HISPANIC SERVING INSTITUTIONS, FUNDING, AND PRESTIGE:

WHO ENGAGES WITH THE TITLE V GRANT?

by

REBECCA PERDOMO

(Under the Direction of James C. Hearn)

ABSTRACT

Title V, the Developing Hispanic Serving Institutions grant, is a competitive grant specifically designated for Hispanic Serving Institutions, which are those U.S. postsecondary institutions that enroll at least 25% FTE undergraduate students. Because HSI status is largely determined by the enrollment threshold, and Latinx students fall behind White, Black and Asian students in educational attainment, I seek to understand the factors associated with serving an HSI's Hispanic students. Thus, the current study takes a quantitative approach to understanding the factors related to Title V engagement at HSIs. I employ the multidimensional conceptual framework for understanding "servingness" at HSIs. At its core, servingness relates to the degree to which an HSI serves its Hispanic students. The theory of racialized organizations and institutional theory supplement the broader conceptual framework to help explain prestige and servingness at HSIs. I use data provided by the Department of Education, including the Integrated Postsecondary Data System (IPEDS). Initially, a series of descriptive statistics offer a picture of the characteristics of the HSIs in the sample. Logistic regression analyses uncover the relationships between prestige, access, servingness, and Title V engagement at HSIs. Findings

indicate that institutional servingness was related to Title V engagement, suggesting that grant engagement may reflect a commitment to servingness at HSIs. Moreover, findings suggest that Title V engagement is associated with somewhat higher levels of institutional prestige. These results should be considered in light of the fact that there was limited consistency across the five years of the study (2010 - 2017). Future research should investigate differences in servingness between different institution types among HSIs.

INDEX WORDS: Hispanic Serving Institutions, Race, Ethnicity, Higher Education, Stratification

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DEDICATION

This dissertation is dedicated to the loved ones who have accompanied me on this journey. To my incredible friends, colleagues, and mentors – thank you for laughing, crying, and celebrating with me over the years. Thank you for inspiring me, teaching me, and growing with me. Thank you for being part of my life.

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CHAPTER 1

INTRODUCTION

In a climate where the value of higher education is being called into question, and institutions are competing for increasingly scarce resources, we must question the effectiveness of the colleges and universities responsible for educating traditionally underserved students. Students of color and low-income students are the least likely to succeed in the United States educational pipeline, with the nation's most vulnerable populations remaining at the bottom strata of higher education. Postsecondary enrollment figures among Hispanics increased between 1993 and 2014 (by 13%), but only 15% of Hispanics between the ages of 25 and 29 currently hold higher education degrees, which is lower than Asians, Whites, and Blacks (Krogstad, 2016). These numbers are cause for concern given the significant increase of the Latinx[1][2] population in the United States (10.8%) between 1980 and 2014 (Stepler & Brown, 2016).

Moreover, postsecondary enrollment within the U.S. is not equitable by factors such as race and class. Instead, underserved (e.g. low-income and Black, Latinx, and Native American) students generally attend less selective institutions which also tend to have lower graduation rates (Carnevale & Strohl, 2013). With the numbers of Hispanics in higher education growing annually, it is critical to deepen our understanding of if and how postsecondary institutions serve

[1] Hispanic and Latinx are used interchangeably to discuss peoples of Latin-American and Native Spanish-Speaking descent (U.S. Census; Gonzales 2013; Crisp & Nora 2010)

[2] Latinx is employed in the scholarly literature around Hispanics and Latino/as inclusive, gender neutral terminology. Further discussion on the significance and debate surrounding the term can be found in the Association of Mexican American Education 2018 special issue on HSIs.

Latinx students in the hopes of improving future retention rates and eventual labor market outcomes among this population.

Hispanic Serving Institutions

Currently, over 60% of Hispanic students are concentrated at just 13% of postsecondary institutions in the country (HACU, 2018a). These institutions are otherwise known as Hispanic-Serving Institutions (HSIs) as defined by the Higher Education Act. HSIs are defined as "accredited, non-profit higher education institutions with at least 25% full time equivalent enrollment (FTE) of Hispanic undergraduate students" (HACU, 2018a). Reflective of the shifting demographic landscape, the number of HSIs doubled between 1994 and 2014 from 198 to 409 and this number continues to increase (HACU, 2018a).

HSIs fall under the umbrella of Minority Serving Institutions (MSIs). Collectively, MSIs make up about 20% of institutions of higher education in the United States, however, they enroll about half of Black and Hispanic students ("Black + Brown: Institutions of Higher Education," 2014). HSIs do remain distinct from the two most well-known types of MSIs, Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs), primarily because HSIs attain their status through an enrollment threshold (25% Hispanic) rather than by historical mission.

In fact, the vast majority of HSIs do not address HSI status or Hispanic students anywhere in their institutional mission statements (Andrade & Lundberg, 2018; Contreras et al., 2018). HSI scholars suggest that HSIs do not publicize their MSI status because it may threaten institutional prestige (Andrade & Lundberg, 2018; Contreras et al., 2008; Cortez, 2015). For example, in one study, a university repeatedly highlighted and advertised its "Tier One" status, but their HSI status was nowhere to be found in online articles or websites (Cortez, 2015). Institutional

prestige within higher education is a nuanced concept, but it, broadly, points to the excellence of an institution (DiMaggio & Powell, 1983), or the perception of such excellence. It is contingent upon the perceptions of players such as students, their parents, stakeholders, policymakers and other institutions, all of whom influence the formation and maintenance of an institution's prestige. The majority of HSIs are accessible institutions with open admissions or lower entrance requirements than their non-HSI peers. Yet, HSIs do not exist in a static environment and may therefore face pressures to engage in prestige-seeking over access-oriented behaviors.

Given that HSIs gain their status through enrollment, rather than through mission, and because of the particular challenges that HSIs face, relevant research often investigates what it means to serve Hispanic students. The extent to which an HSI serves their students can be conceptualized as "servingness" (Garcia, Núñez & Sansone, 2019). Servingness should be understood within the context of HSIs and U.S. postsecondary education, more broadly. The majority of schools that are eligible for the HSI designation never actually sought out the status, rather, their Hispanic enrollments grew as a result of broader socio-political factors. Many schools became HSIs because factors like affordability or geographic location, which can attract low income and minority students, led to an influx of Hispanic students on their campuses (Villareal & Santiago 2012; Laden, 2001). HSIs also face important challenges, namely limited resources (HACU, 2012; Cuellar, 2015; Merisotis & McCarthy, 2005). Compared to all postsecondary institutions, HSIs only get 66 cents for each federal dollar per student (HACU, 2012). Additionally, many HSI students tend to have lower access to academic and financial resources compared to those at non-HSIs (Núñez & Bowers, 2011). Both institutional and student resources are linked to lower student outcomes at these institutions (Flores & Park, 2013, 2014; Núñez, Crisp & Elizondo, 2016; Rodríguez & Calderón Galdeano, 2014, 2015;). Recall

that there is a significant lag in Hispanic student achievement in the U.S. This lag in conjunction with the larger HSI context underscores why the concept of servingness is so critical to the study of HSIs and Hispanic higher education.

One way of engaging with servingness is by engaging with the Developing Hispanic-Serving Institutions (20 U.S. Code § 1101; Higher Education Act, Title V) grant program. Title V is a competitive, capacity-building grant. Noting the importance of HSIs as pathways into postsecondary education for underserved students, the Title V program was implemented, primarily, to increase student opportunities and attainment at HSIs. Because Title V funds are specifically intended for Hispanic and low-income student support at HSIs, this has prompted researchers to question if there is something distinct about the HSIs that apply for the grant versus those that do not (Contreras et al., 2008; Olivas, 2015). Whether college or university decision-makers choose to engage with the grant, and therefore HSI status, may be shaped by the broader environment of higher education where the tension between prestige and access dominates (Brewer, Gates, & Goldman, 2002).

Progressively more information is being published relating to HSIs on a regular basis. Still, because it is a relatively young body of literature, there remain significant gaps in the literature, which this dissertation attempts to fill. I add to the knowledge-base on Title V, which is currently scant (Bolemon, 2018; Vargas, 2018; Vargas-Palmino, 2018). The Title V studies that do exist, however, only look at Title V recipients rather than at applicants. Thus, this may be the first study of its kind to include all applicants in a given year when examining Title V funding. I also added a unique contribution to HSI literature, more generally, by studying institutions deemed eligible by the Department of Education instead of including all institutions with 25% Hispanic students. This study may also be the first to use HACU membership as a central variable and to

use it within the context of servingness at HSIs. Because Title V is central to the welfare of HSIs, HSI advocates, policy-makers and researchers alike may benefit from the current study by gaining a deeper understanding of the factors associated with HSI decisions to engage with Title V. HSI decision-making should matter to these populations because it may have direct effects on Latinx students in higher education.

Purpose Statement

The purpose of the current study is to address the aforementioned gaps in the literature by taking a quantitative approach to understanding what factors relate to Title V engagement at HSIs. Building on the literatures focused on servingness (Garcia et al., 2019) and prestige-seeking (Brewer et al., 2002; O'Meara, 2007) in higher education, I consider components of the servingness context, prestige and access as central to understanding institutional decision-making at HSIs. To date, there do not appear to be any HSI studies quantitatively exploring prestige at HSIs or any research examining Title V that includes all applicants. Thus, the current study examines decision-making at Title V-eligible HSIs from the years 2010 – 2017. Specifically, I ask:

1. How do prestige and access factors relate to servingness context and control factors at HSIs?
2. How do servingness context factors relate to the likelihood that an institution will engage with Title V funding?
3. How do prestige factors relate to the likelihood that an institution will engage with Title V funding?
4. How do access factors relate to the likelihood that an institution will engage with Title V funding?
5. How do HSIs that do and do not engage with Title V funding differ?

Using data provided by the Department of Education including the Integrated Postsecondary Education Data System (IPEDS), I employed logistic regression to understand the relationship between servingness, prestige-seeking ant Title V engagement at HSIs. The Department of

Education provided a list of Title V-eligible HSIs and of grant applicants and renewals from 2010 – 2017. Analyses compare measures of servingness, prestige-seeking or access-driven activities between Title V-eligible engagers and non-engagers. The larger discussion is situated within the multi-dimensional framework for understanding servingness at HSIs. I then draw on components of institutional theory and the theory of racialized organizations to address the ways in which decision-making relates to indicators of servingness, institutional prestige, and access at HSIs.

CHAPTER 2

HSI BACKGROUND AND POLICY CONTEXT

As part of the efforts to emphasize the role of higher education in improving mobility and stratification in the U.S., the Department of Education introduced Title III, the Strengthening Developing Institutions program, under the Higher Education Act (HEA) of 1965. The HEA allocated federal appropriations to institutions of higher education that were doing poorly at the time. Its intent was to "strengthen the academic quality of developing institutions which have the desire and potential to make a substantial contribution to the higher education resources of the Nation" (Title III – Strengthening Developing Institutions, 1965). It would do so by providing institutions with the necessary funding for improvement projects and programs. Upon its creation, Title III offered funding to small institutions, HBCUs, and community colleges. Currently, the grant is used to decrease the achievement gap by improving educational opportunities for low-income, rural, and minority students.

During the 1970s, Latinx organizations mobilized and pushed for visibility in the legislative and educational landscapes. Then, in 1986, the Hispanic Association of Colleges and Universities (HACU) was created and helped form the legislation that gained them recognition and defined what later (1992) came to be known as Hispanic-Serving Institutions (HSIs). By 1994, TCUs were introduced into the HEA legislation as well. These institutions, which enroll high proportions of historically underrepresented populations, are known as Minority Serving Institutions (MSIs).

While there are a few others, two of the most well-known types of MSIs are HBCUs and TCUs. Over 1.8 million students, of predominantly African American, Hispanic, and Native American descent, are educated at HSIs, HBCUs and TCUs ("Black + Brown: Institutions of Higher Education," 2014; Núñez, Crisp, & Elizondo, 2016). Lesser known MSIs include Predominantly Black Institutions (PBIs) and Asian American and Native American Pacific Islander-Serving Institutions (AANAPISISs). MSIs are integral to the education of minority students and therefore deserve attention from policymakers, constituents, and academic researchers alike. Not all MSIs are the same, however.

Hispanic Serving Institutions

The most noteworthy difference between HSIs as compared to TCUs and HBCUs is that HSIs do not reach their status through their historical missions (NASEM, 2018; Núñez, Hurtado, and Calderon-Galdeano, 2015). HBCUs and TCUs were founded for the purposes of serving targeted student populations, but the vast majority of HSIs were founded as Predominantly White Institutions (PWIs). Exceptions to this include National Hispanic University, Boricua College, Hostos Community College, Northern New Mexico College, St. Augustine's College, and Colegio Cesar Chavez (Calderon Galdeano, Flores, & Moder, 2012; Núñez, Hurtado, & Galdeano, 2015; Olivas, 1982). Instead, most HSIs came upon their status because of environmental factors (e.g. demographic shifts in the state) rather than because they sought out Hispanic student enrollments (Laden, 2001; Santiago, 2012). HSIs also differ from HBCUs and TCUs in size. While HBCUs and TCUs tend to be smaller and stable in number, HSIs grow annually and, in the 2008-2009 academic year, their average enrollment number was over 6,000 students (Núñez et al., 2016). The annual growth of HSIs is a byproduct of the criteria that define them.

Three main criteria determine the eligibility of institutions for HSI status. The current legislation states that to be an HSI an institution must be an "eligible institution" and that it must enroll at least 25% Hispanic FTE undergraduate students. The criteria for being an eligible institution include an enrollment of needy students and low "average educational and general expenditures…per full-time equivalent undergraduate student in comparison with the average educational and general expenditures per FTE undergraduate student of institutions that offer similar instruction" (20 U.S. Code § 1101). The enrollment of needy student criterion means that at least 50% of enrolled students are receiving need-based financial aid *or* that a "substantial percentage" of enrolled students receive Pell Grants, compared to the percentage of students receiving them at all institutions. Need-based financial aid programs include the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Work-Study, or the Federal Perkins loan.

The federal regulation later explains that the "substantial percentage" means that the percentage of an institution's undergraduate students who were enrolled at least half-time and "received Federal Pell Grants *exceeded* the median percentage of undergraduate degree students who were enrolled on at least a half-time basis and received Federal Pell Grants at comparable institutions that offer similar instruction" (20 U.S. Code § 1101). The legislation also states that the needy student criterion carries twice the weight of the expenditure criterion in determining an institution's HSI eligibility, but I found no further explanation on how that is calculated.

Given the needy student and expenditure criteria, it is unsurprising that the majority of HSIs face challenges related to financial constraints and limited institutional capacity (Mulnix, Bowden & Lopez, 2002, 2004; Ortega et al., 2015). These challenges have much to do with why the Title V Developing Hispanic Serving Institutions program was developed. Those institutions

who meet the eligibility criteria may apply for official HSI designation, which would then make them eligible to apply for the grant.

HSI Funding. Historically, HSIs have been undreresourced compared to all not-for-profit postsecondary institutions (de los Santos & de los Santos, 2003; Malcom Dowdy & Yu, 2010; Merisotis & McCarthy, 2005). These institutions are often understaffed and offer uncompetitive employee salaries (de los Santos & Cuamea, 2010; Hurtado & Alvarado, 2015; Malcom et al., 2010; Mulnix et al., 2002). They also tend to rely on local, state and federal funds and appropriations, at least in part, because of their limited budget and endowment funds (Benitez, 1998; HACU, 2012; Hurtado & Alvarado, 2015, Ortega et al.; 2015). Previous HSI revenue trends demonstrate that public 2- and 4-year HSIs have a limited ability to raise tuition for increased revenue and that they absorb the declining state investment in postsecondary education (Ortega et al., 2015). HSIs also struggle to grow their funds (Mulnix et al., 2002; 04; Ortega et al., 2015) which might help explain why some HSIs never apply for Title V. In one study of 80 leaders at HSIs, 30% did not have grant monitoring offices and 35% did not have staff to engage with state, local, and private foundations (Mulnix et al., 2004).

