

Access for Whom?
Examining Poor and Ethnic-minority Student
Participation at the Public Flagships

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Abstract

As a result of increasing college costs and diminishing organizational support, poor and ethnic-minority students are finding it increasingly difficult to attend large public research universities. To investigate the potential relationship that exists between market-oriented practices in higher education and access for poor and ethnic-minority students, the Institutional Logics Perspective is employed as a theoretical frame to contextualize the precursors, content, and consequences of the market logic in the public higher education system. Hypotheses drawing out linkages between the mechanisms of the market logic and decreased student access are offered. A fixed-effect model is then constructed to evaluate proposed connections between university practices undergirded by the logic and access for both poor and ethnic-minority student populations. Results are discussed and the ramifications of the market logic for the future of accessible public higher education are explored in the context of social justice.

DEDICATION

To my wife and son for their constant encouragement.

To my brother for always listening.

To my parents for instilling in me the importance of educating yourself.

To my grandmother and grandfather.

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I would like to thank my entire dissertation committee for the time and effort they invested in this project. I was fortunate to have the opportunity to learn and grow under their direction. I would especially like to thank Dr. Laura Jensen for her guidance during the course of the work. The feedback and direction she provided cannot be understated.

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CHAPTER I

INTRODUCTION

Even more than in the past, higher education attainment is a critical determinant of whether or not individuals are able to provide for themselves and contribute to their communities. Postsecondary education is now viewed as almost essential for securing a living wage, career advancement opportunities, health care services, and protecting oneself against economic volatility (Ikenberry 2009, 1). Historically, public policies enacted to open pathways for individuals previously excluded from higher education have been indicative of collective efforts to avert the consequences of an undereducated populace. Moreover, federal, state, and local subsidization of universities along with direct financial support for incoming students has been driven by a shared expectation of positive spillover effects and the notion that higher education should be an accessible public benefit (Lowry 2009). These measures, among others, represent a conception of the public university wherein public service, social responsibility, and equal access are fundamental values (Goetsch 1940; Veysey 1965).

Much like other sectors, higher education has not been impervious to economic hardship, institutional limitations, or external shocks. Changes in the way universities engage and respond to organizational pressures began taking hold in the 1980's amid national financial and political crises affecting higher education funding¹ (Hauptman 2009). It was at this time that public research universities, and specifically their central administrations, became more aware of and responsive to macro-level market trends. Many cultivated additional revenue streams, pursued investment opportunities, and increased tuition and fees to compensate for waning financial support from state governments (Ikenberry 2009, 2). This was a formative period in the

¹ Winston (1999) and Archibald & Feldman (2008) also refer to the tax revolt of the 1980's that subsequently led to decreases in government support for higher education.

development of the American higher education system. The changes that took place altered the institutional mindset of large public research universities and continue to shape the higher education landscape today.

Framing the Problem

Financial constraints, interorganizational competition, and changing managerial norms have become more pronounced in higher education's institutional milieu. Accompanying these changes has been the public university's increased reliance on business management practices in their assessment of and response to perceived problems (Eckel & Morpew 2009, 182). The adoption of this market-based internal calculus, or logic, has resulted in the spread of policies and practices that increase the costs of attendance for students, decrease need-based aid awarded, and encourage private sector partnerships as ways of alleviating institutional demands (Connor & Rabovsky 2011; Balderston 1990).

Some view these policies and practices solely as functions of responsible fiscal management in the face of decreasing state revenues, and laud the more business-like university model. However, because they also potentially create structural barriers to educational access, others argue that the institutionalization of this market logic has resulted in the relegation of access and other normative values to *de facto*, second order concerns (Hauptman 2009, 74). The lack of any coordinated effort to modernize the financial aid framework developed to support financially needy students, for example, reveals the tendency of universities to deprioritize issues of student access (Bowen et al. 2009, 155). This unwillingness or lack of urgency on the part of public research universities to address aid issues predominantly affecting underserved students suggests that access is essentially being crowded out as a central objective of the state flagship institution. The embrace of market logic coupled with the fact that many public universities are

renege on their charge to support access provides some insight into the institutional changes taking place within the American higher education system (Rodriguez, 2013).

The government funds public universities enjoy, the external controls they are bound by, and the formal role they play in preserving the public interest definitively establish them as appendages of the state. This makes the interplay between market-driven practices and access to public higher education inherently a public policy issue. The focus of this research is the question of whether market-driven approaches erode the ability of universities to implement policies that address systemic barriers to access.

Public policy broadly defined is any governmental reaction to real or perceived problems (Birkland 2001). Accepting this definition, the institutionalization of market logic raises important questions about the future of access because it represents a purposive turn away from inaccessibility as an urgent policy concern. The market logic promotes policies that potentially subsume initiatives to expand access in favor of those that accomplish strictly financial objectives. Thus, the market logic initiates policy change while shrouding the prevalence of inaccessibility. This reading of the situation is in line with researchers who describe the logic as the underlying motivation behind reprioritization in higher education, a policy of targeted neglect directed toward underserved populations, and the rationale for relying on market mechanisms as generic solutions to institutional problems (Eckel & Morpew 2009).

The public research university's imperatives to operate in an environment of constrained government funding, outsource essential services, seek increased institutional autonomy, and mediate political shifts reframing the way legislators view higher education have all fueled what higher education scholars currently refer to as "privatization" in the public higher education

system (Gumport 2000; Morphew & Eckel 2009).² Ostensibly, this privatization of the public research university has also led to the pitting of short-term economic success against any duty to support socio-economic and ethnic diversity on college campuses. This is the crux of the policy problem that the market logic presents.

Engell and Dangerfield (2005) detail the commodification of higher education in terms of a relentless preoccupation with the ability of divisions and departments to secure future earnings, produce knowledge about money, or become a source of new revenues (89). Entrepreneurial board members, technological transfer initiatives, business incubators, and venture capital investments are all strategies that public institutions now regularly employ to conform to the market-oriented university ideal (Eckel & Morphew 2009). Concurrently, educational disparities disproportionately affecting underrepresented groups grow virtually unabated. Data show that access challenges for poor and ethnic-minority students are systemic, with these students substantially trailing other student groups in regard to attendance and student learning outcomes (Bowen, Chingos & McPherson 2009, 32).

In an in-depth critique of the funding model that states and public research universities regularly employ, Newfield examines the economics of the public university with special attention paid to its impact on access for poor and ethnic-minority students. He attests that there is a lack of any concerted effort to address the increasing inaccessibility of public higher education, with the single most important reason why being an incessant institutional focus on resource accrual and allocation schemes (2010, 632). His preliminary findings crystallize the need to fill gaps in the literature by examining the market logic and its implications for student access. The intent of this project is to address one such knowledge gap that exists regarding the

² Privatization in higher education refers to public institutions resisting government regulation, relying on private investment, and assuming a corporate business model.

prevalence of market-based policies and practices at state flagship institutions and their relationship with access for underserved and underrepresented student populations.

The Research Aim

I intend to document material and symbolic manifestations of the market logic in higher education for the purposes of exploring its relationship with educational access for poor and ethnic-minority students. Thus, I pose my central research question: what is the market logic's impact on educational access for poor and ethnic-minority students at large public research universities? At present, we have a general sense that market-based practices have deleterious effects on student access, but we lack a substantive understanding of this relationship and its bearing on the future of the public higher education system. As educational gaps between low socioeconomic status (SES), ethnic-minority, and affluent students widen, it becomes increasingly important to understand the institutionalization of the market logic and investigate its intersection with the public research university's commitment to accessible higher education (Callan 2009).

This research is timely because of a loose consensus between higher education scholars indicating that public research universities may be reaching a tipping point in regard to their ability to pursue the benefits of privatization while supporting the broader goal of educational access (Scott 2004; Eckel & Morphew 2009). The research is also problem-oriented, meaning that, at its core, the focus is on institutional barriers to access that disproportionately impact underserved communities. I purposefully emphasize the role that higher education policy can play in inhibiting access and as a conduit of the market logic. The Institutional Logics Perspective (ILP) is utilized to develop the market logic and lay out its projected outcomes within the context of the American public higher education system. The ILP is of particular

import because it accounts for the role of macro-level trends and supplies the theoretical mechanisms needed to develop mid-level theory and contextualize the policy problem. To gauge the impact of the logic on student access, market-driven policies are examined to uncover plausible relationships that exist between their implementation and inaccessibility. Expectantly, findings will bring a new level of understanding to the problem area and support efforts to address issues of student access.

The Significance of the Research

The dilemma that the market logic presents is an issue of social justice because educational access is an important conduit through which public participation is achieved and social barriers are addressed (Taket et al. 2009, 189). The research assumes a normative stance by advocating the abolishment of structural barriers that reinforce privilege and institutionalize inequality. Exploring the problem through the lens of social justice encourages individuals to develop a sense of social responsibility and awareness that in turn motivates substantive, comprehensive policy solutions (Owens 2009, 86). The social justice perspective therefore stresses social equity through the evaluation of systemic policies and practices that collectively sustain inherently biased and prejudicial processes (Gooden 2014).

Analyzing these questions in this light is also instructive because it reexamines them from the perspective of underrepresented and/or marginalized groups. This is a critical component of the social justice lens because it assumes that these particular groups are the most vulnerable to market trends and institutional changes. This is precisely why scholars argue that few are more threatened by the prospects of higher education privatization and its accompanying logic than low-income and ethnic-minority students seeking access to higher education (Ikenberry 2009, 5). Since these groups have historically been excluded from the formal

structures and institutions of the economy, society, and the state, the impetus for turning our attention to their circumstances is to combat further and entrenched social exclusion (Taket et al. 2009)

Looking forward, the consequences of the business-university are potentially a public higher education system that is either inattentive to or disinterested in the plight of the abjectly impoverished, the working poor, many ethnic-minority groups, and, increasingly, middle-class Americans. Thus, examining the potential relationship between market logic and institutional barriers that inhibit participation may help bring more clarity to the debate surrounding public higher education, privatization, and educational access. This line of research is noteworthy because it serves as an initial attempt to reach a level of transparency where policies and practices can be critically examined with respect to their impact on specific student populations. I believe findings will not only shed light on the institutionalization of the market logic and its intersection with student access, but also, and perhaps more importantly, provide actionable prescriptions that can address the increasing inaccessibility of the public research university for poor and ethnic-minority students. Below I summarize the remainder of the dissertation.

In the remainder of Chapter 1, I survey perspectives on access to contrast differing views on what the term entails. There I offer a working definition of access for the purposes of the study. I then briefly review the policy history of the American public higher education system to support the argument that accessibility, in one form or another, has been a basic and essential aim of the public higher education system. Building upon that notion, I analyze inaccessibility through the lens of social justice. I argue that the public mission of the university is equally a commitment to social equity and justice. Next, I review alternative explanations, and sometimes conflicting accounts, of why inaccessibility exists in the public higher education system. The

intent here is to identify linkages between competing narratives in order to develop a better understanding of the root causes driving higher education inaccessibility. In the final section of Chapter 1, I summarize privatization in higher education by highlighting its main components. Here I allude to the systems' trending toward privatization as an indication of the existence of an underlying market logic potentially motivating institutional change.

In Chapter 2, I briefly review literature representing the theoretical foundations of the Institutional Logics Perspective (ILP), and by association, the proposed market logic in higher education. This segment firmly grounds the work in the institutional tradition. The focusing works I have assembled posit the existence of a collective social consciousness that influences agency, organizes the environment into social institutions, and provides a blueprint for studying the impact of institutional forces on organizational behavior and outcomes.

After laying this initial groundwork, I formally introduce the ILP. In this section I cover the macro and micro foundations of the framework, and its import for making sense of waning access for poor and ethnic-minority students. Here I draw from Thornton and Ocasio, the architects of the framework, to define an institutional logic and convey how they are identified in institutional settings. I also outline the essential components of studies relying on the ILP to make inferences about institutional effects on organizational actors and decision making processes. An approach for employing the ILP is then offered and its overall applicability to this research question is explored. I conclude this section by laying out the general elements of a market logic, and more specifically, the values, assumptions, and beliefs that commonly accompany it.

To conclude chapter 2, I move to analyzing public research universities through the lens of the ILP. This section represents that conceptual framework in which I integrate theory and

practice as it relates to the ILP and the interworking of the public research university. Working from the assumption that that market logic³ has become thoroughly institutionalized in the American public higher education system, I highlight policies and practices that align with a market orientation, strengthen the universities market position, and consequently inhibit access for underrepresented student populations. By detailing the effects of the market logic's institutionalization in higher education, I hope to glean a better understanding of the direction of public research universities and what that direction might mean for poor and ethnic-minority student access.

Chapter 3 describes the methodology utilized in the dissertation. To begin, I lay out five hypotheses specifying relationships between the market logic and its effect on poor and ethnic-minority student access. Relying on the theoretical framework, measurable indicators that accurately represent realizations of a market logic are identified. Independent variables correspond to institutional antecedents of the market logic, the social identity of individual institutions, their goals, and the schemas they employ. The response variable, access, is measured by the ethnic and socioeconomic composition of university campuses. I describe the sources of data, the time period it spans, and the way it has been aggregated for this particular project. The fixed effect model is then introduced as the statistical method used to identify relationships between variables of interest and the aforementioned measures of access.

In Chapter 4, results of the fixed effect analysis are laid out. The two separate models are summarized and interpreted, and findings are discussed in relation to the substantive theory detailed in Chapter 2. Convergence between findings from the disparate models is also

³ The way the market logic is presented and discussed throughout the course of the dissertation may read as if cause-and-effect relationships between it and access are pre-determined. However, this is not an underlying assumption of the dissertation, but rather a hypothesis to be empirically tested.

addressed. The hypotheses are then reexamined in context with the results of the statistical analysis and the limitations of the study are acknowledged.

Lastly, the study concludes with a discussion of the implications of the findings for poor and ethnic-minority student access at the public flagship institutions.

Defining Access

Access can be generally defined as the ability of individuals to secure postsecondary certifications or degrees. Acceptance, matriculation, and eventual graduation constitute three important elements of access. Referring specifically to minority participation in higher education, Vera incorporates recruitment, admittance, and retention into the definition of educational access (1989, 34). Even though Vera's work focuses on access for underrepresented ethnic-minority groups, the definition can be applied to students who fall into other disenfranchised or marginalized classes.

Some define access in ways encompassing all things students need to be successful at the postsecondary level. Heller takes a holistic approach when he argues that access is comprised of financial, geographic, programmatic, academic, and cultural-social components (2009). His work builds from higher education scholarship linking student level outcomes to campus experiences, social engagement, and interconnectedness (Astin 1984; Tinto 2005). From this perspective, access is not simply acceptance, but the provision of support systems necessary for students from different backgrounds and capabilities to be successful in their transition from high school to college.

Others associate access largely with affordability, viewing financial barriers as the single most salient issue undermining access to higher education (Hauptman 2009; Mumper & Freeman 2009). By extension, participation patterns contingent on college costs represent distinct issues

of student access. Since both poor and ethnic-minority students are generally underrepresented at doctoral research universities specifically, it follows that educational quality should also be included in discussions geared toward addressing access gaps (Richardson 1987).

The breadth of perspectives on access reflects its multiplex nature. It also necessitates that a working definition be developed to frame the discussion and define the scope. I define student access as the ability of students to participate in the spectrum of educational opportunities supported by the public higher education system. It refers to the relative ease in which students are able to navigate the higher education system, utilize available educational resources, and ultimately acquire certifications or degrees.

There are two important points to note. First, I focus on poor and ethnic-minority student access measured by deficits in enrollment, matriculation, and academic success (NCES 2012). Although the apparent educational “squeeze” on the middle-class has garnered national attention and political interest, I concentrate on poor and ethnic-minority students because they have the longest history of exclusion from higher education (Obama 2013). Secondly, my focus on state flagship institutions is equally restrictive. These institutions in particular exhibit systemic educational disparities between student groups but are responsible for educating a large percentage of the college-going population (Carnevale & Strohl 2013; Bowen, Chingos, & McPherson 2009). They also represent a cross-section of the most prestigious, well-funded, and well-staffed colleges and universities in the U.S. That some students are underrepresented at these schools in particular is a matter of access to high quality, research intensive institutions.⁴

Access as Public Policy

⁴ For more information on college and university classifications see Carnegie Classification descriptions at <http://classifications.carnegiefoundation.org/descriptions/basic.php>

Public policy has over time shaped perspectives on educational access. The public's view of a more inclusive higher education system incorporates diverse slices of the population who have not historically been afforded the ability to attend (Lucas 2006: Rudolph 1962). Formal legislative responses to educational inaccessibility represent manifestations of the government's, and the general public's, evolving commitment to educational accommodation (Owens 2009). An appropriate starting point for understanding the United States' long-standing commitment to the ideal of universal access to higher education is the passing of the Morrill Acts of 1862 and 1890. The Morrill Acts widely are considered the first expansive effort to address geographical and socioeconomic barriers to postsecondary education. The acts created land-grant (1862) and agricultural (1890) colleges in an effort to democratize higher education by opening its doors to the rural farming community and by extolling the public college as a symbol of liberation from entrenched elitism (Lucas 2006, 158-159).

The second Morrill Act (1890) specifically provided institutional support for Historically Black Colleges & Universities (HBCUs) in states where blacks were excluded from flagship institutions (Cohen 1998, 111). The enactment of both statutes constituted watershed moments establishing the beginnings of a more inclusive higher education system. Moreover, these statutes were significant because they were the first to codify in Federal law the values that public institutions of higher education were to embody. Moving forward, the public college or university would become "a source of civic pride" and a "symbol of progress" to communities that historically were excluded from what was an entirely white, wealthy, male dominated institution (Lucas 2006, 159).

The Servicemen's Readjustment Act of 1944, or "G.I. Bill" as it is commonly referred to, is yet another example of higher education policy enacted to open pathways for increased

participation. The influx of World War II (WWII) veterans presented an imminent problem for policymakers concerned with the potentially grim prospect of millions of young, unemployed servicemen returning from war. In an attempt to avert an economic catastrophe, benefits, insurance, and counseling services were dispersed to veterans and coupled with the promise of tuition, books and living expenses while attending any educational institution, public or private, of their choosing (Cohen 1998, 182). The G.I. Bill is an example of public policy being employed to increase participation in higher education not solely for the benefit of the individual, but also for the general well-being of society. It was at this time that the U.S. saw a definitive shift to mass higher education, as enrollments doubled pre-WWII levels and postsecondary training became a customary track for individuals seeking an 'in' into the middle class (Cohen 1998, 182).

While the Morrill Acts' and G.I. Bill's main goals were to bolster access for targeted groups of citizens, other policies sought simply to increase the overall capability of the labor force. Brewing Cold War tensions were the impetus for utilizing the higher education system to support a burgeoning American military industrial complex. The National Defense Education Act (NDEA) of 1958 was enacted to take advantage of the higher education system's expansion by sponsoring weapon and defense systems research, cultivating a more technologically oriented workforce, developing competence in Science, Technology, Engineering, & Math (STEM) fields, increasing the availability of student loans, and encouraging foreign language studies (Lucas 2006; Cohen 1998; DOE 2013). The accessibility of the higher education system was viewed as a mechanism for bringing the best minds together in support of national security objectives. A substantial amount of federal funding was directed to large public research universities as a result of the NDEA of 1958. These funds helped to establish a number of

universities as flagship institutions and premiere centers for not only technological innovation, but also career advancement.

The large influx of funding enjoyed by public research universities during the late 1950's ushered in a new era of higher education spending that was perhaps the most critical for poor and ethnic-minority student access. The Great Society initiatives of President Lyndon Johnson and the 89th U.S. Congress reified national sentiments to make government institutions, and society in general, more equitable and accessible. The Civil Rights Act of 1964 placed greater importance on reviewing policies and programs that not only intentionally discriminated against certain groups, but also ones that indirectly resulted in disparate impacts for certain populations (Vera 1989, 19).

President Johnson's signature piece of higher education legislation was the Higher Education Act (HEA) of 1965. Arguably the most ambitious federal education statute up to that time, the HEA reflected the Johnson Administration's progressive agenda. It consisted of eight titles that addressed expansion into underserved urban communities, gave financial support to HBCUs, created teachers' corps for poverty stricken areas, and provided institutional support for undergraduate instruction and infrastructure maintenance (Parsons 2000, 86; Cohen 1998, 240-241). The act set out to address disparities in participation on socioeconomic and racial fronts with its emphasis on student aid.

The enactment of other pieces of legislation either buttressing or building upon the principles of the HEA provide further evidence of the regime's commitment to higher education access: the Vocational Education Act of 1963, the adult education provision of the Economic Opportunity Act of 1964, the National Vocational Student Loan Insurance Act of 1965, and the Education Professions Development Act of 1967 are examples. Also notable was the subsequent

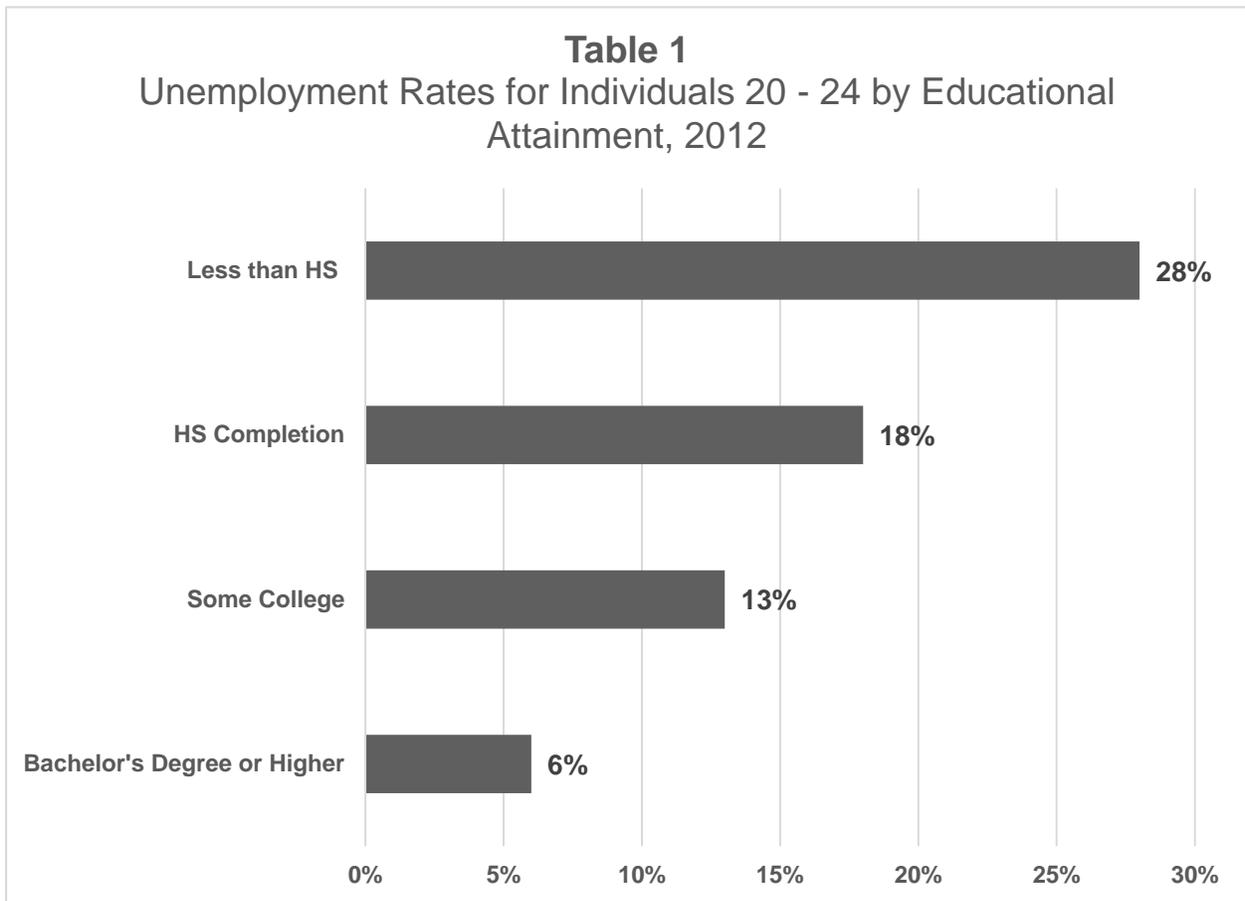
reauthorization of the bill in 1972, which created the legal framework for the grant program named after Claiborne Pell, which provides funds to students who fall below certain income thresholds (Parsons 2000). Later reauthorizations and amendments have attempted to extend the promises of the original HEA by ensuring that deserving students are not excluded from higher education on the basis of their race, ethnicity, or ability to pay.

The constant thread that binds together these policies is democratization, or making available the opportunities availed by the public higher system accessible to larger slices of the general population. Whether the desire was to provide educational opportunities to rural populations, bolster national defense, or combat institutionalized inequalities, access was viewed and instrumented as a solution to systemic problems. This is in line with our general definition of public policy. Policies expanding access demonstrate government reactions to public problems and social ills. For this reason, we can view educational access as a formal policy objective of the public university. This vantage point forces us to acknowledge the public university's role in promoting social mobility, and reminds us of the collective benefits of access.

Access as Social Justice

Poor and ethnic-minority student deficits are intertwined with issues of group exclusion and social inequality. Generally speaking, these issues are associated with the broader concept of social justice. The social justice perspective (SJP) is immediately applicable to the discussion because many deem access as a necessary condition for the achievement of any level of social equity. Without access, it is argued, social disparities entrench cycles of social and economic marginalization. Owens succinctly describes social justice as a process where issues are engaged and actions taken to ensure equality of opportunity (Owens 2009). Higher education access is of particular importance because it has direct implications for family pathology, social mobility,

and democratic participation. Callan (2011) associates access with “education and training beyond high school that helps one achieve employment that supports a middle-class standard of living” (89). As shown in Table 1, educational attainment is an important determinant of employment, and by extension socioeconomic status. For Callan and others, a lack of access for underrepresented groups represents a moral and ethical failure on the part of government and society because of the democratic and communitarian values supposedly espoused by our public higher education system (Callan 2011, 103; Engell and Dangerfield 2005).



Source: NCES Report – The Condition of Education 2013, 2013

The SJP also urges that we view universities as social institutions. Social institutions can be described as systems of organizations that share a central purpose and are bound together by

common conventions, values, assumptions, and other social elements (Miller 2007). Scholars often associate justice with the idea of the social institution. Miller specifically links distributive justice to social institutions focusing on the comparative distribution of resources allocated for individuals and groups that provide them support (Miller 2007). Miller's work suggests that since all tax-paying citizens contribute to the sustainment of public universities, none should be disproportionately excluded from taking advantage of its benefits.

Thinking of the public higher education system as a social institution also shows how managing competing logics can put a strain on organizations. The university's historic role in supporting social mobility is not necessarily translated well through logics that above all else emphasize economic gain. At the same time, prudent financial management is essential to the well-being and longevity of any successful organization. In the case that certain financial management practices create barriers that actually inhibit access for already disadvantaged student groups, it is appropriate to approach them as matters of social equity and justice.

Viewing the public higher education system in this light requires us to reconcile inconsistencies between its normative roles in society and its day-to-day functional modalities. How can public universities be tasked with expanding access while at the same time implementing policies that effectively disqualify large segments of the student population? This question epitomizes the situation that many public research universities find themselves in. Institutions are continually at risk of failing to redress social injustices, and sometimes this further exacerbates disproportionality between groups (Miller 2007). The situation illustrates the intractable nature of the situation and the need to evaluate it through both a public policy and social justice lens.

Moreover, we do not understand the long-term effects of a higher education system that potentially reinforces differential power relationships and exacerbates social inequalities. From this perspective, scholars choose to engage participation in higher education as a social problem in addition to a higher education policy issue (Richardson 1987 19; Vera 1989, 32).

Incorporating the SJP highlights the plight of poor, underrepresented, and/or marginalized classes. Since these groups are the most likely to encounter barriers to higher education, and the least likely to formally oppose them through institutional means, they are particularly vulnerable to exclusion.

