myriad of interdependent factors, including variations in institutional type, state histories regarding the development of higher education systems, as well as states’ political orientation, any study of necessity involves significant complexity. However complex, certain trends and patterns emerge consistently across studies. The first, and perhaps most arresting, is that the “golden age” of public funding appears to be a historical phenomenon unlikely to be repeated. The trend toward massification of higher education given post WWII economic vibrancy and perspectives favorable to the societal benefit of higher education

precipitated generous state funding initiatives. Economic downturns, tax reductions, competing social needs, and lowered enthusiasm for higher education have all contributed to the decline in public contribution to higher education.

Fiscal retrenchment for higher education is a phenomenon evidenced not only in the United States, but also among other advanced democratic societies. Beginning in the early 1980's the political philosophy of neoliberalism ascended to the political arena, and through emphasizing fiscal conservancy, market-driven entrepreneurship, and in advocating the private good of higher education have eroded the level of public support for higher education. Furthermore, as noted by Thelin (2004) the changing political landscape served to invert the presumably favored position of higher education among legislative bodies. Previously, under progressive regime values, higher education experienced little governmental regulation, including tax exemptions and freedoms from certain aspects of employment law. Under the changing political regime values, business increasingly assumed a more favored status, while higher education faced greater regulation, doubtless a reflection of a lowered political position. Reduction in funding ensued concurrently, as education faced constraints and increasingly was expected to assume a more managerial and entrepreneurial posture.

While the expectation for entrepreneurial activity is not unprecedented in the history of American higher education, it differentially impacts institutions of higher education. Universities with expansive endowments are better equipped to weather reductions in appropriations, as are those with significant research funding, whether public or private in origin. Institutions with limited ability to secure outside funding, raise tuition and with greater dependency on public resources undergo fiscal retrenchment often precipitating reductions in student services and instructional resources. These reductions are disproportionally experienced by community

colleges, arguably the least favorably positioned institutional type relative to appropriations reductions.

When viewed broadly, the funding of higher education is one part of a larger milieu of societal trends. As indicated previously, the impacts of the tax revolt explored by Archibald & Feldman (2006) the policy tradeoffs as the result of competing budgetary demands detailed by Delaney & Doyle (2011) and the assumptions underlying political ideology of funding preferences outlined by Busemeyer (2013) in concert serve to suppress expenditures for public higher education. While these factors are all instructive towards illuminating the situation, explanations are still tenuous. The anti-tax sentiments among rank-and-file Americans continue unabated, and it is unrealistic to expect a return to the more generous ethic of support for public institutions prevalent in previous decades. The rightward turn in the body politic indicates both a preference towards limited government expenditures, and concurrently, a lowered belief in, and a lowered support for public institutions supporting broader societal ideals.

More significantly, tax policy reversal is unlikely given the ensuing political repercussions invoke for any party willing to undertake such a venture. We find ourselves in an environment of self-absorption, where taxes are despised, and large societal institutions are held in suspicion. While most young people desire and understand the need for a college education, they are increasingly faced with the burden of higher fiscal responsibility for its acquisition. As demonstrated previously, one of the byproducts of neoliberalism is the shift in perspective as to what constitutes a public good. As higher education is increasingly perceived in terms of its private benefits, public appetite for its support wanes proportionally.

Yet political parties do not want to appear to be anti-education, but this must be balanced against demands for fiscal constraints. This duality brings a measure of understanding to the

more favorable position that community college education has obtained in terms of funding allocations from state legislatures over the fifteen years included in this study. Community colleges simply cost less, both in terms of student fees, but also general operating costs and lower wages, so allocated monies have the potential to spread further than at a four-year college or university. There are also political benefits to be derived from more generous funding of community colleges, given the attendance demographics of lower SES, minority and first-generation students who disproportionately attend them. With limited resources to disseminate, funding community colleges appears a rational choice.

The distributional benefits of favoring community college funding impact the colleges positively as well. Lacking the means to significantly raise tuition rates relative to other sectors of higher education, community colleges are disproportionately dependent on public monies for their operations. Community colleges witnessed substantial enrollment increases immediately following the recessionary period beginning in 2008, which put the colleges under significant strain. Since college enrollment has always served as a buffer in lieu of employment during periods of economic setback, this development was foreseen. However, with limited ability to raise revenues, community colleges faced increased need for public monies. The response to this demand may in part explain the more favorable position community colleges obtained during this period.

Recommendations

It is reasonable to assume that given the given the fiscal constraints in state budgeting that little will change in state funding for public higher education. Current trends of inadequate levels of financial support will continue to demand that colleges pivot to embrace increasing privatization characterized by an escalated reliance on private monies and adoption of market

strategies. The pursuit of market mechanisms to increase enrollment and help ensure institutional viability is remaking higher education. With the pursuit of private resources, institutions of higher education become subject to the desires of stakeholders who will seek to exercise a modicum of control over the institution. Second, institutions increasingly engage in competition for students, spending substantial funds on efforts to attract and retain students which siphons these funds away from other uses. As competition for students and their attendant tuition dollars intensifies, students and parents gain influence in shaping institutional priorities. Third, since tuition dollars have increased in importance for institutions, students and parents gain considerable influence over institutional priorities expressed in the expectation of amenities and preferred curricular offerings.

Any anticipation of immediate rectification of funding shortfalls is unfortunately a vain hope. While the answer to public funding inadequacies lies within the political sphere, an expectation that a change in political party majority alone will resolve the problem is ill informed. From this study, it is apparent that majority party composition of the state legislature or of the governor's office has little significant impact on the funding of higher education. Further, higher education funding is often incremental, tied to a series of legislated commitments or funding restrictions. Until the dominant regime values informed by marketized approaches, perceptions of higher education as a private value, and an anti-tax bias among the citizenry are changed, the status quo will prevail. Effort to reverse the malaise will prove daunting but must be undertaken by thought leaders in the higher education community if the institution of higher education is to flourish over the coming decades.

A study that could help bring issues to the fore for consideration would be to chronicle state legislation that imposed tax cuts, spending limitations or other mechanisms serving to

reduce funding allocations to higher education and to parallel these to specific reductions in services, quality, or increased cost burdens upon higher education consumers in the state. Through making the case that legislative actions on tax reduction, irrespective of popularity, negatively impacts upon the education of the citizenry, an outcome essential to democratic ideals. Another prospective study would be a cross-sectional study of the business and industry sector of the state economy evaluating employers' needs for an educated workforce and a subsequent evaluation as to the adequacy of the state's colleges in preparing that workforce. If sufficient, it could serve as a warrant for continued adequate support, if deficient, it could serve as a guide for educational leaders to adjust course. The value of higher education is no longer a passive assumption, but rather an asset whose value must be demonstrated.

If the intent is to document the current funding situation, and then decry its inadequacies, it can be argued that no change will occur to funding allocation levels. I think with certainty that this approach has been tried and found wanting. I'm arguing that higher education needs to navigate a new course through speaking the language and demonstrating the results that our market dominated political ethos understands, namely efficiency and results. Barring a significant reordering of the assumptions that now undergird our national life, any other approach will prove inadequate.

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