HBCUs and TCUs are guaranteed certain funds because of their historical missions, which outwardly state an intent to support underserved student groups who have historically been systematically excluded from higher education (Olivas, 1982). Because of this, these institutions automatically receive HEA funding whereas HSIs do not have this guarantee. Instead, they must compete for a limited portion of funds. No more than 30% of HSIs have received Title V funding in a given year and the grants do not exceed $600,000 per institution per year.

Title V

The federal regulations surrounding Title V may complicate our understanding of institutional eligibility. The regulations state that in order to be eligible for the Developing Hispanic Serving Institutions Program, "not less than 50% of its *Hispanic* students [must be] low-income individuals" (§ 606.2 a2). This may stem from the original legislation, where HSIs reached their status by enrolling at least 25% Hispanic undergraduate students, 50% of whom had to be low-income *and* first-generation college students, while an additional 25% had to be *either* low-income or first generation (HEA, 1992). Nowhere in the current legislation (not regulations) does it specify that *Hispanic* students must be low-income. Title V legislation has additional provisions stating that institutions who meet the primary HSI criteria, 25% Hispanic FTE undergraduate enrollment, may apply for a waiver to be eligible even if they do not meet the other two criteria (20 U.S. Code § 1101).

HSIs are in particular need of financial help. While Title V funding increased by 875% between 1995 and 2010, the actual proportion of HSIs receiving the funding declined by 9% during those years (Villareal & Santiago, 2012). In 2009, just under half of all HSIs did not receive Title V funds (Ortega et al., 2015). The total funding toward Title V increased annually between 1996 and 2004 but has steadily ranged between $92 and $94 million since then, despite the significant growth in the number of HSIs in recent years (Ortega et al., 2015). HACU even created a category of HSIs called Emerging HSIs, which includes those institutions that enroll between 15% and 24.9% Hispanic students. The substantial number of institutions on that list suggests that the number of number of HSIs will only continue to rise. It is therefore imperative that the funds available to these institutions increase as well.

While the government efforts to help HSIs should not be overlooked, the question remains, how will HSIs survive? The answer remains unclear as the funding for Title V continues to be under scrutiny. Moreover, research highlights the consistency of trends in Hispanic education with the growth of HSIs, noting the importance of continued funding for these colleges and universities that are responsible for the education of the majority of Latinx and a substantial portion of both Black and Native American students (Cuellar, 2015; Núñez et al., 2015; Santiago et al., 2016). Thus, it is important to ensure that these institutions have the resources necessary to serve "post-traditional" (Santiago et al., 2016) populations effectively.

Research Issues

The vast majority of research on HSIs only acknowledges the 25% enrollment threshold, with extremely limited research to date accounting for the expenditure or needy student criteria in its sample selection of HSIs. Additionally, the 25% enrollment is not always calculated in precisely the same way. For example, HACU includes headcount enrollment for both graduate and undergraduate students in their creation of an HSI list, although this discrepancy may affect "only a handful of institutions in a given year" (Calderon Galdeano, Flores, & Moder, 2012 p. 159). For research purposes, however, differences in the precise conceptualization of HSIs may lead to inconsistencies in sample selection and conclusions.

To better understand these research issues regarding HSIs, I look to the federal legislation and regulations that define HSI criteria. The waiver that allows schools with 25% Hispanic to apply for HSI designation, while important, further complicates a researcher's ability to decipher who HSIs really are. Yet, those who meet the enrollment threshold with*out* meeting either the needy student or low expenditure criteria may be systematically different than those who do meet either or both. Thus, the lack of consideration for such criteria in research means that studies on

HSIs may include a small yet potentially significant set of institutions with a fundamentally different set of needs and characteristics than "true" HSIs.

Another issue researchers face is that the Integrated Postsecondary Education Data System (IPEDS), where the majority of HSI information can be found, often has missing data on important variables, which may narrow the sample of HSIs studied to HSIs with available information about certain questions. This means that, from one study to another, even if they were conducted in the same year, the sample can differ depending on the variables used in the analysis. Thus, the conclusions drawn from research may be inconsistent. Furthermore, Title V legislation barres institutions that have conflicting Title III or active Title V grants from getting more than one at a time. Although this policy makes sense, it also limits the "true" population of HSIs further.

Title V has existed since 1998, but the U.S. Department of Education did not publicly provide an official list that distinguished Title V-ligible from Title III-eligible institutions until 2017. The list, which is part of the larger "Eligibility Matrix," codes institutions based off their eligibility for a Title V grant. This means that those conducting research on HSIs prior to 2017 had no way of knowing if their calculations for an HSI population aligned with the restrictions and waivers set through the HSI legislation. While Title V may indicate a need to support HSIs, researchers should not overlook the fact that resources, as well as the populations at HSIs, may vary greatly.

Heterogeneity at HSIs. Because HSIs gain their status through enrollment, there is a range in the proportion of Hispanic students at these institutions - between 25% and 100%. It is therefore unsurprising that there is a significant amount of diversity within HSIs that makes it challenging to find consistency within the already limited literature. In recent years, this

heterogeneity has been given attention by scholars (Nelson-Laird et al., 2007; Núñez et al., 2016). HSIs include two-year, four-year, public, and private institutions, ranging in size from under 500 to over 30,000 students. They also include religious, open-access, and technical schools.

In an effort to categorize this complex and understudied group of colleges and universities, Núñez and colleagues (2016) formally devised a unique typology for HSI research. The six typologies Núñez and colleagues presented are as follows: 1) Urban enclave community colleges 2) rural dispersed community colleges 3) big systems four-year institutions 4) small community four-year institutions 5) Puerto Rican institutions and 6) health science schools. Although the typologies suggested are certainly useful and ought to be utilized, they may not be effective for all HSI research. Scholars may seek different criteria for categorization. For example, a different potential method for categorizing HSIs may be to use enrollment percentages. Intuitively, there should be a fundamental difference in the student experience on a campus that enrolls 25% Hispanic students compared to one that enrolls 70% Hispanic students. Being careful to recognize the utility of the typology study, the problem for HSI researchers remains.

Failing to study HSIs in a systematic and consistent manner weakens the case for unified HSI support and policy. In one of the most widely cited journal publications focusing on HSIs, Nelson-Laird et al. (2007) tested for differences in experience and outcomes between Black students at HBCUs versus predominantly White institutions (PWIs), and Hispanic students at HSIs versus predominantly White institutions. HBCUs demonstrated stronger outcomes for Black students as compared to PWIs. HSIs and PWIs tended to be about equal in how well they serve the needs of Hispanic students. Nelson-Laird et al. (2007) argue that weak outcomes at the

HSIs they sampled is not a deficiency of the institutions, but a byproduct of the variance among them. Had the sample been limited to HSIs with populations comparable to the HBCUs in the study, the outcomes may have been different. The unpromising results of the aforementioned study demonstrate the need for continued conversation between scholars invested in the welfare of a successful minority student population.

Enrolling vs. Serving

Although there has been increased Latinx enrollment in some institutions, that led them to reaching HSI status, many of these institutions also had simultaneous increases in enrollments by Black, Asian American, and Native American students as well (Núñez & Bowers, 2011). In some cases, these institutions have had even *greater* enrollment increases by Black, Asian, and White students (Flores, & Morfin, 2008). These trends regarding students of different racial/ethnic backgrounds suggest that Latinx enrollment increases may have occurred at these institutions because of external factors rather than because of targeted institutional efforts to enroll and serve Hispanic students.

Thus, a burgeoning body of literature calls into question whether HSIs truly "serve" their students, as the designation suggests. Yet, research that frames HSIs as simply "enrolling" or "serving" has been critiqued for failing to take into account the significance of the access that these institutions provide Hispanic (and other underserved) students (Garcia, 2017, 2019), the heterogeneity *among* HSIs (Núñez et al., 2015) and the challenges they often face due to limited resources and funding (Ortega et al., 2015). The following addresses issues of prestige, access, and a thorough review of HSI literature to lay the groundwork for an investigation of "servingness" (servingness attempts to conceptualize what it means to truly *serve* Latinx students

(Garcia, et al., 2019)) at HSIs. This study does so while intentionally drawing attention to research limitations and HSI contexts.

CHAPTER 3

LITERATURE REVIEW

Institutional prestige points to the perceived excellence of colleges and universities (DiMaggio & Powell, 1983). When institutions engage in striving behaviors in their pursuit of prestige, access to higher education for underserved students may suffer. The majority of HSIs are high-access institutions, with open admissions or lower entrance requirements than their non-HSI peers. HSIs do not exist in a static environment and may face pressures to engage in prestige-seeking over access-oriented behaviors. The concept of servingness takes a step beyond access and addresses whether and how HSIs meet the needs of their underserved student populations. In this dissertation, I argue that HSI servingness relates to an institution's pursuit of prestige and its efforts towards access; the current chapter presents a review of the relevant literature.

Prestige & Access

Prestige. The 1970s and '80s witnessed significant social and political shifts overall. Regarding higher education, there was a decrease in the focus on group welfare and, instead, more attention was given to privatization and economic opportunity (Slaughter & Rhoades, 2007; Taylor, 2016). Over time, these priorities pushed higher education into the competitive, market-driven landscape we have today. The commodification of higher education, which led institutions to engage in striving behaviors as they pursued prestige, lies in tension with notions of colleges' and universities' contributions to the public good.

Striving tends to occur at the expense of access-oriented institutional efforts (Bowen, 1980; Gumport & Sporn, 1999; Thelin, 2004). Thus, discussions of access to higher education are sometimes placed within the context of higher education as a market. Competition plays an important role within this context by having the potential to compromise institutional goals related to access as they pursue resources such as status and legitimacy. Legitimacy works as a form of institutional prestige, a key player in the higher education market. Recall (Ch. 1), prestige is contingent upon the perceptions of players such as students, their parents, stakeholder, policymakers and other institutions, all of whom influence the formation and maintenance of an institution's prestige.

As decision-makers work to pursue prestige, components of access may be overlooked. Pressures for institutions to pursue prestige can lead to institutional striving (or striving behaviors) (O'Meara, 2007) which are actions that institutions engage in to improve their prestige. This can occur throughout all segments of postsecondary education, however, it has been studied most widely at top-tier research institutions (Taylor, 2016). Although competition could lead to improved institutional performance and outcomes, evidence shows that colleges and universities that engage in striving behavior are inefficient in their use of funds and that the goal of promoting prestige usurps resources that could otherwise be used towards expanding and improving access. As Eckel (2008) explains:

> When faced with choices of where to invest scarce time and resources, institutions may yield to those priorities that will position them well in the competitive arena, such as focusing on talented students, star faculty, externally funded research, and top-flight amenities. The flipside is that with finite, if not constrained, resources, access and affordability may be put at risk (p. 184).

Brewer, Gates, and Goldman's (2002) research focuses on the significance and pursuit of prestige in higher education. As they explain, prestige works as an asset, allowing postsecondary "institutions to convey non-price information to customers … [allowing customers] to evaluate better the extent to which the institution will be able to satisfy their demands" (Brewer, Gates & Goldman, 2002, p.27). Customers, in this instance, refers to students and their parents. Engaging in striving behaviors can lead to an array of benefits associated with prestige, including increases in revenue and research grants, and the successful recruitment of sought after faculty members and students (Brewer, Gates, & Goldman, 2002; Ehrenberg, 2003; McCormick & Zhao, 2005; Monks & Ehrenberg, 1999; O'Meara, 2007).

The emergence of institutional rankings in the 1960s was pivotal in establishing the significance of prestige (Weerts et al., 2014). During this time, institutions were beginning to mimic the most successful and prestigious colleges and universities. As rankings became more prominent, which may have been reinforced through the American Council on Education (Peterson, 1998), the push towards selectivity and prestige as tactics to improve institutional reputation gained traction (Weerts et al., 2014). Even today, outward perceptions of an institution are largely shaped by these national rankings such as U.S. News and World Report (USNWR) and the Carnegie Classification system. These classification and ranking systems use similar standards for measures of success across institutions, regardless of institutional type or resource-base. The ranking systems are now so well-known and esteemed that policymakers and potential students alike regularly reference them to make decisions regarding institutions today. Actors within institutions such as faculty, donors, and administrators like college presidents are influenced by and interested in these rankings as well (Monks & Ehrenberg, 1999; O'Meara 2007; Weerts et al., 2014).

Striving. A significant body of work highlights cases of striving behavior within higher education. O'Meara (2007) describes it as "the pursuit of prestige within the academic hierarchy" (p. 122). Decision-makers work to shape the way they are perceived through the use of institutional levers, or prestige generators, as part of their striving behaviors. Scholars on the subject note several areas where institutions work to improve their prestige including student recruitment and admissions, faculty recruitment and research, curriculum and programs, and external relations and resource allocation (Brewer et al., 2002; O'Meara, 2007). These practices among striving institutions may produce unintended results, stifling access to these schools for underserved students.

Despite the prevalence of striving, few schools ever actually make significant gains in prestige (Brewer et al., 2002; Taylor, 2016). Brewer and colleagues (2002) state that institutional prestige tends to remain constant over time with prior prestige being predictive of that in the future. The few institutions at the top, elite institutions, tend to stay in their place with only little room for change in the tiers of the academic hierarchy just below it (Taylor, 2016). It is particularly troubling that striving may not necessitate actual improvements in prestige when we consider the consequences that can occur as a result of prestige-seeking in colleges and universities.

Striving and Access. Within the marketization context, institutions of higher education work to enroll and maintain students to ensure the survival of their organization. Thus, public perception is key to maintaining institutional prestige. Access remains a significant consideration in much of the higher education literature as scholars investigate its relationship with prestige and social mobility. As Bastedo and Gumport (2003) point out, access often refers to affordable higher education. The current study, however, employs a broader conceptualization whereby

access refers to affordability in conjunction with the availability of programs, student support services, campus diversity, and institutional selectivity.

Student Recruitment and Admissions. Improving the "quality" of students is one way that institutions can raise their levels of prestige. This comes about when institutions increase their academic selectivity, most often in undergraduate admissions. They strive to make their student bodies more like those at prestigious institutions (e.g. higher GPAs or SAT scores) (Ehrenberg, 2003). Postsecondary institutions also work to attract more students, which improves the number of applications, while the number of available spots remains the same. Such work can include investing in marketing and recruitment efforts. In some cases, this can go so far as to include the addition of competitive sports teams and new amenities such as athletic facilities or luxury residence halls to make a campus more attractive to students (Geiger, 2004; Morphew, 2002; O'Meara, 2007). To improve selectivity, institutions also encourage applications from students with lower qualifications who they will reject. To improve yield rates, they may even reject qualified students who they expect will attend higher-ranked institutions over theirs as well (Ehrenberg, 2003; O'Meara, 2007).

Thomas Mortenson's (2007) research expands on the costs of academic selectivity, stating:

> In their pursuit of profits and prestige, these institutions have lost sight of their broader social mission to educate rather than select … these institutions increasingly compete for the shrinking share of the high school graduate market and turn away from the growing share. These practices do not expand higher education participation and social welfare, instead they address short-term institutional interests of profits and prestige (p. 54).

He explains that, "academic selectivity is nearly synonymous with family income. Thus, selective admissions at colleges and universities are effectively focusing on the most affluent segment of the college student populations" (Mortenson, 2007, p. 53). Academic selectivity

might also entail raising the average GPA and SAT scores of the entering class, but because of the inextricable relationship between race and class, the potential consequences of academic selectivity translate to a lower proportion of students of color at the most selective colleges and universities in the country.

Early decision processes also play a role in student recruitment. The process encourages students to apply early and, if accepted, commit to the institution and revoke their application from competing schools (Avery, Fairbanks, & Zeckhauser, 2001; Eherenberg, 2003; O'Meara, 2007). Lower income students are less likely to commit to an institution before seeing all of the aid available to them at the institutions where they are accepted, leading to stratification through this process which secures the enrollment of more affluent students who may be less dependent on aid packages (Ehrenberg, 2003; Machung, 1998). Early decision improves the selectivity of an institution and benefits them financially because it generally leads to gains in enrollment commitments from students who can afford to pay the tuition, thus costing the institution less in aid. So, institutions can benefit from increasing their selectivity both through gains in prestige and finances while simultaneously having negative effects on disadvantaged student populations.