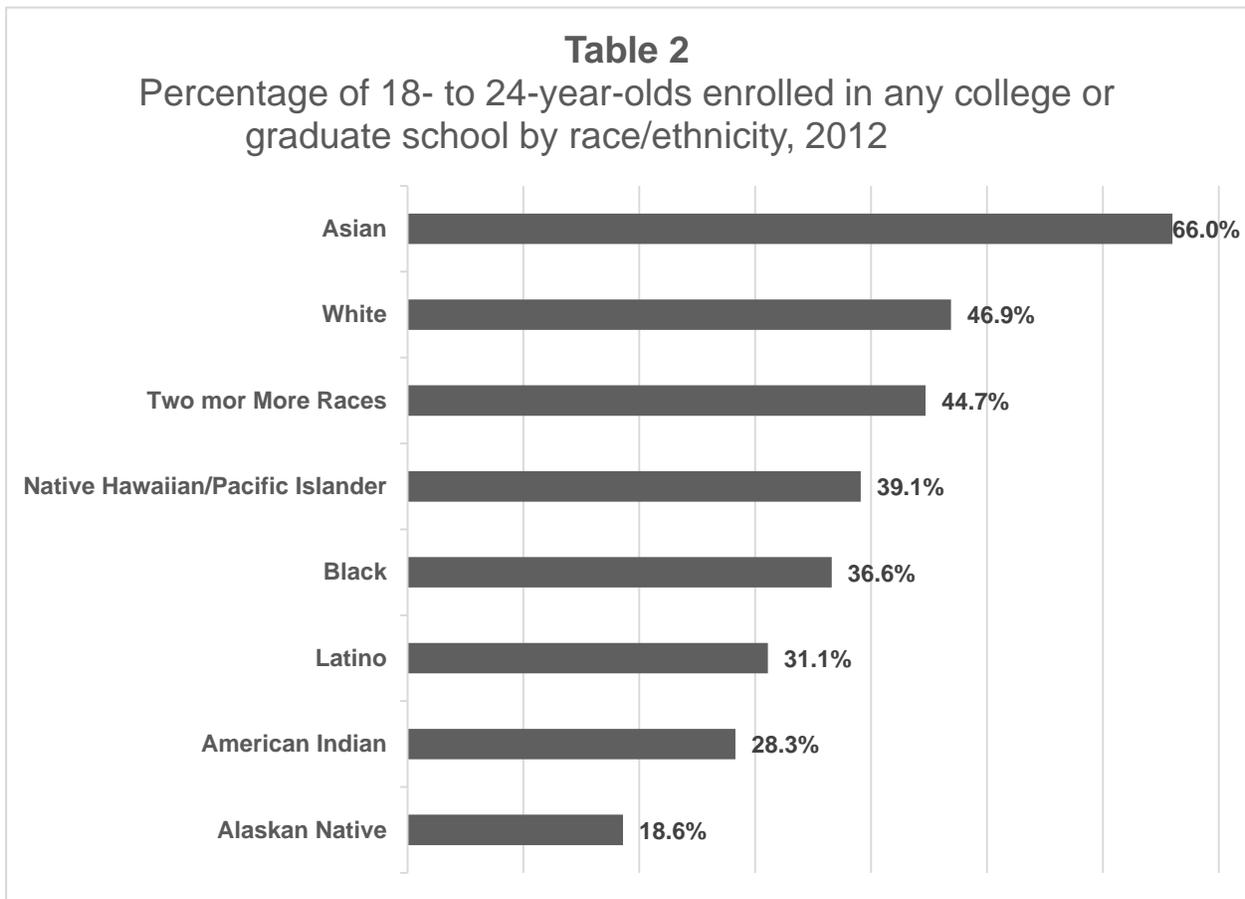
The higher education system is open to larger segments of society than has been the case in the past. The public's support of policies that have expanded educational access comport with the aspiration of social equality and justice. This is a testament to public demand for a distributionally just higher education system. It also gives credence to the idea that the public higher education system is a social institution. One thing to remember is that policy issues, at their core, deal with the distribution of resources (Gooden 2014). This implies that public research universities, as social institutions, will be evaluated by not only the quality of the services they offer, but also by the way in which they make those services available to the public at large.

The SJP encourages us to take a critical view of institutions and their power to perpetuate or ameliorate inequality. This is the rationale for focusing on institutional structures, or the conduits through which institutional power is exerted. Institutional structures are the habits, routines, rules, and procedures that permanently encode institutional values in day-to-day operations (Gooden 2014). Structures play an important role in the institutionalization process because they govern the flow and quality of interactions between individuals and organizations.

A number of authors have documented the role that institutional structures can play in reproducing race and class-based inequality (Perna 2006; Pease 2009; Carnevale & Strohl 2013). The SJP's emphasis on structure as an important unit of analysis for gauging institutionalized inequality is a theme I draw from in the remainder of the study. In the conceptual framework I identify the market-based policies specifically that potentially underlie systemic barriers to access.

Explanations of Inaccessibility

Empirical research unequivocally establishes that gaps in post-secondary attendance, matriculation, and graduation persist between different demographics of student groups (NCES 2012) (see Table 2 below). The nature of these race and class-based disparities has motivated serious discussions and myriad programs to deal with what has been deemed a particularly pernicious social problem.



Source: NCES Report – Higher Education: Gaps in Access & Persistence Study, 2012

However, educational stratification continues to be a reality, and more so when we shine a spotlight on research universities, and the public flagship institutions in particular (Carnevale & Strohl 2013).

The inability to make measurable gains is at least partly explained by a lack of consensus regarding the root causes of inaccessibility. Without a shared understanding of the institutional structures reinforcing barriers to access, policymakers will continually struggle to coordinate action and identify solutions that can reverse current trends.

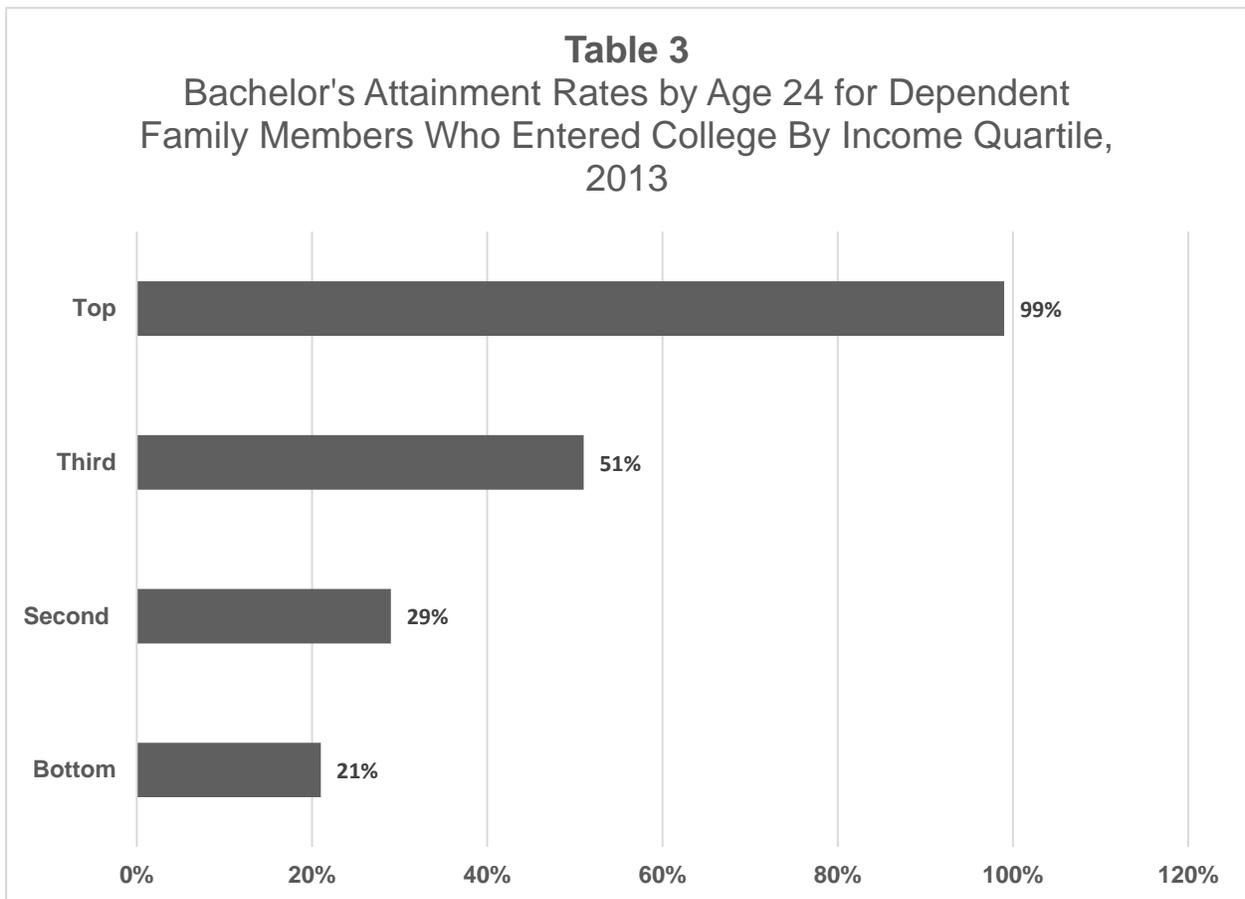
Below I detail a number of competing narratives that attempt to explain educational gaps between different student groups. All of these explanations of inaccessibility identify underlying issues influencing access, but they all fall short in their ability to connect the relevant components under one overarching framework. For the purposes of the study, this body of work serves as the basis for a more comprehensive framework tying together each stream of thought. Through a distillation of the extant literature, I identify barriers to access hampering poor and ethnic-minority student success as well as linkages between these perspectives that support the development of an integrative framework.

Explanations of Inaccessibility

To begin we must note that underrepresented student participation in higher education is on the rise. National Center for Educational Statistics (NCES) reports project that Pacific-Islander, Black, Latino, and nontraditional students will account for a larger proportion of postsecondary enrollments by the 2020-21 academic year (NCES 2013). These figures reflect positive strides made toward expanding educational access for underserved students. However, it is important to account for concurrent trends within the public higher education system. Namely, the vast majority of these students are overwhelming concentrated at community

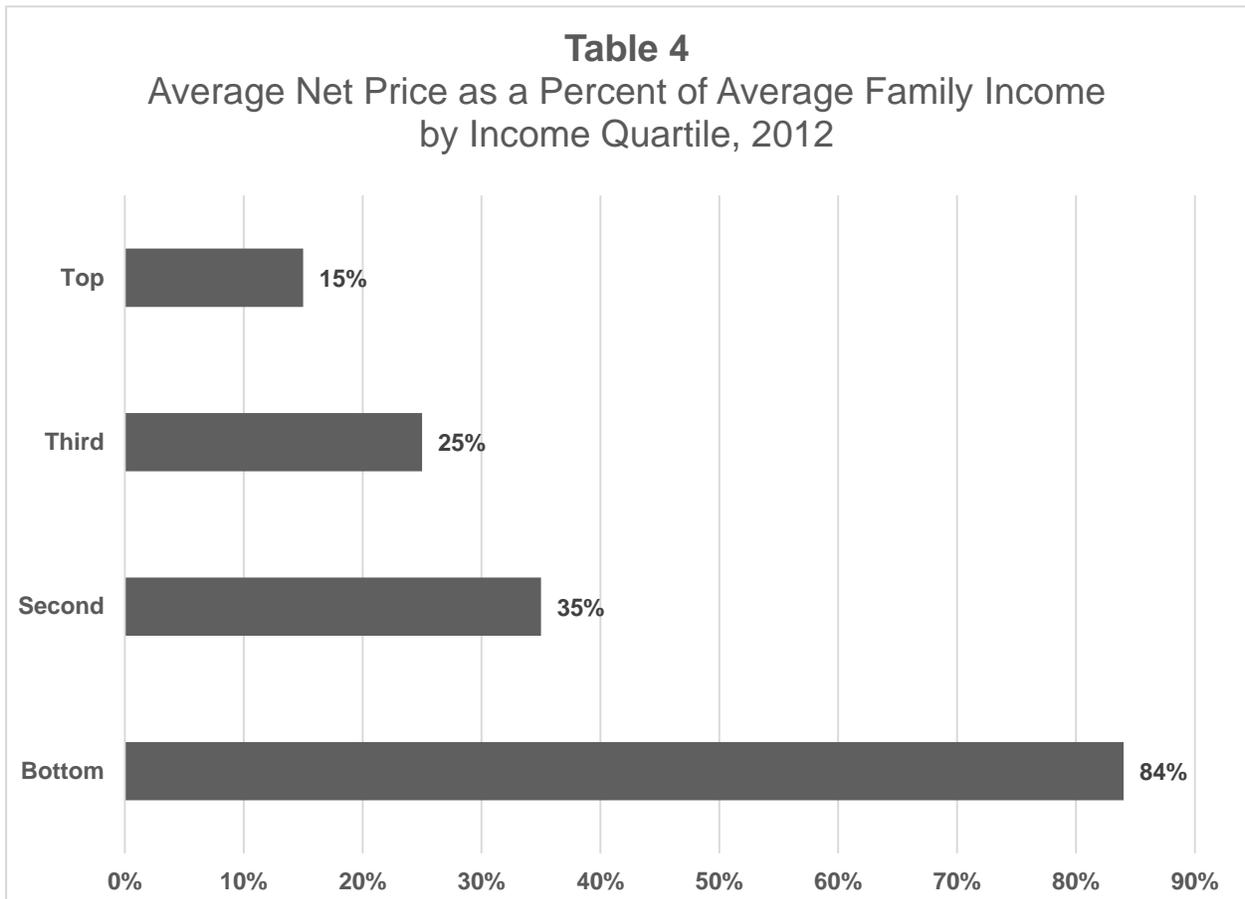
colleges, HBCUs, Latino Serving Institutions, and Tribal Colleges (NCES 2010). The converse is that these students are conspicuously absent from many of the nation’s large public research universities.

There is little doubt that these participation patterns are heavily influenced by the differential costs associated with open access colleges compared to flagship institutions (Carnevale & Strohl 2013). When examining enrollment through the lens of SES, the figures illustrate that increasing college costs influence the ability of low SES students to enroll and eventually graduate (Titus 2006; Bowen, Chingos, & McPherson 2009) (see Table 3 below). Reasons for institutional sorting and achievement gaps are varied, but prohibitive costs are one piece of a complex puzzle.



Source: Pell Institute Report – Indicators of Higher Education Equity in the United States, 2015

Others go further in their belief that increasing college costs are the most pressing issue undermining student access. A widely held perspective emanating from this camp is that increases in tuition and fees, while generating additional revenue for universities, shift costs to students and families (Heller & Rogers 2006; Paulsen & St. John 2002). This viewpoint supports approaches isolating costs as the preeminent barrier to access for poor and ethnic-minority students (see Table 4 below).



Source: Pell Institute Report – Indicators of Higher Education Equity in the United States, 2015

Studies have shown that students hailing from underrepresented groups are the most affected by these price increases because they deter them from applying to more prestigious universities, and when they do attend, the price increases decrease their likelihood of retention (Paulsen & St. John 2002).

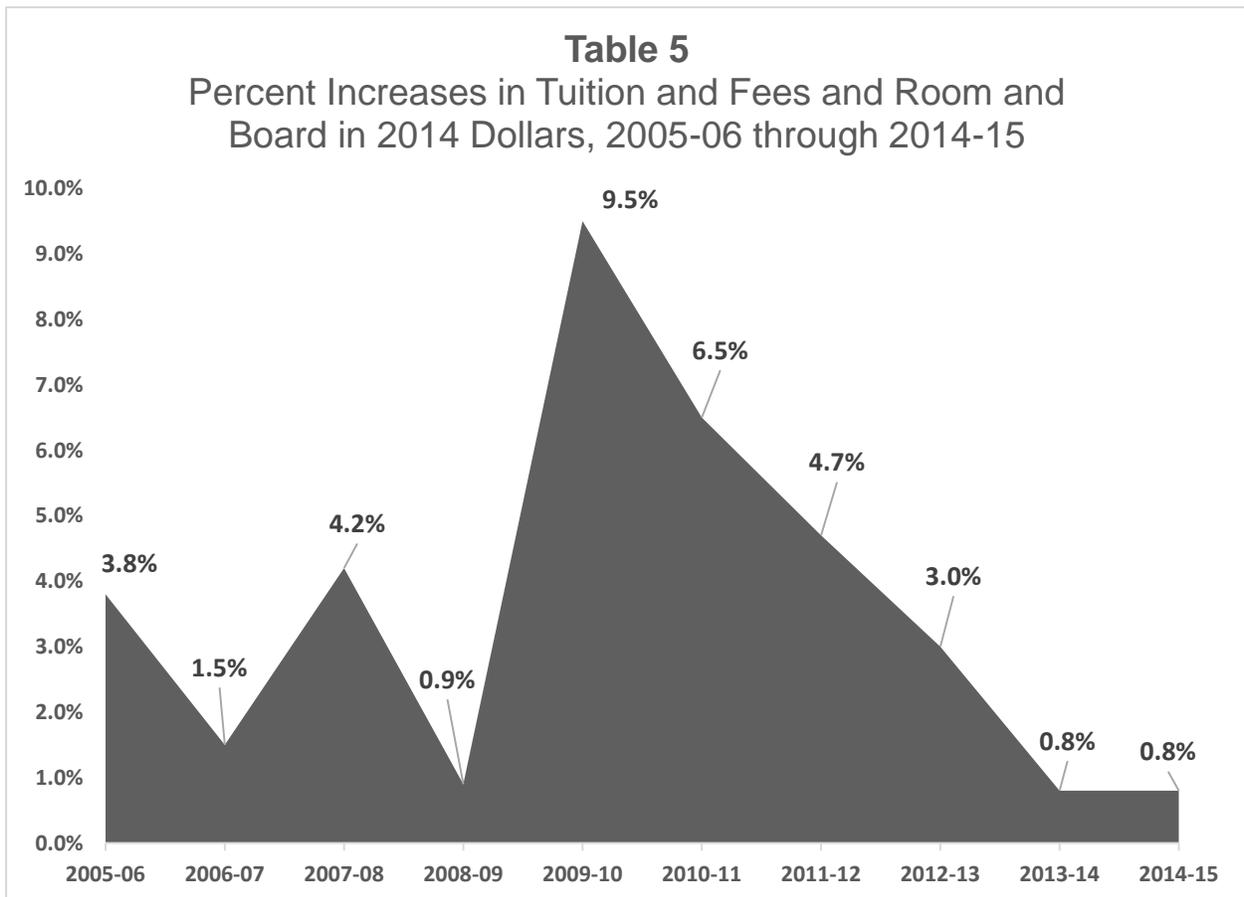
There is disagreement, however, as to whether the forces causing price increases are endogenous or exogenously constructed. Archibald and Feldman (2008) attend to this question specifically. They contrast a revenue theory of costs with a cost disease hypothesis.⁵ The latter attests that service industries, of which higher education is one, have difficulty taking advantage of technological advances to increase quality and/or efficiency. Therefore, service industries resort to increasing wages to optimize on either front, subsequently increasing the price of services at a much faster rate than that of goods (Archibald & Feldman 2008, 273). It is their contention that the revenue theory of costs, which associates increased costs with higher education-specific factors, overlooks microeconomic theory that adequately explains rising costs in higher education and other comparable sectors (Archibald & Feldman 2008). The commonality between these two schools of thought, nevertheless, is that increasing costs pose an immediate threat to the ability of economically disadvantaged groups to realize the benefits of public higher education (Archibald & Feldman 2008; Bowen 1980).

The scholarship focusing on college costs as an explanation of inaccessibility regularly incorporates SES as a highly salient factor with regard to student access. Researchers have identified household income as a strong predictor of postsecondary attendance (Losco & Fife 2000; Newfield 2010; Connor & Rabovsky 2011). Becker finds that increases in family income result in much higher probabilities of postsecondary enrollment, presumably because of an increased ability to pay (1990, 171). The corollary is that low SES high school graduates are less likely to pursue or attain postsecondary degrees. Becker acknowledges that the costs of alternative options, ability, and selectivity are also important factors affecting the choice of high

⁵ Archibald & Feldman reject Bowen's revenue theory explaining increased higher education costs. Instead, they favor the cost disease hypothesis where increased costs are a function of macroeconomic trends that affect other industries in similar ways.

school graduates; his main contribution though, is the establishment of the commonsensical yet essential understanding that income and costs strongly influence college attendance (Becker 1990, 175).

In their seminal book *Crossing the Finish Line*, Bowen, Chingos, and McPherson (2009) provide perhaps the most detailed analysis of postsecondary educational gaps that exist between poor students compared to students from more affluent backgrounds. They look at large flagship universities in particular and provide detailed statistics documenting troubling trends taking place at a number of prominent institutions. Even after controlling for the academic preparedness of different student groups, the authors find that substantial outcome gaps persist between students from different socioeconomic backgrounds (Bowen, Chingos, & McPherson 2009).



Source: The College Board, Annual Survey of Colleges: NCES, IPEDS Data (Trends in College Pricing, 2014

Their analysis provides further evidence of the structural barrier that increased costs represent to low SES students. The research is relatively consistent. A great deal of findings identify rising college costs as a prohibitive factor for low-income students (see Table 5 above).

As schools have continued to increase net costs, student access has been negatively affected (St. John et al. 2006). Widening enrollment gaps in step with increased costs only bolster the claim that inaccessibility can be directly attributed to the exponential increase in tuition and fees we have witnessed over the past thirty years (Kaplan 2009). There are indeed other factors that contribute to inaccessibility in the higher education system, but researchers, practitioners, and student advocates have made a compelling case zeroing in on college costs as the main culprit.

The way states and public universities allocate resources to manage the delivery of postsecondary education has also been an area of considerable interest. Resources dedicated to student services, instruction, financial aid, and administrative overhead have all been examined as manifestations of the institutional changes taking place within the higher education system. One motivating force behind inquiries into the resource allocation practices of universities is the view that these decisions have direct and immediate implications for student access.

Webber and Ehrenberg (2009) analyze university spending practices to assess their effects on student outcomes. They use ordinary least squares (OLS) and quintile regression to show that university spending in different areas can have measurable effects on student success. They found that increasing student service expenditures can be beneficial for increasing persistence and graduation rates at institutions that serve low-income and/or low SAT students (Webber & Ehrenberg 2009).

Another important finding was that increases in research expenditures seem to have a negative effect on student graduation rates (Webber & Ehrenberg 2009). This is in light of the widely held view that increasing research expenditures is an imperative to maintain or attain a “Tier I” status (Ehrenberg 2012). The findings raise important issues regarding university spending practices when goals do not align. Webber and Ehrenberg make a significant contribution to the literature by revealing the nuanced relationship that exists between student success and university expenditure categories.

More recently, in a follow-up to the 2009 study, Webber provided further evidence that student service expenditures were more effective at increasing the probability of graduation at low ACT schools (2012). He analyzed organizational inputs alongside institutional and student characteristics at a number of universities in Ohio to find that students at high ACT schools, as well as those majoring in STEM fields, have increased probabilities of graduation with increases in instructional expenditures (Webber 2012). The work suggests that individual universities, through their expenditure decisions, possess the power to positively (or negatively) influence academic success for targeted student populations by strategically allocating resources.

Other studies have focused on the way states and universities distribute financial aid. Offsetting costs for needy students, or more recently, incentivizing attendance for highly qualified students are the two dominant paradigms. Some point to disparities between percent increases in merit-based compared to need-based aid as yet another indication of the public research university’s pivot away from serving underrepresented students. Heller and Rogers specifically identify the ongoing debate surrounding the allocation of need-based vs. merit-based aid as an issue of distributional equity (Heller & Rogers 2006). During a fifteen year span from

1992-2007, merit-based aid increased by 216%, while need-based aid set aside for the most financially needy students only increased by 103% (Heller 2009, 26).

State programs that shift resources to merit-aid and general appropriations stand in stark contrast to federal aid programs squarely focused on making higher education more affordable for the most economically disadvantaged student populations (Toutkoushian 2010). A number of studies have suggested that the students who qualify for merit-aid many times have the financial means to attend, are well-prepared academically, and would attend an institution of higher education regardless of the aid award (Bowen, Chingos, & McPherson 2009; McLendon & Mokher 2009; Heller & Marin 2002).

Arguments in favor of rebalancing aid to focus more on need are often motivated by human capital theory. It assumes college-going reflects a rational choice determined by sticker price, opportunity and transaction costs, subsidies, and other economic factors associated with college attendance (Perna 2006). From a human capital perspective, economic contexts are the most salient factors in the decision to attend. Critics of disproportional merit-aid increases argue that need-based aid is a more efficient use of public resources, if the main objective of aid is to make college more accessible. This is because need-based aid is presumed to more effectively target students who will attend college only if they receive adequate financial support.

Alternatives are deemed less efficient because they direct aid to students that already have the ability to pay.

Toutkoushian and Shafiq (2010) examine inefficiency in non-need-based student aid frameworks. Relying on economic principles, they create a model of student choice that optimizes student enrollments on student aid type at public colleges (Toutkoushian & Shafiq 2010, 50). In their simulated study, they illustrate that optimal enrollment gains can be realized

using a need-based framework. Again, their contention is that need-based aid more efficiently targets students who would, and are willing to attend, but lack financial resources. Toutkoushian and Shafiq analyze the impact of need-based funding compared to state appropriations, but they speak to similarities between appropriations and merit aid. By failing to earmark funds for need-based aid, the authors anticipate universities encumbering an increasing share of state funds for the provision of merit-based aid rather than reducing costs for underrepresented and low-income students (Toutkoushian & Shafiq 2010, 55).

The call to redirect resources to need-based aid is intuitive enough in terms of its projected impact on student access, but a number of important concerns remain. First, some contend that failing to reward highly qualified, academically prepared students to support others who may not have the same academic credentials is an injustice (Horn & Flores 2011).⁶ This view comports with studies that have indicated need-based aid recipients are, on average, less academically prepared than wealthier students (Terenzini & Cabrera 2001). It also coincides with the notion that awarding aid based on academic merit, as opposed to simply need, is an equally important component of social equity and justice (Jost & Kay 2010).

Moreover, merit-aid creates a kind of educational marketplace where high achievers can seek out the most attractive financial aid packages (Eckel & Morphey 2009, 181). The implementation challenges that would arise from any attempt to comprehensively change the student financial aid framework seem daunting. States and universities would most likely face staunch political opposition, have to navigate interstate competitive forces, and be susceptible to unanticipated consequences (Toutkoushian & Shafiq 2010).

⁶ *Hopwood v. Texas* was a seminal affirmative action case banning race-conscious admissions decisions in favor of criteria based solely on merit. The product was Texas's Top Ten Percent Plan (TTPP).

There are also questions as to whether college decisions are totally dictated by rational economic choice. As some point out, a limitation of human capital theory is its inability to account for social factors that play an important role in the decision to attend college. Social capital and cultural perceptions both play an important role in student choice that pecuniary benefits do not wholly address (Perna 2006; Paulsen & St. John 2002). Without a firm understanding of social contexts, any attempt at expanding access is prone to failure. Still others maintain that simply offering more need-based aid is no panacea for addressing educational disparities in the public higher education system (Toutkoushian & Hillman 2012; Goldrick-Rab et al. 2009). Yet, the push to reemphasize need-based aid clearly signals the importance of the way universities distribute student financial aid.

Also commonly cited for decreasing affordability and access is the growth of university administration. Benjamin Ginsberg has been perhaps the most outspoken critic of the adverse effects that administrative growth has had on higher education. Tracking personnel figures from the 1970's to the mid-2000's, Ginsberg finds that university administrations have considerably higher growth rates than all other personnel classifications (Ginsberg 2011a; Ginsberg 2011b). Furthermore, Ginsberg points to recent examples at the University of Maryland, Florida Atlantic University, Washington State University, and the University of Vermont where executives increased the size, scope, and compensatory packages of university administrations against the backdrop of budget crises and financial retrenchment (Ginsberg 2011a). Ginsberg's forceful critique of university bureaucracies attempts to illustrate how the priorities of universities emerge when high level managers and executives choose between competing objectives (Ginsberg 2011a). From Ginsberg's perspective, the prioritization of administration over instructional

faculty lines is tantamount to aggrandizing the professional class at the expense of quality teaching, research, and student access.

Leslie and Rhoades' (1995) article "Rising Administrative Costs: Seeking Explanations" was written when the administrative costs question had gained considerable momentum. It was in 1991 that the higher education publication *Academe* published an issue dedicated specifically to the question of administrative bloat (Hedrick et al. 2009). That was shortly after Zemsky and Massey defined the administrative lattice, "a term used to describe the proliferation and entrenchment of administrative staff at American colleges and universities" (Hedrick et al. 2009; Zemsky & Massey 1990).

In response to mounting concerns over the growth of university administrations, Leslie and Rhoades outlined a number of important propositions explaining administrative changes on university campuses. They drew from organizational theory, microeconomics, and management theory to outline plausible rationales for the exponential growth of college bureaucracies (Tolbert 1985; Williamson 1963; Rhoades & Slaughter 1991). In sum, administrative growth was attributed to the compounding effects of revenue seeking, the pursuit of legitimacy, regulatory pressures, and inefficient management (Leslie & Rhoades 1995).

The authors also alluded to the growing displeasure of state governments with increased institutional expenditures. More specifically, they cited a study initiated by Arizona's Joint Legislative Budget Committee over concerns of shrinking instructional budgets and ballooning administrative costs (Leslie & Rhoades 1995). Leslie and Rhoades's propositions, along with their reference to Arizona's discontent with executive decision making, is a natural benchmark for newer work looking into similar questions.

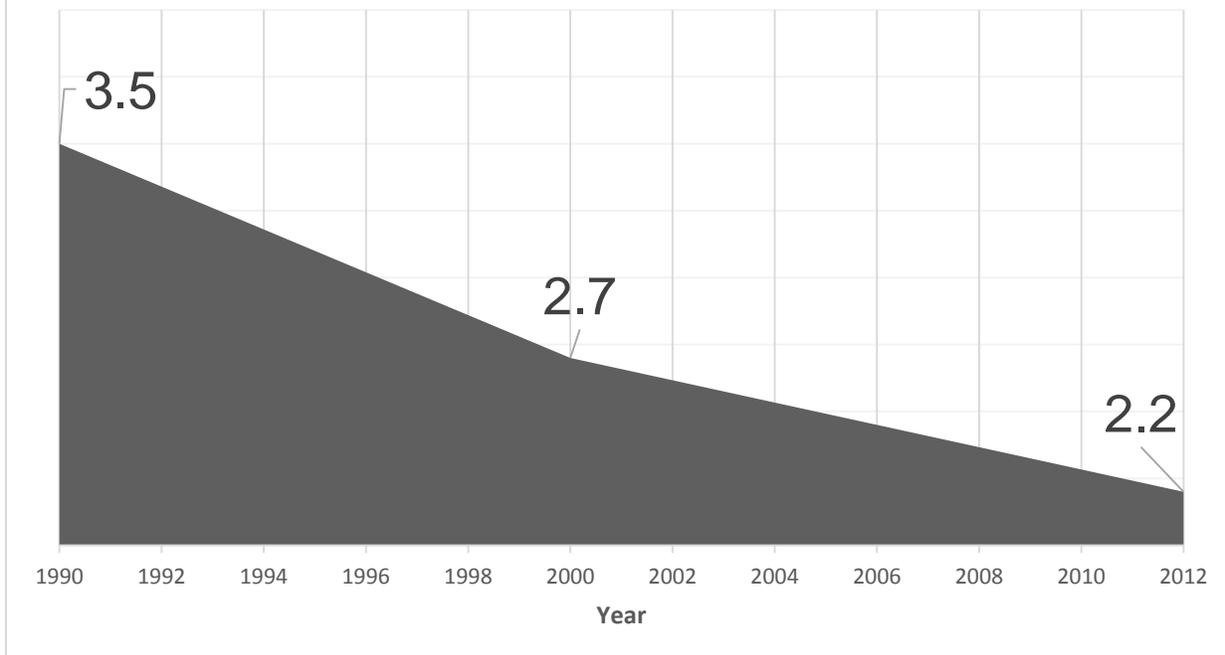
Green et al. utilize Integrated Postsecondary Education Data System (IPEDS) data to gauge the prevalence of administrative bloat. In their analysis, they found a 39 percent increase in administrative employees per 100 students as well as a 61 percent increase in administrative spending per student between 1993 and 2007 (Green et al. 2010). To the authors, these changes were indicative of a perverse funding model that supported unchecked administrative growth and wasteful resource management practices.

Similar to Leslie and Rhoades, Green et al. looked to Arizona as a case in point. Their findings seemed to justify earlier concerns raised by Arizona's Joint Legislative Budget Committee in the early 1990s. Principally, they argue that Arizona public universities were diverting fees, government subsidies, and private donations away from instruction and ultimately to executives and administrative offices (Green et al. 2010). The authors suggest that increased access to higher education could be realized by tracking costs, imposing limits on spending, and holding administrators accountable for poor financial decision making (Green et al. 2010).

Some findings have seemed to temper attacks on university bureaucracies by contextualizing historical trends. Hedrick et al. (2009, 134) analyzed time-series data to find there was little evidence to suggest that the increases in administrative spending were a result of diverting funds away from instruction. To the contrary, the authors claim that increases in administrative personnel and spending have mirrored increases in other personnel categories. It is important to note, however, that the authors acknowledge administrative expenditures grew at a more rapid pace than instructional spending.

Most recently, the American Institute for Research's (AIR) report *Labor Intensive or Labor Expensive?* provided an in-depth analysis of administrative growth in higher education.

Table 6
Number of Faculty & Staff per Administrator at Public
Research Universities, 1990 - 2012



Source: Delta Cost Project Report – Labor Intensive or Labor Expensive, 2014

Its results neither quelled concerns, nor fully supported alarmist claims. Findings state that: growth has been increasing rapidly in administrative offices; administrative staff, rather than executive level administrators are comprising most of the growth; an emphasis on student services is responsible for a large proportion of the personnel increases; and the number of faculty and staff per administrators is on a constant decline (Desrochers & Kirshstein 2014) (see Table 6 above).

Their results indicate that administrative growth is a real phenomenon, but it is not necessarily indicative of blatant imprudence on the part of university executives. Growing the division of student services might even support the goal of access, according to Webber and Ehrenberg (2009). In closing, administrative growth and spending does not seem to be fading out of the public eye. With administrators bemoaning diminished financial support, critics will

continue to question the appropriateness of administrative growth in the face of increased college costs and racial and class-based disparities.

Privatization as an Integrative Framework

The aforementioned explanations of inaccessibility are by no means an exhaustive list. Family pathology, the failure of the public elementary and secondary school system, and social exclusion are all alternative explanations that explain the relative absence of poor and ethnic-minority students at public flagships institutions (Paulsen & St. John 2002; Cary & Roza 2008; Taket 2012). I have solely concentrated on narratives whose locus is at the organizational level, but the explanations I offer thread together in another way. Increasing costs to generate revenue, managing expenditures to gain a strategic competitive advantage, and an organizational emphasis on administration loosely conforms to a model of the business firm.

The term business firm refers generally to a large-scale business operation. This can also be described as a coordinated business unit, motivated by the return of profit to shareholders, and operating in the private sector. Modern conceptions of the firm vary from that of a singularly focused profit-seeking entity to a social institution balancing profit motivations with a tinge of public purpose (Gordon 2002; Allen 1992). From either vantage point, business firms are assumed to take affirmative action to maximize short and long-term economic gain. They are extremely price sensitive and form to minimize costs and solve coordination problems in their pursuit of profit (Coase 1937).

This entails generating profits through the delivery of goods and services, efficiently running operations, staying on a competitive footing with industry peers, and managing cash flow. Further probing theories of the business firm, we find that there is an emphasis on central administrations as the locus of important decision-making processes. This is because centralized

administrations are assumed to handle and transmit information more efficiently, react more swiftly to the effects of external markets, and subsequently implement system-wide policies that result in lower operating costs (Simon 1962, 6). These views not only reflect the way business firms operate, but they also underscore the firm's central objectives. In light of the explanations of inaccessibility previously surveyed, interesting parallels can be drawn between theories of the business firm, public research universities, and defined objectives.

Analyzing public institutions of higher education as pseudo-business firms is a worthwhile exercise. It ties together distinct perspectives on inaccessibility and sheds light on the steps that universities take to become more business-like. Similar to the business firm, universities have increased revenues by shifting costs to students and families, whom they now deem consumers (Gumport 2000). The strategic allocation of resources is evidenced through the partial repurposing of the student financial aid framework and an emphasis on increasing the cadre of administrative personnel. The business firm conception helps make sense of these realities by situating them in the context of organizations attempting to secure economic gains. Many of the institutional changes taking place are plausibly explained by a system-wide push to model the research university after the business firm.

These explanations are distinct from one another in that they inhibit access in different ways, but they are connected because they coincide with our general assumptions regarding the way a business firm operates. They illustrate the way public universities have gravitated toward business practices, internalized a consumer approach to educational delivery, and increased their reliance on markets. The interlocking nature of these changes indicates that the root cause of inaccessibility may not be any particular narrative, but rather the generating mechanism that motivates them all.

A framework that can uncover the root causes of the pervasive lack of access at public research universities is privatization. Morphew and Eckel's (2009) edited text *Privatizing the Public University: Perspectives from the Academy* examines changes taking place in the public higher education system as a result of institutional pressures to become more efficient, competitive, and business-like. For the contributors to their volume, privatization of the public university can be defined generally as an increased reliance on market mechanisms, a growing dependence on private revenue streams, and increased autonomy from the state (McLendon & Mokher 2009). More importantly, they forecast the potential challenges that these trends pose for student access.

As higher education privatization becomes more entrenched in the public higher education system, the editors anticipate what they describe as a limiting effect on access (Eckel & Morphew 2009, 189). The empirical component of the book closely examines university revenues and allocations over an extended period to track what they deem as privatization (Toutkoushian 2009). Principally the authors argue that privatization is in fact a real and dominant trend in the higher education landscape.

However, it is clear from the policy history of the American higher education system that public research universities are not inherently private enterprises. More often, public universities are described in line with non-profits. Winston (1999) addresses the apparent misalignment between higher education privatization and the university's public purposes. Non-profits operate in trust markets where clients are at the mercy of suppliers because they are at an immediate deficit with regard to choice and assessing quality (Winston 1999).⁷ Non-profits are often described as altruistic organizations that support community objectives rather than purely the

⁷ Trust markets refer to sectors like education and health-care. Winston differentiates trust market from traditional markets because participants must 'trust' that they are receiving a quality good at a fair price.

interests of shareholders. Still, it is apparent that non-profits are subject to pressures of the market.

Winston states that universities must balance revenues with costs similar to the way businesses manage cash flow. He attests that universities may appear to be profit-motivated by way of their pursuit of revenues to cover or exceed costs (Winston 1999). Here again lies the intractability of the access problem. A conflict exists between the modeling of the public university in the image of the business firm and policies and practices that support access. Chiefly, business objectives effectively demote access from a central university objective to an ancillary concern. Put differently, the institutionalization of the market logic may be leaving little room for the university's social objectives.

Some researchers contend that changes in the higher education system can be attributed to an objective functionalism, or economic rationality, on the part of universities. Other authors have engaged and responded to this conception of institutional changes in higher education. Gumport (2000) refutes a similar image of institutional change in higher education where privatization is driven by a neutral or detached inertia. She sufficiently attends to the confluence of internal and external forces impacting the higher education landscape, but does not fail to recognize the power that universities possess in regard to supporting student access. Analogous to Gumport's work focusing on the institutional mindset of the higher education system, I contend that changes are deliberate even in the face of their implications for student access. More specifically, I attribute the turn toward privatization as a result of the institutionalization of a market logic within the public higher education system.

In the following chapter, I highlight literature that has formed the basis of the Institutional Logics Perspective (ILP). The ILP is a meta-theory that I use to define the logic of

the market, establish that universities are informed and guided by a dominant logic, and study the effects of the market logic in higher education on educational access (Thornton et al. 2012). I begin with a brief overview of the work that has laid the foundation for the ILP. I then review work by the architects of the ILP. I conclude by arguing that the ILP is an integrative framework that shows promise as a means of uniting disparate explanations of systemic educational disparities.

CHAPTER II

REVIEW OF THE LITERATURE

Theoretical Building Blocks

Antecedents of institutional perspectives, and the ILP in particular, can be traced back to earlier works in general sociology (Jepperson 1991). Emile Durkheim was perhaps one of the first sociologists to analyze the behavior of individuals not so much as a function of individual rational choice, but as an extension of a collective consciousness reinforcing institutional norms and connecting individuals within social groups. Durkheim's work represents a view of institutions as natural systems, where goals are motivationally complex, rules are formal and informal, and behaviors are judged in light of their accordance with the dominant social order (Scott & Davis 2007).

Durkheim was especially attentive to the power of social institutions to influence internal processes and ultimately decision making. He was of the mind that the collective consciousness, in many situations, overrode individual agency and ultimately determined what individuals would and would not do (Schweikard & Hans 2013). His collective consciousness construct described a shared conception of the important values, artifacts, and objectives that comprise the institution, more or less representing a collective intentionality regarding the way things should be (Schweikard & Hans 2013). As opposed to analyzing cost-benefit analyses at the individual

level, Durkheim thought it more prudent to study institutionalized norms, assumptions, and social conventions that inevitably affect the way individuals behave.

The importance of institutional dynamics cannot be overstated from Durkheim's point of view. To him, it was imperative that we acknowledge the social origins of individual thought in order to understand individual behavior (Douglas 1983, 10). As a result of his emphasis on the social group, Durkheim's institutionalism has been criticized for its thin treatment of the role that agency plays in individual behavior (Nee 1998; Scott & Davis 2007). In truth, Durkheim does not deeply delve into the ability of individuals to make autonomous decisions. Yet in hindsight, Durkheim's focus was not to systematically refute choice theory, but more to develop a much needed understanding of the role that institutions play in defining spheres of appropriate behavior, dictating choices, and guiding individual actions.

Similar to Durkheim, Robert K. Merton wrote extensively about group interaction and social dynamics. He was interested in the way groups control membership, the formation of sub-groups, and subsequent between-group exchanges (Merton 1968). Merton examined how social roles and institutional controls regulated the actions and interactions of institutional actors. He found that institutional controls could take a number of different forms from permissions to proscription as a means of directing behavior (Merton 1968, 187).

Merton was also well aware of role that barriers, limits, and controls played in preserving the institutional order and social hierarchy (1968). His work laid the foundation for analyzing institutions through the structures they erect and the processes they foster. Nee (1998) interpreted much of Merton's work as an analysis of institutional structures and their capacity to dictate choice to lower tier participants.

Unlike Durkheim's collective consciousness however, Merton avoided broad generalizing by approaching much of his work with a narrower scope and focus. Merton was aware of the difficulties inherent in trying to construct all-encompassing sociological theory for uniform application in contextually dissimilar areas. Instead, he argued for the development of theories of the middle range to construct empirically testable hypotheses, develop a coherent body of scholarship, and serve as the basis for more generalizable systems research (Merton 1968, 51).

Merton's work is germane to the contributions of Durkheim because it helped established the tools necessary to identify how institutional pressures translate into micro-level processes and outcomes. More specifically, Scott and Davis (2007) credit Merton with setting the stage for the usage of social mechanisms. Social mechanisms can be described as the social instruments, wheelwork, or agency that produces a prescribed social outcome (Hernes 1998, 74). They are the conduit through which institutional forces influence tangible meso and micro-level realities. Merton's work serves two purposes here. First, it functions as a blueprint for the middle range approach to theorizing where concrete, contextualized findings are valued over grand theory building. Secondly, his underpinning of the social mechanism is the essential link between organizational behavior and the pressures exerted by social institutions.

Durkheim held that social institutions were a primary unit of sociology (Schweikard & Hans 2013). He supplied an initial framework to analyze decisions made at the institutional level. Merton's contribution, on the other hand, has been the furnishing of the analytical tools necessary to study exactly how institutional pressures are exerted. By emphasizing intermediate level, context-specific analyses, Merton sought to minimize assumptive reasoning and evolve systems theory through mid-level findings (Merton 1968). It was Merton's contention that

middle range theories helped move us toward solutions to problems by availing the available and empirically tested information that we possess regarding institutions (Merton 1968, 68).

Both Durkheim and Merton laid the groundwork for theory predicated on institutional pressures influencing cognition and ultimately outcomes. They establish the root metaphor that a great deal of contemporary work relies upon. Squarely in line with this tradition is the work of scholars exploring the way that institutions inform decision making by imparting a logic that in some situations is convenient and in others problematic. In *How Institutions Think* (1983), Douglas conducts an in depth analysis of the work of Durkheim and others to synthesize the cognitive pull that institutions can have over individuals. Her work moved institutional theory forward by detailing how entrenched and pervasive institutional thinking can become, and also the outcomes that may result.

Douglas makes the case that institutions frame reality as if it were a natural progression of events rather than purposive maintenance of the status quo (Douglas 1983). She asserts that institutions have the power to make decisions, create solutions, start wars, and lie. Although she does not use the term, Douglas refers to what is functionally an institutional logic. In her view, institutions rouse emotions to a standard pitch endowing certain outcomes with righteousness; they systematically direct individual memory to strategically highlight some events and obscure others (Douglas 1983). From Douglas's perspective, institutions are powerful because they effectively control the way people perceive information, come to conclusions, and ultimately think.

Public administration scholars have described institutions along similar lines. Stemming from the conceptual ambiguity associated with defining institutions, Heclo uses a polythetic approach to distinguish institutions by schools of thought. Among others, he describes one line

of thinking wherein institutions are buttressed by cognitive processes, and calculations are guided by socially constructed patterns of thought regarding appropriateness and consequences (Hecllo 2008, 55). While approaching institutions from a somewhat different perspective, Selznick too acknowledges the presence of mental scripts that govern the way institutional actors approach problems. He makes the analogy that doctrinal orthodoxies regulate social institutions in a manner similar to the way organizational philosophies maintain order in formal organizations (Selznick 1957, 14). Both authors posit that the cognitive school of thought can be instructive when analyzing formal organizations. Moreover, the authors make connections between the cognitive pressures that institutions can exert, the decisions organizations make, and the outcomes that follow.

Other scholars have used this broad conception of institutions as a platform to articulate specifically what institutional logics are and how they operate. March and Olsen (1989) were perhaps the first to formally employ some variation of a logic for institutional analysis. They posited that institutional actors were guided by two complimentary logics: the logic of expected consequences and logic of appropriateness (March & Olsen 1989). To March and Olsen, institutional logics were “ways of seeing or interpreting things,” or similarly ways of knowing (Goldmann 2005, 37). Logics demarcated what actions were acceptable in particular institutional settings while supplying actors with information regarding cause and effect relationships.

This early take on institutional logics makes clear that logics shape the way organizations and individuals interface with obstacles, peers, and symbolic artifacts. However, March and Olsen’s contribution to the logics perspective has come under criticism for its lack of coherence. Goldmann, for example, finds that March and Olsen's two constructs are

undifferentiable, empirically untenable, and take an overly simplistic view of interfacing logics (2005).

Still other scholars embrace the general concept of institutional logics. In her analysis of managerialized law, Edelman refers to rhetorics that import norms and scripts that promulgate throughout organizational fields and impact decision-making processes (Edelman et al. 2001, 1631). Rhetorics are akin to logics in Edelman's analysis but differ in that rhetorics are field specific, whereas logics are not necessarily so. At their most basic level, rhetorics shape organizational actions through rationalization processes (Edelman et al. 2001, 1594). Edelman finds that rhetorics enable managers to attune civil rights legislation to conform to managerial norms by prioritizing and deemphasizing certain objectives.

Ansell considers the role of institutional logics from a pragmatist perspective, in which specific institutions have logics fashioned from past experiences. He views logics as being informed by the major components of institutional learning: conceptualization, contextualization, elaboration, and reflexivity (2011, 31-32). Thus, logics are a product of organizational trial and error employed to maintain performance and stability. Both Edelman and Ansell help to fill gaps in terms of the role and form of institutional logics, but neither explicitly utilize the framework to conduct their analysis or resolve their research puzzle. In contrast to Edelman and Ansell, I plan to utilize institutional logics as the principal theoretical constructs for my analysis. However, in order to avoid the criticisms levied against March and Olsen's work, it is necessary to draw from a more developed and well-articulated framework.

New Institutionalism and the ILP

The ILP is based most notably upon Friedlander and Alford's (1991) seminal article, "Bringing Society Back In: Symbols, Practices, and Institutional Contradictions." Akin to

Durkheim, Friedlander and Alford argue that organizational behavior only makes sense when put in context with the institution and its logic (1991, 250). Friedlander and Alford's specification of dominant institutional logics explaining organizational behavior has been the support for the more fully developed ILP. The ILP draws heavily from New Institutionalism and its focus on social embeddedness, cognition, and symbolic significance in institutional analysis. For Friedlander and Alford, as well as other New Institutional scholars, institutions represent "supraorganizational patterns of activity through which humans conduct their material life...and symbolic systems which categorize activity and infuse it with meaning" (Friedlander & Alford 1991, 232).

New institutionalism came about as a response to more well established institutional approaches. Whereas the locus of institutionalization processes in 'Old' Institutionalism was the organization, New Institutionalism's focus was at the societal level (DiMaggio & Powell 1991, 13). DiMaggio and Powell described New Institutionalism as a more holistic approach to organizational studies that encompassed not only formal structures, but also cultural and cognitive factors (DiMaggio & Powell 1991). In contrast to explicating institutions as functions of rational economic behavior, New Institutional scholars argue that they are more aptly defined as outgrowths of historic trends and sociocultural context. They would argue rationality itself is similarly constructed from these environmental contexts (Hall & Taylor 1996). Thus, New Institutionalism has animated institutional perspectives that seek to understand the way principals, values, and doctrine at the institutional level exert power on institutional actors, and subsequently drive outcomes.

Although the progenitors of New Institutionalism contended that it possessed more explanatory power than the more descriptive approaches of the likes of Selznick and others, it

has been critiqued for failing to clarify the link between institutional processes and individual behavior, and the role that power plays (Hall & Taylor 1996). In semblance to the criticisms levied against Durkheim's work, many still question New Institutionalism's capacity to reconcile the role of individual agency within collectively oriented institutions (Scott & Davis 2007; Greenman 2013). Moreover, some have questioned whether or not New Institutionalism represents a radical change from other approaches. Selznick (1996) in a scholarly appraisal of New Institutionalism, evidenced that older institutional approaches had attended to a number of concerns that New Institutionalism was supposedly fashioned to address. He understood that a failure to recognize the continuities between the two approaches could potentially reinforce what he saw as a false dualism (Selznick 1996).

One approach that addresses some of these concerns is the ILP as developed by Thornton & Ocasio. The ILP is rooted in New Institutionalism and represents a meta-theory beginning with the interinstitutional system, or domain space in which overlapping institutional logics converge to inform organizational actors and subsequently inform decisions. They define institutional logics as "socially constructed, historical patterns of culture, symbols, assumptions, values, beliefs and practices by which individuals and organizations provide meaning to activity, organize time and space, and reproduce experiences" (Thornton et al. 2012, 2). Thus, logics are ubiquitous, fluid, and compelling normative guidelines that enable and constrain behavior (Thornton & Ocasio 2008, 104). Therefore, they are powerful in the way they influence agency by focusing attention and framing problems within broader social and cultural contexts.

The ILP also advances the institutional literature by providing a new take on institutional character and institutional change. Selznick attests that an institution's character is formed through the institutionalization of habits, or tangible ways of approaching problems that reflect

higher order values, interests, and norms (Selznick 1957). What's more, he argues that it is leadership that ultimately builds special values and an organization's distinctive competence to accomplish its primary objectives (Selznick 1957). The logics perspective has a similar take on the formation of an institution's character but differs in its origination point. Even before habits are developed, institutions foster cognitive processes that influence the way the environment is viewed, frame uncertainty, and crystalize intentions. These ways of deciphering the environment, or logics, are the first characteristics of institutions that ILP scholars would look to when attempting to describe an institution's character. Further, the way that leaders interpret the logic, and marshal it in leading their respective organizations would be an equally important component of character. Hence, to ILP scholars the logic and its role in guiding decision-making processes is an appropriate gauge of character because it speaks to the purposes and intentions that motivate behavior (Hall & Taylor 1996).

Regarding institutional change, the ILP conceives change as a function of the ebb and flow of different dominant logics within an institutional field. In their examination of competing logics within Alberta's provincial health care system, Reay and Hinings examine institutional change as the result of the emergence of a new logic (2009). They lay out two alternative paths through which nascent institutional logics can incite change. They describe a situation where conflicting logics create an inherent tension with one eventually supplanting the other, or a less well-established path toward change through collaboration (Reay & Hinings 2009, 632, 633). Additionally, scholars have pointed to the expansion and contraction of institutional logics as precursors to institutional change (Thornton et al. 2012).

For the purposes of this project, the ILP is employed to contextualize and explain decision-making and micro-level outcomes in institutional settings. While there is general

consensus around the notion that institutions regulate behaviors, imbue artifacts with meaning, and affect change, there is much less agreement regarding the ways institutions exert such influence (Hecló 2008). The ILP is used because it supplies the appropriate mechanisms, or conduits through which institutions exert pressure on individual actors, to analyze the access problem at state flagship institutions. As has been done in previous work utilizing the ILP, I rely on the market logic as an ideal type for analytical and descriptive purposes. Through this approach, I hope to not only gain insight into the access problem, but to also advance our understanding of the theoretical mechanisms outlined by the ILP. Below I outline in detail my use of the ILP to analyze the effect of the market logic on access for poor and ethnic-minority students at the state flagship institutions.

The pillars of the ILP are that logics have both material and symbolic significance, they are historically contingent, and that in order to understand the logic within the interinstitutional system researchers must adopt a multi-level approach. The emphasis on both structures and processes as material manifestations of logics, and ideation and meaning as indications of their symbolic significance, couch the ILP squarely in line with New Institutionalism. As DiMaggio & Powell describe it, neoinstitutionalism represents a turn toward cognitive and social explanations encompassing not only formal structures, but also less tangible elements emblematic of thought processes and cultural meaning (1991).

A distillation of the concept of historical contingency is that logics are assumed to be functions of the institutional trends, challenges, opportunities and shocks that precede them. Thornton & Ocasio (1999) probed the higher education publishing industry utilizing longitudinal data to analyze macro-level institutional changes that precipitated the contraction of an editorial mindset and the inculcation of a market logic. They analyzed how the historical changes in the

higher education publishing industry served as a precursor to the installment of a new and dominant logic. They then made connections between the newly institutionalized market logic and the corporatization of higher education publishing companies (Thornton & Ocasio 1999).

Another important assumption of the ILP is that logics operate at multiple levels of analysis (Thornton et al. 2012). That is, macro-level realities and/or logics spur the institutionalization of field-level logics that subsequently affect decisions at the organizational/individual level. A macro-level logic consists of generalizations and common assumptions relevant in any number of institutional settings. Macro-level logics are then interpreted and tailored to situations that only certain organizations within specific institutions wrestle with. At the meso-level, or intermediate level, social and physical boundaries demarcate fields, or industries, that share common identities and confer similar statuses (Thornton & Ocasio 1999, 805). It is at this level that macro-level logics are internalized for implementation at the organizational field level. The micro-level is where decisions and actions engendered by the logic are observable. This is the level where organizational decisions, outputs, and outcomes can be evaluated (Thornton & Ocasio 1999). Thus, research utilizing the ILP usually relies on empirical evidence from different levels of analysis to frame and understand institutional dynamics.

In order to make substantive connections between logics, organizational actions, and material and/or symbolic outcomes, the creators of the framework have developed what they term as ‘micro-foundations,’ or mechanisms that can be instrumented to bridge the gap between theory and observable realizations of institutional logics. They look to social identities, goals, and schemas for this purpose. In line with Merton, the authors see the development of these mechanisms as necessary to contextualize findings and hone analyses (Merton 1968; Thornton et

al. 2012). Social identities are tantamount to group memberships and the authentication of particular social roles (Thornton et al. 2012). What is important is that social identity, as framed by the authors, is intimately intertwined with status verification through competition (Thornton et al. 2012). The social identities of organizations that operate within an institution is important because it creates peer groups by which all other organizations are measured. Analyses of institutional logics will many times encompass social identity as a mechanism because the organization's self-image helps explain institutional conformity and shared conceptions of what is valued.

Organizational goals are the next theoretical mechanism the authors lay out. Goals reflect the institutional logic the organization is guided by. For instance, under a market logic, goals will align with the central premises of a market orientation: unfettered markets, competition, a reliance on market-mechanisms, and short-run economic gain. Uncovering organizational goals is then an important step in my attempt to understand the relationship between actions and institutional logics. Goals are simultaneously embedded in logics as well as indicators of their level of institutionalization (Thornton et al. 2012, 87). Thus, an inventory of organizational goals is an important signifier of the impact that logics have on decision making and ultimately outcomes.

Schemas determine how actors "understand, remember, and act upon complex information by drawing upon highly organized, abstracted general knowledge about how the world operates" (Thornton et al. 2012). Similar to Edelman's rhetorics, schemas can be viewed as prepackaged modes of addressing organizational dilemmas. Inferences, decision rules, and nuanced conclusions can be attributed to schemas that organizations employ. It is important to differentiate schemas from institutional logics since they operate in similar ways. Schemas are

much narrower than logics (Thornton et al. 2012, 88). They are only applicable at the organizational field level and are utilized to address distinct, field-specific problems.

Schemas can be viewed as specialized derivatives of logics that help to process information and steer organizational action (Thornton et al. 2012). Although schemas are undoubtedly a theoretical construct ILP scholars draw upon, they have not been extensively utilized in empirical analysis. In order to understand the institutionalization of logics through the presence of schema, I identify prescribed modes of handling uncertainty and conceptual ambiguity.

The core assumption of the ILP is that “the identities, interests, assumptions, and values of organizations/individuals are embedded within prevailing institutional logics” (Thornton & Ocasio 2008). The mechanisms I have offered represent ways to identify manifestations of institutional logics for the purposes of studying their effects on organizational outcomes. Simply put, the ILP focuses attention on institutional logics, the cognitive and sense-making content they transmit, and the organizational actions they trigger. It is useful for articulating and unpacking the logics that “shape and create the rules of the game” and “the means-ends relationships by which power and status are gained, maintained, and lost in organizations” (Thornton & Ocasio 2008, 112).

The emphasis on sense-making, cognition, and organizational response is particularly well suited to the study of the state flagship institution’s varying commitment to access. It is an effective way of drawing out potential relationships that exist between broad market trends, the market logic in higher education, and poor and ethnic-minority student participation at large public research universities. As state universities attempt to make sense of the changing

economics of public higher education, they concurrently inform and employ a logic that aligns with their reading of the important cause and effect relationships constructing their institutional environment. Through this recursive process, the logic becomes a dominant mode of thinking about and addressing institutional concerns. Moreover, the logic operates as a sorting mechanism by elevating some matters while deemphasizing others. Through an analysis of the state flagship institution's dominant logic, its commitment to access can be better understood.