Faculty and Research. Much of the relationship between faculty and prestige is related to research. An institutional lever that is used to improve prestige is the recruitment of and engagement with faculty. Schools aim to hire the faculty with the strongest research backgrounds, sometimes even investing in research facilities to attract such faculty (Brewer et al., 2002). There is evidence that institutions attempt to recruit top faculty members from other more prestigious institutions, in essence, "stealing" star faculty (Ehrenberg, 2003; O'Meara, 2007). One way institutions do so is by offering competitive salaries which also helps improve rankings because faculty salaries are a consideration in the USNWR rankings. (Ehrenberg, 2003;

O'Meara, 2007). More and more, requirements for promotion and tenure include research funding and publication records to motivate faculty to engage in more research.

These practices have bled beyond the top-tier schools; even institutions that are primarily teaching-focused have followed suit, working to improve the level of research conducted by their faculty. This has led to a reduction on the focus of teaching and service which carries important implications for students. Resources poured into research can detract from the focus by faculty on their teaching loads (Massy and Zemsky, 1994), reduce classroom quality, and minimize attention to relationship-building with students.

Curriculum and Programs. Schools with graduate education programs, which are usually research-oriented institutions, are generally considered more prestigious than those without such programs. Thus, one method of improving an institution's prestige is the addition of new graduate programs (Aldersley, 1995; Massy & Zemsky, 1994; O'Meara, 2007). Institutions may shift the focus away from undergraduate education in this process, pouring resources into growing their graduate schools and offering doctoral degrees. Striving can also occur through the reduction or removal of remedial education programs. Instead, the resources once directed there shift to areas such as honors programs or the introduction of specialized learning communities. The removal of remedial and developmental education programs, however, severely disadvantages the students who need it most. Students who come from under-prepared schools are denied the very resources and aids necessary to help improve the achievement gap.

External Relations and Resource Allocation. Since the 1970s, marketing has played a substantial role in shaping outward perceptions of an institution (Weerts et al., 2014). Over time students have come to associate specific characteristics, which can even include successful athletic teams, with what makes a "good" school (Brewer et al., 2002), although these

characteristics may not necessarily be related to academic quality. Thus, institutions put a significant amount of their resources towards marketing and amenities. Often, this is to ensure that awareness of the institution broadens to a wider population (Brewer et al., 2002).

Similar to the shifting of funds in the curriculum, institutions may change where they choose to allocate their resources when seeking prestige. It is unsurprising given that affluent institutions direct proportionally higher funds to institutional support compared to institutions with lower prestige (Morphew & Baker, 2004). Spending that once went to teaching and outreach may move towards administrative support and, generally, to areas that will boost prestige (Longanecker, 2008). Funds may go to activities such as launching campaigns to gain donor support and improve endowments. Overall, funding at striving institutions tends to be reduced in areas that do not generate revenue, namely instruction and academic services for students, despite evidence that academic services are particularly helpful for graduation and retention.

Looking to Taylor's (2016) analysis of hierarchy of fields in higher education, we can understand more thoroughly the relationship between competition and stratification in higher education. Taylor notes that while tuition discounting, which reduces the cost of the institution for those enrolled, may alleviate financial burden for the students and families benefitting from it, institutions may not be offering it to the neediest students. Rather, in an attempt by lower and middle tier institutions to gain visibility and subsequent prestige in the market, tuition discounting benefits may go to the more appealing rather than the neediest students.

While prestige-seeking may lead to important consequences as they relate to disadvantaged student populations, access remains at the forefront of discussions surrounding higher education in the U.S., both historically and today. One group of institutions, MSIs, are

critical to the education of underserved students and should therefore be studied further. The following presents background information as well as a review of the current literature surrounding hsis.

HSI Literature

HSIs and Access. Higher education in the U.S. has shifted from focusing on elite populations to a more universal approach, where education is intended to be available to all who choose to pursue it and at a variety of types of institutions (Núñez et al., 2015). Despite the expanding access, the system of postsecondary education is still stratified by financial factors, racial/ethnic composition, and institutional prestige (Carnevale & Strohl, 2013; Taylor, 2016). The most selective institutions in the country tend to enroll a larger proportion of White students and students from a higher socio-economic status (Carnevale & Strohl, 2013; Taylor, 2016). Black, Latinx, Native American, and low-income students, on the other hand, are concentrated in less selective institutions which also tend to have lower graduation rates (Carnevale & Strohl, 2013; Garcia et al., 2019), many of which are HSIs. While the "traditional" student enrolls at a four-year institution, attends full-time, and lives on campus, HSI students tend to differ in important ways (Calderon Galdeano & Santiago, 2016).

Latinxs who attend four-year HSIs tend to be older, are more likely to be part-time or transfer students, and have parents with lower educational backgrounds than Latinx's attending non-HSIs (Bridges, Kinzie, Nelson-Laird, & Kuh, 2008). Female Latinx students are more likely than their male counterparts to enroll at HSIs (Cuellar, 2015). Latinx students at HSIs, generally, have less academic and social capital and lower incoming GPAs at the beginning of college than those at non-HSIs. Similarly, Latinx students who enroll at HSIs tend to come from lower income backgrounds and are more likely to live closer to home compared to Latinx students at

non-HSIs (Cuellar, 2015). Hispanic students at HSIs tend to reflect the aforementioned trends, with many being first-generation college-goers and demonstrating financial need as well (Cuellar, 2014; de los Santos & Cuamea, 2010).

Not only do HSIs enroll a significant proportion of Latinx students, but they actually enroll more Black and Native American students than do HBCUs and TCUs, respectively (Cuellar, 2019; HACU, 2018a; Núñez et al., 2015). In fact, HSIs enroll around 16% of Black students while HBCUs enroll around 10% of Black students in the U.S. Similarly, HSIs enroll around 14% of Native American students while TCUs enroll around 11% of Native American students in the U.S. Furthermore, students coming from larger high schools, schools with more diverse teachers and that enroll larger proportions of underrepresented students are also more likely to enroll at HSIs (Núñez & Bowers, 2011). Many HSI students work over 20 hours a week, including full-time jobs, while they are enrolled in postsecondary education, which is linked to a higher likelihood of enrolling part-time instead of full-time and a longer time to degree completion.

Together, these factors contribute to an increased likelihood that students at HSIs will have to enroll in remedial education. Such education ends up working to compensate for inequity in the K-12 sector (Gabbard & Mupinga, 2013). For example, a group of HSI administrators noted that many of their Latinx students were underprepared for college-level work (de los Santos & Caumea 2010). From the discussion of student preparedness emerged the topic of remedial and developmental education. Three of the presidents in the study in the survey commented that 75-80 percent of new students need some type of remedial education courses. Empirical evidence indicates that between 30 and 40 percent of first-year community college students are shown to require either remedial or developmental education (Jenkins, 2005) which

is costly both for institutions and for the students who must pay for coursework that does not count towards degree completion. Additional research supports the finding that there is an overrepresentation of Hispanics in remedial education (Bailey, Jeong, & Cho, 2010).

In the HSI administrator study, the need for remediation was partly attributed to the high levels of English language learners entering these institutions. The remediation issue was also said to be a product of inefficiency and inequality in the PK-12 system. Community colleges and open-access institutions, many of which are HSIs, end up having a unique responsibility to compensate for stratification embedded in the education system, at large, that leads to an underprepared cohort of incoming students (Gabbard & Mupinga, 2013).

The part-time status, low-income status, and propensity towards remedial education are just some of the contributors for why students at HSIs tend to take a longer time to degree completion. I highlight these issues to demonstrate that, although students at these institutions may take longer to confer their degrees, it stems from preceding issues of structural inequality and does not necessarily reflect deficiency on the part of HSIs or the students as individuals. Instead, HSIs ought to be recognized for their role in providing access to these student groups and for working to bridge the gap between the K-12 and postsecondary sectors. Often, research on these categories of students is deficit-based, and may, intentionally or not, blame students for struggling academically. This perspective may lead to policies that are student-targeted and ultimately fail to recognize and address the larger problem of inequality within the broader education system in the U.S. (Valencia, 1997). It is therefore necessary to conduct more research that focuses on institutional shortcomings, strengths, and resources, and much of the research on HSIs attempt to do just that, albeit imperfectly.

Traditional Measures of Success. Pressures to ensure accountability within higher education have led to extra emphasis on evaluative measures, and such measures relate to an institution's legitimacy and prestige. Recall that legitimacy and prestige are tied to a broad set of norms and values within the field of higher education, which are shaped and created within the racially stratified system of education in the U.S. It follows that institutions are evaluated on such standards, which I will refer to as traditional measures of success, that tend to revolve around student outcomes such as graduation rates (Espinosa et al., 2014). In fact, these standards, specifically graduation and persistence, have been deemed as important to HSI identity and success by faculty, administrators and staff at one HSI (Garcia, 2017). Most postsecondary institutions are evaluated on such measures despite important differences in resources, funding, and student body composition. The extent to which an HSI serves their students has been measured using standards such as post-baccalaureate enrollment and labor market outcomes (Garcia, 2017; Park Flores & Ryan, 2018).

The empirical evidence regarding HSIs that uses traditional standards of excellence show mixed results. HSIs have demonstrated low persistence rates compared to non-HSIs (Malcom-Piqueux & Lee, 2011) and Latinx students confer a lower proportion of bachelor's degrees than students from other racial/ethnic groups at HSIs (Contreras et al., 2008). Such findings raise concerns over how evaluating institutions based off these standards can affect HSIs. Because these institutions may not meet traditional standards of excellence, they may end up penalized and denied the resources necessary to improve their student outcomes.

Research also shows that HSIs serve STEM majors effectively (Camacho & Lord, 2011; Crisp, Nora, & Taggart, 2009). For example, Latinx students at one large doctoral-granting HSI were significantly more likely to declare STEM majors than White students. When using

academic outcomes to define servingness, HSIs produce equitable outcomes for minority students, compared with non-HSIs after controlling for characteristics such as institutional control, size and selectivity (Flores & Park, 2014; Rodríguez & Calderón Galdeano, 2015). On the one hand, this may be encouraging because such findings may help HSIs gain legitimacy, but, on the other, one could argue that HSIs should produce not only equitable, but *better* outcomes for minority students than non-HSIs in order to truly serve their students. Either way, some scholars argue that HSIs should be assessed based off a different set of standards altogether in order to accurately measure servingness. Garcia and her colleagues (2016) state that success should not be limited to such a narrow definition and that it is critical to consider institutional context. These non-traditional standards relate to a set of outcomes beyond just graduation rates.

Non-Traditional Measures of Success. Non-traditional measures of success ought to be considered when studying HSIs. While an institution may not necessarily have the highest graduation rates, it may still serve its Latinx population in meaningful ways such as improved identity salience or academic self-concept among students. For this to occur, institutions must be deliberate and make real investments in their efforts to support Hispanic students by recognizing and making them visible on campus and adapting curriculum, pedagogy, program availability and directing efforts at increasing retention (Santiago & Andrade, 2010; Santiago, Etter, Wadsworth, & Raviv, 2012). Non-traditional measures of success may, then, contribute to understanding servingness in important ways.

Most postsecondary institutions do not center their practices around access, but those who do may serve as models for institutions whose decision-makers are looking to improve the climate for underserved student populations. Although most colleges and universities use vague language in college view-books and mission statements (Andrade & Lundberg, 2018; Contreras

et al. 2008), a select few do overtly address the needs of vulnerable student populations. One HSI mission statement at California State University Monterrey Bay, for example, states that the institution is committed to serving minority students who have traditionally not had educational opportunities. A descriptive study on the school notes that the practices used to help fulfil the mission are “innovative” and “learner-centered” and use an interdisciplinary approach with a collaborative and service-learning curriculum (Bridges et al., 2008).

Another exemplary HSIs is St. Edwards University in Texas. This institution established a program called the College Assistance Migrant Program (CAMP). The goal of this program was to help educate the, largely immigrant, local migrant community and has assisted over 2,200 migrant students in over 30 years since the program began. Students and their families go to an orientation where they meet previous participants to discuss concerns and learn from their experiences (Merisotis & McCarthy, 2005). It is precisely these types of programs that breed success by incorporating engagement with the community and cultural norms that affect students on an individual level.

Campus climate and organizational culture may also contribute to servingness at HSIs (Franco & Hernandez, 2018). These can include elements of a campus such as using culturally relevant curricula and advising practices and having a diverse faculty (Contreras, 2017). Faculty teaching political science at HSIs do a better job of engaging minority student populations through teaching strategies and service-learning opportunities compared to faculty at non-HSIs (Hurtado & Ruiz Alvarado, 2015). Through curricular and extracurricular opportunities, HSI context can also facilitate the development of racial-ethnic identity among Hispanic men (Garcia & Ramirez, 2018; Guardia & Evans, 2008), which may reflect a positive campus climate.

One potential yet understudied measure of servingness is HACU membership. The Hispanic Association of Colleges and Universities, which was critical in the formation of HSIs and the legislation that created them, was and still is a central political and economic advocate for HSIs (Calderon Galdeano, Flores, & Moder, 2012). HACU played a vital role in gaining Title III and Title V appropriations for HSIs. Membership to the association may, then, also relate strongly to an institution's degree of servingness. If an institution chooses to pay membership dues to HACU, then they are recognizing their HSI status explicitly and giving part of their resources to an organization dedicated to HSIs. Title V application may also be indicative of an institution's intent to serve their Hispanic students. While the above measures are critical to understanding components of effectiveness at HSIs, another important angle to consider is not only if, but *how* institutions improve both traditional and non-traditional measures of success for their students.

Critical Mass. Because a large proportion of Hispanic students tend to enroll at lower-cost institutions and institutions that are close to home (Núñez & Bowers, 2011; Santiago, 2007), it makes sense that higher education enrollments among this population would increase in areas with overall growth in their Hispanic populations. This is central to the enrolling vs. serving question. If reaching a critical mass is enough to improve outcomes, then, even if there are not overt institutional efforts to do so, HSIs may still serve their Hispanic students by nature of achieving the critical mass that is required to be an HSI. Thus, the enrolling vs. serving question may be further complicated by looking to the literature which suggests that having a critical mass of Hispanic students on campus can lead to improved student outcomes.

In some cases, simply enrolling a high proportion of minoritized students may improve both traditional (Hagedorn, Chi, Cepeda, & McLain, 2007) and non-traditional (Cuellar, 2015)

measures of success. A 2007 study demonstrated a positive and significant relationship between the percentage of Latinx students and faculty at an institution and student GPA and course completion rates (Hagedorn et al., 2007). Students also note the significance of having a critical mass of Hispanics on campus because it can enhance the HSI experience (Arana et al., 2011; Bridges et al., 2008; Garcia, 2016; Guardia & Evans, 2008; Rendon, Nora, & Kanagala, 2015). When a critical mass of students is present at an institution, minority students tend to be more successful because their environment improves the chances of having shared values and experiences with other students, which fosters student engagement and mutual support (Merisotis & McCarthy, 2005).

One student's personal account illustrates this. She expressed prior worry about being the only Hispanic student in her undergraduate classes which might make her "*the* representative of '[her] group'" (Dayton, Gonzalez-Vasquez, Martinez & Plum, 2004, p. 33). The student went on to say that at an HSI she could feel less pressure because she would not be "the only minority in the classroom" (Dayton et al., 2004, p. 33) Moreover, a critical mass can improve the likelihood that students will be able to speak Spanish with others on campus, which can be a reassuring experience for Hispanics at HSIs (Guardia & Evans, 2008; Sebanc, Hernandez, & Alvarado, 2009). Hispanic students at HSIs also tend to begin college with lower levels of academic self- than those attending non-HSIs. By their fourth year of college, however, differences between the two groups diminish to the point of no statistical significance. Although research has found that academic self-concept increases in college, generally (Astin, 1993), disaggregating Hispanics, specifically, by HSI vs. non-HSI enrollment suggests that HSIs can help empower and develop the academic self-concept of Hispanic students (Cuellar, 2015).

Overall, this literature highlights the benefits of a critical mass. These findings must be considered in light of the fact that much HSI research is centered on "indicators of servingness" which focus on student outcomes and experiences (Garcia, et al., 2019) (to be discussed further in Chapter 4). Moreover, the percent of Hispanic students enrolled at an institution is not always predictive of Latinx graduation rates (Garcia, 2013). One study, focused on Hispanic student composition, indicated that attending a Texas HSI had no effect on Hispanic completion rates. Additional evidence also suggests that institutional resources and selectivity are more important for student success at four-year HSIs than is student body composition (Garcia, 2013). It therefore remains unclear whether improved outcomes at these institutions occur by way of the growing critical mass, or because of overt institutional decisions to help Hispanic students on campus. One thing is certain, however: whether or not these institutions focus on prestige-seeking may have noteworthy consequences for their underserved students.