A failure to account for institutional logics neglects the need to contextualize organizational practices and explore the motivations supporting organizational decisions. The assumption here is that it is higher education's dominant institutional logic that will dictate how access is supported in policy and practice. By recognizing the importance of institutional antecedents, social factors, and environmental pressures, the ILP supports a more holistic understanding of the way universities operate and the actions they take. Summarizing its application for the purposes of my research, the ILP is a vehicle for testing what I hypothesize to be the hollowing out of the state-centered university in favor of the streamlined, consumer-driven, corporate university model.

My use of the ILP for the study of the public higher education system is an opportunity to not only address my research question, but also to further develop the theoretical framework for future empirical work. The theoretical mechanisms that I rely upon have all been developed to some extent by scholars employing the ILP, albeit with some more developed than others. However, this project presents a unique opportunity to employ those mechanisms in a way that expands the applicability of the ILP in institutional analysis. The narrow focus on state flagship institutions and poor and ethnic-minority students is purposive. As stated, by restricting the

analysis to a particular field with a focus on a unique sub-group, I hope to develop middle range theory that can enhance our working knowledge of the public higher education system.

Market Logic and the Public Higher Education System

As stated, macro-level logics consist of general conventions to be applied to multiple institutional settings. The market logic in higher education reflects one such case where a high-order logic has been tailored for use in a particular field. Generally speaking, market logic has come to represent an unrelenting focus on increasing short-term profits or revenues, sustaining a competitive advantage over self-identified peers, and ensuring the long-run financial stability of the organization. Douglass (1983) refers to a market rationality characterized by means-ends reasoning, bureaucratic rationality, and a propensity for routinization when characterizing the way markets influence cognition (93). Others associate the market logic with capital flow continuously to the areas of maximal return, competition, privatization, and information summarized through price (Collins 1980).

These tenets are currently being adapted for implementation in the public higher education system. Embedded in the turn toward privatization is the implicit assumption that education is a consumer good providing a quid pro quo for students and institutions alike (Hofstadter 1952). The assumption has become so pervasive that many students, faculty, and administrators have unwittingly accepted the conceptualization that, at its core, higher education is an industry that consists of disinterested parties engaging in an economic exchange relationship. Here is where we see the tailoring of the market logic for special use in public higher education. This market-based view of higher education and its inherent value is significant because it has reframed the way many view the higher education system. Even more,

this logic ignores questions that pertain to the system's obligation to provide access for specific student populations.

A vast literature establishes that the market logic is thoroughly entrenched at the large public research universities (Gumport 2000; Morphey & Eckel 2009; Newfield 2010; Mettler 2014). Increased total revenues, efficiency through bureaucratization, and return on investment are all objectives that resonate in administrative circles at the largest public institutions (Engell & Dangerfield 2005). This is seen partly as a result of recent demographic, political, and institutional shifts. Yet, this more resolute commitment to the market-based model is rarely evaluated in light of both its merits and shortcomings.

Many times, the logic and its consequences are discussed in a way so as not to shake our faith in the public university's commitment to the public good. The impetus to forge partnerships with the private sector, gain autonomy from the state, and cultivate and raise additional revenues is framed around the idea that these are necessary steps in order for the university to stay relevant in the twenty-first century. Few would contest the fact that these initiatives play a role in the modernization of the American public research university; however, many would acknowledge that the consequences of such actions are given little or no attention, especially in administrative circles. This uncritical acceptance of the market model has made it increasingly difficult to have conversations about its inherent value, or to question its benefits for certain student populations. Rather, privatization in higher education has been widely framed as a cure-all for the gamut of challenges that universities currently face.

This insulation from formal criticism is indicative of an institutionalized logic. Durkheim again provides powerful insight into the ability of institutions to mobilize resistance to ideas or alternative logics that conflict with the dominant mode of thinking. He researched the way

totems were sacralized through religion eventually becoming immune to change. Since they were the basis of unifying group norms and mores, they became permanently fixed, or set apart and forbidden from any form of regular appraisal (Jones 1986). This idea partly explains the reason why the market logic is so widely accepted in light of its implications for poor and ethnic-minority student access; this is because the market logic has become a permanent fixture in the public higher education system whereby alternative approaches to administering the university are decried as impractical, unworkable, and wholly ideological.

The reluctance to objectively assess the market logic's impact on higher education has serious ramifications for the system's ability to increase student access. It plays a direct role in the figurative disconnect between decreasing access and the culpability of universities in reproducing and perpetuating inaccessibility. This is because the market logic is many times rationalized as *the* way to deal with factors outside the control of individual institutions. The lack of access for poor and ethnic-minority students is therefore seen as a necessary, albeit regrettable, byproduct. However, framing the problem in this way gives little credence to 1) the consequences that such an approach has on marginalized communities, 2) the implications it has for the future economic standing of the entire nation, and 3) the ability of universities to enact policies that address organizational pressures while also increasing access.

Friedlander & Alford describe the logic of the market as a way of thinking that is "not simply an allocative mechanism but also an institutionally specific cultural system for generating and measuring value" (1991, 234). In instances where the market logic resonates, it informs all aspects of institutional life. Just as the market logic is employed when making pecuniary decisions, it is similarly invoked in the valuations of non-pecuniary programs, initiatives, or commitments. This is how logics manifest themselves in perceptions, evaluations and outcomes.

Additionally, this is how access to higher education is potentially crippled by a logic ill equipped to measure its worth.

This is precisely what makes institutionalized logics inescapable. In the case of the market logic, its influence is not constrained to issues of the market. For this reason, the logic has direct implications for the way issues of access are engaged and addressed.⁸ The nature of the market is commonly used to justify the fact that less fortunate segments of society are excluded from higher education, and that this is merely the effect of market forces at work (Jost & Kay 2010). Thus, it is not only the static components of resource accrual and competition that make the market logic powerful, but also its self-legitimizing effect on the status quo. In order to understand the extent to which this particular institutional logic affects educational access, I document how the market logic has been translated into organizational behaviors through social mechanisms and later reified in formal and informal policy. Applying the ILP, I argue that the market logic is the impetus behind higher education policies and practices that increase reliance on the market while concurrently limiting access for poor and ethnic-minority students.

Utilizing the ILP, I will bring to light the historical contingency of the market logic in higher education, unpack the social identity that public research universities have assumed, and lay out the goals and schema that regularly motivate and guide organizational behavior. Linkages between the logic, the structures and processes they propagate, and their effects on educational access for poor and ethnic-minority students are explored. Examples of the material as well as symbolic significance of institutional logics are also offered and examined.

⁸ Again, the intent is not to frame the market logic as deterministic, or necessarily detrimental to access, but to understand its impact, if any, on educational access for poor and ethnic-minority students.

To begin, it is important to demarcate the boundaries of the research project. While I incorporate institutional elements operating at different levels of analysis, the focus of the research is at the meso level. More specifically, I primarily focus on the impact of the market logic within a particular organizational field. DiMaggio & Powell assert that organizational fields “constitute recognized areas of institutional life” comprised of four essential components: interaction among members, sharply defined structures, increased information, and the mutual awareness of participants (1991, 65). The American public higher education system is a stereotypical organizational field because public research universities regularly interact, are similarly structured, generate and dispense large amounts of organizational information, and commonly identify peers. I focus on the flagship institutions because it is at these institutional types that poor and ethnic-minority students seem to encounter the most severe and entrenched barriers to access. Although community colleges, HBCUs, tribal colleges, and vocational schools are equally important actors within the public higher education system, they are outside of the scope of this project.

In their analysis of higher education publishing firms, Thornton & Ocasio (1999) state that the industry classification in particular is a useful descriptor for identifying organizational fields because industry producers develop common identities and valuation orders based on social comparisons and status competitions. Here the industry categorization is a special signifier of the organizational field connoting a market orientation. Furthermore, the industry designation has been used by other scholars in their analysis of the public higher education system. More scholars are beginning to view the public research university as a quasi-corporate entity operating within the bounds of supply and demand (Gumport 2000).

This industry classification accurately characterizes the way that large flagship universities now perceive, approach, and navigate different aspects of the institutional environment. It is also an informative categorization when analyzing the diminished role and relevance of educational access at flagship institutions. By extension, the industry level is commensurate with the meso-level of analysis. It is at this level of analysis that social identities, goals, and schema will be evaluated as manifestations of a market logic. Historical trends that have given rise to the industry-specific market logic represent the main macro-level component of the analysis. The consequences of policies and practices engendered by the market logic for poor and ethnic-minority students represent the micro-level of analysis and in tandem a multi-level analytical approach.

Historical Contingency and an Era of Elite Education

The application of market logic is not a new approach to higher education administration. Since the American public higher education system began taking form in the late 1800's, some variation of a market logic has been in existence to account for and secure the financial interests of the university. Early manifestations of the market logic have laid the groundwork for a more sophisticated logic, one whose effect on student access is more complex than in years prior. Analyzing early variations of the market logic contextualize its current form and illustrate its progression as a legitimated framework for addressing institutional problems.

A variation of the market logic was evident in institutional structures during the era of elite education (roughly the late 1800s to the 1940s). Wealth and affluence were prerequisites for enrollment in the vast majority of universities across the United States (Cohen 1998, 117). Apart from color, wealth was the most critical factor dictating whether or not the pursuit of higher education was a realistic aspiration. Interestingly, the exclusion of disenfranchised and

oppressed groups was rationalized through the lens of social Darwinism and the market. A prevailing thought in elite circles was that ethnic and class-based disparities simply reflected innate deficiencies. From this vantage point, elite education only reflected the inability of lower classes to compete evidenced through a market where the capable thrive and the ill-equipped flounder (Muhammad 2010).

The gross and audacious inequality that defined this era was visibly present in the de facto marginalization of poor whites and direct oppression of ethnic-minorities. The notion that education was a resource that only the few were worthy of was sharply reflected in institutes of higher education. Universities were effectively marked off from most of society by overt and relatively impermeable barriers established to exclude individuals of a lower class or lesser stock (Trow 1973, 11). The market logic of the time rationalized and reinforced many of these prevailing assumptions. And while this era was associated with the rise of the elite private institution, the market logic, and its partialities regarding deservingness, ability, and participation influenced an inchoate public higher education system as well.

With the leading universities catering to the elite class, they by default became training centers for the eventual leaders of business and industry (Rudolph 1962). Accordingly, interested parties from the private sector were able to align themselves with and eventually control universities. Dominant figures from the business sector were able to govern the university through what became an inherently political process (Trow 1973). As leaders of industry, they deemed it appropriate to approach the work of the university with a similar mindset. Critics generally failed to challenge overt racism criminalizing access for ethnic-minorities, but they did document the role and influence of business and monetary interests in

higher education. Their bearing witness to the logic of the market at that time establishes important connections between the market logic then and now.

Thorstein Veblen viewed the corporatization of the university as an impending threat to higher education because it stripped institutions of traditional values and conflicted with long-held conventions. In close semblance to the ILP, Veblen attributed what he saw as a new logical orientation in higher education to macro-trends in society at large. One such trend was the progressive era's secular movement resulting in a shift away from faith-based centers of power. His theory was that the transition from university leadership controlled by the clergy to one dominated by secular entities helped to incubate a market orientation in higher education (Veblen 1918). To Veblen, this was a point of punctuation in which business leaders were able to fill the void left by an absent clergy.

Veblen thought that the entangling of business and academic interests put the university in a precarious situation. He observes a higher education system becoming progressively more attuned to a logic of the market:

“Of course, the standards, ideals, principles and procedure of business traffic enter into the scheme of university policy in other relations also, as has already appeared and as will be shown more at large presently... The common run of business concerns are occupied with industrial enterprise of some kind, and with transactions in credit, - with a running sequence of bargains from which the gains of the concern accrue, - and it is upon these gains that attention and effort centers” (Veblen 1918, 138)

Veblen's words are poignant because of their relevance to the present. He took aim at the direction of the university because of its apparent drift in a direction away from the values it was founded on. Veblen was not alone in his assessment of the changing nature of public higher

education. John Jay Chapman described the turn of events as an infiltration of businesslike attitudes while John Dewey staunchly opposed what he saw as a prevailing atmosphere of money and money-getting (Lucas 2006). Upton Sinclair in 1923, and Robert Hutchins, the former president of the University of Chicago, in 1936, similarly voiced their apprehension about the role of money and direction of the American university (Cohen 1998).

However, Veblen, as perhaps the most outspoken critic, summarized their trepidations with his characterization of the situation as the university being reduced to an enterprise that managed teaching and research in accordance with the principles of pecuniary gain and business organization (Veblen 1918). Higher education was at this time a training ground for the elite class rather than a stepping stone for the poor and working poor. Universities were purposed to support the interests of a small contingent of society with little regard for those that were excluded.

In this way the market logic in higher education at the turn of the twentieth century is akin to the market logic of today. Similar to today, the market logic was expanding. The then new reliance on business practices and businessmen was viewed as a major institutional shift. Many observers perceived the market logic as a threat to the university ideal. Many did not, however, make the critical link between the logic of the market and limits on access. They were concerned with the ability of the university to maintain its identity as the ivory tower, or center of learning where the attainment of knowledge was the ultimate end. Regardless, even at the turn of the century, people were alerted to the pervasive business ethic seeping into higher education.

What we must also remember is that the market logic was a way for higher education administrators to make sense of their institutional surroundings. Even at this time, the prominent

institutions of higher education were beholden to wealthy donors whose funds sustained university operations (Clark 1970). The logic was thus attuned to the finance structure of the organization. Furthermore, in the era of elite education the logic not only incorporated the university's financial interests, but also its biases. Since the logic was a reflection of society writ large, it was ensnared with racism, elitism and nepotism. Therefore, even in this early stage of development, the market logic had an effect on student access. It was a critical factor in rationalizing who could and could not take advantage of university training. Looking forward, I argue that the market logic in higher education still generally has a limiting effect on student access, even though it has evolved in step with public opinion regarding the function of the public higher education system, race, and merit.

Open Access and the Public University

The era of elite education tapered off with the rise of populism and the call for more accessible higher education. If the market logic in higher education was expanding during the era of elite education, it was contracting during the period of mass higher education. Thornton, Ocasio, and Lounsbury describe contraction as a weakening, or shrinking in scope, of an institutional logic (2012, 167-168). Whereas the market logic's emphasis is market equilibrium, business management principles, and competition, the era of mass higher education was distinguished by expanded access and a commitment to the collective good. This turn represented a competing logic that ushered in a new approach to university administration differing in substance from the market logic.

The transition from elite education to mass higher education took place from the mid-1940s to the mid-to-late 1970s. In what could be described as a repudiation of the era of elite education, public institutions evolved by adopting what can be described as a community

oriented value system. During this period, social equality through educational access was codified in national higher education policy and evident in exponential enrollment growth at state institutions. A central idea permeating through the system was that academic institutions had an obligation to solve community problems in public health, poverty, and housing by means of research, extension, and continuing education (Lucas 2006, 254).

The stark difference between the market logic and this more socially grounded logic can partly be explained by broad social and political trends unfolding during the time period.

The U.S. Government's expanded role was one formative influence that "shaped both the character and the direction or thrust of much of that growth" (Lucas 2006). The Civil Rights Act of 1965 also brought issues of access, equality, and social justice to the forefront of the public agenda. The passing of the G.I. Bill represented a reinvigorated commitment to universal access. These initiatives together effectively put higher education within the reach of more Americans than had ever had an opportunity in the past.

What is also known is that the era of mass higher education coincided with a time in American history when education was generously funded. Trow (1973, 4) points out that higher education's increasing reliance on the state was precipitated by the exponential increase in college enrollments. To support the influx of new students, universities needed more funds. Henceforth, it was not only the social and political rhetoric that played a role in the contraction of the market logic, but it was also the state support that made the open access logic feasible. This too, is an important point of deviation from the era of elite education to the era of mass education.

If the Federal government lacked the funds to subsidize higher education, the new logic would have been deemed impractical. The timing of social and political movements along with

the favorable financial environment created an institutional landscape conducive to the open access logic. In the end, the open access logic was employed because it was situationally relevant and aided administrators in their navigation of the institutional environment.

In analyzing the transition from elite education to mass higher education, it is important to understand the social, political, and economic shifts that propelled each to prominence. Environmental forces played a critical role in the institutionalization of both logics. It is also important to note that during the era of mass higher education the market logic simply faded; it did not disappear. With increased demand for higher education, universities still relied on principles of efficiency, bureaucratization, and responsible financial management in order to appropriately deal with more students (Meek 2000). In this light, we can see how the market logic was still employed, though in a different capacity than in the past. Looking to the present, the contemporary market logic in higher education illustrates how different components of the market logic have either stayed relatively consistent or been adapted to fit the times.

Market Logic and a Resurgence of Elite Education

With the passage of California's proposition 13 in 1978, a pronounced shift in the political and socioeconomic outlook of the country was figuratively initiated. Between 1978 and 1980, 38 states took up the issue of local taxation reduction with a large proportion of initiatives being codified into law (Lowery & Sigelman 1981). While the political strategy to engender sufficient popular support for the national tax revolt is outside the scope of this project, its effects there forward have had direct implications for not only higher education funding, but also the way public subsidization of higher education is widely viewed.

Principally, the national tax revolt severely reduced the amount of funding that universities received from the state and federal government (Winston 1999; Archibald &

Feldman 2008). This was an era in which unfettered political support for federal student aid would come to an abrupt end through the course of the Reagan presidency (Heller & Rogers 2006). What we also saw during this period was state institutions searching for ways to replace lost revenues or cultivate rainy day funds in anticipation of future financial hardships. With the financial well-being of the organization threatened by broader economic and political shifts, higher education administrators were hard-pressed to devise new solutions.

To a larger extent than in the past, financial hurdles dominated the higher education landscape. Undeniably, the divestiture of state legislatures forced the hand of public colleges and universities with regard to cutting costs and increasing revenues. Just as the conditions were ripe for an open access logic during the era of mass higher education, conditions have been equally, if not more conducive to the reemergence of the market logic as the dominant mode of approaching higher education administration. It has also brought to bear important questions surrounding the market logics correlation and potentially causal relationship with decreased student access.

When we evaluate the rise of the logic in conjunction with the external financial pressures affecting state colleges and universities, it is apparent that increased organizational reliance on the market logic has coincided with the intensification of external financial pressures. This is one indication of the historical contingency of logics; or the notion that institutional logics are shaped by external economic and social realities that precede them (Thornton & Ocasio 2002).

To understand the contemporary market logic, decreased government appropriations for higher education must be a point of emphasis. Increasing K-12 education costs, the exponential rise of health care costs, and the near doubling of corrections spending have all increased the

scarcity of valuable resources that were previously set aside for higher education (Lovell 2000, 112; Okunade 2004; McLendon & Mokher 2009, 9; Eckel & Morpew 2009, 181). While public funding has increased in real dollars over the last two decades, a more telling figure is the percentage of total costs subsidized by state governments. In the twenty year period from 1975 to 1995, the share of Education and General Funds subsidized by the state fell eight percentage points, failing to keep pace with the rising cost of educating students at public institutions (Toutkoushian 2009).

Dwindling state funds represent macro-level institutional realities with direct implications for student access. The reduction in state subsidies over time has motivated universities to comprehensively adjust their funding model. As public research universities have come to grips with the permanence of financial constraint, students have become more accustomed to, and schools more comfortable with, generating revenues through tuition and fee increases. With the net price at public four-year institutions growing by about 32% during the 2000s (after controlling for inflation), education costs have far outpaced the rising costs of virtually all other consumer goods and services (Bowen, Chingos, & McPherson 2009, 151). This has been rationalized as required to “compensate for reductions in state support” (Ehrenburg 2012, 193).

Ostensibly, the focus on increasing revenues indicates that the market logic has been thoroughly institutionalized at state flagship institutions. Shifting the financial burden to students and their families is now an accepted practice of public universities. Furthermore, during financially stable periods the defunding of higher education has seemed to persist. Between 2001 and 2005, state funding per student decreased approximately 20%, representing a 20-year low in state level funding per FTE (McLendon & Mokher 2009, 12). Universities have responded by further emphasizing the role and importance of markets, market competition, and

market mechanisms. We see this as universities continue to look to tuition and fees as the preferred way to fund any number of projects ranging from new construction to technological improvements (Moxley 2014). This differs markedly from a previous era where in times of financial stability, state government sought to reaffirm their support for public higher education.

This is why historical contexts are so important when attempting to make sense of institutional logics. Environmental factors during a return to an era of elite education in the late 20th century played a key role in institutionalizing what has become the dominant logic of today. That period along with those that followed also lent support to the notion that logics are not static in nature. Changes in the social, political and economic environment fueled changes in the institutional logic and subsequently the way student access was viewed and supported.

Now, instead of overtly discriminating against racial minorities and poor whites as had been the case in the past, those groups are functionally excluded through tacit institutional means. This only strengthens the presumption that the market logic and student access are in ways interrelated. During times of its expansion, the market logic has coincided with the exclusion of the poor and others deemed unworthy, alluding to an inverse relationship with student access. Yet, it is critical that current trends in student access not be viewed as unavoidable, or inevitable. While economic factors have played an important role in the resurgence of the market logic, gains in social and institutional awareness have equally alerted us to the effects of systemic educational disparities. Both of these realities will shape the institutional response to the access problem.

To truly understand the depth of the relationship between the market logic and student access, it is essential to analyze its antecedents along with the contemporary institutional environment. Moving forward, macroeconomic forces will not solely determine the path and

progression of the dominant logic, but also our social and political legacy. Historical trends have played an important role in firmly entrenching institutional mindsets, but current trends are carving out the future. Identifying and studying a sample of the myriad environmental forces currently at work will provide further insights into the evolution of the market logic and foretell the future of educational access at the American public research university.

Social Status and Interorganizational Competition

Social status, competition, and the market logic are interrelated fixtures within the public higher education system. The ‘flagship’ classification itself represents an informal signification of social identity and status. It is a fair assessment that higher education is a field inundated with institutional classifications that confer social status. The Tier I institutions, the Ivy League, the Public Ivies, access colleges, teaching colleges, and emerging research universities are all labels that convey very specific messages regarding academic quality, the profile of prospective students, and access. Schools are more than aware of the importance of these classifications and they perpetuate them by vying for weightier statuses through direct competition with one another.

The competition bred through intense positioning for social status has consequently been formalized in public policy (Hamilton 2010).⁹ Now schools compete directly with another to tip the prestige scale in their favor. With status viewed by many as a zero-sum game, where the gains of one university come at the expense of another (Brewer et al. 2001; Cutright 2003), it is not an overreach to associate interorganizational competition over social status with the market

⁹ Texas House Bill 51 is an example of legislation passed that effectively pits universities against one another for increased financial support from the state.
<http://www.theccb.state.tx.us/reports/PDF/1842.PDF?CFID=16347087&CFTOKEN=41335193>

logic. Linkages become more evident when we understand the direct and indirect benefits that schools enjoy as a result of elevated social statuses.

Status competition intersects with the economic well-being of the university in a number of ways. For one, universities that are successful in achieving prestigious statuses are able to far outpace peer institutions financially. This is precisely the reason why some scholars see the emphasis on status, and prestige more specifically, as a function of privatization in higher education (Stater 2009, 137). As long as a university's status positively correlates with increased alumni giving, asking price, and governmental support, cultivating an advantageous social status will align with the business ethic in higher education.

Status competition between universities has also resulted in public universities placing more emphasis on strategic planning and sustaining a competitive advantage to insulate themselves from external threats. This trend shows few signs of disruption because bolstering social status is many times motivated by the desire to strengthen market position (Winston 1999, 27). This behavior on the part of universities only reaffirms a market logic. It also illustrates the interlocking nature of status, competition, and the market logic in higher education. As will be discussed, the universities' unrelenting pursuit of prestige has created a cycle wherein competition over prestige intensifies, market principles are applied to outpace peers, and concerns over access for poor and ethnic-minority students are supplanted (Marginson 2006, 5).

The Prestige Game

Universities attempt to solidify their social status through the pursuit of prestige. Prestige is the reputational bearing of the university relative to other institutions of higher education. Prestige is a multidimensional construct because it encompasses selectivity, branding, athletic success, and social status gained through attendance. Luring highly qualified students,

increasing research expenditures, offering more amenities, and raising admissions standards represent components of a common continuum that universities continually try to optimize (James 1990, 81). By submitting their institutional data to the likes of *U.S. News and World Report* and *The Princeton Review*, universities directly compete with each other for top 25, top 50, and top 100 statuses. Institutions invest considerable funds and man-hours toward raising their standing in areas that will help them climb up these rating systems (Engell & Dangerfield 2005).

Current research provides compelling evidence linking college ratings to more favorable admissions, enrollment, and pricing scenarios at private institutions (Monk & Ehrenberg 1999). Findings cannot be generalized to public higher education, but they do support the general assumption that rankings fuel direct competition between colleges and universities. This competition over prestige is regularly articulated in market terms with rating institutions viewing universities as firms that market to students and respond to consumer demand (Podolsky 2014). Increased application rates, sticker prices, and donations that stem from improved rankings are all expected to bolster prestige and strengthen the financial standing of the institution. From this perspective we can see how the market logic helps universities cultivate prestige by emphasizing interorganizational competition as the appropriate attainment method.

Ehrenberg has looked specifically at the question of whether rankings like the ones published by *U.S. New & World Report* are actually good measures of academic quality. He found that schools more than likely tailor their offerings so as to maximize their prestige in the eyes of *Barron's*, *The Princeton Review*, and *Peterson's*, for example (Ehrenberg 2005). Ehrenberg also found that the mobility of students has made these rankings increasingly important. This is because these surveys are viewed as a way to outmaneuver peers in the

competition over affluent, well-prepared students. Here Ehrenberg seems to be alluding to the way that schools conceptualize the role and importance of rankings in higher education. Rather than simply guides for prospective students to make sound attendance decisions, these rankings have come to represent a way in which schools can increase their market share in the academic arms race. Ultimately, this way of viewing these rankings only exacerbate an already intensely competitive environment (Ehrenberg 2005).

Prestige is often conflated with selectivity. Student selectivity is an integral component of university prestige (James 1990, 83). In the *U.S. News & World Report* survey, selectivity is an important ranking category commonly measured by acceptance rates, the percentage of first time in college freshman in the top 10% of their high school class, and standardized test scores (U.S. News & World Report 2014). In some respects selectivity operates as a benefit to both the student and the university. Students gain from on-campus synergy created by a highly prepared cohort; on the other hand, universities are able to credit themselves for fostering a rigorous academic environment. Highly selective institutions are endowed with the informal yet powerful mark of prestige, and all the benefits that accompany it.

The idea of a highly selective public university must be scrutinized, however, because it potentially conflicts with the public higher education system's formal charge of supporting access. If access is an important aspiration, it is necessary to question whether or not becoming highly selective inhibits the university in its ability to serve underrepresented groups (Mettler 2014). Selectivity is problematic because it incentivizes exclusion and elitism at the top universities. It is undoubtedly poor and ethnic-minority students not afforded a quality K-12 education who will be disproportionately affected (Rodriguez 2013). And because selectivity

equates to higher asking prices, poor students who are otherwise qualified for admission are in danger of rejection simply because they do not have the funds to attend (Jaschik 2013).

When public universities compete on this continuum, it negates any incentive to recruit students from underrepresented backgrounds who might not have the same academic preparation as more affluent students. Since wealthier students are retained, matriculate, and graduate at higher rates than their underrepresented counterparts, universities are able to realize greater reputational and financial gain by admitting them. This seemingly undercuts the public university's obligation to provide accessible education to residents of the state regardless of racial or socioeconomic background (Ehrenberg 2005). However as noted, selectivity has its own distinct benefits. It is intertwined with prestige and therefore the financial well-being of the university. Both are complimentary aspirations with a great deal of symbolic significance, but pursuing both has ramifications for access.

Newfield points out the apparent hypocrisy of the public research university so vigorously pursuing prestige through selectivity, observing that it is "bizarre that our country's sense of [educational] quality depends on our power of rejection, when in fact quality depends on our power to inculcate skill, knowledge, and craft development across the full extent of society" (2010, 622). Newfield makes a strong argument in light of the fact that selectivity and prestige are only tangentially related to the core mission of public colleges and universities. At its inception, the American public higher education system was created to support the poor and working class segments of society in their pursuit of practically oriented skills sets (Rudolph 1962; Cohen 2008). Moreover, the public university represented a rejection of the system of elite higher education where only the wealthy could participate. Universities and their core constituencies have undeniably expanded since the passing of the first and second Morrill Acts,

but the pursuit of prestige and selectivity seems to be at odds with the push for socioeconomic and racial diversification at the top universities.

The fact that universities compete along the lines of rankings, selectivity, and ultimately prestige evidences an institutional conformity to market-based principles. The underlying motivation behind competing for both is largely financial. In order to increase revenues, schools are forced to compete in the 'prestige' game. This is one way that the pursuit of selectivity, and prestige more broadly, underpin the logic of the market and illustrate the importance of symbolism from an institutional perspective. Even more, the logic has now become thoroughly institutionalized by the way that universities compete in order to gain social footing, maintain relevance, and secure revenue streams. From a business standpoint, this type of competition has become a critical part of university administration.

A New Level of Competition

The advancement of new competitors striving to acquire market share is a case in point. Their introduction into the higher education system has only raised the stakes for the flagship institutions. The profit potential of higher education has motivated the private sector to try its hand at offering postsecondary training. Technological innovations have not only opened new doors for educational possibilities, but also have rapidly escalated the level of competition between institutions. Public research universities still have to compete with each other and private institutions, but now must account for the influx of new industry participants encroaching on their perceived market share in what now can be considered a hypercompetitive environment.

The push toward privatization has made higher education a very attractive industry to private firms. At present, there are myriad new participants that represent potential threats to the economic standing of public institutions: virtual universities, foreign colleges and universities,

for-profit colleges, publishers, television companies, training firms, grassroots organizations, and now free education, i.e., the Khan Academy (Levine 2001, 145; Scott 2004, 99). While these participants are still in their nascent stages of development, they are catching up to the more traditional institutions quickly. Now “the most aggressive and creative actor in higher education is the private sector, or business community” because it sees “higher education as a very lucrative and poorly run industry” (Levine 2001, 142).

This perception of poor management comes at least partly from the fact that “higher education has been one of the few industries in which competition has actually raised both costs and prices” (Levine 2001, 147). These organizations feel that flexible scheduling, specialized curriculum, technological accessibility, and organizational autonomy will help them gain a foothold in a market historically dominated by more traditional institutions. As businesses progress in the field, public universities fall under more pressure to cement their status as the leaders of innovation and educational delivery in higher education. The results are policies that home in on strategic marketing, resource acquisition, and attracting affluent clientele.

The introduction of new competitors to the field does not necessarily have to be viewed as a detriment to access. From a market perspective, we might expect that an increased number of postsecondary providers would have a positive impact on student access by providing underserved students with more educational possibilities. Unfortunately, research has not shown this to be the case. Mettler actually has found that the for-profit institutions employ predatory tactics by targeting and overcharging underrepresented student for inflexible and many times low quality educational offerings (2014). Rather than supporting choice, it seems that competition has resulted in the stratification of schools into the haves and have-nots with poor and ethnic-minority students overwhelmingly attending the latter (Aud et al. 2010). From this vantage

point, the public research university's desire to obtain an elevated social status, as well as the way it attempts to achieve this objective reinforces the market logic and amplifies its effects on access.

At the center of this competition between universities are prospective students. The impetus to become more selective, climb national rankings, and outflank peers now extends to the way that schools view and distribute student financial aid. In their attempts to verify their respective identities as selective, prestigious, and/or flagship institutions, universities compete for highly valued students by way of merit aid awarded and other institutionally accepted measures of excellence (Ehrenberg 2005). This is in spite of the importance of offering need-based aid to support student access. As competition over what are considered 'top tier' students becomes more a part of the institutional environment, basing aid decisions on academic background and ability to pay are becoming increasingly important determinants of college entry at many schools.

Universities propagate the market logic through their attempts to entice only certain segments of the prospective student population through merit awards. The steady pivot from need-based to merit aid is indicative of an institutional shift in the way student financial aid is awarded (Tierney & Venegas 2009; Toutkoushian & Shafiq 2010). Many argue that merit-based aid is simply a way to award students for hard work and academic achievement, but it is important to understand that merit-based aid goes primarily to financially able students that will most likely attend a college or university regardless of the aid award (Eckel & Morpew 2009, 181). Subsequently, merit aid is functioning more as a marketing tool for prestigious universities to attract students rather than a subsidy to help students pay for the rising cost of college.

The emphasis on merit as opposed to need is an important issue because of its intersection with college affordability. Lewin supports the case that the lack of affordability at public research universities is directly attributable to universities' captivation with outpacing peer institutions. In addition to merit aid, he observes universities becoming mesmerized with "more social programs, more athletics, more training facilities, more food courts, and higher sustainability" [compared to peer institutions] in an attempt to attract rather than educate students (Lewin 2009, 49).

Lewin's analysis artfully draws out the incongruence between the market logic and many of the ideals the public research university was founded upon. As opposed to the ultimate end of public research universities being to master the art of educating students so they may have the tools necessary to thrive, Lewin argues that they are more concerned with the image and incentives they convey to consumers. The ongoing reconstitution of the student financial aid framework is an important byproduct of market competition in higher education. As need-based aid is scaled back in favor of merit aid awards, poor and ethnic-minority students will only encounter more difficulty and increased barriers to access at the top public colleges and universities (Brock 2010).

Merit aid is not the only new point of emphasis stemming from the marketization of higher education. Research expenditures have also come to represent another continuum on which schools compete for heightened social status. Since the 1970's, research expenditures have gained importance as distinguishing parts of the university's character as well as a vital component of their perceived prestige (Dundar & Lewis 1998). National rankings, other institutions in higher education, and governmental entities use university research expenditures

as proxy measures of academic quality and research output.¹⁰ They are also regularly used as an indirect measure of the university's commitment to (and innovation in) the STEM fields (Kaplan 2009, 112). Research expenditures continue to be highly influential because they are equated with an institution's general research prowess. Yet, there is sufficient evidence to question whether research expenditures are a suitable metric.

Research Spending and Legitimacy

Research spending is not a direct indication of technological innovation or high quality output. At many universities, a proportion of research expenditures is utilized to purchase highly specialized machinery and equipment. Thus, some argue that many universities are getting favorable ratings not based upon their outputs, such as scholarly publications or productive graduates, but more simply upon their ability to secure and spend grant funding. Some scholars argue that without accounting for departmental size and composition, institutional type, discipline, and teaching responsibilities, measuring research productivity through research expenditures is an exercise in futility (Dundar & Lewis 1998).

Secondly, increasing research expenditures has shown to have an inverse relationship with college affordability and access. Losco and Fife found that the increasing emphasis on research sets off a chain reaction that drives up costs, redirects funds away from instruction, and subsequently makes college less affordable (2000, 68, 74). Perhaps most disturbing are the findings of Webber and Ehrenburg, whose analysis indicated that "higher levels of budgeted research expenditures per student appear to be associated with lower graduation rates" (2009,

¹⁰ See the NSF national rankings in research expenditures.
<https://ncesdata.nsf.gov/profiles/site;jsessionid=E88410993AB8C8412CA7C34F234AF7F4?method=rankingBySource&ds=herd>

956). With schools claiming that increased research spending represents a net benefit, the appropriate follow-up question is “for whom?”

This question is not without regard for the fact that public research universities have a vested interest in increasing research productivity; it is a central component of their mission. Diligently working toward increased research output bestows legitimacy, prestige, and consequently the benefits of both on the university. High quality research may also produce positive spillover effects for the university’s immediate constituency, region, and also at the national level (Lowry 2009, 38). This is undoubtedly a part of the public university’s rationale for emphasizing the importance of research spending and productivity.

Seen through the lens of the ILP, universities elevating their status in this way (through increasing research spending and ultimately prestige) is a field-specific example of a recurrent theme in institutional theory. To adapt to their social environment, organizations regularly mimic one another in conformity to institutionally acceptable behaviors that confer legitimacy (DiMaggio & Powell 1991). Schools are obliged to emphasize research expenditures because they have become a fundamental part of the institutional identity of the public research university. Now, university leaders challenge university communities to emphasize research not necessarily to learn or to innovate, but simply to climb institutional research rankings (Trulove 2003). More to the point, research expenditures represent an important metric by which many universities are evaluated.

This makes the relationship between research expenditures and access particularly complex. DiMaggio and Powell have argued that legitimacy can become an organizational priority to the extent that it undercuts other organizational goals such as efficiency (DiMaggio & Powell 1991). In the case of the public research university, the pursuit of legitimacy through

constant increases in research expenditures potentially conflicts with the goal of making the public research university more accessible for poor and ethnic-minority students. In sum, the pursuit of legitimacy can benefit the university from a market perspective and hinder it as it relates to student access. This is a problem observed by higher education scholars and directly attributable to the multiplex nature of most universities – that is their distinct commitments to teaching, research, and service (Dundar & Lewis 1998; Keohane 1993).

That perpetually increasing research expenditures does not fully align with the ideal of increased access is not the central dilemma. What may prove disastrous is totally supplanting commitments to access with essentially market-based goals and aspirations. Data indicate that it is becoming more difficult for poor and ethnic-minority students to attend state flagship institutions (Carnevale & Strohl 2012; Ross & Kena 2012; Aud et al. 2010). As the public research universities provide assurances that they will work feverishly to increase expenditures on research, what is conspicuously absent is a similar institutional commitment to improving student access. As the situation unfolds we will learn more about the public research universities commitment to both. What is important at this point is to add to our body of knowledge with regard to the relationship between increasing research expenditures and access, and the current direction of the American public higher education system.

Organizational Goals

While the fiscal solvency of the organization has always been a preeminent objective of university administrators, some argue that new developments within higher education have brought the system to a tipping point. Historically, pressures to make the public research university more business-oriented were met with opposition not only from faculty, but also from

high level administrators. Veysey summarizes the account of one high level educational administrator at the turn of the twentieth century:

Of course the university cannot become a business corporation, with a business corporation's ordinary implications.... The distinguishing ear-marks of an American university are its moral purpose, its scientific aim, its unselfish public service, its inspirations to all men in all noble things, and its incorruptibility by commercialism (1965, 353).

Although these aspirations are hailed as noble, this model of the American public research university is under fire for its impracticality in the face of mounting organizational concerns and fiscal uncertainty. Instead of embracing public service aims, universities are more narrowly focused on emerging unionism, performance metrics, branding concerns, board-of-trustee activism, and cost-effectiveness (Pattenaude 2000, 165).

The economic objectives of public research universities have begun to closely mimic those of more conventional industries. Tuckman and Chang (1990) outline a number of striking similarities between goals commonly associated with private industry and those now found within the public higher education system. They argue that universities seek to ensure perpetuation and growth, streamline processes, increase revenue, and foster economic success (Tuckman & Chang 1990, 57-58). These goals are significant because they serve as a reflection of the logic that universities have assumed. It is widely accepted among scholars that goals are organizational statements of purpose (Tuckman & Chang 1999). Working backwards, the presence of goals that value economic success, efficiency, competitiveness, and increased market share signify the presence of a market logic at work. Likewise, it is evident that aspirations to increase access will be evaluated on the basis of their 'fit and accordance' with these goals.

Scholars have contributed to our understanding of the economic objectives commonly held by large public research universities. Analyses have focused on central administrations specifically because they hold considerable organizational authority and are tasked with overseeing the short and long-term financial well-being of the organization in its entirety. Moreover, the goals and objectives they operate under differ from those in the peripheral academic departments (Salancik & Pfeffer 1974; Tuckman & Chang 1990; Pattenaude 2000). These differences in the formal objectives of subunits often equate to differentials in the power and influence they are able to exert in organizational decision making processes.

Salancik and Pfeffer's analysis of the relationship between subunit power and the degree to which they are able to secure essential organizational resources supports this argument. They categorize resources along the continuums of scarcity and criticality to uncover how academic and administrative departments are tasked with different objectives and are able to attain varying positions of prominence within universities. The administration's responsibility to meet the university's broad expenditure requirements, revenue targets, and endowment objectives puts it at the heart of financial decision-making processes. The authors find that subunits who secure essential resources and address environmental uncertainty acquire more power relative to other departments. That power is then used to "favorably influence allocations of internal resources" (Salancik & Pfeffer 1974, 470). This partially illustrates the role that central administrations play in promulgating the market logic.

Often, market-based goals set by centralized administrations conflict with normative concerns (or goals) set at lower levels of the organization. Bastedo and Gumport attend to the tensions that have arisen as a result of these organizational realities. They use a case study approach to examine the mission differentiation practices of high level administrators at the

CUNY and UMASS systems. Mission differentiation, as the authors observe it, consists of restructuring academic programs in ways that inevitably funnel low SES and ethnic minority students to satellite campuses rather than the large flagship institutions of the state. They highlight how mission differentiation gains momentum in times of resource constraint as a way to increase system efficiency, even though the consequences of policies that promote differentiation may limit access (Bastedo & Gumport 2003, 342).

From their analysis, we see how mission differentiation aligns with a market logic, as opposed to a mindset that values access for underserved or underrepresented groups. Further, it exemplifies the impact that market-based goals can have on student access. Rather than a situation where public research universities create a mutually supportive system to accomplish both market and normative goals, we see market-oriented goals effectively crowding out efforts to increase access to flagship institutions.

Diversifying University Revenues

The goal that is perhaps most indicative of a market logic in the public higher education system is increasing total revenues. Distilling the market logic down to a focus on university revenues helps us understand the internal calculus of the most prominent state institutions. The constant pressure to increase revenues is becoming so entrenched within the higher education system that universities are now being evaluated as if they were business organizations singularly focused on capturing profit. This framing of the way universities should operate isn't without distinction. The more that universities are assessed on the basis of their revenue-generating potential, the more universities will be compelled to enact formal and informal policy that accords with the corporate university model (Symcox 2009, 54)

In 2013, Moody's Investors Service revised its outlook of the entire U.S. higher education system to negative because of the fact that more and more institutions were "facing diminishing prospects for revenue growth" and in need of serious reforms to their business model (Bogaty 2013a, 1). This was an overarching theme within the report. In 2014, the outlook on higher education was similarly negative (Bogaty 2013b). As an investor and credit rating service, it is not surprising for Moody's to evaluate the public university in market terms, but it is important to understand how Moody's evaluations alter goals, and more broadly the logic of public schools and universities.

The report attempts to outline general opportunities and threats that affect the financial prospects of all public universities. More or less, the report is a resource that universities can use to navigate the external environment as it relates to the institution's economic interests. It also reflects a myopic focus on the business side of the university without a full awareness of the implications of its suggestions for the university as a whole. This framing of issues surrounding university revenues is indicative of a logic wherein the capacity of the state university to serve the neediest segments of the general public is of little concern.

Moody's views tuition growth above the rate of inflation as a positive sign of increased demand that directly translates to additional revenues (Bogaty 2013a, 4). This is certainly in line with microeconomic theory; as demand increases, firms are inclined to raise prices to reap financial gains and manage supply. On the other hand, there is little mention of the potential consequences that raising prices will surely have on prospective poor and ethnic-minority students. In fairness, this is not a matter that Moody's would be particularly inclined to address. However, the same cannot be said for the public research university. Universities are in a critical position where the trade-off between market gain and access is an issue germane to the character

of the institution. If universities internalize the findings of Moody's annual reports without sufficient scrutiny, we can only expect further institutionalization of the market logic.

Some might argue that the give and take between access and revenue-seeking is little more than an instance of goal conflict. Winston (1999) wrote explicitly about the conflicting nature of economic goals versus the goal of access in higher education. Since the public university is a complex organization with multiple goals, goal conflict is not an uncommon issue. But scholars are pointing to trends that alert us to a different scenario. The constant push for more revenues at all levels is resulting in a qualitative transformation of what the university represents and is (Newson 1994). These trends connote a supplanting of the goal of access rather than a natural friction that will eventually resolve to a state of equilibrium. The approach used to address these conflicts reveals an institutionalized logic that enables schools to frame, engage, and resolve problems in ways that account for financial concerns above much else.

There are undoubtedly a growing number of challenges in higher education that can legitimately be framed as issues of financial constraint or capacity. Where we possibly see the market logic undermining access is in the way organizations uncritically and consistently view problems through an economic lens. While it is external financial pressures along with the logic that potentially explain the intense focus on increasing revenues, the logic in particular may explain schools losing sight of their public service mission (Dill 1997).

This trend has become so pronounced that cultivating revenue streams as well as protecting streams of revenue that have been already established is an objective equal to or more important than offering a high quality undergraduate education. This is somewhat evident through the university's targeted emphasis on private giving. As schools look to increase and diversify revenue streams, private giving has become an increasingly attractive option that

schools are employing to bolster revenues (Cheslock & Gianneschi 2008). This comes as a result of increased confidence on the part of higher education advancement professionals who see almost limitless opportunities to capture more revenues through private donations.¹¹ Beyond increasing tuition, universities are emphasizing and having success raising private funds while at the same time access is decreasing, undergraduates are less likely to be taught by a tenured or tenure-track professor, and the regional community to a lesser extent reaps the benefits of a state flagship institution in the immediate vicinity (Ikenberry 2009; Jaeger & Eagan 2010; Toutkoushian 2012).

Intercollegiate athletics is yet another example of the public research university diligently working to protect an already established revenue stream. Where high profile athletic programs were at one time primarily viewed as a symbol of excellence, tradition, and shared pride, they are now widely considered necessities because of the fact that they are an important marketing tool and likewise represent a revenue stream that offsets the cost of other ‘non-revenue generating’ sports (Sheehan 2000). This is not an unfair assessment of the interworking of collegiate athletic departments, but it does work to change the way intercollegiate athletics is viewed, and how problems within athletic departments are handled. One illustration of this is the entrenched legal battle that the National Collegiate Athletic Association is waging against the prospect of a players’ union that would threaten their sole claim to the revenues produced by intercollegiate athletic events (Solomon 2014).

Revenues and Goal Conflict

¹¹ In 2014 The Council for Advancement & Support of Education released survey results indicating that fundraising at public higher education institutions increased by 5.4% with expected growth of private donations in the 2015 fiscal year being 6.1%.
http://www.case.org/About_CASE/Newsroom/Press_Release_Archive/US_Educational_Fundraisers_Predict_Steady_Growth_in_Giving_for_2014-2015.html#.U-uRjAOQ0fA.gmail

Few argue against the notion that the financial obligations of the university must be met with financial solutions. However, we must not lose sight of the fact that their identity as teaching institutions, as hubs of public outreach, and as conduits into the middle class for state residents may disappear as the pursuit of revenues takes a higher priority in the university's internal calculus (Kaplan 2009). What must also be stated is that the impetus to diversify revenue streams in order to replace lost state appropriations is somewhat misleading. A closer read of the situation reveals that the logic of the market directs action well beyond situations where the public research university is simply generating revenue in an attempt to keep its proverbial head above water.

Kirshstein and Hurlburt (2012) conducted an in-depth study of public research university finances to better understand where university revenues originate. In their analysis, they come to a number of interesting conclusions regarding the way revenues have been generated as well as how they might be increased moving forward. They find that from 2000 to 2010, overall tuition revenue increased by an amount greater than the amount needed to offset declining state appropriations at public 4-year institutions (Kirshstein & Hurlburt 2012). This suggests universities do in fact have funds to support access even without decreasing funding to other areas. However, instead of actively pursuing this path, attention has been diverted to revenue-generating endeavors almost entirely (Kirshstein & Hurlburt 2012).

The financial hardships that schools faced during periods of financial hardship have had a lingering effect on the way they operate and engage their environment. What is interesting here is that public universities neither limited tuition and fees increases to the point where they simply offset lost revenues, nor utilized the surplus revenues in a way that would represent a systematic and purposive plan to address the access problem. This is indicative of the effects that a market

orientation can have on university policy. Research universities are the most financially stable of all the public 4-year institutions because they receive the highest levels of state appropriations and are the only institutions with significant revenue generated from their endowments (Kirshstein & Hurlburt 2012). Yet these institutions serve the most affluent students almost exclusively.

This is a bit counterintuitive because it would seem that the resource wealth of the largest public research universities would lend itself to a heightened ability to serve groups without the financial means to attend college. Yet, this is arguable; researchers have documented the increasing costs of delivering post-secondary education as well as the fact that a great deal of revenues collected stem directly from students with the ability to pay. Regardless, we must not forget that the largest universities have a formal charge to support access to higher education. Thus, it is important to question why so many poor and ethnic-minority students are essentially channeled to schools with the least funds and most susceptible to economic shocks.

As it stands, racial and socioeconomic stratification is thoroughly entrenched in the public higher education system. The most established universities use surplus revenues to strengthen their market position while leaving the underfunded institutions with the responsibility of providing access to underrepresented groups. This suggests that even as the flagship universities become more adept at cultivating and strengthening revenue streams, opportunities for poor and ethnic-minority students at these particular institutions will continue to dissipate. This speaks directly to the intent behind university objectives to increase and diversify revenues streams. Rather than cultivating new revenues to support the breadth of university endeavors, it seems the impetus behind this goal is firmly intertwined with a market logic that prioritizes short-term gains,

Market Schema

As seen in the ILP, schemas are ways of approaching problems that inform how organizations generate solutions and resolve ambiguity. In higher education, they are implemented not only to solve problems, but also as ways in which organizational goals will be accomplished through appropriate means (Thornton et al. 2012, 88-89). Schema can also be loosely associated with the garbage can model of decision making. In cases where uncertainty abounds, goals are complex, and information is limited, organizations many times rely on trusted approaches, rather than wholly rational ones, to address organizational problems (March & Olsen 1972). A number of higher education scholars have recognized how public research universities have resorted to generic schema as ways of dealing with institutional problems (Leslie & Berdahl 2008; Eckel & Morpew 2009). At present, the schema principally applied to higher education problems are heavily influenced by a logic of the market.

There are two distinct ways to conceptualize schema. From one perspective, schema can be viewed as taken-for-granted organizational responses to uncertainty. This represents a material manifestation of schema stemming from institutionalized logics. From another perspective, schema can represent ways of knowing, thinking about, or cognitively evaluating problems and/or solutions. This represents symbolic manifestations of schema because although they are powerful, they are not tangible when compared to concrete organizational responses. Below I highlight administrative growth and the New Public Management (NPM) movement in higher education as examples of material and symbolic manifestations of schema.

Sustained by the market logic is the notion that market-based approaches are indispensable in accomplishing market-based goals. The new model of university administration further ingrains this perception by emphasizing an economic astuteness with relatively little

significance placed on intangible goals (Tuckman & Chang 1990, 72). As institutions of public higher education have come to more closely resemble their private industry counterparts, they have increased the size and scope of administrative divisions advancing this approach. One manifestation of this change is the sheer amount of resources dedicated to administration. It is difficult to view administrative growth coupled with the simultaneous dwindling of tenured and tenure-track faculty as anything other than yet another step toward the corporate university (Ehrenberg & Zhang 2005). Therefore, it is appropriate to conceptualize administrative growth as a way of dealing with problems and equally the employment of a market schema.

Administrative Growth as Institutional Schema

University scholars have taken note of the increasing size, influence, and costs associated with university administrations (Losco & Fife 2000, 70; Ehrenberg 2012, 207). Part of the rationale for bureaucratic growth in higher education is an increasingly complex, compliance oriented, and legalistic institutional environment. Administrative value is derived from the ability of executives to address these organizational challenges while also ensuring the perpetuation and economic growth of the university (Tuchman & Chang 1990, 57). As the market logic focuses more and more attention on the financially oriented aspects of university administration, the administrative apparatus grows in concert with the logic justifying its existence. As a result, market principles and pecuniary concerns are elevated to the point where they divert attention away from other organizational concerns.

By way of their prominent role within the organization, executive-level administrators have gained considerable influence. Interestingly, they now have the authority to perpetuate administrative growth as an institutionally acceptable response to higher education problems.

Their power has enabled them to diffuse schemas to all corners of the university by compelling less powerful subunits to operate in accordance with the corporate university model.

Currently, central procurement departments are being created to begin strategic sourcing programs, negotiate prices with suppliers on behalf of departments, and set university-wide goals and spending caps (Carlson 2014). The University of Michigan is just one example of a public institution where these changes are taking effect. And while these practices have aided universities in cutting costs, they have admittedly taken procurement and hiring choices out of the hands of department heads and individual faculty members (Carlson 2014). This is only one example of ongoing trends tipping the balance toward administrative control. As authority is usurped by powerful central administrations, faculty, students, and taxpayers gradually lose their voice in the discourse over public values. By extension, decisions fundamentally changing the state of affordability and access are similarly taken out of the hands of the public, faculty, and staff.

From a longitudinal standpoint, administrative growth has increased in a linear fashion. While full-time equivalent (FTE) faculty increased by over 50% since the 1970's, administrators and their professional staffers have increased by 85% and 240% respectively (Ginsberg 2011). These trends suggest that universities have looked to executives and professionals to deal with the obstacles and challenges now associated with higher education. The organizational value placed on administrative divisions is also apparent through the number and sheer amount of resources allocated for administration. Administrative spending has exponentially increased since the era of mass higher education with perhaps the most visible contribution of these larger administrative units being the ability to seek out and secure new revenue streams (Ginsberg

2011). Looking ahead, the emphasis on executive and professional level hiring is only gaining momentum (Desrochers & Kirshstein 2014).

The growth of university administrations might lead us to believe that market-driven policies will continue to play an important role in determining the means to complete short-term and long-run higher education goals. In the report, *Renewing the Academic Presidency: Strong Leadership for Tougher Times*, the Association of Governing Boards of Universities (AGBU) proclaimed that a lack of financial sophistication, business training, and outcomes orientation was one of the most troubling concerns in higher education (1996, 166). The AGBU went on to suggest that the prospects of higher education might be brighter if only more non-academics would put their expertise to use as heads of public institutions (AGBU 1996). These statements ultimately supported the corporatization of public higher education. They also summarized a prevailing market orientation. With many of the most influential actors championing the top-heavy, business-oriented university model, leaders of many institutions simply conformed to institutional pressures.

The rhetoric of the AGBU is powerful because it serves as a “stream of discourse that promulgates, however unwittingly, a set of assumptions about managerial practices” (Edelman et al. 2001, 1593). It operates to further entrench the market logic by supplying it with additional context and meaning. An acute knowledge of the dominant logic’s assumptions and values regarding how economic goals are acceptably attained is a prerequisite to assume high level administrative positions at public research universities. It is also a path to institutionalizing generic responses to commonly encountered organizational problems. On the other hand, these practices generally align with privatization, despite the fact that they potentially undermine the access mission of the public institutions (Stater 2009, 143).

The growing numbers and power of university administrations aligns with the assertion that the market logic is thoroughly entrenched in the public higher education system. From the perspective of the ILP it reflects a material manifestation of a market schema. At the outset it may seem that increasing administrative spending is antithetical to the market logic, but we must keep in mind that high level executives, managers, and non-instructional professional employees approach their day-to-day activities in ways that reflect the organization's priorities.

Developing the administrative apparatus is conceptualized as a net financial gain because it represents an upfront investment that covers its costs. By shrinking the tenured and tenure-track faculty corps, cutting nonessential programs, streamlining processes, and cultivating new revenue streams, administrators can make the argument that their presence makes the university a more efficient operation. Furthermore, it isn't uncommon for small contingents in powerful positions to act in self-aggrandizing ways (Leslie & Rhoades 1995, 202; Ginsberg 2011). By stressing the importance of markets, competition, and financial management, administrators elevate their own organizational statuses while insulating themselves from internal threats. Thus, universities are becoming more adept at instituting a market-based model of organization but at the same time are failing to systematically address the structural barriers to access present at many public research universities.

This is not to say that higher education administrators totally ignore or neglect the access problem. It does suggest, however, that their concerns regarding access are for the most part superseded by what they deem as more pressing financial issues. Laurie Edelman's research on the managerialization of civil rights law is indicative of a phenomenon wherein good faith organizational aspirations are gradually overtaken by day-to-day bureaucratic concerns. Edelman theorizes that as law becomes endogenously constructed, "it becomes possible to

understand how and why laws regulating organizations often take unanticipated” and many times ineffective forms (Edelman 2005, 338). Edelman’s managerialization process aptly characterizes why it is so difficult to make substantive headway with regard to access.

In Edelman’s example, information is filtered through rhetorics that reframe problems in order to offer solutions in line with organizationally accepted conventions, processes, and procedures (Edelman 2001, 1598). More importantly, her analysis uncovers the negative consequences of these rhetorics on other organizational priorities. With the economic interests of the university taking precedence over so many other university functions and responsibilities, it is not difficult to imagine situations where concerns for student access fall victim to what many consider higher order concerns. Drawing from Edelman, the current state of affairs in higher education may represent one such managerialization process wherein access, like the civil rights legislation that was her focus, is essentially swept to the side in favor of day-to-day pecuniary matters.

This is precisely why analyzing material schema at public research universities is critical to understanding how access is viewed and valued at these organizations. Traditional commitments to access are filtered and evaluated with regard to their alignment with the principles of efficiency, outcomes-based budgeting, and market reliance. Unfortunately, supporting access is a resource intensive endeavor that does not result in immediate or direct economic benefits. Therefore, it seems clear that a market logic is not the ideal mechanism for translating the public’s formal commitment to access into organizational reality.

NPM as Institutional Schema

The elevation of financial concerns in combination with the deprioritization of access can also be viewed as a function of problem framing. A problem frame “names the relevant aspects

of a problem situation” in a process contingent on environmental factors and guided by institutional logics (Poppelaars & Scholten 2008). In contrast to growing university administrations, this represents what is more or less a cognitive process. Although intangible, the mental scripts that administrators use to navigate their environment and frame problems are equally important in trying to understand the market logic’s impact on educational access.