Striving at HSIs. As discussed earlier, HSIs are not usually intentional about gaining HSI status. I suspect that, to some extent, this may relate to striving behaviors, which occur as institutions seek legitimacy and do so at the cost of serving certain student groups. A case in Texas, for example, demonstrates how an institution whose history was rooted in serving its local community faced significant pressures to meet measures of success as the institution grew (Doran, 2015). A bill incentivizing institutions in the state to work towards Tier One standing provided benchmarks, including minimum levels of research funding and increased admissions selectivity levels, for colleges and universities to work towards. As a result of the bill, one HSI made shifts towards prestige while publicly trying to maintain its access and diversity mission. Despite the public commitment to diversity, however, shifts towards prestige led to a drop in the admissions rate from 99% to 60% between 2004 and 2014. The incentive provided by the bill is

a primary example of how external forces can influence decision-making and how access can be quickly compromised when this happens.

Similar findings quote HSI administrators struggling to negotiate how to best serve needy students while also striving towards excellence. Referring to increasing academic selectivity, one administrator noted:

> We're going to have to start to say no to some people. We just are... Performance metrics [the base funding connected to performance relative to other institutions in the state] can be scary...Fortunately, the urban institutions are still faring okay, but at a certain point we're all going to be at the bottom" (Zerquera, Ballysingh, & Templeton, 2018, p. 211).

The authors of the article follow up the quote by stating that "resource streams were in direct conflict to an access- and diversity-centered mission, or more specifically, to the students served by it…the status quo for institutional mission enactment had been adjusted or was expected to face an inevitable shift" (Zerquera, Ballysingh, & Templeton, 2018, p. 211). This highlights the collision occurring as a result of prestige measures and the way in which HSIs, which are largely high-access institutions, face unique pressures and challenges for gaining prestige (Daly & Dee, 2006; Zerquera, 2016).

O'Meara comments that institutions engaging in striving behaviors make "trade-offs without knowing what they are" (O'Meara 2007 p.122). Findings of the above study suggest that this may not be the case. The administrators in the study are aware that trade-offs are occurring, and, instead, find rationalizations or attempts to work around them. In other words, institutional decision-makers may knowingly take the trade-offs between prestige and access into account.

Another study, focusing on HSI mission statements, found that, although all the statements mentioned diversity, multiculturalism, or access, none of them mentioned Hispanics explicitly (Contreras et al 2008). This may link to more recent work, which suggests that HSIs

may not engage with their HSI status due to a concern over the reaction from stakeholders (Cortez, 2015). HSI decision-makers may opt not to focus on Hispanics in a mission statement out of fear that stakeholders will think that the institution does not prioritize other or all student groups. Perhaps a similar explanation could be given to understand why HSIs either do or do not apply for Title V funds.

A substantial portion of HSIs have never submitted Title V applications, but the reasons for this are unclear. It may be related to an aversion of HSI identity (Andrade & Lundberg, 2018; Contreras et al., 2008), because the funds are relatively low and thus may not be enough to implement desired programs, or, because institutions may not have the resources to spend on applying for grant money (Mulnix et al., 2004). Currently, there does not seem to be research investigating the issue directly, but, given the significance of Title V to HSIs, there is an urgent need for more. To better understand the grant, it is useful to review what little research is available on Title V.

Title V. When applying for Title V grants, schools must submit a proposal stating the goals, predicted outcomes, and assessment components for how they will use the funds. Those who receive the grant are also held accountable through the requirement that they submit evidence-based reports showing findings from the use of the grant funds later on. These reports tend to demonstrate that the funds are used in ways that increase retention and graduation outcomes among Hispanic students at HSIs (Harring-Hendon, 2015; Santiago et al., 2016).

Rather consistently, the top activities that institutions use Title V funds for are the support of faculty issues, research and curriculum development, and for supporting low-income students. This can include outreach, academic services, mentoring, scholarships, fellowships and other financial assistance (Villareal & Santiago, 2012). The original specifications for Title V

supported faculty and curriculum development and also included support for faculty attainment of advanced degrees in their field. The support for advanced degrees was eliminated in 2008 and replaced with support for faculty research instead (Villareal & Santiago, 2012). This reflects the rapid growth of faculty research in higher education (Slaughter & Rhoades, 2004; Taylor, 2016; Villareal & Santiago, 2012) and the growing expectations that faculty will already have attained more advanced degrees at the time of hiring (Santiago et al., 2016; Villareal & Santaigo, 2012).

The original legislation that allowed the funds to be used for student support was also modified in 2008 to be directed at low-income students and added the inclusion of support through scholarships, fellowships, and mentoring. This was to help ensure that the funds were improving education for the *neediest* students at HSIs. Cuellar (2015) suggests that, because Title V funds tend to go towards academic support, faculty professional development, and programs to help Hispanic students with the transition into the postsecondary environment, HSIs that receive the grant are likely to provide the types of programs and services which can aide academic development among Hispanic students. On the other hand, recent research also detects potential inequity where Title V-funded projects benefit Asian and White students more than Hispanic students (Vargas, 2018). Additional concerns suggest that the funds have a tendency to be granted to institutions with higher proportions of White students (Vargas & Villa-Palomino, 2018). Further research on the outcomes of Title V is needed to better understand and explain its effectiveness and areas in need of improvement for this grant.

Practitioners and policy makers alike must consider these ideas as they seek to improve outcomes for Latinx students who will make up a significant portion of the future U.S. workforce. Recognizing the importance of these findings, HSIs exist in the larger environment of higher education. Thus, while it is critical to study and engage in best practices, it remains

essential to continue working towards understanding decision-making at HSIs within this environment. The area in which decision-making becomes especially important is in the engagement with the HSI status, which occurs most overtly through the pursuit of federal funding designated specifically for HSIs – Title V.

In a rapidly changing demographic and political landscape, it is critical to focus attention towards HSIs as Hispanic enrollments grow and HSI-specified funding is threatened (Bauman & Harris, 2017). We must work to improve our understanding of these institutions and how they vary to better support them in an effort to reduce the achievement *and* opportunity gaps. Central to this improvement is a thorough understanding of decision-making at these institutions, how that relates to the racialization of organizations, and a multi-dimensional framework for understanding servingness at HSIs.

CHAPTER 4

THEORY

The current study, guided by the multi-dimensional conceptual framework for understanding servingness at HSIs, uses institutional theory and the theory of racialized organizations to explain decision-making at HSIs. Institutional theory emphasizes the importance of the environment and external pressures, offering explanatory power to the study of prestige. The theory of racialized organizations brings together two bodies of literature – organizational and racial theories. This allows me to observe HSIs through a racialized lens. Finally, the multi-dimensional framework offers guidance for how to study servingness at HSIs in a meaningful and holistic way. Together, the framework and theoretical perspectives allow me to investigate the relationship between prestige and Title V engagement at HSIs.

Institutional Theory

Institutional theory is a type of organizational theory aimed at explaining decision-making within organizations. It is widely used to describe how the environment can shape or constrain institutions. Rather than seeking to describe variation, institutional theory is used to explain homogeneity (DiMaggio & Powell, 1983)[3] while still taking into account agency and institutional goals in its interpretation of organizations. The present application of Institutional Theory looks to the similarities of organizations within the field of higher education. I argue that such similarities are, partly, a result of striving or prestige-seeking behaviors at institutions.

[3] In this dissertation, I use the term "Institution Theory" to incorporate and imply DiMaggio and Powell's interpretation of Neo-Institutional Theory.

Institutional organizations, under this perspective, are complex, in part, because the technologies they use are ambiguous, as are the subsequent outputs, making "'value' and 'quality' very difficult to determine" (Morphew & Huisman, 2002, p. 495). Within higher education, such technologies and outputs include, primarily, teaching and knowledge, respectively. As Brewer, Gates, and Goldman (2002) suggest, in the relationship between customers (e.g. prospective students) and service providers (e.g. colleges and universities), how well the needs of customers are met, and who the customers are can be a determinant of value, indicative of prestige. Thus, as colleges and universities strive to look more like elite institutions, they may end up increasing admissions standards, for example, failing to take into account how this reduces opportunities for students who may not meet such requirements due to coming from under-resourced K-12 schools.

Still, the quality and value of an institutional organization is determined through its alignment with the norms established within the organizational field. An institution must abide by the particular structures within its organizational field in order to be considered legitimate (Meyer & Rowan, 1977; Morphew & Huisman, 2002; Scott, 1987). In this way, it is clear how institutional theory focuses on the significance of the environment, which both offers context and constrains decision-making and activities within organizations. In higher education, accreditation agencies are a critical component of legitimacy. A postsecondary institution must be recognized as a college or university in order to actually *be* a college or university (Morphew & Huisman, 2002).

Legitimacy arises as a central point in institutional theory as a way of explaining institutional behavior through what is expected and valued of institutions in the dominant culture of the system. Selznick (1996) suggests that legitimacy takes the form of a justification for

institutional behavior. This is reflected in earlier discussions (Chapter 3) about the pursuit of prestige is used to justify why institutions may overlook access. The three pillars of legitimacy include regulative, normative, and cognitive (Scott, 1995). The regulative pillar relates to rules, such as the law as a guide for behavior. The normative pillar looks to social norms and values, while the cognitive pillar relies on history. The cognitive pillar rationalizes decision-making based on traditional and established systemic practices (e.g. traditional measures of success). It is through attempts at establishing legitimacy that behavior among varying institutions becomes similar, yet this may lead to certain issues. Scholars underscore the role of the power elite in shaping change, and, because the norms and values are shaped by those at the top in what is a hierarchical system, reinforcing these norms can reproduce inequality and maintain stratification.

Three types of change, or isomorphism, can help explain why institutions come to act in particular ways (DiMaggio & Powell, 1983). The three types are mimetic, coercive, and normative isomorphism. Mimetic isomorphism occurs when organizations engage in similar behaviors as a result of uncertainty. In the case of HSIs, for example, this uncertainty could be because of a rapidly shifting student demographic. This means that one institution may look to a peer for direction when faced with similar changes. Coercive isomorphism is when isomorphism is a result of external pressures, perhaps legal or governmental, forcing a change in behavior. Such pressure may also occur through standards set by accrediting organizations, for example. Finally, normative isomorphism is also rooted in external pressure for action, however, it is less formal (DiMaggio & Powell, 1983). For instance, changes in the norms of a professional field may lead to eventual differences in departmental curriculum. The three types of isomorphism are not mutually exclusive, meaning that more than one may occur at a time (DiMaggio & Powell, 1983). As it applies to HSIs, mimetic isomorphism may help explain potential responses to shifts

in population through the employment of servingness tactics. Normative and coercive isomorphism may explain prestige-seeking behavior, such as increased admissions selectivity for performance funding (Doran, 2015).

Institutions of higher education may strive to look like the most prestigious institutions which can be explained through the isomorphism perspective. As Brewer, Gates and Goldman (2002) note, however, institutions of higher education are large and multi-faceted, with different goals and priorities throughout the entirety of the organization such that, as isomorphism suggests, the need to change demanded by the environment may eventually supersede certain core goals and values such as access and diversity.

Organizational Identity. In addition to legitimacy and isomorphism, the concept of organizational identity has been applied to the study of higher education for many years, allowing researchers to explain the institutional behaviors of colleges and universities. This perspective has been used to study innovation within institutions as well as their affiliations, values, and how they either stay the same or change over time (Weerts, Freed & Morphew, 2014). As such, the perspective places the university as an actor making it an active player rather than merely a passive recipient of social, political, and economic forces. This allows for the analysis of institutional decision-making in a distinctive way as scholars work to understand the positions of colleges and universities in an evolving climate, broadly, and throughout higher education.

Parsons (1956) and Selznick (1996) state a need to study colleges and universities as social institutions. Parsons noted that organizations are different from other types of social groups, because they are oriented towards a particular goal. The set goal leads to an output that becomes useable for some other system (Parsons, 1956). Selznick's (1996) work highlights the

shift from an organization to an institution through established values. The primary values and actions are those considered critical for the well-being of the organization, which can be reflected in, for example, an institution's expressed mission. Once a distinctive identity is formed as primary values become clear, this shapes subsequent behavior of actors and decision-makers within the institution in order to maintain the identity. As changes occur both internally and externally, however, the institution must work to preserve its identity.

Organizational identity can be distinguished between inner and outer levels of analysis. The inner level relates to how the members of an organization make sense of the primary characteristics and values of their organizations and what actions they take accordingly. An organization's identity can be tied to an individual's loyalty to the institution. When an identity is strong, individuals may feel personally invested in its successes or failures. Research on HSIs has predominately focused on the inner level, by assessing identity through the perspectives of students and faculty (Garcia, 2016, 2019).

The outer level of analysis is related to strategic planning whereby institutional decision-makers work to shape external perceptions of an organization. Roughly, the outer level of analysis considers the image of an organization and how it is distinguishable from others. Such image-shaping can occur through institutional symbols, branding, or marketing (Pussa, 2006; Weerts et al., 2014), which, incidentally, are key in the pursuit of prestige (Brewer, Gates & Goldman, 2002). Although less research has focused on the outer level of identity at HSIs, some findings indicate that HSI status tends not to be central to identity at this level through the absence of attention to Hispanic students in institutional mission statements (Andrade & Lundberg, 2018). The current study focuses on the outer level of analysis whereby decisions

regarding Title V are made with much attention and consideration to how it may affect external perceptions as they relate to the broader climate of and competition for institutional prestige.

Institutions may stray from advertising unique characteristics to appeal to a wider array of students, reflecting normative pressures. Veering too far from norms within the field could present a threat to an institution's legitimacy. Holding onto a specific niche, in this case, serving a particular student population, may be a risk as social environments, interests and priorities change. Decision-makers engage in a balancing act between holding onto institutional values, through the organizational identity, and being conventional enough to appeal to an array of students. Of course, this begs the question, where and how do non-traditional students fit? The wide appeal that many institutions strive for in their marketing and mission may instead be a reflection of a dominant culture that consequently alienates underserved student populations, despite their continually growing presence in colleges and universities.

The merging of organizational and racial theories is rather uncommon, however, the environment of higher education cannot be fully understood without taking race into consideration. As multiple researchers have noted, theoretical frameworks in higher education literature tend to fall short in their coverage of the role of race/ethnicity when being applied to HSI research (Garcia, 2017; Villarreal, 2014). Recognizing that racism is embedded into the very threads of higher education, I expect that there will be a negative relationship between a school's prestige factors and its likelihood of engaging with Title V. Given the environmental pressures that occur with demographic changes, however, I expect that as the percent of Hispanic students at an institution increases, so will the likelihood that a school engages with Title V, giving consideration to the assumptions of institutional theory's isomorphism. To understand the racial assumptions of this argument, the following explores the role of race in organizations.

Racialized Organizations

Despite the strengths of both theories, organizational theorists tend to operate from a race-neutral perspective while race theorists tend to talk about race independently of structure. Recognizing the role of race in the formation and current processes within HSIs, HSI scholars emphasize the need for "race-conscious organizational theory" (Garcia et al., 2019). Ray's (2019) theory of racialized organizations works to connect components of organizational and racial theories making it a useful lens for the study of HSIs.

Through this perspective, cultural rules connect to material and social resources through the formation, hierarchy, and processes of organizations (Bonilla-Silva, 1997; Sewel, 1992). In addition to material and economic resources, resources also include ways of changing or maintaining one's social position (Ray, 2019). Institutions (macro/state) and individuals (micro) meet and interact at the organizational, or meso-level. Thus, what occurs at the meso-level can perpetuate (or resist) the racial order and racialization processes. Recognizing organizations as racialized allows us to consider the ways in which organizations can both influence and be influenced by larger institutions (e.g. the state/policy) (Ray, 2019).