An important problem framing mechanism in higher education began as a political movement to comprehensively change the way government goods and services are provided. The zeitgeist known as New Public Management (NPM) has generally been described as a generalized approach to administration where the public bureaucracy is made more effective through management strategies found in the private sector. NPM emphasizes economic efficiency, streamlined processes, the reduction of procedural hurdles, explicit standards, and a customer service orientation (Hood 1991). Founded in the early 1990’s, it continues to play a role in political rhetoric and policy. Political pressures exerted on state governments to become more business-like have now diffused down to the states’ public research universities. As a result, NPM principles are similarly being applied to matters of public higher education (Newson 1994).

The diffusion and tailoring of NPM principles for use in the public higher education system has been a force in institutionalizing the market logic because of the way it has shuffled institutional priorities and procedures. The way problems are perceived, students are viewed, and the measures seen as appropriate for achieving goals have all been affected. McLendon and Mokher (2009) argue that NPM has shifted university thought processes toward “efficiency rather than equity, choice rather than standardization ... performance rather than process, and outcomes rather than input measures” (20). The dramatic changes taking place in the way

universities set out to achieve their goals are at least partly manifestations of governmental pressures to adopt NPM practices.

Gumport specifically looks at the ramifications of NPM practices for the American public higher education system. She observes that NPM is essentially a cost-benefit analysis for courses of action where non-market oriented strategies are heavily penalized (Gumport 2000). More importantly, she identifies the knowledge gap that exists when referring to our limited understanding of how NPM affects access. For Gumport, the root metaphor of NPM is a corporate model of production wherein students are reduced to consumers and areas not valued by the NPM model are sharply neglected or actively dismantled (2000).

A plausible contributing factor to the erosion of low SES and ethnic-minority student enrollments at flagship institutions is the imposition of NPM practices. Research has shown that “the percentage of students at state flagships whose families earn less than \$20K per year declined from 14% in 1995 to 9% in 2003;” this occurred during an important period in the development of the NPM movement (Bowen, Chingos, & McPherson 2009, 263). Although this does not demonstrate a direct causal link between NPM and decreased access, it does motivate questions regarding who NPM helps and its utility with regard to increasing access.

A number of important initiatives underpinned by NPM have gradually been adopted by a significant proportion of research institutions. The pursuit of economic associates for universities to partner with is one trend closely associated with the NPM movement. An important tenet of NPM is the diversification of revenue streams through entrepreneurial approaches (Morphew & Eckel 2009, viii). As universities pursued business partnerships in conformity with this component of the model, the distance between universities and their corporate allies has begun to dissipate. In *TVA and the Grassroots*, Selznick describes the co-

optation of the Tennessee Valley Authority (TVA) through close ties to powerful corporate interests. Eventually, those ties became insidious due to the infiltration of business interests and the agency's inability to pursue core components of its central mission (Selznick 1949). Selznick's case study of the TVA is a detailed account of corporate intrusion into an inherently public agency, and the process by which it took place.

Analogous to what occurred with the TVA, higher education's growing reliance on business and industry has created a similar pressure to meet corporate objectives that sometimes conflict with its public aspirations. The University of California at Berkeley's Lawrence Berkeley National Laboratory is an example of a university center where private industry partly subsidizes day-to-day operations. With over \$110 million dollars of its funding coming from work for others, it isn't unreasonable to expect those sponsors to make financial demands upon the organization and the university more broadly (DOE Website 2014). With the leadership team actively doing more to attract private investment, the Lawrence Berkeley National Laboratory represents a joint venture that supports both the University of California as well as its private investors (Kantor 2014).

However, some are wary about the ability of public institutions to stay resolute in the face of influential corporate partners and/or increasing market demands. This is due in part to the fact that these alliances "entail certain risks of intrusion and control" because a "public goods view of fundamental knowledge differs from the corporate justification of research" (Balderston 1990, 37-38). Tuckman and Chang allude to the pressure that universities are subjected to by pointing out that "when a university contracts to accept funds provided by an external source, it admits a new participant to its goal-setting team" who may become a source of organizational instability (1990, 65). Once the university has entered into this bargain, it commits to pursuing many of the

goals of the partnering organization. In instances where partners hail from the private sector, this only compounds pressures to conform to market-based schema.

The emphasis on developing more intimate ties to business and industry has been rationalized as a way to diversify revenue streams while also tying the university into the global economic marketplace. Business partnerships are now pursued by research universities with a laser-like focus on what the partnerships will mature into from an economic perspective. Universities are actively searching for business affiliates that can diversify their revenue streams, increase competitiveness, and ultimately cement market share. There was a time when prominent voices within the university ranks questioned whether these types of partnerships grew the capacity of the university to accomplish its fundamental objectives; by contrast, important voices within higher education today are calling for closer ties between flagship universities and big business with little else in mind other than economic development (Basken 2014).¹²

Another aspect of NPM that further institutionalizes the market logic is the reliance on accountability metrics. Although the intent behind accountability metrics is to improve quality and financial oversight, they have been more effective at creating a performance-based environment that focuses heavily on fiscal outputs and measurables (Titus 2006, 295). Additional research has shown that new performance metrics do not necessarily help institutions make the critical leap from measurement to improved performance (Volkwein & Tandberg 2008). Questions have also arisen regarding the way access is measured and evaluated under such a system. Where there are a number of metrics to quantify a school's economic

¹² A 25 member panel from the Academy of Arts & Sciences released the report arguing that closer and more elaborate business ties will keep higher education and the U.S. more broadly economically competitive.

productivity, there is a dearth of robust measures capable of accurately tracking their progress as it relates to access (Bensimon et al. 2006).

This is concerning in light of the influence that performance-based accountability systems have in higher education. NPM reinforces tendencies to view students as consumers or economic outputs. Since productivity is assumed to be immediate and material, schools are evaluated based on their outputs on prearranged measures. The metrics serve as a way to document university progress or the lack thereof. To exhibit performance, universities direct attention and energy to the areas that are measured and highly visible to outside constituents. Emanating from these pressures has been the need to demonstrate that enrollments will culminate in a 'return on investment' and that things are being done more efficiently (Lovell 2000, 119). Here we see the market logic present in conversations concerning productivity and organizational measures of success. This way of approaching accountability issues has only fueled efforts to emulate the private sector.

NPM has only amplified these forces by instigating the public research university's transformation into what many would consider a private entity (Wang 2013). Universities have responded to the imposition of performance-based accountability systems by requesting more fiscal and decision making autonomy from the state. The leading universities in the state of Virginia (the University of Virginia; Virginia Tech; and the College of William and Mary) recently tied their ability to centrally manage capital projects, tuition and fees levels, human resource decisions, and procurements to performance on government assessments (Leslie & Berdahl 2008, 317). The rationale was that increased distance from the state, and an increased reliance on the market, would address intrusive and burdensome state regulations, empower schools to innovate, and bolster the market position of in-state schools.

At the same time, policymakers emphasized that higher education restructuring in Virginia would give universities the autonomy needed to ensure that state interests were being met. Policy entrepreneurs pushed deregulation, privatization, and greater use of market forces to not only make schools more efficient and productive, but also to “provide access to higher education for all citizens” (Leslie & Berdahl 2008, 315). The problem is that there is very little evidence to suggest that the implementation of these market reforms has had any beneficial impact on access. Now schools in Texas, Florida, Wisconsin, California, and Louisiana, are all vying for more independence from the state without a firm grip on the impact that these policies will have on access (Wang 2013). Some might argue that the new reforms are not only untested, but also seemingly at odds with the public goods perspective of higher education.

For example, a 2008 Virginia state audit report indicates that “the number of low-income students at each of the [aforementioned] universities—as measured by federal Pell grants—was actually decreasing” (Wang 2013). What may be more telling is that this outcome was framed as acceptable under the privatization paradigm. We know this because even with low SES student enrollments decreasing in step with privatization efforts, it was concluded that the schools were meeting their access goals (Wang 2013). This is particularly disconcerting because it suggests that the gradual degradation of access is actually an acceptable byproduct of the performance-based system and NPM by extension. Moreover, it connotes that of the many goals that flagship universities are expected to excel at, access is conspicuously absent. As universities coalesce around the market-driven university ideal, it would seem that access as well as other public benefits are bound to be adversely affected.

It seems the probable consequences of such approaches to university administration are not unknown. Scholars have foreshadowed the adverse effects that this path may entail.

Keohane, for example, has warned that universities must be wary of perceiving the substance of their work in strictly monetary terms because this can quickly overshadow the core mission of knowledge discovery and sharing (1993, 116). Others argue that as short-term economic gain becomes the focal point in decision making processes, money rather than learning and competence will be the ultimate end associated with higher education (Engell & Dangerfield 2005, 91). Schemas that frame students as consumers, encourage intimate business ties, and erect performance-based accountability systems can be particularly detrimental to students who have little to offer universities by way of their financial means. They crystalize structural barriers inhibiting students from attending because they are deemed unprofitable by organizational cost-benefit analyses (Stater 2009, 154-155; Rodriguez 2013). With NPM now a permanent presence in public affairs, its interrelationship with student access on university campuses will be an issue that researchers as well as institutions will need to continually assess.

CHAPTER III

METHODOLOGY AND RESEARCH DESIGN

The rationale for the methodology of analysis is twofold. First, because I hypothesize that the effects of the market logic on access are systemic at the field level, aggregated (industry-level) national public higher education data represents data compiled at the commensurate level of analysis. Thus, data in this particular format lends itself to statistical approaches that leverage the power of large data sets (for example, the fixed-effect model). Secondly, other scholars utilizing the ILP have relied on quantitative methods to study the expansion and contraction of institutional logics over time (Thornton & Ocasio 1999; Greenwood et al. 2010). These approaches have been used to shed light on the historical contingency of logics and identify antecedents that result in the onset of the institutionalization process. My work similarly utilizes panel data in an effort to identify changes (over time) in the way public research universities

engage and respond to institutional stimuli, and their subsequent effects on underrepresented student access.

Although the research design suits the research question I pose, it is important to note that it does entail certain limitations. Relying on aggregated institutional data makes it difficult to document the nuances of the institutionalization processes taking place on individual university campuses. To partially attend to this limitation, I provide specific examples and particularly applicable anecdotes as ways of substantiating the market logic's presence in the public higher education system. Although the institutional field level is the primary focus of the analysis, the inclusion of organization-specific information will enable me to concretize connections between industry-level trends, functional realities for specific universities, and diminishing access for particular student groups.

The fundamental problem motivating this analysis is that poor and ethnic-minority student access at the public flagship universities is decreasing precipitously. Rather than elevating inaccessibility as a contemporary policy issue, new models of administration have offered few solutions that directly or aggressively engage the access problem. In tune with the state of student access, and institutional pressures to become more market-oriented, I therefore pose the question "what is the market logic's impact on educational access for poor and ethnic-minority students at the public flagship institutions?" Based upon the literature reviewed above, I hypothesize that the institutionalization of the market logic at large public research universities has negatively impacted access for both poor and ethnic-minority students. This hypothesis will be evaluated by assessing the relationship between manifestations of the market logic in higher education and access for both poor and ethnic-minority students over time. It is necessary to quantify the market logic by way of its tangible realizations in the higher education system

because it is essentially a latent construct that cannot be directly measured. In order to analyze the effect of the market logic's institutionalization, I will assess its influence on on-campus ethnic diversity as well as on-campus socioeconomic diversity by constructing two statistical models designed to shed light on potential relationships that exist between the market logic and poor and ethnic-minority student access.

Drawing from theory, I argue that historical trends, social identity, goals, and schema can be used to signify the presence of an industry-level market logic in the public higher education system. Thus, I use observable indicators of all four theoretical mechanisms to model the hypothesized relationship between the market logic and student access. Each of these four constructs equate to important components of the market logic. Below are research hypotheses coinciding with the conceptual framework:

H₁- Increases in external fiscal constraints will share an inverse relationship with student access for both poor & ethnic-minority students.

H₂- As schools focus more attention on competitive metrics, selectivity, and prestige, access for poor and ethnic-minority students will be reduced.

H₃- As schools become more adept at achieving market-oriented goals, access for poor and ethnic-minority students will stagnate or decrease.

H₄- As more pressure is exerted on universities to employ market-based schema, poor and ethnic-minority student access will suffer.

The Data

The majority of data used to conduct the analysis in this dissertation is drawn from the Integrated Postsecondary Education Data System, also known as IPEDS. All university expenditure, revenue, personnel, and demographic information are drawn from IPEDS. IPEDS is an exhaustive higher education database managed by the National Center for Educational Statistics (NCES). Specifically, data include finance, enrollment, graduation, student financial

aid, and employee and institutional characteristics figures compiled by disseminating surveys to participating universities on an annual basis.

NCES is able to gather and archive institution-specific data from institutions because all schools offering federal financial aid are compelled to submit institutional information through IPEDS (NCES 2013). IPEDS fulfills a congressional mandate to collect, analyze and report higher education data (NCES Website). Moreover, the penalty for failing to participate in the IPEDS data submission process can result in a fine of \$35K per survey, or revocation of the ability of an institution to distribute federal financial aid (IPEDS Workshop 2014). Thus, the vast majority of public research universities submit multiple reports to IPEDS annually. Below I detail the IPEDS data submission process and briefly speak to the manner in which the data are aggregated for analysis.

The Institutional Characteristics Survey that IPEDS distributes to participating institutions is simply a way to track the proportion of schools within sectors, classifications, and regions. Within this survey, schools indicate their Carnegie classification, whether they are a public, private or for-profit institution, and the region in which they reside. Also included in this survey are indicators of a school's vested mission (whether it is a Land Grant, HBCU, Tribal College, Community College, or Latino Serving Institution), in-state vs. out-of-state tuition and fee requirements, and general information regarding the institution's current year applicant pool.

The IPEDS Finance Survey is comprised of general revenue and expenditure data as it relates to aggregate costs, operation maintenance, auxiliary services provided by the institution, research spending, and government appropriations. This survey in particular is critical for understanding the overall financial well-being of the institution as well as its financial priorities evidenced by the flow of resources over time. Moreover, this survey is commonly used to

evaluate systemic pecuniary trends in higher education. The IPEDS Finance Survey in particular has underpinned studies examining college completion for low SES students, enrollment growth trends in higher education, and the impact of intercollegiate athletic success on private giving (Titus 2006; Gumport 1997; Humphreys & Mondello 2007).

The IPEDS Enrollment Surveys are similar in their importance for identifying institutional types. Unlike the finance data, enrollment data are collected within interrelated surveys that purport to profile incoming cohorts. The 12-month enrollment data include headcount figures for both undergraduate and graduate students, FTE calculations for those populations, and instructional activity information (credit hours reporting) (NCES 2014). The fall enrollment survey, on the other hand, tracks full versus part-time students, the number of first time in college (FTIC) enrollees, student-to-faculty ratios, and academic preparedness indicators for the incoming freshman class (NCES 2014). These figures generally speak to the selectivity of the institution through tracking entering student standardized test scores and providing cohort counts to track first-to-second year retention.

Lastly, the human resources component of IPEDS tracks the employee composition of particular institutions. Occupational activity, faculty members by rank, executive administrators at the university, total salary outlays, and the number of individuals under contract to teach for pre-specified periods are all pieces of information documented here (IPEDS 2014). These data are important for understanding how institutions are composed with regard to personnel. They are also essential for analyzing personnel trends at public universities reflecting systemic changes within the public higher education system.

Other sources of data are gathered in order to either measure macro-level political trends impacting the public higher education system, or simply to supplement the IPEDS data with

important institution-specific information not surveyed. The Financial Assistance Shared Assessment Program database contains data on the number of dependent and independent students at colleges and universities and financial aid applications filed by income classification (Delta Cost Project 2011). The information gathered through FISAP is central to the analysis because it provides an avenue for measuring the socioeconomic diversity of the entire institution by charting aid applications and family income indicators.

These data, much like the Student Financial Aid Survey, provides measures of the socioeconomic status of the undergraduate attendees. Also utilized in the analysis are data originating from the Inter-University Consortium for Political and Social Research (ICPSR). ICPSR was created to provide researchers with a comprehensive data repository to track election results, enacted policies, and other political outcomes for the purposes of expanding behavioral and social research (ICPSR website). ICPSR data contain longitudinal political outcomes data at the state and national level. For the purposes of this project, ICPSR data will be used to track important political outcomes that affected higher education policy and possibly student access. Lastly, publicly available state demographic data were compiled from data tables provided by the United States Census Bureau.

With the exception of the ICPSR and Census Bureau data, all the data sets were compiled by the Delta Cost Project at the American Institute for Research. As a result of growing interest in higher education expenditure and revenue data, and the inherent complexity of developing a database from multiple IPEDS data sources, the Delta Cost Project commissioned the development of a comprehensive higher education database (Delta Cost Project 2011). Since 2006, individuals at the American Institute for Research, working closely with NCES, have overseen the generation of the data each year. Their efforts have culminated in the Delta

database which is now the aggregation of three distinct panels¹³ covering time periods from 1987 – 2010. IPEDS survey data compiled by the Delta Cost Project is solely used because it has been vetted through the Delta Cost Project’s data integrity process (Delta Cost Project 2011, 14).

To reiterate, the Delta Cost Project database is perhaps the most complete resource for higher education revenue and expenditure data. Moreover, the nature of the continual data compilation process has engendered a great deal of familiarity with the data as well as a high degree of scrutiny from not only the American Institute of Research, but also higher education scholars and institutional researchers. With that said, the Delta data do have important limitations to consider.

First, although steps have been taken to attain the highest level of referential integrity possible, this is an issue for some Delta Cost data. Changes in financial reporting standards at public universities have necessitated that certain financial metrics be either transformed or recalculated to reflect consistent reporting over time. From 2002 to 2004, public institutions transitioned to Governmental Accountability Standards Board (GASB) reporting standards from Financial Accountability Standards Board (FASB) standards. This transition represents an institutional shift with regard to public higher education accounting standards. However, this is predominantly a problem when attempting to compare depreciation and interest over the GASB-to-FASB transition period (Delta Cost Project 2011).

Another limitation of the Delta database stems from the way IPEDS data are collected around the country. Although IPEDS publicizes definitions, maintains a comprehensive glossary, and supports institutional users, different institutions at times apply different reporting standards when completing institutional surveys. Differences in the reporting of common

¹³ Panels refers to datasets indexed by both unit and time. Units stay consistent throughout the duration of the time period in which the panel is constructed. Panel data is used for longitudinal/trend analysis.

metrics does introduce a degree of measurement error into any analysis using IPEDS data to make claims regarding systemic trends within the higher education system. This may be a result of different institutional philosophies, exaggeration, purposive misrepresentations, or simply human error. With that said, the stewards of IPEDS do in fact take steps to mitigate the submission of erroneous data by examining data irregularities and allowing schools to subsequently make fixes (IPEDS Workshop 2014). Lastly, because of changes to the surveys over time as well as the inability of some institutions to meet reporting obligations, some survey data is missing. This is addressed in the analysis by only utilizing data that meets a minimum threshold for completeness.

The Sample

The universe of higher education institutions that comprise the sample is limited to large public research universities. By way of their public mission and acceptance of government funding, these institutions are charged with supporting broad access goals. Additionally, their geographic dispersion and scale of enrollment make them well suited for the analysis of systemic trends inhibiting access to public higher education (Bowen 2009).

The sample is inclusive of only universities that could be considered flagship institutions. The flagship designation is an important yet somewhat informal characterization of institutional type. The informal ‘tier one’ classification, membership in the Association of American Universities (AAU), a high or very high research activity classification from the Carnegie Foundation, or simply prestige are all criteria at times used to designate flagship institutions. For the analysis, I rely on the Delta Cost Project’s identification of a flagship institution, and also apply five criteria that are used to round out the eventual sample. As stated, within the Delta Cost Data, there is a flagship indicator that identifies only one institution per state conferred with

flagship status. All schools with this indicator flag were included, however, additional schools were included in the analysis that the Delta Cost Project did not identify.

In states like Texas, Florida, Virginia and California, more than one flagship university may exist. In order to account for these institutions, additional criteria were applied to identify other leading universities within states. First, private schools were omitted. Secondly, only institutions with high or very high research designations as per the Carnegie Classification system were kept as potential candidates. If a school met these two initial criteria, their enrollment and endowment dictated whether or not they would be included in the final sample. Institutions with total full-time enrollments greater than twenty thousand students and endowments greater than \$100 million dollars were additionally flagged as flagship institutions. In the end, all of these universities represented the leading institutions in the country on the forefront of research, undergraduate degrees awarded, and graduate education. In many cases, two universities per state were designated flagships, although there are exceptions where either one or three universities received the signification.¹⁴ Universities were only dropped from the analysis in the event that they supplied incomplete data to IPEDS leaving insufficient data for analysis.

Statistical Analysis

A panel data set ranging from the 2002-03 through the 2009-10 academic year was used for the study. The data compiled for this analysis can be more specifically described as a short panel.¹⁵ Panel data signifies that the same universities are evaluated similarly over several time periods, so that the dependent variables and regressors can be indexed by both institution and time (Cameron & Trivedi 2005, 14; Frees 2004). Panel data is advantageous because it increases

¹⁴ For a listing of the state institutions included in the analysis see section A-1 in the Appendix.

¹⁵ In short panels the units of analysis far outnumber the time periods observed.

the precision of estimation and lends itself to techniques that potentially address misspecification and/or endogeneity issues (Cameron & Trivedi 2005, 697). Moreover, longitudinal data analysis using panel data allows for the identification of dynamic relationships that cannot be isolated using cross-sectional data.¹⁶

In order to evaluate the plausibility of the substantive theory statistically, a mapping between theoretical constructs and observed variables must be outlined. These mappings are known as variable measurement assumptions, “where observational variables are assumed to correspond to the theoretical variables of interest” (Davis 2005, 102). In order to make the case that relationships exist between theory-driven independent variables and tangible outcomes, variables need not be perfect realizations of constructs, but should at the very least highly correlate with the theoretical concepts. Below I specify the observational data that I utilize to measure: historical precursors of the market logic in higher education, the social identity of public research universities, market-based organizational goals, market schema, poor and ethnic-minority student access, and confounding factors if omitted from the analysis.

Indicator Variables

As discussed above in Chapter 2, the market logic is historically contingent. Per the theory, macro-level institutional trends precipitate field-level logics. Therefore, it is important to measure the logic as a function of higher order trends that precede it. In the case of the public flagship institutions, I hypothesize fiscal constraints stemming from decreased educational spending at the state level have played, and continue to play, a role in the institutionalization of the market logic. To quantify the effects of waning state funding, prior year state appropriations are included in the model. The state spending figures are lagged by one year to account for the

¹⁶ Dynamic relationship in this instance refers to relationships that change over time. They can only be examined with repeated observations (Frees 2004).

delayed effect that decreased budgetary resources can have on student outcomes. By studying the previous year's state appropriations I hope to gain more insight into the relationship between decreased funding, the application of market mechanisms, and student access. More generally, I hope to evaluate the claim that decreases in state funding inhibit poor and ethnic-minority student access at the flagship institutions.

The social identity of the university is measured with data that is commonly used to describe the selectivity and prestige of institutions; these are fronts on which public research universities regularly compete. Standardized test scores are viewed by many as a quantitative measure of academic preparedness. However, research suggests that their importance and utility as predictors of college completion might be negligible (Sheffer 2014). So while we accept that standardized test scores are being used by institutions to identify prospective students they deem as highly qualified, it seems they have at least a dual purpose as marketing tools that convey an institution's level of selectivity and prestige. For the analysis, 75th percentile SAT math scores were used. Being that the universities included in the analysis are some of the most prominent in the country, there was relatively little missing data even in states where the ACT is commonly administered. The vast majority of schools in the sample will accept and evaluate students on the basis of SAT scores. Accordingly, the SAT math score highly correlates with high composite scores on the assessment.

The yield rate is yet another indicator variable used to measure the social identity of sampled universities because it commonly frames the university's self-image in terms of institutional comparisons, tier classifications, and competitive aspirations. The yield rate of an institution is the number of enrolled students divided by the number of admitted students. In this case, I divide the number of first-time degree-seeking undergraduate students enrolled by the

number of first-time degree seeking students that were granted an official offer of admission. The higher the yield rate, the more selective and deliberate institutions are able to be in the cultivation of an entire student body. Schools may actively work to increase the yield rate through recruitment and advertising efforts while many times continuing to keep admissions relatively low. Ultimately, increasing yield enables universities to exert more control over the types of students that they offer admittance to. Additionally, universities with high yield rates are commonly characterized as highly prestigious.

Lastly, research expenditures represent a measure of prestige that is highly salient for internal assessments and peer comparison. Rather than the aforementioned student-centered measures of excellence, research expenditures are commonly viewed as indirect measures of faculty productivity and innovation in the STEM fields. All of these indicators represent meso-level indicators of the logic, and also indicate how largely symbolic significations are significant in institutional settings. Furthermore, many of these metrics are regularly utilized by external organizations as the basis for widely accepted higher education classifications.¹⁷

Goals are measured by market-based objectives that universities regularly pursue by focusing attention and deploying resources. In this instance we emphasize the organizational importance of financial goals. All financial variables in the analysis were scaled to measure revenues in the millions. Additionally, these variables were adjusted for inflation.

Unrestricted revenues and stable operating revenues are two similar constructs that seek to measure the ability of institutions to meet financial goals. These measures provide insight into the financial flexibility and security of institutions. The assumption here is that as schools become more adept at raising revenues in these areas, they will focus more attention upon market

¹⁷ Carnegie class methodology: <http://carnegieclassifications.iu.edu/methodology/basic.php>

mechanisms in an effort to sustain their competitive advantage over other schools with which they compete. By extension, I hypothesize that as revenues in these areas increase, access for poor and ethnic-minority students will decrease. In addition, stable operating revenues may serve as an indirect measure of restricted revenues, since they are funds that are perpetually relied upon and regularly encumbered for specific purposes.

Similarly, tuition and fee revenues illustrate the propensity of institutions to raise revenues by increasing sticker prices or enrollments. In the analysis, I specifically examine net tuition derived from students. Thus, this figure does not take into account gross tuition revenues that account for payment from students, as well as institutional aid, federal grants, etc. The net amount of tuition and fees derived directly from students is a more appropriate measure than gross or net tuition revenue because it more accurately measures the university's increased financial reliance on attendees. Additionally, this measure quantifies an institution's success in either raising revenues through increased prices, larger enrollments, or both.

In order to account for the importance of schemas, I examine the number of administrators employed by institutions as well as legislative outcomes at the state level. I define schemas as patterned ways of recognizing and responding to field-specific dilemmas or challenges. The number of full-time executives/administrative staff per 100 FTE students is intended to probe the assertion that the increased number of administrators on college campuses represents a turn toward strategic planning, economic astuteness, and an overall acceptance of the corporate university model. Some argue that increases in the number and percentage of administrators on campus represents the de facto empowerment of university administrations in all aspects of university life. Moreover, this measure aligns with theory arguing that administrative growth is a programmed response to organizational problems.

Secondly, a dummy variable indicating whether or not the state legislature was majority Republican was included. The partisan tilt is hypothesized to correspond to political pressures to assume a customer-service orientation, rely on markets, and prioritize fiscal austerity. This is in line with many of the prescriptions that stem from pressures to employ NPM techniques as specified by a number of scholars (Hood 1991; Heller & Rogers 2006; Morpew & Eckel 2009). The Republican tilt of state legislatures is an appropriate proxy for the level to which NPM principles are applied in administering the public research university because of the party's affinity for neoliberal ideology. Wendy Brown, in an exacting treatment of the neo-conservative and neoliberal elements that comprise the political right, describes neoliberalism as free market economic policies, privatization, economic self-direction, and an entrepreneurial rationality (2006, 693, 694). However, Brown finds that the political rationality represents much more than a finite set of broad economic directives. Much in line with the ILP, Brown sees the implementation of the principles as a way of orienting reality, a normative belief in the proper role of government, and truth criteria (2006, 693).

Moreover, other research has utilized the composition of representative bodies as determinants of student outcomes at public universities. In "Race, Structure, and State Governments: The Politics of Higher Education Diversity" the authors measure minority representation in state governments to assess their impact on minority enrollments at public universities (Hicklin & Meier 2008, 853). In line with that work, this variable in particular seeks to incorporate the pressures exerted on universities by external political forces at the state level into the model.

Again, these measures are in line with the ILP analysis framework. The administrative growth indicator is a factor operating at the meso-level while the political tilt variable represents

a macro-level indicator accounting for the ability of external stimuli, or general NPM practices in this case, to filter down to distinct organizational fields. Secondly, the measures of schema are unique in that the former reflects what was previously described as a material schema, while the latter is an attempt to measure the effects of symbolic schema. Together, both variables represent a multi-level treatment of schema and incorporate the two distinct types of schema as described in the ILP.

Control variables were included in the analysis to account for potentially confounding factors. The total enrollment at each institution is included. It in particular is important because any discussion of university finances, organizational composition, or governmental funding must be placed in context with the size of the institution's student body. This is primarily because expenditures on infrastructure, student services, and employees are a function of total enrollments. The percentage of the fall cohort hailing from out of the state is also an important metric to consider. This is because research indicates that increasing numbers of out-of-state students attending prestigious universities are effectively displacing poor and underrepresented minority students (Jaquette et al., 2014). Representing another plausible indicator of academic capitalism, as Jaquette et al. suggest, it is important to account for the effects of the public research university's reliance on high paying out-of-state students (2014).