Previous theories of organizations fall short by failing to recognize that organizations are, at least in part, formed on the basis of the "expropriation and exclusion of racial others" (Ray, 2019, p. 29). Instead, such theories ought to recognize racialized social systems, a central component of Critical Race Theory (CRT), as foundational in organizational environments. A racialized social system is a society where individuals are placed in varying racial categories that shape other major facets of society such as economics and politics (Bonilla-Silva, 1997). Under

this conceptualization, race is socially constructed and racial hierarchies shape social relations between races. Whichever racial category is furthest up in the hierarchy tends to reap economic, political, and occupational benefits.

Importantly, the racial structure of racialized social systems may vary. So, while racialized social systems may be tiered in nature, as CRT suggests, the ways in which subordination and dominance occur is not uniform. For example, while much of the subordination of Blacks in the U.S. developed through slavery, the mechanisms by which the subordination of Blacks occurs currently is more covert than it used to be. Still, the system by which Whites have a higher status and life chances as compared to Blacks in the U.S. continues. As Bonilla-Silva states, "the historical struggle against chattel slavery led not to the development of race-free societies, but to the establishment of social systems with a different kind of racialization" (Bonilla-Silva, 1997, p. 470).

Despite variation on individual, gendered, and class lines, the structure by which racial groups differ in their social positions remains intact and, therefore, cannot and should not be ignored. While class and gender differences must also be accounted for when considering social issues, both class and gender are racialized themselves. For example, noteworthy racial tensions have long been an issue in the fight for women's rights in the U.S. (Caraway, 1991; Giddings, 1984). This perspective also states outwardly that racism is not merely a belief; rather, it is embedded into the structure of society.

A primary limitation of racial theories is that many racial theorists do not pay attention to the power of organizations in their work. In the theory of racialized organizations, race is "a relationship between persons mediated through things" (Ray, 2019, p. 29) which justifies racial inequality. Racialization imposes racial meaning onto things (e.g. organizations, bodies,

emotions) that, typically, have not been associated with race. The notion that organizations form based off an unequal distribution of resources and discrimination must be recognized as a foundational norm. Under this perspective, structures are viewed as a coupling of 'rules and resources' while schemas relate to unconscious assumptions. Thus, racial schemas inform racialized ways of knowing which can be applied, implicitly or explicitly, through the process of organizational formation. Once schemas connect to resources, racial structures are created (Figure 1). Racial ideologies can be applied and adapted to various and changing organizational settings.

Focusing on the meso-level (organizational) of analysis allows one to see how racialization processes, which can occur in macro- and micro- ways, are enacted. Organizations can reinforce, challenge or alter racial meanings, but most commonly reinforce them. For example, organizations tend to have racialized hierarchies as well as occupational segregation (e.g. White CEOs vs. PoC custodial staff in the same organization), both of which reproduce inequality along racial lines. In fact, most organizations are racially segregated at their core, which reinforces racial boundaries. Even integrated organizations tend to have internal segregation, despite formal efforts (e.g. diversity policies, affirmative action) to combat this. Such efforts can still be centered on Whiteness and work on the assumption that minorities must conform to pre-established norms.

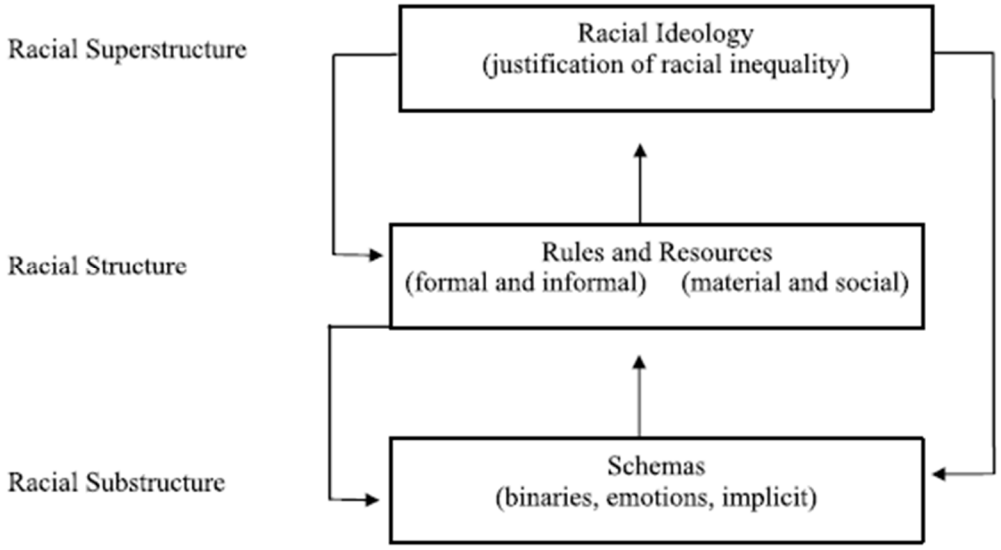

Figure 1. *The relation between schemas, racial structures, and racial ideology*

Note: Reprinted from Ray, V. (2019). A theory of racialized organizations. American Sociological Review, 84(1), 26-53.

Although much of organizational theory describes organizations as neutral, the U.S. environment may make it so that organizations are founded on privileging Whiteness. A key point in the theory of racialized organizations is the credentialing of Whiteness (Ray, 2019). So, because White organizations are treated as normative, non-White organizations, tend to be stigmatized. Moreover, non-White organizations often depend on institutions of Whiteness (e.g. the state) for their survival, as is the case with HSIs (Merisotis & McCarthy, 2005)

It is once racial structures exist across varying organizational forms that they become institutionalized. Therefore, the dominance of traditional measures of success, which have been criticized for catering to better-resourced (and predominantly White) institutions, exemplifies how a racial structure becomes institutionalized. These measures of success focus on credentials such as graduation rates that are fundamentally linked to Whiteness, and these same credentials

are used to justify the unequal distribution of resources, such as performance based funding (see: Doran, 2015).

This perspective is not entirely fatalistic, however. Organizations have the power to either reinforce *or challenge* individual-level racial prejudice and discrimination. Although organizations tend to be formed in such a way that resources are differentially distributed across race, external factors may challenge and eventually change racial structure. Three factors serve as catalysts for this type of change: social movements, macro-level policy, and how much an organization relies on the state. Incidentally, each of these factors play a large role in higher education organizations, highlighting the appropriateness of this theoretical framework in discussions of U.S. postsecondary institutions.

The Multi-Dimensional Conceptual Framework for Understanding Servingness at HSIs

HSI research inquires whether HSIs enroll or serve their Hispanic students, but what does it mean to truly serve this population? Garcia, Núñez, and Sansone (2019) seek to explain this in detail by introducing the multi-dimensional conceptual framework for understanding servingness at HSIs. They note where HSI research falls short and present a framework for how to address servingness in a meaningful way. This occurs by recognizing that servingness is not just one thing. It is not simply graduation rates, it is not simply organizational culture. Rather, servingness is layered, complex, and must be studied through a multi-dimensional lens. The framework addresses experiences and outcomes at HSIs, specific structures for serving, external influences on serving, and, finally, the broader structure of White supremacy (Figure 2). In the current study, Institutional Theory helps explain that HSI behavior and choices related to access and prestige occur because of their broader environment. The extent to which colleges and universities choose to focus on access and prestige then effects their decisions, such as whether

or not to engage with the grant. An institution's servingness context additionally helps account for important distinguishing factors among HSIs that can affect their likelihood of intending to serve, or engaging with Title V.

Much of the research on HSIs does not use HSIs as an organization as the unit of analysis. Instead, it tends to focus on students, faculty, or programs/interventions taking place at HSIs. Garcia, Núñez, and Sansone (2019) caution readers to recognize that these may be good *indicators* of servingness, however, studies that do not use HSIs as the unit of analysis cannot make claims about these institutions as organizations because they are only studying factors or experiences within (usually only one or a few of) them. Researchers aiming to add to HSI literature should also acknowledge HSI context and ask relevant research questions that account for the organizational variation among them.

Another component of the multi-dimensional framework for understanding servingness at HSIs is deficit framing. Deficit framing occurs when researchers refer to non-HSIs as being more effective than HSIs and, sometimes, critique them for not truly serving Hispanic students or for *just* enrolling them (while overlooking the importance of access for Latinx students). This type of framing may lead to negative conclusions about HSIs, which are made without fully recognizing the limitations present in data, relating to an inability to capture servingness holistically. Overlooking HSI context and data limitations related to measures of servingness can lead to authors making conclusions that are outside of the scope of their studies. Authors might make organizational claims despite using student-level data (Garcia, et al., 2019).

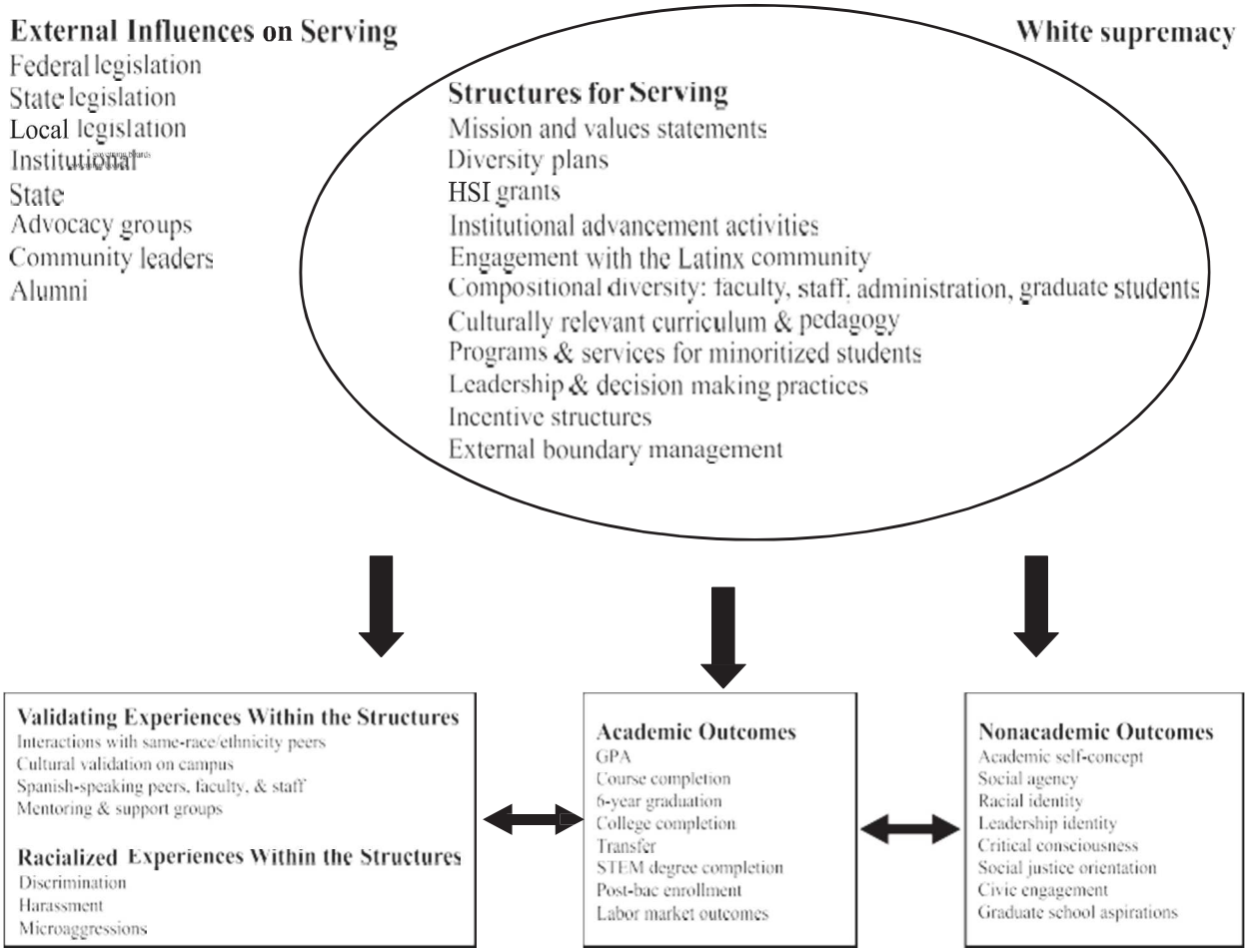

Figure 2. *Multidimensional conceptual framework of servingness in HSIs.*
Note: Reprinted from Garcia, G. A., Núñez, A. M., & Sansone, V. A. (2019). Toward a Multidimensional Conceptual Framework for Understanding "Servingness" in Hispanic-Serving Institutions: A Synthesis of the Research. Review of Educational Research, 0034654319864591.

Indicators of servingness usually involve individual experiences or outcomes and generally use individuals as the primary unit of analysis. Both experiences and outcomes are influenced by time spent within HSI structures. Outcomes are categorized into academic and non-academic outcomes. Academic outcomes include those commonly studied in higher education literature: GPA, six-year graduation rates, or labor market outcomes, to name a few. Non-academic outcomes relate to self-efficacy, civic engagement, or racial identity, for example. Experiences, which influence outcomes, reflect how individuals within HSIs interact with, perceive and feel about their organizational environment. They may be divided into positive and

racialized experiences. Experiences at HSIs relate to the recognition and validation of a student's background, or they can involve experiences of racism or discrimination.

The framework next looks at structures for serving. These can involve an array of measures such as strategic planning, institutional missions, or diversity plans. Garcia, Núñez, and Sansone "stress that applying for and implementing HSI grants shows a commitment to serving Latinx students (Flores & Park, 2015; Garcia, 2016)." It is likely that HACU membership may reflect a commitment to serving Hispanic students as well. Ultimately, structures reflect an institution's capacity for and decision-making related to serving Hispanic students.

Finally, Garcia and colleagues discuss external influences on serving. This goes beyond structures and focuses on broader relevant contexts that can shape the HSI environment. Measures can include legislation, historical context, or the decision-making of advocacy groups or governing boards.

The broadest, and final, component of the framework is the system of White supremacy and its influence on HSIs. I utilize the theory of racialized organizations to frame and explain this, above. Overall, the multi-dimensional framework for understanding servingness at HSIs does the vital job of identifying the many complexities of servingness. Of course, not all components of servingness can be captured in a single study, often due to availability of data. Thus, the authors recommend that researchers outwardly address their limitations in addressing servingness and that they address those limitations using relevant HSI research.

HSIs, Race, & Servingness. HSIs exist in a world where brownness is stigmatized and Whiteness is a credential (Ray, 2019). While negative perceptions associated with access and affordability are certainly important considerations in the reasons for why an institution has low prestige, race cannot be ignored. When a school like University of Texas Rio Grande Valley,

which also happens to have one of the highest Hispanic populations in the country, is given a colloquial name such as "Taco Tech,"[4] to emphasize the low status of a school, it is hard to deny (Keating & González-López, 2011; Villarreal, 2014). I draw attention to this example to emphasize the role of race in the higher education prestige game. In an environment where a name like Taco Tech emerges with an intended derogatory connotation (Keating & González-López, 2011; Villarreal, 2014), it becomes clear that there is a negative association between serving a significant minority population and a school's perceived prestige. Thus, as decision-makers make choices regarding what components should remain crucial to organizational identity, we begin to understand reasons why a school might not highlight their HSI status.

Garcia and colleagues (2019) highlight one key point that underscores much of what is so important to the current dissertation – context matters. Institutional theory complements the theory of racialized organizations. Centralizing race creates a strong platform for addressing the issue of White supremacy as a player in shaping HSI engagement in servingness. This grounds my argument that institutions choosing not to engage with HSI status may do so because the Hispanic serving status may threaten their prestige. In contrast, I expect that institutions that are focused on offering access for underserved populations will be more likely to demonstrate an intent to serve their students, via engaging with the Title V grant.

The proposed negative relationship between Hispanic serving status and prestige is rooted in the recognition that racism is embedded in the broader higher education landscape, which is an unspoken norm within the environment, and this affects decision-making, per institutional theory. It is with this understanding and these assumptions that I consider multiple

[4] See also Saldivar-Hull, 2000, p. 10 for reference to another HSI referred to as "Tamale Tech."

dimensions of the HSI servingness context and focus, specifically, on Title V engagement among HSIs.