Secondly, state specific demographic indicators are included in the model as controls. The rationale for their inclusion is that on-campus ethnic and socio-economic diversity may be directly impacted by changing state demographics as opposed to market-oriented policies. In the same vein as other macro-level variables, it is understood that broader demographic, social, and political shifts will have bearing on the public university's student composition, policies, and practices.

By holding state-specific demographics constant, we reduce the risk of conflating the impact of market-based policies with non-related external forces that may have similar outcomes. The variables included are the percentage of Whites, Blacks, and Asians, and the percentage of people of Hispanic origin in the respective state. These variables are included because demographic fluctuations are potentially reflected in student body changes at public institutions. Therefore it is important to analyze whether or not diversity gains are stemming from an increased number of ethnic-minorities in the state, or from deliberate policy changes on the part of institutions to become more diverse. This is an important point of focus because while one scenario could lead to more ethnic-minorities on campus and the other to the homogenization of the institution, both would continue to leave many ethnic-minority groups underrepresented at the largest public institutions.

Lastly, an interaction term was modeled to account for the possible relationship between state appropriations and net student tuition. Since one commonly accepted explanation of inaccessibility is that government divestiture in higher education is the driving force behind increased tuition and fees, I analyze this claim statistically with the inclusion of the state appropriations, net student tuition interaction effect. With the inclusion of this variable, I hope to better understand the validity of the claim, while also taking this potentially moderating effect into account in my evaluation of the other independent variables of interest.

Response Variables

To measure access, two distinct response variables were used. By utilizing multiple measures of access, I summarize access along the ethnic-minority and SES dimensions. A diversity index was created in order to measure racial/ethnic diversity on campuses. Diversity indexes commonly are utilized in the biological sciences to study the ecological diversity of

natural systems. I use Shannon's diversity index to measure the comparative racial/ethnic diversity of public research universities, which is considered a reasonable index of diversity (Jost 2006). The diversity index that I employ measures the demographic make-up of the university as it relates to four ethnic groups. Demographic figures for Blacks, Latinos, Native Americans, and Whites are used to calculate the diversity index. Asians have been excluded because they are not generally considered underrepresented minorities (NCES 2010). Therefore, the diversity index increases in step with the percentage of underrepresented minorities on campus.

The number of dependent undergraduate students whose financial aid application indicates a total annual family income (TFI) of \$15K or less is a strong indicator of socioeconomic diversity. This is perhaps the best measure low SES student attendance available. While other measures of socioeconomic status, like the amount of federal grants disbursed, or federal grants awarded demonstrate financial need, TFI is a more direct and accurate measure of socioeconomic status (Mettler 2014). Moreover, federal grants are disbursed not only to low SES students, but other targeted population such as veterans. Higher percentages of dependent undergraduate students who have TFIs below \$15K and are applying for financial aid more definitively suggests more low-income students are at the institution.

These access measures are the dependent variables and represent outcomes that market-oriented policies and practices may affect. Evaluating the relationships between the indicator variables and these response measures will shed light on the market logic's effect on access along ethnic and socioeconomic lines to help substantiate or refute the plausibility of the hypotheses offered above. Presumably, as the logic further manifests itself within the public higher education system, access for poor and ethnic-minority students will decrease. Below are

test hypotheses that coincide with the hypotheses previously offered. These hypotheses map out the relationships I anticipate observing between the indicator variables and responses measures:

TH₁- Prior year state appropriations will share a positive relationship with the diversity index and the percentage of dependent undergraduate financial aid applicants who have TFIs below \$15K.

TH₂- Yield rates, SAT math 75th percentile score, and research expenditures will share a negative relationship with the diversity index and the percentage of dependent undergraduate financial aid applicants who have TFIs below \$15K.

TH₃- A school's unrestricted revenues, stable operating revenues, and net tuition derived directly from students will share a negative relationship with the diversity index and the percentage of dependent undergraduate financial aid applicants who have TFIs below \$15K.

TH₄- The ratio of full-time executive/administrative staff per 100 fte students will share a negative relationship with the diversity index and the percentage of dependent undergraduate financial aid applicants who have TFIs below \$15K. Schools in states where the legislature is predominantly republican will have lower diversity index scores and fewer dependent undergraduate financial aid applicants who have TFIs below \$15K, when compared to schools in states with non-republican majorities.

The Two-Way Fixed Effect Model:

A two-way fixed effect (2-way FE) model will be used to examine potential relationships that exist between indicators of the market logic and student access measures. The 2-way FE model allows for the statistical investigation of causal effects that vary by institution and time (Cameron & Trivedi 2005, 733). The modeling approach controls for unobserved heterogeneity (unmeasured factors) that correlate with regressors by accounting for time and institution specific effects (hence the two-way classification).

The fixed-effect, or within estimator, is more appropriate than a cross-sectional or pooled approach in this case. Mainly, the FE model better leverages the information garnered by panel data and will relay information regarding how access varies (with respect to the independent variables) within particular institutions depending on measures of the market logic. This modeling approach controls for the innate characteristics of specific universities while estimating

the average effects of admissions, financial, reputational, and schematic changes over time, holding other variables constant. This notion of dealing with heterogeneity by controlling for innate differences between schools is the motivating assumption underlying the fixed effect model.¹⁸ More concisely, the 2-way FE model speaks more to the average effects of policy changes controlling for organizational idiosyncrasies.

Below is the model I use to estimate the impact of the observed indicators on poor and ethnic-minority student access:

$$A_{it} = \alpha_i + \lambda_t + X_{it}\beta + \varepsilon_{it}$$

Where

A_{it} = Poor and ethnic-minority student access at the i th institution at time t .

α_i = Institution specific dummy variables

λ_t = Time specific dummy variables

X_{it} = A matrix of indicator variables indexed by institution and time

β = A vector of parameter estimates

ε = An error term

Another strength of this modeling approach is its allowance of correlation between fixed effects and the model regressors. This allowance is a more realistic condition than proceeding with the assumption that fixed effects (or innate university characteristics) are wholly uncorrelated with the independent variables (the case of the random effects model). This is especially true when put in context with this particular research study. In reality, the unobserved effects that impact access to higher education most likely do in fact correlate with many of the independent variables I examine in the model.¹⁹ In addition, since the data are inclusive of a

¹⁸ See Fixed Effect Model Primer on Course Hero.

http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.jblumenstock.com%2Ffiles%2Fcourses%2Fecon174%2FFEModels.pdf&ei=muvIVPfrKYigyQSah4HgAQ&usg=AFQjCNFUqa6fwdGiUT_88BNOGQwXKY_Gig&sig2=UKE953a_qlk0WXbrtMeCGQ&bvm=bv.84607526,d.aWw

¹⁹ Fixed effects may correlate with independent variables, but the FE model continues to be consistent even in the event that the fixed effect and independent variables are uncorrelated (Cameron & Trivedi 2005, 699).

large sampling of the American public flagship institutions in existence, the random effects model is theoretically indefensible.

The impetus for utilizing the 2-way FE model is to examine whether or not certain higher education policies and practices share an inverse relationship with student access controlling for time and other factors. With this approach, one holds fixed all unmeasured aggregate effects, essentially allowing the researcher to draw out only the impact of the variables of interest without confounding their effects with external shocks or institutional changes. This baseline analysis can potentially help substantiate whether or not certain policies driven by the market logic, *ceteris paribus*, impose structural barriers inhibiting access for poor and ethnic-minority students at the institutions studied.

It is important to note that the fixed effect model only accounts for variation within cross-sectional units, as opposed to variation between units. In turn, the interpretation of coefficients cannot be extended, or generalized to populations. What results may indicate are the average effects of variables, for the particular schools included in the model. As a result of the fact that we effectively wipe out the variation that occurs between schools, or time-invariant measures, we must be cautious in our interpretations. This is because there is important variation between schools that might also explain the state of poor and ethnic-minority student access.

Although this does limit the scope of the analysis in terms of its generalizability to the entire higher education system, the results of this analysis can be used as a starting point in understanding how market-oriented policies and practices can affect access at the public flagship institutions. Rather than asserting that significant results equate to causal real-world relationships, the results are more judiciously interpreted as heuristics that aid in our understanding of the market logic and its potential impact on student access. For this reason, the

magnitude of time-varying effects that are included in the model are not interpreted, as this may be an overreach in terms of the utility of the model.

To responsibly execute the approach, I will utilize goodness of fit criteria to confirm that the fixed effect model will result in reliable estimates of parameters. The F-test for fixed effects will be the main determinant of model compatibility. Heteroskedasticity robust standard errors will also be used to avoid providing artificially precise standard error estimates resulting from non-constant error term variation.

CHAPTER IV

RESULTS AND DISCUSSION

The results of the analysis indicated that some manifestations of the market logic have statistically identifiable relationships with the measures of access utilized in this study. In the following section, I will outline the results of the two statistical models, and provide commentary on similarities and differences found between them. One general takeaway is that the indicators of the market logic do not affect all measures of access in the same way. However, it is reasonable to conclude that the market logic and its implications for poor and ethnic-minority student access warrant further exploration, as some seem to present real challenges to increasing access at large public research universities.

Model #1

In the first model, the dependent variable is the diversity index. First, the F Test for No Fixed Effects has a p-value that is statistically significant at the 95% level.²⁰ Thus, the decision to employ the fixed effect model is validated as we reject the null hypothesis that no fixed effects exist. Generating a histogram from the residuals forms a bell shaped curve centered at zero.

²⁰ For further documentation on the F-test for No Fixed Effects see http://support.sas.com/documentation/cdl/en/etsug/60372/HTML/default/viewer.htm#etsug_panel_sect051.htm

This indicates that the errors are normally distributed and homoscedastic. A q-q plot similarly illustrates that the residuals do not visually alert us to any assumptive violations (see appendixes). The r-squared value for the model is high at .99. The most likely explanation for this result is the comparatively small amount of variation in the dependent variable within institutions as compared to between institutions.

Turning our attention to the specific independent variables, we see that the lagged state appropriations variable is significant at the 90% level (see Table 7 for Model #1 results). Moreover, it shares a positive relationship with the ethnic-diversity measure. This would suggest that, holding all other variables constant, when the public research universities in the sample endured diminishing state funds, ethnic diversity decreased. The standard error of the estimate is sufficiently small that even when accounting for error, there is plausible evidence of a relationship. This result seems to support at least one explanation of inaccessibility discussed, which is that schools are hampered in their ability to support poor and ethnic-minority student access because of a lack of adequate state funding. This would also seem to suggest that historical external factors do in fact have an impact on the ability of research universities to promote access through the cultivation of an ethnically diverse student body.

The corollary is that as schools are more amply funded, we would expect diversity to increase, on average, at the sampled institutions. This finding, while not definitive, aligns with H₁ stating that fiscal constraints, or a lack of state funding in this case, will inhibit ethnic-minority access. More importantly, the result presses us to evaluate not only universities, but also how the decisions of external institutions to fund higher education can affect the ability of schools to accomplish their vested mission. However, further analysis is needed in order to give credence to this conclusion.

The measures that quantify the social identity of the institution are informative as well. In the analysis, the institution's SAT math 75th percentile score did not bear out any relationship with on-campus diversity. However, the yield rate did in fact share a statistically significant relationship with the diversity index. Research funding also failed to demonstrate a statistically significant relationship with the dependent variable.

The yield rate finding is of consequence because it is an indirect measure of selectivity, as well as a widely accepted metric of institutional prestige. Yield rate effectively measures the attractiveness of the institution to students offered admission. High yield rates demonstrate that a university is a first choice, or priority choice, for many students. In the case that an institution intends to hold total enrollment constant, higher yield rates necessitate that the institution decrease the number of students admitted.

Observing that high yield rates seem to be inversely related to diversity suggests that as public research universities become more deliberate and selective with regard to who is offered admission, it is poor and ethnic-minority student enrollments that may suffer.

Rather than focusing on the institutions themselves, there is research to suggest that this finding is an extension of ethnic and class-based sorting at the primary and secondary level (Bastedo & Gumport 2003). In other words, some may argue that as admissions become more competitive, underrepresented students are less likely to gain admission to the top universities because of the high schools they attend, or the opportunities they are afforded prior to applying. While this may play a role in the phenomenon, it does not negate the point that market-based enrollment management policies have the ability to compound educational disparities originating at the elementary and secondary level (Jaquette et al., 2014).

Table #7

Fixed Effect Model Results (Model #1): Estimating the Relationship Between Manifestations of the Market Logic and On-Campus Ethnic Diversity, 2003 - 2010

<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>
1 year lagged state appropriations	0.00020233*	0.000122
SAT Math 75th percentile score	-0.0002991	0.000184
Yield	-0.0522978***	0.0167
Research Expenditures	0.00011851	0.000118
Unrestricted current funds	0.00001908***	5.268E-6
Stable Operating Revenue	-0.0000281	0.000022
Net tuition directly from students	0.00007177	0.000082
Full-time executive/administrative staff per 100 FTE students	-0.0159023***	0.00437
Dummy variable if house republicans ge %50	-0.0010862	0.00776
Net Tuition/State Appropriations Interaction Term	-0.0000630	0.000120
Total students	-0.0039412*	0.00209
% of Cohort - Out-of-State	-2.713813E	0.000330
White_pct	0.01082218	0.2725
Black_pct	2.44183599***	0.8252
Asian_pct	-0.1152017	0.3954
His_orig_pct	0.08255485	0.2027

R-Squared = .995

F Test for No Fixed Effects Significant at the 99% Level

*Significant at the 90% level **Significant at the 95% level ***Significant at the 99% level

If policies essentially restrict admission to the most affluent and well-prepared prospective students, opportunities for students from underserved populations will be undercut; this would effectively nullify the public university's historic role in proactively attempting to include underserved communities. This may especially be true when the motivation supporting such policies is to increase organizational prestige and selectivity. The impetus to increase yield at many of the top institutions may in fact fit this criterion.

This finding directs attention to the flagship university's ability to balance its pursuit of prestige and selectivity with its public obligations. It raises questions regarding who benefits from prestige and selectivity gains, and the ramifications of such practices for ethnic-minority student access. The social identity findings only partially support H₂, that focusing on competitive metrics will adversely affect student access. The standardized test scores and research expenditures' failure to demonstrate any relationship with the diversity measure must give pause. While there is some evidence that pursuing prestige decreases diversity, all metrics of prestige may not affect access in the same way, or at all.

The financial goals indicators did not exhibit the negative effect on ethnic diversity as hypothesized. Net student tuition and stable operating revenues did not demonstrate any meaningful relationship with the diversity index measure. Unrestricted revenue, on the other hand, evidenced a positive relationship with diversity at the 99% significance level. This finding seems to refute H₃, that the attainment of fiscal goals will fail to increase access. For the schools in the sample, it seems that growth in unrestricted funds can translate into increased access for ethnic-minority students.

Unrestricted revenues represent funds that universities have considerable latitude in spending because donors do not designate them for any particular purpose (UVA 2013). This

means that these funds may be used by universities to support student access efforts if such efforts are deemed appropriate by the financial stewards of the institution. What we may infer from the results is that as the universities sampled are more successful in raising unrestricted funds, a proportion may be allocated for increasing ethnic diversity on campus.

Placed in context with H₃, that the successful attainment of financial goals will result in decreased access, we must conclude that there is no evidence to support this hypothesis. On the contrary, the result may indicate that as these universities are able to meet core financial concerns in key areas, they are actually more apt to spend in areas such as student access. More specifically, it is plausible this is the case in instances where universities raise adequate, or above average amounts of unrestricted revenues. Proverbially, this could be described as a rising tide lifting all ships. Regardless, the finding suggests that as the public research universities sampled raise unrestricted revenues, those gains on average are translating to increased student access for underrepresented minorities.

The independent variables attempting to measure the effects of material and symbolic schema on ethnic diversity showed mixed results. Material manifestations of schema exhibited a statistically significant impact on ethnic diversity. In contrast, the indirect measure of NPM practices quantified by Republican majorities in state legislatures failed to establish any substantive connection between symbolic schema and student access. The proportion of full-time executives/administrative staff per 100 FTE students was significant at the 99% level and shared an inverse relationship with the diversity index. Even when accounting for error, the estimate suggests that as this metric increases campuses become more homogeneous.

This result seems to corroborate work done by other scholars who have questioned the necessity and intent behind administrative growth in higher education (Leslie & Rhoades 1995;

Green 2010; Ginsberg 2011). From these results, it is appropriate to at least question the value of administrative growth for different student populations at the high and very high research activity institutions. If the premise that administrative growth in higher education is a manifestation of market logic is accepted, then this result also provides a level of support for H₄, that market schema adversely affect access.

Alternatively, the dummy variable indicating whether or not state legislatures were predominantly Republican showed now such relationship. Thus, we cannot speak to the impact of NPM practices employed at flagship universities. For H₄, Model #1 provides an impetus to further investigate material manifestations of schema and their proposed ability to impact university access. As universities rely more on generic responses to institutional challenges, the public would be remiss not to question the impact of these practices for different communities. At these institutions in particular, the literature and empirical evidence seem to suggest that as universities become more administratively oriented, or top heavy, they too become less ethnically diverse.

Two of the control variables in the model demonstrated statistically significant relationships with the response variable as well. The percentage of Blacks in the state was unsurprisingly correlated with the ethnic diversity of university campuses. As the state's Black population increased, included institutions were more diverse, holding other factors constant. This result was significant at the 99% level. The total enrollment of the university also proved to have a relationship with ethnic diversity on campus. In the model, as total enrollments grew, the diversity measure actually decreased, indicating an inverse relationship between total enrollments and diversity at the 95% significance level.

Through the market logic lens, this result is somewhat expected. As schools place more emphasis on increasing enrollments by pursuing affluent, well-prepared, and predominantly white students, the enrollment of ethnic-minority students logically might decrease. This is because underrepresented ethnic-minority students generally do not have the same means to attend. As a result of lower average earnings, and fewer opportunities to attend well-funded elementary and secondary schools, these students do not fit the student profile that has been adopted at many of the leading public research universities (Carey & Roza, 2008). Again, this result potentially speaks to the motivation of schools in cultivating a student body, and also intersects with pervasive educational disparities that persist at the elementary and secondary level.

Model #2

Model #2 adds a level of convergent validity to a number of the Model #1 findings. Results and interpretations from Model #1 in many cases are supported through examining manifestations of the market logic and their relationship with socioeconomic diversity. However, there are also a number of important divergences that illustrate the complexity of the access problem. Differences indicate that although ethnic diversity and socioeconomic diversity are interrelated, there are fundamental differences between the two that necessitate the two dimensions of access being decoupled.

Similar to Model #1, Model #2's F-Test for No Fixed Effects suggests we reject the null hypothesis that there are no fixed effects. The analysis of residuals through the histogram once again indicates an acceptable error distribution (see appendixes), although the q-q plot does indicate a left skew. Again, the model possesses a high r-squared value that can most likely be attributed to the amount of variance occurring within institutions.

The lagged state appropriations variable similarly has a statistically significant relationship with the number of dependent undergraduates submitting a financial aid application indicating they have a TFI of \$15K or below. For Model #2, the lagged state appropriations variable is significant at the 99% level. This finding further substantiates the findings of Model #1 (see Table 8 for Model #2 results).

What can be gathered from both results is that the state's support of higher education seems to play an instrumental role in the degree to which these particular institutions support poor and ethnic-minority student access. In this instance, both of these groups are similarly affected by external fiscal constraints impacting public research universities. At worst, these findings fail to refute H₁, that external financial constraints will negatively impact student access at the public flagships. At best, the findings further validate claims that the state's divestiture in higher education represents an institutional constraint that undermines the ability of state schools to support poor and ethnic-minority student access.

Therefore it seems that at least one of the prevailing explanations of inaccessibility, that waning state support of higher education inhibits access, is a legitimate claim based on the analysis of the schools utilized in this study. Moreover, the relationship between prior year state appropriations and student access demonstrates the utility of one element of the theoretical framework, which is that historical contexts have the ability to influence institutional logics. Logics must be properly framed within their institutional environment, and examined in context with the important external forces that shaped them. The failure to refute H₁ seems to signify not only that external fiscal constraints impacted access for the schools studied, but also that privatization in higher education is in some cases a reaction to external institutional forces.

Table #8

Fixed Effect Model Results (Model #2): Estimating the Relationship Between Manifestations of the Market Logic and On-Campus Socioeconomic Diversity, 2003 - 2010

<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>
1 year lagged state appropriations	2.6452360 ***	0.9039
SAT Math 75th percentile score	0.15110868	1.4007
Yield	-334.48053*	180.3
Research Expenditures	0.96463641	1.2456
Unrestricted current funds	-0.3451751**	0.1360
Stable Operating Revenue	-0.2875574	0.2690
Net tuition directly from students	2.99776944***	0.7221
Full-time executive/administrative staff per 100 FTE students	-11.237640	54.285
Dummy variable if house republicans ge %50	7.86409033	50.514
Net Tuition/State Appropriations Interaction Term	6.75329273***	1.1525
Total students	28.8751158	18.881
% of Cohort - Out-of-State	1.82468036	3.2053
White_pct	-576.5868	1678.2
Black_pct	-13531.395*	7968.7
Asian_pct	2461.30309	1643.3
His_orig_pct	-763.59113	2829.7

R-Squared = .995

F Test for No Fixed Effects Significant at the 99% Level

*Significant at the 90% level **Significant at the 95% level ***Significant at the 99% level

This is very much in line with the widely held belief that the university's increased reliance on market mechanisms, and general turn toward privatization, was in some way triggered by the states' divestiture in higher education.

The social identity indicators also mirrored the findings of Model #1. Out of the three indicators of social identity, only the yield rate was found to be statistically significant, this time at the 90% significance level. In tandem, the results from Model #1 and Model #2 indicate that access for poor and ethnic-minority students was similarly affected by the research university's pursuit of prestige through yield rates specifically. With yield rates a fairly direct measure of selectivity, the results align with previous scholarship asserting that the pursuit of organizational prestige through selectivity may conflict with the general goal of educational access. Based upon these findings we might also focus more attention upon yield rates, along with the number of students admitted, as critical metrics reflecting an institution's priorities regarding both selectivity and access.

The absence of any statistically detectable relationship between standardized test scores or research expenditures and the response variables is also informative. For the latter, we might infer that expenditures on research are not necessarily being diverted away from funds that would go to support access. Research expenditures may be more a function of the ability researchers to secure grant dollars than the shifting of institutional funds away from public-minded objectives. Regarding standardized test scores, the results of both models failed to show that increased average test scores led to decreased access. This may mean that although schools attempt to demonstrate prestige through higher average test scores, this practice in and of itself does not hinder institutions in their ability or commitment to admitting poor and ethnic-minority students.

From the two models, we can reasonably conclude that H₂ is partially confirmed. The statistical analysis indicates that as schools concentrate more on specific metrics commonly associated with reputational bearing, selectivity, and ultimately prestige, access for poor and ethnic-minority students decreased on average. Furthermore, there is no evidence to the contrary suggesting that any of these metrics will counteract current trends in higher education that impede access for poor and ethnic-minority students. This is an important finding because of the increasing intensity of competition between the leading universities. One overarching takeaway from this portion of the analysis is that interinstitutional competition may not be a benefit to all prospective students, as some market proponents may suggest.

The caveat here is that not all metrics that increase selectivity and confer prestige are alike, as not all were shown to have an adverse effect on student access. More work needs to be done to contextualize these findings in light of literature asserting that the increasing competitiveness of college admissions, by way of test scores specifically, is a hindrance to underrepresented student populations (Carnevale & Strohl, 2013). Moving forward, other measures of selectivity and prestige need to be assessed to understand whether or not they differ in their impact on access, much the same way these indicators of social identity did in this analysis.

The financial goals indicators show the most divergence from Model #1. Perhaps the principal finding stemming from the analysis of the financial goals was that all indicators of financial success do not uniformly affect student access in the same ways. Where Model #1 unearthed a relationship between only unrestricted revenues and ethnic diversity, Model #2 identified relationships between unrestricted revenues as well as net student tuition and the socioeconomic diversity response variable. Interestingly enough, Model #2 displayed an inverse

relationship between unrestricted revenues and socioeconomic diversity at the 95% significance level. From this result, we would expect the number of low-income students to decrease as the unrestricted revenues rose at the institutions analyzed.

This is seemingly in conflict with the results of Model #1; however, it is important not to conflate access for ethnic-minorities with access for low SES students. One plausible explanation is that unrestricted revenues are being employed to target students from underrepresented groups who are not necessarily low-income. Although ethnicity and socioeconomic status are interrelated on an aggregate scale, there are individuals from all levels of the income distribution in every ethnic group.

While fewer in number, there are students from underrepresented groups that fit the affluent, highly prepared student profile. In this case, universities could make ground with regard to ethnic diversity by more aggressively recruiting relatively affluent, high achieving ethnic-minority students, while neglecting, or even reproducing class-based disparities. One mechanism by which this could be accomplished is through the offering of merit-based, as opposed to need-based, aid. In this instance, eligible ethnic-minorities could increase ethnic diversity figures while doing nothing to make institutions more socioeconomically representative. Again, seeing that increases in unrestricted revenues are inversely correlated with socioeconomic diversity may be evidence of universities allocating funds in ways that further inhibit the ability of low-income students to attend flagship universities. While this is only one plausible explanation out of many, it does reconcile the findings of both models by incorporating some of the prescribed consequences of higher education privatization.

Net student tuition is another seemingly counterintuitive finding at first glance. As per the model, as net student tuition increases, or the amount of tuition revenues derived directly

from students, the number of dependent financial aid applications from students with a TFI of \$15K or less increases. The results were significant at the 99% significance level. In this instance, the result can only be interpreted in context with the net student tuition and lagged state appropriations interaction effect, which is also significant at the 99% level in Model #2.

We may interpret the interaction effect to mean that for the schools sampled, the relationship between net student tuition and our dependent variable is mitigated, or dependent upon, the state appropriations amount from the previous year. It is important to recall the previous year's state appropriations amount was found to have a statistically significant, positive relationship with the response variable in both models. Thus, the magnitude of the relationship between net student tuition and the proxy measure for socioeconomic diversity is contingent upon state funding for higher education.

Recognizing that the net student tuition result is interrelated with state appropriations necessitates that we interpret the finding in context with external economic forces. State appropriations to higher education are influenced by larger statewide and national economic trends. In times of economic crises, state appropriations for higher education are in many cases reduced; in times of economic prosperity, they are more prone to increase. By extension, the tuition revenues universities collected from students as well as the socioeconomic diversity of the institution are both heavily influenced by state funding. Thus, we may view net student tuition increases as well as increased access for poor students as functions of state appropriations to higher education and the larger economic trends affecting them.

Rather than insinuating that increasing the amount of revenues derived from students has a causal relationship with student access at these schools, this result seems to reflect two constant threads throughout the analysis. The first is that the access problem in higher education is a

complex one influenced by many different internal as well as external factors. Second, we cannot assume that as institutions do better financially, access will decrease. Although there is evidence to suggest that the benefits of economic success are not spread equally to all constituent groups, some findings support the contention that the achievement of financial goals can in fact increase poor and ethnic-minority access.

In this case, one might also assert that when states do well, it is indicative of state residents, and state institutions, doing better financially. From this reasoning, two possible explanations stem. First, in times of broad economic growth, public universities collect more revenues from students, and more poor students are able to acquire the funds needed to attend large public research universities. This interpretation would reduce the finding to a matter of correlation rather than causal effect. Second, when universities enjoy increased revenues from tuition and fees, it enables them to more aggressively redistribute funds enabling them to support poorer students.

Although tentative, these explanations may partly explain why increased revenues derived from students positively correlate with greater low-SES student enrollment. However, it is important not to negate the information that can potentially be drawn from the finding, which is that in semblance to the findings of Model #1, the university's attainment of financial goals may not necessarily result in decreased access for poor and ethnic-minority students.

In attempting to apply these findings to H₃, it is again important to recognize the inherent complexity of the issue. From the analysis it is evident that as universities attain financial goals, access is not unequivocally diminished. In at least two instances, financial gains were associated with increased access for poor and ethnic-minority students. On the other hand, there were

results that suggested that the attainment of financial goals does not necessarily go to the benefit of underrepresented groups.

Going further, increases in unrestricted revenues may draw the university further away from its commitments to access for low SES students. Therefore H₃, like H₂, can only be partially accepted because it does not incorporate the multifaceted nature of the relationship between financial goals and student access. More emphasis on all market-based goals does not in all cases translate to decreased access, but it seems to in some. From the analysis, as well as from the observation of pervasive trends in higher education, we can posit with some degree of certainty that in some instances, the market logic conflicts with student access. However, in order to better understand these relationships, more financial indicators need to be analyzed, and qualitative work needs to be done to contextualize findings.

Moving to the independent variables that measure schema, both failed to display a statistically identifiable relationship with socioeconomic diversity. Unlike in Model #1, there was no evidence of even material schema affecting the percentage of low SES students in attendance. Model #2 fails to lend any support to H₄, that market-based schema will lead to decreased access for poor students.