In the current study, I draw in the servingness framework by using different factors related to servingness to account for an institution's "Servingness Context" and use Title V engagement to measure an institution's intent to serve. The Servingness Context factors include HACU membership, representing acknowledgement of HSI status, the percent of Hispanic students at an institution, which per institutional theory may affect institutional decision-making, and the Hispanic graduation rate which relates to academic outcomes under the framework. I focus on engagement with Title V, as opposed to receipt of the grant, because I am interested in understanding the choices made at HSIs relating to institutional action. While Title V is an imperfect variable, as I cannot pin point an institution's specific motives in their engagement with the grant, I argue that because of Title V's explicit goals and purpose, engagement reflects decision-making specifically related to servingness. The following section describes the data and methodology that I will employ to address the research questions at hand.

CHAPTER 5

RESEARCH DESIGN

Illustrated by the conceptual Model presented here (Figure 3) are the current research questions:

1. How do prestige and access factors relate to servingness context and control factors at HSIs?
2. How do servingness context factors relate to the likelihood that an institution will engage with Title V funding?
3. How do prestige factors relate to the likelihood that an institution will engage with Title V funding?
4. How do access factors relate to the likelihood that an institution will engage with Title V funding?
5. How do HSIs that do and do not engage with Title V funding differ?

RQ1 investigates the relationship between prestige, access, servingness context, and control factors at HSIs. RQ2 assesses the association between servingness context variables and Title V engagement. Similarly, RQs 3 and 4 investigate the relationship between prestige and access, separately, and the likelihood that an institution will engage with Title V funding. Finally, RQ 5 inquires how prestige, access, servingness context, and control factors affect the likelihood that an eligible HSI will engage with Title V funding to understand the differences between the types of HSIs that do and do not engage with the grant.

Data

The current study uses data obtained through the U.S. Department of Education (DoE). The data include the DoE's complete lists of eligible HSIs between the years 2010 and 2017, a list of Title V applicants (including those denied the funding) and renewals between the same time period, and IPEDS data corresponding to the eligible HSIs each year. The DoE sent me a

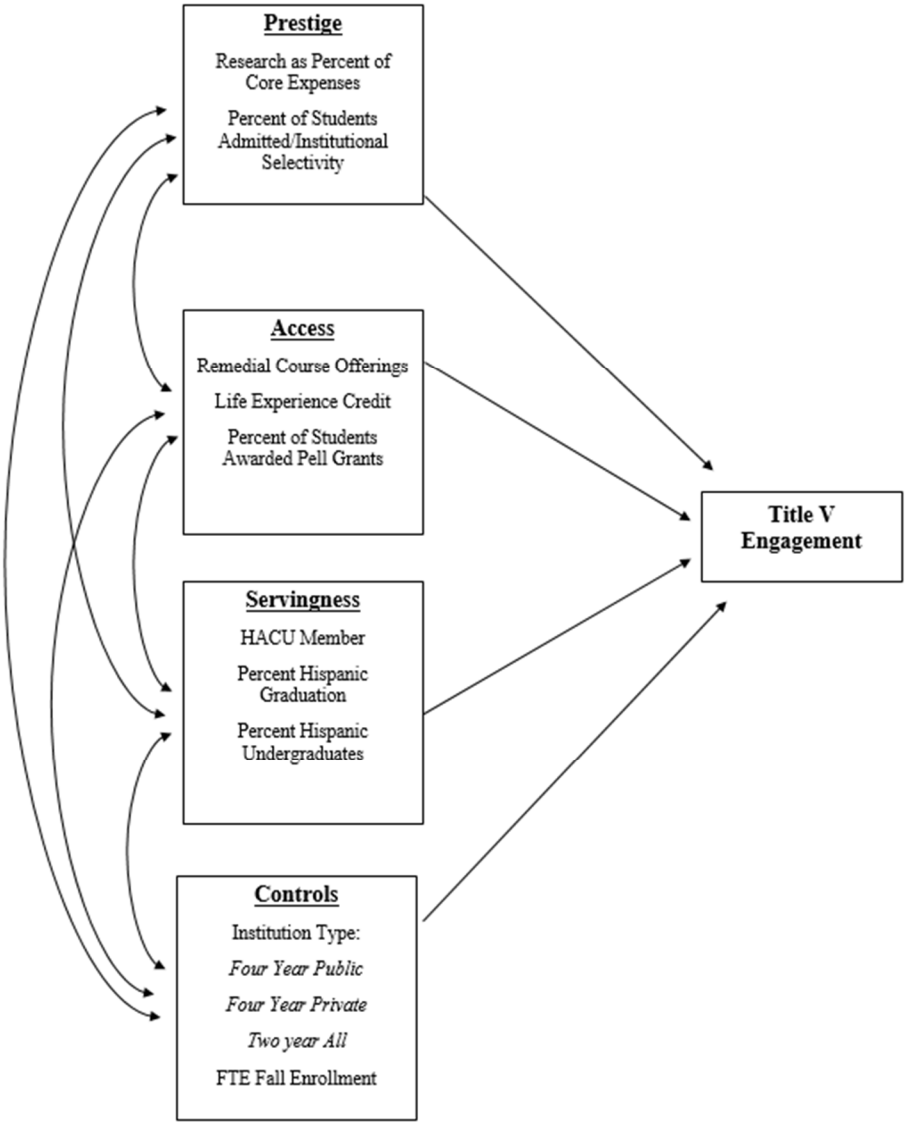

Figure 3. *Conceptual Diagram: Prestige, Access, Servingness and Controls on Title V Engagement*

separate list of eligible institutions for each year obtained through a Freedom of Information Act (FOIA) request. In 2010 and 2012, I was only given a simple list of institution names on a PDF document. It is unclear how those lists were derived. I used an online PDF converter to put each list into an Excel document. From 2014 on, the DoE provided me with eligibility matrices on Excel documents. These matrices include in-depth information about each institution and

whether or not an institution was eligible for a variety of grants. These matrices are not public for any academic year prior to 2017-2018. Using the matrices, I extracted the list of eligible HSIs for 2014-2017. I then created a "master list" which included all institutions that were eligible for Title V across the five years of data.

The DoE's list of Title V applicants was sent as one file. I manually extracted the list of institutions and created separate documents for each year. The list indicated whether a grant was from a previous year or whether it was from a new application. The data from IPEDS cover several areas: demographic information of students at each institution, institutional characteristics, access measures, prestige measures, and some servingness measures. HACU provided me with separate lists of members of their organization since 2010. I grouped together the HSIs from the lists and incorporated them into Excel documents for each year of the study. I then added in that information into a larger Excel document including the other variables I created using the list of Title V engagers and eligible HSIs.

For each year of the grant competition, I included data for that academic year. So, if I state that an institution engaged with the grant in 2014, it means that the institution either had their grant renewed or applied for a new one by May of that year. In this case, I would use corresponding IPEDS data for the 2013-2014 academic year.

Together, these data allow me to not only determine whether and when a school engaged with Title V funding, but, also, to assess the relevant institutional characteristics in a given year. The sample for this study includes the institutions of higher education that were deemed eligible for the Title V Developing Hispanic-Serving Institutions grant by the DoE between 2010 and 2017. The study excluded Puerto Rican institutions due to their differing cultural and ethno-racial context; while more research on these institutions is necessary, it is beyond the scope of

the current study. The list of eligible institutions prior to the 2010-2011 academic year were unavailable. Institutions who were missing data on the relevant variables were excluded from the final analyses. For ease, Table 1 indicates which variables came from which data sources.

Table 1. Variable Sources

Source	Variable
HACU	HACU Membership
IPEDS	Research as Percent of Core Expenses
	Percent Admitted
	Remedial Course Offerings
	Life Experience Credit
	Percent Pell
	Hispanic Graduation
	Percent Hispanic Undergraduates
	Institution Type
	FTE Fall Enrollment
Department of Education	Title V Eligibility *(This was not a variable in the models but was used for sample selection)*

Dependent Variable. The dependent variable for this study is Title V engagement. It is coded as a binary variable indicating whether a school either submitted an application *or* received a renewed grant for the Developing Hispanic Serving Institutions program in a given year (1= engaged, 0 = did not engage). I include previous-year grant recipients, and not just new applicants, to get a fuller picture of the institutions *engaging* with Title V at all.

Conceptually, even if an institution is not applying for a new grant, they are still engaging with Title V in that year, and they should therefore be accounted for when testing for what factors may relate to an institution's likelihood of showing *intent to serve*. Only including new

applicants in the primary analysis would exclude what may be a group of institutions that are the most likely to be fully engaged in serving behavior. I expect that these institutions are especially engaged because they can only use the funds in specific ways, which are highly linked to servingness by improving the climate and outcomes for low-income and Hispanic students at HSIs. I use Title V engagement so that the analysis considers what characteristics are associated with eligible HSIs that engaged with the grant in any manner.

This variable was derived from the DoE-provided list of Title V grant applications and renewals for the years 2010-2017 as well as their list of eligible institutions for each year. For part of my supplementary analysis, I use the same variable, Title V engagement, but exclude HSIs that were receiving funds from a previous year. Doing so does allow me to investigate if there are differences between the full sample and those institutions that applied for a new grant and did not have a previous year's grant.

Independent Variables. *Servingness Context.* Related to servingness context at HSIs are graduation rates, HACU membership, and the percent of Hispanic students at an institution. The graduation rate variable accounted for the graduation rate within 150% of normal time to graduation of Hispanic students at a given institution. This variable functions as an indicator of servingness by looking at academic outcomes for Latinx students (Garcia et al., 2019). It accounts for the six-year graduation rate at four-year institutions and the three-year graduation rate at two-year institutions because HSI students tend to take more time to graduation.

I test for whether an institution is a member of HACU in a given year using a dichotomous variable indicating membership (1= member, 0= not a member). HACU membership relates to structures for servingness at HSIs (Garcia, et al., 2019). While the percent of Hispanic students may not represent institutional commitment at HSIs, the proportion of

Latinx students at an HSI may affect student experiences and outcomes (Cuellar, 2015). Thus, I account for demographic makeup using the percent of FTE undergraduate students that identified as Hispanic. Because it is based off the enrollment threshold, it ranges from 25%-100% Hispanic undergraduates.

Prestige. I assessed the faculty and research component of prestige by including the percent of core expenses spent on research. To test for recruitment and admissions, I include a measure of institutional selectivity using the percent of students admitted to an institution.

Access. I use distinct binary indicators for whether a school offers credit for life experiences or remedial education services to assess the curriculum and programs at HSIs. To test for external relations and resource allocations, I included a continuous variable indicating the percentage of undergraduate students awarded Pell grants.

Controls. In the full analyses, I account for two control variables. First, I created a categorical variable which combined the indicators for whether institutions were public or private and two year or four year. The institution type variable has three categories: public four year, private four year, and all two year institutions. I joined public and private two year institutions because the number of observations for private two year variables was too low to test as a category on its own. I then account for whether an institution is public or not using a dummy variable. The FTE fall enrollment numbers in a given year measure institution size. In the descriptive statistics I use this variable in its original form, however, for the regression models, I used the natural logarithm to transform the variable because the data were heavily skewed.

Analytic Strategy

Following descriptive analyses (RQ 1), I employed logistic regression analysis to examine the likelihood that an institution will engage with Title V funding (RQ 2 – RQ5). I

could not assume a linear relationship with the predictors because the outcome variable (Title V engagement) was dichotomous. So, I employed binomial logistic regression rather than OLS regression. This method identifies the effects of the predictor variables net of the other selected variables. Logistic regression models the probability that an outcome, in this case, Title V engagement, is a function of a group of independent variables and regression coefficients, expressed as:

$$\boldsymbol{Y_{it} = \alpha + P_{it}\beta + A_{it}\theta + S_{it}\delta + C_{it}\gamma + \varepsilon_{it}}$$

where Y_{it} = Title V engagement for institution *i* during year *t*, $P_{it}\beta$ = set of prestige variables with coefficients β, $A_{it}\theta$ = access variables with coefficients θ, $S_{it}\delta$ = servingness context variables with coefficients δ, and $C_{it}\gamma$ = institutional characteristic control variables with coefficients γ. I ran separate cross sectional (Babbie, 1990) models for each of the five years in which the Title V grant competition occurred: 2010, 2012, 2014, 2015, and 2017. Each model included the set of HSIs that were eligible for Title V in a given year, meaning that the sample of institutions varied (and also grew) annually. One of the supplementary models excluded HSIs who were receiving a grant from a previous year. Additional methodologies were considered in earlier iterations of the analyses[5] but the following chapter shows the results of the final analyses.

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[5] Earlier iterations of the analysis involved the use of various statistical techniques. I initially considered employing event history analysis, but the changes in sample size and gaps between years (e.g. missing 2011, 2013, 2016) made it so that cross sectional analysis was the more appropriate option. I also used Principal Component Analysis (PCA), which is a statistical data reduction technique. PCA is used to reduce the number of variables that go into a model while still considering the effects of those factors, which also tend to be highly correlated, while accounting for as much of the original data as possible (Fields, 2013; Suhr, 2005). Using this method, I derived an "Institution Type" component where the effects of being a two-year vs four-year and a public vs private institution were accounted for. This did not stand up against robustness checks. Early analyses also involved testing for the current models disaggregated by two-year and four-year, however, the number of observations in those analyses fell below 100, reducing the statistical power of the analysis. I therefore created the categorical Institution Type variable currently used.

I also created a scaled variable to represent access. It was comprised of six factors including: distance education, remedial education, life experience credits, weekend courses, on-campus daycare, and academic counseling. In doing so, I tested for the Chronbachs alpha, which indicates scale reliability. The Chronbachs alpha was, however, too low to reasonably incorporate the scale into the model. Thus, I used just two access indicators

representing remedial and life experience credits. The choice to do so was because these variables had a higher number of observations than some of the others that would have been included in the scale. Life experience credits also had the most normal distribution among the variables for eligible HSIs. Remedial education is also particularly relevant for studying HSIs because, as stated earlier, many HSI students are in particular need of remedial education (Gabbard & Mupinga, 2013).

CHAPTER 6

RESULTS

The following chapter presents results from the data analysis as it relates to the five research questions. First, I address RQ 1 using descriptive statistics, comparing institutional behaviors and characteristics according to various indicators of HSI servingness context. I also examine descriptive differences between institutions that did and did not engage with the Title V grant (RQ 5). Using logistic regression analyses, I address RQs 2-4 by running Models that test for the effects of servingness context, prestige, access and additional control variables on Title V engagement separately. Finally, I discuss the results of the full model including all relevant variables to address RQ 5.

Descriptive Statistics

Hispanic Composition. Tables 2-4 present descriptive statistics for different categories of HSIs where HSIs are grouped according to servingness context variables cross-tabulated with prestige, access, and control variables. Each table is used to show the differences between these means in 2010 and 2017. Table 1 compares HSIs in 3 categories: low Hispanic composition, moderate Hispanic composition, and high Hispanic composition. I also categorize HSIs by their graduation rates for Latinx students in Table 2 into three groups: low Hispanic graduation, moderate Hispanic graduation, and high Hispanic graduation. Finally, given the significance of HACU membership in reflecting acknowledgement of HSI status, I use HACU membership status to group HSIs in Table 4.

The undergraduate Hispanic composition of an institution may influence decision making at HSIs. Table 2, therefore, provides three categories of HSIs in 2010 and 2017, those with low (25-40%) Hispanic undergraduates (N=112, 2010; N=137, 2017), those with moderate (41-55%) Hispanic undergraduate composition (N=50, 2010; N=101, 2017), and those with high Hispanic composition (56% or higher) (N=39, 2010; N=90, 2017). In both 2010 and 2017, a few patterns emerge. A larger proportion of HSIs were four-year institutions among those with low Hispanic composition compared to those with high Hispanic composition. Similarly, as the Hispanic composition increases, so does the mean percent of students awarded Pell in both years, but, the average percent of students awarded Pell was lower for each category in 2017 than in 2010. In 2010, FTE fall enrollment in each composition category was higher than the mean FTE fall enrollments in 2017. More HSIs were HACU members if they enrolled a larger proportion of Hispanic undergraduate students in 2010 *and* 2017, however, in each composition category, the percentage of HACU members was smaller in 2017 than in 2010. The table also suggests that HSIs with high Hispanic student composition are less selective (higher percent admitted) and fewer offer credit for life experiences than HSIs with low Hispanic student composition.