Examining these results in tandem with those of Model #1, there is not enough evidence to strongly support H₄. The lack of convergence between models is the main reason for this conclusion. However, the finding in Model #1 that the number of full-time executives/administrative staff per 100 FTE students had an inverse relationship with ethnic diversity is insightful. This finding is buttressed by other research on administrative growth and confirms the need for additional analysis to truly understand the role that schema play in the

implementation of university policy. Perhaps with more accurate measures of schema, more definitive evidence can be obtained to either support or dispel H4.

The control measures for Model #2 that had significant relationships with the response variable were the previously discussed net student tuition and prior year state appropriation interaction effect, as well as the percentage of Blacks in the state. In contrast to Model #1, the percentage of Blacks in the state actually had an inverse relationship with socioeconomic diversity at the 90% significance level. Herein is another instance in which it becomes imperative to decouple access for ethnic-minorities from access for poor students. Again, this finding may point to widening class-based disparities in higher education.

Compared to Whites and Asians, Blacks and Latinos comprise a disproportionate amount of the total number of people living under the poverty line. Both Blacks and Latinos have more than one quarter of their populations living in poverty, and both have even higher percentages of children under 18 living in poor households (NPC 2015). As a result, we might expect states with higher percentages of Blacks or Latinos to have larger pockets of poverty. In essence, I view this figure as a rough proxy measure for state level poverty in addition to it measuring demographics. If we accept this premise, then the statistical result may indicate that states with larger pockets of poverty actually have less access for poor students. This could result from a combination of state higher education policies, internal policies at the flagship institutions, and demographic factors. While further investigation of this result is outside the scope of this project, it indicates there are a number of factors in addition to organizational policy that impact access for low SES students.

Through the statistical analysis and testing of the offered hypotheses, it seems fair to conclude that at least for the institutions examined, the market logic does seem to have some

effects on access for poor and ethnic-minority students. This is not to say that the market logic is or is not the driving force behind pervasive inaccessibility in higher education, but only that waning access for poor and ethnic-minority students seems in ways to be interrelated with privatization in higher education. Universities conforming to the market-based model, and more broadly an institutional logic that emphasizes its necessity, cannot adequately advance the state of student access without thoughtfully examining institutional policies that seek to transform the public university into a more business-like organization.

From the analysis we can gather that the schools studied, on average, support policies that inhibit access for poor and ethnic-minority students. National statistics indicate that accessibility is rapidly diminishing at the public flagships for not only poor and ethnic-minority students, but also for a large contingent of students hailing from the middle class. If access truly is a high priority for public institutions of higher education, some of the policies identified in this study are in need of reevaluation and perhaps reform.

What is also important is to recognize that a great deal of the variability in access is explained by between institution variation. As previously stated, this is one of the limitations of this analytical approach. The high r-squared figures in both models clue us in to the possibility that a great deal can be gleaned from different statistical methods accounting for that variability. This means that analyses that incorporate institution-specific measures can also be highly informative in allowing us to better understand why student access is on a precipitous decline for poor and ethnic-minority students at public research universities.

In addition, more comprehensive and complete data are needed to draw out more concrete conclusions. Even though the IPEDS data is a tremendous resource, a number of schools submitted data that was partially incomplete. This is simply the reality of aggregating

data for what amounts to enormous and dynamic enterprises. Unfortunately, analyses of these types are only as robust as the amount of complete and accurate data used to estimate the population parameters.

Although the analysis did indicate that certain revenue streams positively correlated with student access, it is evident by looking at national trends in higher education that they are not enough to support poor and ethnic-minority student access at even moderate levels. In order to complete the public objectives of the public research university, analyses like these can be used to understand how university policies can effect student access, irrespective of the factors that make colleges unique. Instead, this work simply aimed to uncover policies and practices implemented on research university campuses that are prone to conflict with their commitment to support student access. As the findings suggest, there are areas that schools must examine if aspirational goals for student access are to be met.

CHAPTER V CONCLUSION

Public research universities support regional economic growth both directly and indirectly, confer individual and public benefits, and many times promote the social well-being of entire communities. Invariably, this means that the public research universities, or the flagship public institutions specifically, are inherently complex organizations. With myriad concerns, responsibilities, and aspirations comes the need to balance priorities, reconcile conflicts, and ultimately set policy. This has proved a difficult but manageable task as the public research university has progressed through important transitional periods and expanded its role to meet the demands of an ever-increasing constituent base.

At present, the university is yet again at another precipice of transition and change. Current fiscal policies are being enacted in an effort to contend with an evolving relationship

with the state, increased external scrutiny, and motivations to stay relevant in what is a rapidly changing institutional landscape. Undergirding these policies has been a market logic that has framed and contextualized higher education changes in the terms of supply and demand, price, and efficiency. While this new logic understandably has placed a greater emphasis on market concerns, it has also translated into the suppression of university objectives outside of the ordinary scope of the market.

Hence, the institutionalization of the market logic in higher education has in a way crowded out other normative concerns that universities were created for and are uniquely qualified to address. It is at this nexus between the market logic in higher education and decreased access for poor and ethnic-minority students that this study has focused on, and hopefully brought an increased level of clarity to. These populations are identified in particular because they find themselves in a particularly precarious situation. Poor and ethnic-minority students already facing institutional barriers to access, who have little or no voice in the policy-making process, are now in danger of being completely shut out of the upper echelon of post-secondary institutions by prevailing higher education trends that value market gains over social ones (Chomsky 2013). Thus, the stakes are high for poor and ethnic-minorities students aspiring to attend a public flagship institution.

Reexamining the findings of the analysis helps to elucidate the policy problem and draw firmer conclusions regarding the logic and its implications for access. The financial constraints that universities contend with appeared to hamper higher education access. It seems that as universities deal with diminishing state support they operate in ways that make the university more homogenous, and presumably revert to policies and practices that align with the general market logic. In a manner consistent with the theory laid out in Chapter 2, it is conceivable that

as the financial relationship between the states and the public universities wanes, so too do some aspects of student access at the public research university.

This result becomes more pronounced when examined in concert with the growing importance of perceived prestige through selectivity. Some of the policies and practices being implemented to help schools climb college ranking surveys and exploit the power of branding are synchronously making it more difficult for poor and ethnic-minorities to attend those very institutions. The proliferation of new metrics is purported to provide important and actionable information to prospective college students. Interestingly enough, accessibility is rarely a central component in the formulation of such rankings, which raises the question, “who are these rankings intended to inform and benefit?”

The misalignment between pursuing prestige and adhering to the goal of inclusivity as a core component of the public university’s service mission is not surprising when we understand that prestige is equated with attracting students from the highest rungs of the socioeconomic ladder. The problem is that this practice is perpetuated even though it virtually disqualifies some of the neediest students from post-secondary opportunities. In addition, a powerful yet unspoken message is being communicated. Unfortunately, it is one that is dismissive of open access and more than tinged with elitism. This assertion is strengthened by analytical results illustrating that some of the most fundamental elements of prestige are inversely related to access for historically underserved populations. Again, this represents a fundamental problem for those who view the public research university as a center for economic prosperity *and* as a force for promoting the social good through accessible education.

Another issue at the heart of the project is affordability. As previously stated, ethnic-minorities are specially distinguished in the analysis because many hailing from

underrepresented groups are more likely to contend with poverty than whites or ethnic-minorities who are equitably represented in higher education. This makes the issue of poverty a complex and cross-cutting one, though no less important. However, one thing is certain: without affordability as a central tenet in the delivery of public higher education, all low SES students will routinely and systematically be disadvantaged. As a result of the institutional nature of this barrier, it is one of the most pernicious, intractable, and far-reaching.

The university's increasing reliance on tuition and fees is a case in point. Schools are gravitating toward a more tuition dependent funding model with only minimal interest in the implications of these policies for underserved students. The findings from this analysis indicate that increased tuition revenues from students correlates with student access, but this is more a function of a conducive national and state economic environment than a causal relationship between increased prices and student access. Further, we must question whether it is appropriate to allow student access for poor and ethnic-minority students to buoy with random market variation. More precisely, should student access only be something that trickles down to poor and ethnic-minority students in times of fiscal prosperity?

What is known is that the increased willingness on the part of universities to pass on costs through tuition and fee hikes fits neatly within the framework of privatization in higher education. As a consequence, we can begin to make the association between terms like efficiency, market-driven, and fiscal flexibility commonly used to describe the streamlined, corporate university model and a decreased emphasis on accessibility for certain student populations. Although with some important caveats, this analysis and others have identified instances where these policies conflict with public-centered objectives.

These problems weaken faith and confidence in the belief that public research universities are attempting to maintain some level of equity for non-affluent students. Whereas in most circles it would be foolhardy to discount the imminence and importance of astute financial management, one would hope that it would be equally as foolish to discount or ignore the public university's vested charge to promote the public good. In the event that these two sentiments are not held on equal footing, with pecuniary interests prioritized over public ones, only more questions are raised regarding the internal calculus of public institutions as it relates to their commitment to ensuring access.

A closer look at the changing composition of university campuses does little to dispel many of the fears that higher education observers are beginning to voice. With greater autonomy comes more opportunity for college administrators to control the destiny and composition of their institutions. Coinciding with the growth of the administrative apparatus at many of the flagship institutions has been the precipitous decline in access as discussed throughout this study and many others. Although preliminary, the results of this analysis indicated that more decision makers do not translate to any perceivable gains in access for underrepresented ethnic-minorities, and may in fact hinder it at the institutions examined. Once again the question arises, "if the decision makers on campus are not championing access, then who will"?

These are important questions and concepts that are all either directly associated or indirectly related to the market logic in higher education. The thrust of my argument is that the market logic must be more thoroughly scrutinized. It potentially represents one of the root causes of the institutionalization and reproduction of systemic barriers to access for many poor and ethnic-minority students. At the same time, the eagerness to implement market reforms in light of the access crisis suggests that serious discussions are not being had to address this

reality. More often, inaccessibility is framed as a byproduct of an unfortunate chain of events, rather than a fairly predictable consequence of deliberate policymaking.

The framing the market logic can be put into context when we refer back to institutional theory. The market logic's presence in higher education is in line with conceptions of institutional thinking as self-reinforcing and durable (Jones 1986). As sentiments have changed over time with regard to the way universities should operate, the market logic has continued to retain some role as a legitimized way of understanding the higher education landscape. This is because the market logic should play a role in higher education policymaking. Its utility comes by way of its elevation of the financial interests of the university, and by extension, the continuity of the organization. This perspective is in accordance with the view that organizations become *going concerns*, referring to the instance when the preservation of the organization becomes as important an objective as the original tasks the organization originally set out to achieve (Selznick 1957).

The process of becoming a *going concern* is an important step toward permanently encoding institutional values and interests. However, it is important to evaluate what those values and interests will be if the market logic continues to gain momentum. As the market logic is promulgated as the way to approach higher education problems, the character of the public higher education system will correspondingly evolve. From a different vantage point, the day-to-day application of the logic can be viewed as the habits that define the institutional character of organizations. This would encompass the values that define the organization's mission, its integration with its social surroundings, and also its distinctive competence (Selznick 1957). So it is important to not only view the market logic as a conduit to financial stability, but also as the defining component of institutional character.

The findings from the analysis suggest that the market logic does little to increase access, or elevate it as an important policy problem. From the evidence we might also infer that the actions it supports in fact can undermine access for certain student populations. Again, it becomes imperative to contrast the benefits of financial stability with the shortcomings of a public higher education system that potentially exacerbates ethnic and class-based disparities. The reemergence of the market logic can also be viewed as an inchoate stage of institutional change. In essence, we may be observing the market logic alter the character of the public higher education system. More specifically, the market logic may be subsuming the public university's implicit commitment to serve historically underserved communities.

It is also important to realize that there are alternative scenarios. The complexity of the higher education system makes it nearly impossible to forecast the impending pressures schools will face, institutional responses, or the impact of technology. Herein we find a shortfall of the ILP, and many other institutional approaches. We are unsure if the market logic will eventually supplant public values, contract with the expansion of an alternative logic, or perhaps even integrate community interests through the development of mutually supportive structures (Reay & Hinings 2009). The application of the ILP was insightful for examining the relevant aspects of the logic and prescribed relationships with micro-level outcomes, but more work needs to be done to understand the institutional levers that spur and sustain expansive change. This is one area of the ILP that is ripe for future development through empirical research. Yet, even taking into account the shortcomings of the theoretical framework, the findings from this study seem to comport with some of the prevailing trends in higher education, and waning access to the state flagship institutions.

In 2010, ninety percent of financial aid administrators indicated that shortages of funds allocated for financial aid specifically hindered their ability to assist and attend to target populations (NASFAA Report 2010). Additionally, it was found that national accrediting agencies were more likely to cite financial rather than academic problems; this is in light of the fact that schools with weaker student learning outcomes were no more likely to be sanctioned than schools with stronger ones (GAO Report 2014). Perhaps nothing is more emblematic of the infiltration of market forces than collegiate athletics, where the professionalization of student athletes seems to be the norm even when it directly undermines academic integrity (Wolverton 2014; Wanstein et al. 2014).

Closer ties with private entities can and should be examined along these same lines. With universities now sponsoring private foundations, it becomes imperative to analyze not only the benefits, but the costs of privatization in higher education. At Virginia Polytechnic Institute and State University (VPISU) in particular, executive administrators would agree that to understand the university and its reliance on the market, you must also understand its corporate structure. At VPISU, the rationale for a private foundation is cost-savings, financial flexibility and agility, regulation avoidance, and the ability to lobby (Shelton & Dooley 2014).

These are characteristics that invariably help universities navigate a trying institutional environment, but the fact remains that the costs are often neglected and under analyzed because they are disproportionately levied on those with the least political capital. At the same time, the vast majority of public institutions have offices, departments, or overarching frameworks ensuring that diversity and inclusion are fundamental values taken into account in all decision-making processes. You would be hard pressed to find a university administration that would concede that they are willing to sacrifice access for short-term financial gain, but this is what a

great deal of the scholarly evidence suggests. It is also indicative of the identity crisis taking place at the public institution.

Just this cursory look at some of the current developments in the public higher education system demonstrates how budget cuts, a parochial focus on financial objectives, and revenue-seeking behaviors reverberate throughout the institutional field. The market orientation has definite benefits for higher education institutions, but we must evaluate those benefits along with the market logic's disadvantages. This is imperative in order to implement policy solutions that can feasibly address the access problem. Yet even with a wealth of evidence implicating market trends as one culprit for waning access, some still extoll the market as a panacea for all higher education problems.

Proponents regularly associate the acceptance of market reforms in higher education with many of the theoretical constructs regularly associated with perfect markets: competition that benefits consumers, optimal efficiency, information sharing, and reflective prices (Dill 1997). In theory, all of these characteristics increase access at the public flagship institutions. To take it a step further, many increase access in reality. However, any discussion of access necessitates a delineation of the target population, or more specifically posing the question "Access for whom?"

Competition in higher education has driven up prices as opposed to controlling them (Levine 2001). The new competitive market for merit aid has been a benefit to many prospective students, but not students from the margins. As for efficiency, some have asserted that for the types of schools identified in this study "higher prices would have little impact on demand" (Geiger 2004). This is certainly an efficiency gain when ascribing to microeconomic theory. On the other hand, econometric analyses have indicated that higher costs do in fact price out students

depending on family income therefore affecting demand at lower income distributions (Becker 1990).

Here again, the failure to recognize the differential impact of higher education policy translates to an inability to account for the social ramifications it can engender. More so, this type of approach is a microcosm of a larger problem, which is that there are a large number of public research universities that are not deeply and aggressively committed to making their institutions open and accessible to poor and ethnic-minority students. As long as the growing inaccessibility of public research universities is attributed mainly to the states, failing secondary schools, and family pathology, public institutions will continue to operate in ways that ignore and/or compound postsecondary inaccessibility.

In her keynote address at the SACSCOC Annual Conference, former Secretary of Education Margaret Spellings reiterated that things must change in order to guide institutions back onto the right path. It was her observation that higher education in the United States was too expensive and too exclusive, and that the leading institutions needed to take it upon themselves to reach out specifically to poor and ethnic-minority student populations (Spellings 2014). Her words were cogent because they were directed at the institutions themselves. Too often, explanations of inaccessibility focus on factors outside of the control of institutions while failing to address the responsibility schools share in reproducing institutional barriers through policy. Time and again, any mention of the tools and resources that institutions have at their disposal to turn the tide on the access problem is omitted from the discourse.

This is an important point because scholarship and policy recommendations alone will not address the underlying issue. While it is necessary to home in on the cause and effect relationships that exacerbate inaccessibility at the public research university, only well-crafted,

data driven policy can make an impact. Solutions abound with regard to the ways institutions can combat the lack of access to education for certain populations. More intensive recruitment and information sharing efforts are one way the schools could attract high achieving low-income students that many times are routed to schools with fewer resources (Hoxby & Turner 2014). Schools could encumber, or restrict, more funds specifically for the purpose of providing need-based aid. National accrediting agencies could, and should be, lobbied to assess and evaluate diversity and inclusion efforts with sanctioning power in the event a school's actions fail to align with their prescribed mission. More work can also be done to educate low SES students about the predatory practices of for-profit institutions (Mettler 2014). Institutions as well as students could pressure ranking surveys to weight access measures, so that schools that support efforts to increase access are not penalized for committing resources to areas not associated with student amenities, facilities, or athletics.

However, all of these recommendations are connected in that they require institutional leadership and a much stronger and more genuine commitment to access. Phillip Selznick writes that leadership is lacking when it is needed, or disproportionately driven by short-term economic gain (1957). He is able to draw out the lack of leadership characterizing the public higher education system as it relates to supporting student access for poor and ethnic-minority students. Instead of rewarding administrators who make public institutions look more like private ones, university leaders who can develop competence in both areas should be elevated and compensated appropriately. Without innovators of this kind, we risk propping up public institutions that are closed off to a large contingent of the public.

One exemplar of a higher education institution that is doing things differently is Vassar College. At Vassar, President Catherine Bond Hill took action to put policies and procedures in

place that increased access. Her efforts aligned a spoken commitment to access with an organizational one. More specifically, President Bond acknowledged that the hurdle was committing resources. In order to overcome that obstacle, she allocated money to need-based aid, championed need-blind admissions policies, and raised money specifically for the purpose of making Vassar more accessible (C. B. Hill 2014). In all, it was not the way in which Vassar was going about supporting access that was especially innovative; rather, it was leadership at the top that modeled a true commitment to addressing inaccessibility.

What is perhaps more interesting is that Vassar is a private liberal arts college. It is somewhat ironic, to say the least, that perhaps the most vivid example of a school demonstrating a genuine commitment to access is a private institution. Recalling some of the main themes of the privatization literature, many advocates called for the employment of practices that hail from the private sector. If public institutions truly wanted to address the access problem, they should indeed look to institutions like Vassar that have created a sort of blueprint for increasing access on college campuses.

Compensating administrators who can be successful at advancing the institution in both areas is one way in which the marketplace could work to achieve access goals. In this example privatization is not the enemy of access. Here, the innovation and flexibility that the private sector is many times praised for might actually be a benefit if it were tailored for public sector institutions and their distinct objectives. Again, this example is pertinent not because of the methods employed, but rather because of the overarching goal that an institution's leader set out to achieve (Selznick 1957).

In all honesty, the private categorization makes little difference here. Rather than focusing on the public versus private dichotomy, the important issue is that it takes leadership to

model and imbue a true commitment to access and affordability. As shown, this type of change does not have to be in direct opposition to the market logic or higher education privatization, but it must not take a back seat to it. External forces, political regimes, and financial constraints will always present challenges, but innovative leadership can overcome them.

For this type of thoughtful change to be commonplace in higher education, as opposed to an anomaly, leaders must take it upon themselves to identify instances where actions do not align with values. In these instances, there needs to be a constant pressure to ensure organizational actions are consistent with organizational values. When inconsistencies are pervasive, or hamper the public research university's ability to be fiscally solvent, innovative, and socially conscious, leadership changes should be made. There are leaders with the skills to handle, or even excel in these situations, and the marketplace is perhaps the best place to begin identifying them.

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Appendix A - 1

Model #1 Sample Population

Institution Name
Indiana University-Bloomington
Louisiana State University and Agricultural & Mechanical College
Ohio State University-Main Campus
Pennsylvania State University-Main Campus
Pennsylvania State University-Penn State Main Campus
SUNY at Buffalo
The University of Alabama
The University of Montana
The University of Texas at Austin
University at Buffalo
University of Alaska Fairbanks
University of Arizona
University of Arkansas
University of Arkansas Main Campus
University of California-Berkeley
University of Colorado at Boulder
University of Connecticut
University of Delaware
University of Florida
University of Georgia
University of Hawaii at Manoa
University of Idaho
University of Iowa
University of Kentucky
University of Maine
University of Maryland-College Park
University of Michigan-Ann Arbor
University of Minnesota-Twin Cities
University of Mississippi Main Campus
University of Missouri-Columbia
University of Nevada-Reno
University of New Hampshire-Main Campus

Sample Criteria
 Greater than 20K Students
 Endowment over \$100 Million
 Public Institution
 High/Very High Research Activity

Appendix A - 1

Model #1 Sample Population

Institution Name
University of New Mexico-Main Campus
University of North Carolina at Chapel Hill
University of North Dakota
University of Oklahoma Norman Campus
University of Oregon
University of Rhode Island
University of South Carolina-Columbia
University of South Dakota
University of Utah
University of Vermont
University of Virginia-Main Campus
University of Washington-Seattle Campus
University of Wisconsin-Madison
University of Wyoming
West Virginia University

Sample Criteria

Greater than 20K Students
Endowment over \$100 Million
Public Institution
High/Very High Research Activity

Appendix A - 2

Model #2 Sample Population

Institution Name
Indiana University-Bloomington
Louisiana State University and Agricultural & Mechanical College
Ohio State University-Main Campus
Pennsylvania State University-Main Campus
Pennsylvania State University-Penn State Main Campus
SUNY at Buffalo
The University of Alabama
The University of Montana
The University of Texas at Austin
University of Alaska Fairbanks
University of Arizona
University of Arkansas Main Campus
University of California-Berkeley
University of Colorado at Boulder
University of Connecticut
University of Delaware
University of Florida
University of Georgia
University of Hawaii at Manoa
University of Idaho
University of Iowa
University of Kentucky
University of Maine
University of Maryland-College Park
University of Michigan-Ann Arbor
University of Minnesota-Twin Cities
University of Missouri-Columbia
University of Nevada-Reno
University of New Hampshire-Main Campus
University of New Mexico-Main Campus
University of North Carolina at Chapel Hill
University of North Dakota

Sample Criteria
 Greater than 20K Students
 Endowment over \$100 Million
 Public Institution
 High/Very High Research Activity

Appendix A - 2

Model #2 Sample Population

Institution Name
University of Oregon
University of Rhode Island
University of South Carolina-Columbia
University of South Dakota
University of Utah
University of Vermont
University of Virginia-Main Campus
University of Washington-Seattle Campus
University of Wisconsin-Madison
University of Wyoming
West Virginia University

Sample Criteria

Greater than 20K Students
Endowment over \$100 Million
Public Institution
High/Very High Research Activity

Appendix B - 1

Model #1 Variable Summary Statistics

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
diversity_index	Diversity Index	299	1.7115953	0.3139213	1.2068533	2.8300075
lag_state	1 year lagged state appropriations	299	269.6067141	244.9197887	28.1924922	1921.04
satmt75	SAT Math 75th percentile score	299	644.5155580	43.3603405	562.0000000	760.0000000
yield	Yield	299	0.4434473	0.1151982	0.1651741	1.0000000
research01	Research Expenditures	299	229.0654408	228.8936689	10.0527485	1503.51
unrestricted_revenue	Unrestricted current funds	299	674.4762240	591.8333712	-503.5140701	4430.43
stable_operating_rev	Stable Operating Revenue	299	1298.97	1258.07	105.3860780	8607.85
net_student_tuition	Net tuition directly from students	299	197.0525211	180.1623140	14.4240155	1199.74
ft_executive_per_100fte	Full-time executive/administrative staff per 100 FTE students	299	1.3094373	0.9711035	0.0088584	5.6081428
house_rmajority	Dummy variable if house republicans ge %50	299	0.4381271	0.4969888	0	1.0000000
nst_lsa_interaction	Net student tuition & lagged state appropriation interaction term	299	21.3012437	96.5026954	-36.1472186	1014.97
total_enrollment	Total students	299	35.3806221	30.2090796	8.1200000	208.9610000
fall_cohort_pct_outofstate	% of Cohort - Out-of-State	299	28.2809365	15.9550965	0	75.0000000
White_pct	White_pct	299	0.8232241	0.1310830	0.1780000	0.9720000
Black_pct	Black_pct	299	0.0987893	0.0906944	0.0010000	0.3740000
Asian_pct	Asian_pct	299	0.0359097	0.0667608	0.0010000	0.4780000
His_orig_pct	His_orig_pct	299	0.0956555	0.1042577	0.0040000	0.4390000

Appendix B - 2

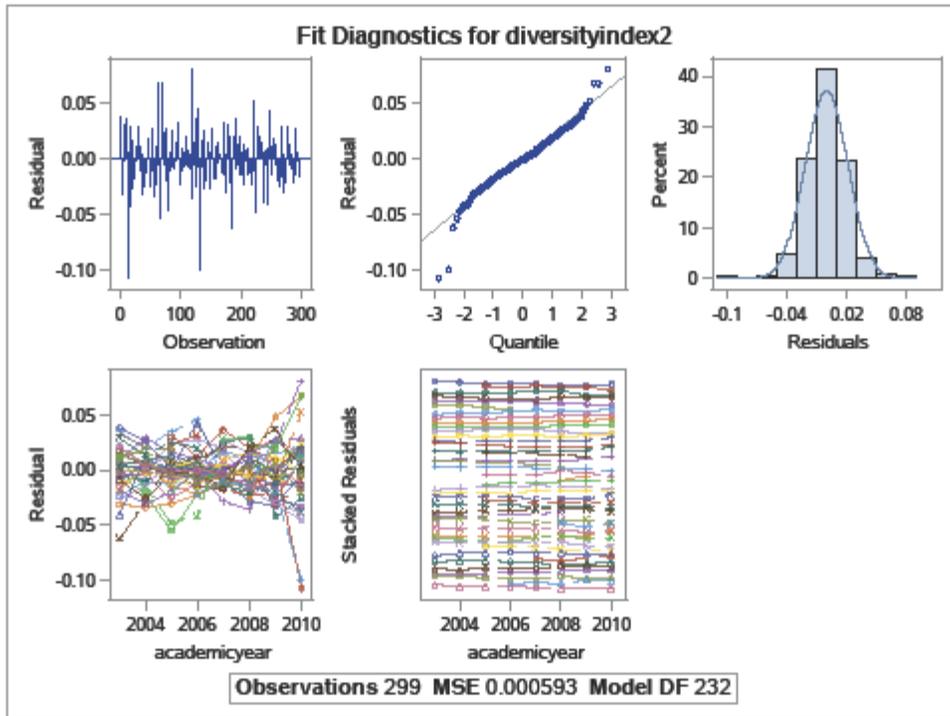
Model #2 Variable Summary Statistics

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
dependent1	FISAP- dependent undergraduate financial aid applicants (0-14,999)	223	1123.83	1816.50	39.0000000	14840.00
lag_state	1 year lagged state appropriations	223	250.5668857	220.3715562	28.1924922	1508.73
satmt75	SAT Math 75th percentile score	223	642.9961967	42.0256397	562.0000000	740.0000000
yield	Yield	223	0.4474620	0.1118946	0.1883936	1.0000000
research01	Research Expenditures	223	209.5776764	202.9418051	10.0527485	1283.94
unrestricted_revenue	Unrestricted current funds	223	650.7894154	559.2986303	68.9264654	3689.38
stable_operating_rev	Stable Operating Revenue	223	1187.12	1124.70	105.3860780	7066.16
net_student_tuition	Net tuition directly from students	223	175.9564627	158.3267719	14.4240155	994.8924428
ft_executive_per_100fte	Full-time executive/administrative staff per 100 FTE students	223	1.2987329	0.9065199	0.0088584	4.8571708
house_rmajority	Dummy variable if house republicants ge %50	223	0.4798206	0.5007166	0	1.0000000
nst_isa_interaction	Net student tuition & lagged state appropriation interaction term	223	16.7712798	71.1353931	-22.1904312	698.8221297
total_enrollment	Total students	223	34.6897534	29.5612336	8.1200000	198.1750000
fall_cohort_pct_outofstate	% of Cohort - Out-of-State	223	28.0044843	15.8783375	0	75.0000000
White_pct	White_pct	223	0.8253991	0.1356828	0.1780000	0.9720000
Black_pct	Black_pct	223	0.0965336	0.0896103	0.0010000	0.3280000
Asian_pct	Asian_pct	223	0.0370807	0.0717756	0.0010000	0.4780000
His_orig_pct	His_orig_pct	223	0.0943857	0.1025028	0.0040000	0.4390000

Appendix C - 1

Model #1 Goodness of Fit

Fixed Two Way Estimates



Appendix C - 2

Model #2 Goodness of Fit