There were not always similar distributions when comparing across 2010 and 2017. For example, in 2010 HSIs with moderate Hispanic composition (81% Title V engaged) had the highest proportion of Title V engagers when compared to those with low (70% Title V engaged) and high (67% Title V engaged) Hispanic composition in 2010. In 2017, on the other hand, around half of HSIs with low Hispanic composition (49% Title V engagers) engaged with Title V compared to 59% and 67% of HSIs with moderate and high Hispanic composition, respectively. Hispanic graduation rates were higher in 2017 than in 2010. While institutions enrolling 41-55% Hispanic undergraduate students graduated an average of 20% of their

Hispanic students in 2010, institutions enrolling the same percent of Hispanic undergraduates had a Hispanic graduation rate of 35% in 2017.

Hispanic Graduation. The percent of first-time full-time Hispanic students who graduate from an institution within 150% of the "normal" (i.e. two-years for an associate degree and four-years for a bachelor's degree) time to degree completion may reflect one component of Hispanic student outcomes at HSIs. Thus, Table 3 categorizes HSIs based off whether an institution graduated a low (Under 25% (N=134, 2010; N=142, 2017)), moderate (26%-50% (N=50, 2010; N=130, 2017)), or high (Over 50% (N=17, 2010; N=56 2017)) percent of Hispanic students in 2017 and 2010. When Hispanic graduation rates are low, more HSIs tend to be two year institutions than when graduation rates are moderate or high; this is evident in both 2010 and 2017. When Hispanic graduation rates are high, more HSIs tend to be four-year institutions than when graduation rates are low.

In both years, the table reveals that institutions with low Hispanic graduation rates tend to be less selective (admit a higher proportion of students), have lower research expenditures, and are more likely to have remedial education offerings and offer credit for life experience than those with higher proportions of Hispanic graduation rates. There did not seem to be a discernable trend related to the graduation rate categorizations and HACU membership, the percent of students awarded Pell or an institution's size in 2017. No trends were identified in 2010 for Title V engagement, HACU membership, or FTE fall enrollment. A higher proportion of HSIs with low graduation rates were Title V engagers in 2017 compared to HSIs with moderate or high Hispanic graduation rates. In both years, the mean Hispanic composition decreased as the graduation rate category increased.

HACU Membership. HACU membership is an important variable for understanding Latinx servingness, thus, Table 4 groups HSIs by whether or not they were a HACU member in 2017 and in 2010. HSIs could be a HACU member (2017: N=196; 2010: N=141) or not (2017: N=132; 2010: N=60). Unsurprisingly, a much higher proportion of HACU members engaged with Title V than did the proportion of non-HACU members in each year. HACU members in 2010 and 2017 tended to have higher Hispanic undergraduate population percentages than non-members. Although HACU members had a higher mean of Hispanic graduation than non-members in 2010, non-members had a higher mean of Hispanic graduation than members in 2017. A greater proportion of HACU members were four-year institutions as compared to non-members in both 2010 and 2017. A higher proportion of institutions were two-years among HACU members compared to non-members in 2017 as well as in 2010.

In 2010, HACU members were more selective than non-HACU members. That same year, non-members spent a higher percentage of core expenses on research than members and the proportion of institutions that offered remedial education were almost the same among HACU members and non-members. In 2017, HACU members were also more selective and had a higher proportion of institutions with remedial education offerings and life experience credits than non-HACU members.

Title V Engagement. Table 5 compares the means for all variables between Title V engagers and non-engagers across the five years of data. The first row shows that 74% of eligible institutions applied in 2010. This proportion decreased to 66% in 2012, rose back to 74% in 2014 and then continually declined in the subsequent years. Overall, there was a 16 percentage point decline in the proportion of eligible institutions that applied for Title V between 2010

Table 2. Characteristics of HSIs by percent Hispanic Composition, 2010, 2017

		N	Title V	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
25-40% Hispanic	**2010**	*112*	0.70	0.65	27.43	29.29	2.09	87.11	0.93	0.50	52.55	0.26	0.17	0.57	8464.49
	2017	*137*	0.49	0.47	34.18	32.79	1.59	89.40	0.85	0.57	51.31	0.29	0.23	0.48	7325.63
41-55% Hispanic	**2010**	*50*	0.81	0.73	20.22	48.06	1.34	92.42	0.96	0.46	59.60	0.22	0.06	0.72	7538.60
	2017	*101*	0.59	0.63	35.03	47.35	0.97	89.18	0.89	0.54	54.55	0.22	0.28	0.51	5681.48
56-100% Hispanic	**2010**	*39*	0.74	0.82	21.44	71.80	1.56	94.77	0.95	0.21	70.15	0.26	0.13	0.62	7691.39
	2017	*90*	0.67	0.71	30.10	70.00	1.11	95.42	0.09	0.44	62.40	0.20	0.10	0.70	6860.08

Table 3. Characteristics of HSIs by percent Hispanic graduation, 2010, 2017

		N	Title V	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
0-25% Graduation	**2010**	*134*	0.75	0.66	14.52	43.41	0.15	97.93	0.99	0.46	60.1	0.13	0.05	0.81	7565.66
	2017	*142*	0.63	0.61	18.11	49.42	0.13	98.58	0.94	0.57	55.66	0.16	0.06	0.78	6619.66
26-50% Graduation	**2010**	*50*	0.76	0.80	37.24	42.77	4.36	74.86	0.88	0.40	56.18	0.48	0.24	0.28	9601.00
	2017	*130*	0.56	0.61	36.24	47.10	1.66	88.16	0.92	0.52	52.91	0.30	0.24	0.46	6533.87
51-100% Graduation	**2010**	17	0.59	0.71	65.35	31.61	7.29	70.12	0.77	0.35	44.65	0.47	0.47	0.06	8206.35
	2017	*56*	0.50	0.54	65.43	43.81	2.86	78.73	0.68	0.43	58.38	0.32	0.50	0.18	8286.13

Table 4. Characteristics of HSIs by HACU Membership, 2010, 2017

		N	Title V	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
HACU Member	**2010**	*141*	0.79	25.22	45.47	1.59	88.46	0.94	0.39	59.54	0.26	0.16	0.58	8082.73
	2017	*196*	0.74	32.65	50.06	1.80	87.81	0.91	0.54	53.87	0.22	0.08	0.70	8710.88
Non HACU Member	**2010**	*60*	0.53	22.72	34.52	2.32	93.39	0.95	0.56	53.54	0.32	0.19	0.49	8075.85
	2017	*132*	0.33	34.32	43.41	0.54	95.48	0.82	0.51	57.44	0.13	0.23	0.64	3862.43

Table 5. HSI Characteristics by Title V Engagement, 2010-2017

	2010 (N=201)		**2012 (N=208)**		**2014 (N=256)**		**2015 (N=301)**		**2017 (N=328)**	
	Title V	**No Title V**	**Title V**	**No Title V**	**Title V**	**No Title V**	**Title V**	**No Title V**	**Title V**	**No Title V**
N	*148*	*53*	*137*	*71*	*189*	*67*	*183*	*118*	*191*	*137*
(%)	*(74)*	*(26)*	*(66)*	*(34)*	*(74)*	*(26)*	*(61)*	*(39)*	*(58)*	*(42)*
HACU Member	0.74	0.45	0.77	0.39	0.71	0.35	0.75	0.32	0.71	0.30
% Hispanic Grad	24.01	25.76	25.44	23.21	27.83	32.52	27.83	33.91	32.13	34.99
% Hispanic FT UG	44.31	36.34	47.12	36.24	48.38	40.85	48.81	41.51	49.82	43.90
Research	1.36	3.02	1.68	1.71	1.46	0.95	1.72	0.42	1.59	0.84
% Admitted	90.42	88.59	87.51	93.49	87.90	91.70	88.13	93.48	89.21	93.34
Remedial	0.96	0.89	0.96	0.87	0.96	0.84	0.93	0.84	0.92	0.81
Life Exp. Cred.	0.41	0.50	0.40	0.53	0.43	0.53	0.44	0.49	0.51	0.56
% Award Pell	57.83	57.49	57.62	58.36	56.43	56.87	55.09	53.21	53.85	57.34
4yr Pub	0.23	0.30	0.26	0.21	0.24	0.10	0.24	0.09	0.31	0.15
4yr Pri	0.13	0.15	0.15	0.13	0.16	0.25	0.15	0.28	0.17	0.26
2yr All	0.64	0.55	0.59	0.66	0.59	0.64	0.61	0.63	0.52	0.58
FTE Fall Enrollment	7506.77	9674.87	7722.05	8707.95	8200.77	4703.62	8206.27	3680.49	8246.92	4596.68

Table 6: Title V Eligible Institutions, Engagers, Renewals, New Applicants, and Grantees

Year	All Engagers	Renewals	New Applicants	New Grantees	Eligible HSIs
2010	148	67	109	69	201
2012	137	77	85	17	208
2014	189	87	134	35	256
2015	183	61	144	85	301
2017	191	123	112	19	328

(74%) and 2017 (58%), however, the decline was not constant across all five years. A larger proportion of those either applying for or renewing Title V grants were two year than four year institutions as compared to the proportion among those who did not do so in all years, except 2010.

Unsurprisingly, across all years, a greater proportion of applicants were HACU members compared to the proportion of HACU members among non-applicants. Similarly, institutions that applied for the grant tended to have a higher proportion of Hispanic undergraduates than non-applicants. In all years except 2012, applicants had a lower mean for the percent of Hispanic graduates when compared to non-applicants, however, this difference tended to be slight, never differing more than six percentage points in a given year (Table 5).

A larger proportion of Title V applicants offered remedial education compared to non-applicants in each year, but the majority of HSIs offer these services. In each year, a lower proportion of HSIs offered credit for life experiences among Title V engagers, compared to those who did not engage with the grant. No clear pattern emerged between the two groups when looking the mean for the percent of students awarded Pell grants over the five year period. For the percent Pell variable, the range was small (53% - 58%), overall. In all years except for 2010, Title V engagers were, on average, more selective than non-engagers.

Table 6 breaks down the sample into several groups based off their engagement with Title V funding. The numbers reveal that the majority of the sample, in all years other than 2017, was made up of new applicants. Note that the sum of the new applicants and renewals is greater than the number of engagers. This means that a portion of engagers who's grants are being renewed are also reapplying for new funding. The number of HSIs who receive the grant in each year is highly inconsistent, but this reflects decisions made by the DoE instead of by HSIs, thus while interesting, is not the focus of this research.

Logistic Regression Analysis

Control Variables (Model 1). To account for institutional characteristics, I control for FTE fall enrollment and institution type (e.g. all 2 years (reference category), 4-year public, 4-year private). Model 1 (Table 6) includes just these variables regressed on Title V engagement. The initial model shows that none of the control variables were significant in either 2010 or 2012. Beyond that, the only significant indicator in the model was a continuous measure of FTE fall enrollment. There was a positive ($p<.01$) relationship with Title V engagement in 2014,2015 and 2017. This means larger institutions were more likely to engage with the grant than institutions with smaller enrollments. The model also suggests that there was no relationship between engagement and HSI institution type. Neither public nor private four-year institutions demonstrated noteworthy differences when compared to all two year institutions. Such results should be considered in light of the Pseudo R^2s, which were low in every year of Model 1. Subsequent models provide additional insight into Title V grant engagement.

Servingness Context (Models 2 & 3). Model 2 (Table 8) includes only the variables related to an institution's servingness context – HACU membership, the percent of Hispanic students who graduate (150% time) and the percent of FTE Hispanic undergraduate students at

an institution. Model 3 includes those variables in addition to the control variables. Results from Table 8 reveal that HACU membership is a constant, strong (p<.01), positive predictor of whether an institution will engage with Title V funding across all five years, in both Models 2 and 3. The other variables in the model show much less consistency across years.

The percent of Hispanic students at an institution was positively associated with Title V engagement in Models 2 and 3 in the years 2010 (OR=1.02, p<.1, Model 2; OR=1.02, p<.1,

Table 7. Logistic Regression: Core Organizational Characteristics on HSI Title V Engagement, Model 1

	Model 1	**Model 1**	**Model 1**	**Model 1**	**Model 1**
	2010	**2012**	**2014**	**2015**	**2017**
Public Four-year	0.67	1.45	1.76	1.56	1.31
	(0.26)	(0.54)	(0.81)	(0.61)	(0.42)
Private Four-year	0.69	1.23	1.06	1.23	1.22
	(0.34)	(0.57)	(0.41)	(0.43)	(0.39)
FTE Fall Enrollment	0.94	0.95	**1.63*****	**2.02*****	**1.72*****
	(0.1)	(0.15)	(0.26)	(0.27)	(0.19)
AIC	238.28	273.92	284.58	362.96	413.80
BIC	251.49	287.27	298.76	377.79	428.97
% CC	73.63%	65.87%	76.17%	68.44%	65.55%
Observations	201	208	256	301	328
Pseudo R^2	0.01	0.00	0.06	0.12	0.09

Standard Error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

Model 3), 2012 (OR=1.03, p<.01, Model 2; OR=1.03, p<.01, Model 3) and 2017 (OR=1.02, p<.05, Model 2; OR=1.02, p<.05 Model 3). For example, a one-percentage point increase in the percent of Hispanic undergraduate FTE students at an institution was associated with a 2% increase in the odds that an HSI would engage with the grant in 2010. Hispanic graduation rates at HSIs had an opposite effect and it was present in the years where the relationship with Hispanic composition was not significant. HSIs with *lower* graduation rates were more likely to

engage with Title V, but only in 2014 (OR=.98, p<.05, Model 2; OR=.98, p<.05, Model 3) and 2015 (OR=.98, p<.05, Model 2; OR=.97, p<.05, Model 3).

Taken together, these findings suggest that it is HSIs with larger Hispanic populations but poorer Hispanic graduation rates that are seeking Title V funds, perhaps in hopes of improving outcomes for this growing student population. The results also suggest that being a member of HACU is a strong driving factor across all years, yet this is unsurprising because HACU membership, by necessity, indicates an institutional willingness to acknowledge that they reached HSI status.

Prestige Factors (Models 4 & 5). To assess how prestige factors relate to Title V engagement, Models 4 and 5, depicted in Table 9, included variables indicating the percent of core expenses spent on research and the percent of students admitted to an institution. Model 5 additionally accounts for the set of control variables. The percent of students admitted was negatively associated with Title V engagement in 2012 (OR=.97; p<.05, Model 4; OR=.96, p<.01, Model 5) and no relationship was evident for this variable in any other year for Models 4 and 5. The percent of expenditures spent on research only demonstrated a significant relationship with engagement in 2015 (OR=1.10; p<.1). While the relationship was positive, it was modest at the .1 level, and was no longer evident when accounting for institution type and size.

Access Factors (Models 6 & 7). In Model 6, I test for the relationship between access factors and Title V engagement without control variables, and Model 7 includes the control variables (Table 10). Although there was no significant relationship between remedial education and Title V engagement in either Model 6 or 7 in 2010 or 2012, offering remedial education was positively associated with Title V (p<.1) every year after that for Model 6. The relationship only continued to be evident in Model 6 in 2015 (OR=2.04, p<.1) but not when accounting for

Table 8. Logistic Regression: Servingness Context Factors on HSI Title V Engagement, Models 2 & 3

	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3
	2010	2010	2012	2012	2014	2014	2015	2015	2017	2017
HACU Member	**2.76*** **	**3.03*** **	**4.20*** **	**4.44*** **	**4.33*** **	**3.41*** **	**4.98*** **	**3.34*** **	**4.60*** **	**3.03*** **
	(0.99)	(1.11)	(1.43)	(1.56)	(1.37)	(1.13)	(1.34)	(0.97)	(1.14)	(0.82)
% Hispanic Graduation	0.99	1.01	1.01	1.02	**0.98****	**0.98****	**0.98****	**0.97****	0.99	0.99
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
% Hispanic FTE UG	**1.02***	**1.02***	**1.03*** **	**1.03*** **	1.02	1.02	1.01	1.01	**1.02****	**1.02****
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Public Four-year		0.53		0.82		1.77		**2.27***		1.4
		(0.25)		(0.41)		(0.94)		(1.03)		(0.50)
Private Four-year		0.46		0.66		1.65		**2.13***		1.27
		(0.29)		(0.42)		(0.80)		(0.94)		(0.49)
FTE Fall Enrollment		0.9		0.87		**1.45****		**1.85*** **		**1.49*** **
		(0.17)		(0.16)		(0.25)		(0.28)		(0.18)
AIC	224.21	227.55	236.77	241.89	268.69	266.34	358.19	334.97	400.61	389.14
BIC	237.43	250.68	250.12	265.26	282.87	294.16	373.02	360.92	415.78	415.70
% CC	78.61%	78.61%	74.04%	73.08%	77.73%	76.56%	71.76%	74.75%	70.73%	71.04%
Observations	201	201	208	208	256	256	301	301	328	328
PseudoR2	0.07	0.08	0.14	0.15	0.11	0.14	0.13	0.20	0.12	0.16

Standard error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

Table 9. Logistic Regression: Prestige Factors on HSI Title V Engagement, Models 4 & 5

	Model 4	Model 5	Model 4	Model 5	Model 4	Model 5	Model 4	Model 5	Model 4	Model 5
	2010	2010	2012	2012	2014	2014	2015	2015	2017	2017
Research % Expend.	0.97	0.97	0.99	0.99	1.02	0.98	**1.10***	1.04	1.03	0.98
	(0.02)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.06)	(0.05)	(0.04)	(0.04)
% Admitted	1.00	0.99	**0.97****	**0.96*****	0.99	0.97	0.99	1.00	0.99	0.99
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Public Four-year		0.70		0.68		1.43		1.06		1.25
		(0.34)		(0.34)		(0.79)		(0.52)		(0.46)
Private Four-year		0.55		0.43		0.79		0.98		1.05
		(0.33)		(0.26)		(0.36)		(0.43)		(0.39)
FTE Fall Enrollment		0.93		0.85		**1.61*****		**1.97*****		**1.70*****
		(0.17)		(0.14)		(0.25)		(0.27)		(0.19)
AIC	235.61	240.43	265.434	269.04	297.24	287.15	399.17	365.16	447.25	417.07
BIC	245.52	260.26	275.45	289.06	307.88	308.42	410.29	387.40	458.63	439.82
% CC	74.13%	74.13%	65.87%	67.13%	73.83%	75.78%	60.80%	68.11%	58.23%	65.24%
Observations	201.00	201.00	208.00	208.00	256.00	256.00	301.00	301.00	328.00	328.00
PseudoR2	0.01	0.02	0.03	0.04	0.01	0.07	0.02	0.12	0.01	0.09

Standard error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

Table 10. Logistic Regression: Access Factors on HIS Title V Engagement, Models 6 & 7

	Model 6	Model 7	Model 6	Model 7	Model 6	Model 7	Model 6	Model 7	Model 6	Model 7
	2010	**2010**	**2012**	**2012**	**2014**	**2014**	**2015**	**2015**	**2017**	**2017**
Remedial Education	2.55	2.03	1.68	2.06	**3.84****	**4.55****	**2.04***	1.63	**2.40****	**2.26***
	(1.62)	(1.35)	(1.06)	(1.37)	(2.13)	(2.88)	(0.88)	(0.84)	(0.89)	(0.95)
Life Experience Credit	0.64	0.59	**0.54****	**0.56***	**0.53****	**0.56***	0.73	0.70	0.79	0.78
	(0.21)	(0.20)	(0.16)	(0.17)	(0.15)	(0.17)	(0.18)	(0.19)	(0.18)	(0.20)
% Awarded Pell	1.00	1.00	1.00	1.00	1.00	1.01	1.01	**1.02****	0.99	1.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Public Four-year		0.65		1.48		2.03		1.51		1.41
		(0.27)		(0.58)		(0.99)		(0.61)		(0.47)
Private Four-year		0.77		1.37		1.31		1.31		1.43
		(0.39)		(0.66)		(0.53)		(0.46)		(0.48)
FTE Fall		0.98		0.98		**1.63*****		**2.19*****		**1.74*****
		(0.18)		(0.16)		(0.27)		(0.31)		(0.21)
AIC	236.00	240.73	270.15	247.88	292.11	281.44	406.56	360.83	444.93	415.16
BIC	249.22	263.84	238.50	298.24	306.23	306.25	421.34	386.79	460.11	441.71
% CC	73.63%	72.64%	65.38%	65.38%	73.83%	75.00%	59.47%	67.44%	60.98%	65.85%
Observations	201.00	201.00	208.00	208.00	256.00	256.00	301.00	301.00	328.00	328.00
PseudoR2	0.02	0.02	0.02	0.02	0.03	0.09	0.01	0.14	0.02	0.10

Standard error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

additional institutional characteristics. When including the controls in Model 7, remedial course offerings had a positive relationship with grant engagement in both 2014 and 2017 but this relationship was a bit stronger in 2014. HSIs that offer life experience credits were somewhat ($p<.1$) *less* likely than those that did not offer these credits to engage with the grant in 2012 and 2014, even when accounting for the control variables in Model 7. The percentage of students awarded Pell grants did not have a strong influence on whether or not an institution engaged with Title V funding in four out of the five years. The only instance in which this variable was significant in Table 10 was in Model 7 in 2015 ($OR=1.02$; $p<.05$) where it demonstrated a positive relationship with Title V. It is unclear why the relationship emerged only when the control variables were accounted for.

Full Model (Model 8.) *Servingness Context.* Finally, Model 8 (Table 11) includes the full model with the servingness context, prestige, access, and control variables. Just one variable had a consistent strong, positive relationship with the dependent variable in every year: HACU membership. In all five years, members of the association demonstrated higher odds ($p<.01$) of engaging with Title V than did non-members. The next most noteworthy variable in the model included the measure for Hispanic composition. The percent of Hispanic students at HSIs was at least somewhat significant in all years except 2015. In 2012, the year with the strongest association, a one percent increase in the percent of Hispanic students was associated with a 4% increase in the odds of engaging with Title V ($p<.01$).In 2014 and 2015, the percent of Hispanic students who graduated within 150% of "normal" time to degree completion was negatively ($p<.01$) associated with Title V engagement. This means that institutions with *lower* Hispanic graduation rates were more likely to engage with the grant than were institutions with higher Hispanic graduation rates.

Prestige. Among the prestige variables, the percent of students admitted to an institution stood out in its relationship with the dependent variable. In 2012, 2014, and 2015, an increase in the percent of students admitted to the institution was associated with a 6% (OR=.94, p<.01), a 4% (OR=.96; p<.05), and a 2% (OR=.98; p<.1) decrease in the odds that an HSI would engage with Title V, respectively. The percent of core expenses spent on research was not significant in any of the five years, this may be due to a proportion of expenditures directed toward research among HSIs in general.

Access. The next set of variables include the measures for access. Institutions offering remedial education were *slightly* more likely than those that did not to engage with Title V, however, this was only the case in 2014 (OR=5.03, p<.1). On the other hand, that same year (2014), institutions that offered life experience credits were somewhat *less* likely to engage with the grant than were those that did not (OR=.55, p<.1). Interestingly, the percent of students receiving Pell grants at an institution was not significantly associated with Title V engagement among eligible HSIs in any year in Model 8.

Controls. Institution size was strongly related to Title V in the final two years, 2015 (OR=1.82; p<.01) and 2017 (OR=1.45; p<.01). As enrollment increased so did the likelihood that an HSI would engage with the Title V grant. Public four year institutions showed no differences when compared to all two year institutions (reference category). Private four-year HSIs, on the other hand, did show a slight difference when compared to all two years, however this was only apparent in one year of the study (2014).

Table 11. Logistic Regression, Servingness, Prestige, & Access Factors on HSI Title V Engagement, Model 8

	Model 8 2010	Model 8 2012	Model 8 2014	Model 8 2015	Model 8 2017
HACU Member	**2.97*** **	**5.07*** **	**3.83*** **	**3.21*** **	**2.94*** **
	(1.13)	(1.90)	(1.33)	(0.95)	(0.81)
% Hispanic Grad	1.00	1.00	**0.96*** **	**0.97*** **	0.99
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
% Hispanic FT UG	**1.02** **	**1.04*** **	**1.02***	1.01	**1.02** **
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Research % Expend	0.97	0.98	0.99	1.08	0.99
	(0.03)	(0.03)	(0.05)	(0.08)	(0.04)
% Admitted	0.99	**0.94*** **	**0.96*** **	**0.98***	0.99
	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Remedial Courses	1.77	3.02	**5.03***	1.17	1.90
	(1.45)	(2.53)	(4.18)	(0.79)	(0.91)
Life Experience Credit	0.83	0.96	**0.55***	0.77	0.83
	(0.32)	(0.35)	(0.19)	(0.23)	(0.23)
% Award Pell	0.98	0.98	0.99	1.01	1.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Public Four-year	0.56	0.40	1.06	1.05	1.33
	(0.31)	(0.24)	(0.65)	(0.56)	(0.52)
Private Four-year	0.42	**0.27***	1.17	1.45	1.24
	(0.30)	(0.20)	(0.63)	(0.77)	(0.54)
FTE Fall Enrollment	0.85	0.77	1.33	**1.82*** **	**1.45*** **
	(0.17)	(0.14)	(0.25)	(0.29)	(0.18)
AIC	232.79	234.21	260.88	337.63	395.79
BIC	272.43	274.26	303.42	382.12	441.31
Observations	201.00	208.00	256.00	301.00	328.00
PseudoR2	0.10	0.21	0.20	0.22	0.17

Standard error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

Supplementary Analyses (Models 9 & 10). Although the full mode revealed important relationships, I additionally include Models 9 and 10 as supplementary analyses. In Model 9, I include all variables *except* HACU because HACU membership is so closely related to Title V in the primary models. The outcome of this model is very similar to Model 8, however, when HACU membership was no longer present, the primary driving factor in the model was the Hispanic composition variable. In all five years of Model 9, Hispanic composition was strongly and positively associated with Title V engagement ($p<.05$), but this relationship was only present for four of the five years in the full Model. The difference between private four year institutions and all two years was no longer apparent in this model. Additionally, a modest relationship between FTE fall enrollment and Title V engagement emerged during 2014 in Model 9 that was not present in Model 8.

The full model was replicated with a smaller sample in Table 13. This sample includes only those HSIs who applied for funding and did not already have funding from a previous year. The differences between applicants and those with either a previous grant or a new application are slight, suggesting robustness in the findings. Generally, the same set of variables demonstrate a relationship with Title V funding in this model as compared to the one using the full sample, Model 8.

As is the case with the full sample, HACU membership continues to show a strong, positive relationship with Title V engagement each year. While Hispanic graduation rates were negative and significant in both 2014 and 2015 in Model 8, they were only significant in 2014 when looking at the sub-sample. There was a substantial drop in the relationship with Hispanic composition in Model 10. It went from demonstrating strong significance in four years, down to just two years – in 2010 (OR = 1.02; $p<.1$) and in 2012 (OR = 1.03; $p<.05$).

Table 12. Logistic Regression, Servingness (without HACU), Prestige, & Access Factors on HSI Title V Engagement, Model 9

	Model 9	Model 9	Model 9	Model 9	Model 9
	2010	**2012**	**2014**	**2015**	**2017**
% Hispanic Grad	1.00	1.00	**0.96*** **	**0.97*** **	0.99
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
% Hispanic FT UG	**1.03*** **	**1.05*** **	**1.03** **	**1.02** **	**1.03*** **
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Research % Expend.	0.96	0.99	0.99	1.08	0.99
	(0.03)	(0.03)	(0.05)	(0.07)	(0.04)
% Admitted	0.99	**0.95*** **	**0.96** **	**0.97** **	0.99
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Remedial Courses	1.77	2.92	**4.21***	1.53	2.11
	(1.39)	(2.32)	(3.30)	(1.02)	(0.99)
Life Experience Credit	0.73	0.78	**0.53***	0.75	0.93
	(0.27)	(0.27)	(0.17)	(0.21)	(0.25)
% Award Pell	0.99	0.98	0.99	1.01	1.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Public Four-year	0.55	0.52	1.61	1.05	1.48
	(0.30)	(0.29)	(0.97)	(0.54)	(0.57)
Private Four-year	0.50	0.35	1.39	1.50	1.48
	(0.34)	(0.24)	(0.73)	(0.76)	(0.62)
FTE Fall Enrollment	0.92	0.84	**1.38***	**2.01*** **	**1.63*** **
	(0.18)	(0.15)	(0.25)	(0.31)	(0.20)
AIC	238.94	251.93	274.82	351.58	409.38
BIC	275.28	288.64	313.81	392.36	451.09
% Correctly Classified	76.12%	74.04%	76.17%	69.44%	64.94%
Observations	201	208	256	301	328
PseudoR2	0.06	0.14	0.14	0.18	0.13

Std. Error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

When looking at the prestige variables, research did not demonstrate a relationship with Title V engagement in either model. The percent of students admitted to an institution continued to have significance in both 2012 and 2014 in Model 10. The modest relationship in 2015 shown in Model 8, however, was not significant in Model 10. As for access, remedial education courses were no longer significant in Model 10 while the association with life experience credits was still present in 2014 ($p<.1$). Interestingly, the percent of students awarded a Pell grant came up as significant in both 2010 ($p<.1$) and 2012 ($p<.05$) in Model 10 but it did not do so in any years when including HSIs with grant renewals (Model 8).

Finally, there were some additional shifts in the associations for the control variables. Fall enrollment was associated with Title V in 2014 ($p<.1$), 2015 ($p<.01$), and 2017 ($p<.1$) in Model 10 although it was only significant in 2015 ($p<.01$) and 2017 ($p<.01$) in Model 8. Additionally, the strength of the 2017 relationship was somewhat diminished in Model 10. Neither four-year public nor four-year private were demonstrated significant differences with all two year HSIs in Model 10 despite a modest relationship evident for private-four year HSIs in Model 8.

Limitations. The current study does have a set of limitations that one should consider when interpreting the results. Among the more noteworthy limitations of the study is that IPEDS does not collect data from all eligible HSIs. This means that some institutions were dropped from the analysis due to missing data. While the analysis could benefit from including a variable indicating if an institution had *ever* applied for Title V, the data necessary to create such a variable were unavailable. There is also room for error through the translating of data from PDF to Excel.

Table 13. Logistic Regression: Servingness Context, Prestige, & Access Factors on HSI Title V Applications, Model 10

	Model 10	Model 10	Model 10	Model 10	Model 10
	2010	**2012**	**2014**	**2015**	**2017**
HACU Member	**2.71****	**5.44*****	**3.94*****	**3.14*****	**3.66*****
	(1.17)	(2.57)	(1.53)	(1.03)	(1.42)
% Hispanic Grad	1.00	1.00	**0.96*****	0.98	1.00
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
% Hispanic FT UG	**1.02***	**1.03****	**1.01****	1.00	1.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Research % Expend.	0.98	0.96	0.98	1.07	0.97
	(0.03)	(0.04)	(0.06)	(0.08)	(0.04)
% Admitted	1.00	**0.96****	**0.96****	0.98	0.99
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
Remedial Courses	1.09	1.15	3.63	1.53	1.51
	(0.94)	(1.02)	(3.33)	(1.32)	(0.90)
Life Experience Credit	0.67	0.82	**0.53***	0.77	0.68
	(0.30)	(0.38)	(0.20)	(0.25)	(0.25)
% Awarded Pell	**0.97***	**0.96****	1.00	1.01	0.99
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
Public Four-year	0.62	0.62	1.24	0.90	1.67
	(0.40)	(0.42)	(0.80)	(0.53)	(0.85)
Private Four-year	0.67	0.36	1.51	1.28	1.95
	(0.57)	(0.30)	(0.95)	(0.80)	(1.12)
FTE Fall Enrollment	0.87	0.81	**1.44***	**2.16*****	**1.33***
	(0.19)	(0.18)	(0.31)	(0.42)	(0.22)
AIC	187.06	168.83	205.44	280.78	242.54
BIC	221.83	203.33	243.00	322.55	282.42
% Correctly Classified	67.16%	67.94%	73.37%	72.08%	71.22%
Observations	134	131	169	240	205
PseudoR2	0.09	0.20	0.20	0.23	0.16

Standard error in parentheses
***** p<0.01, ** p<0.05, * p<0.1**
Note: Results presented in Odds Ratios.

One IPEDS variable that is notably related to prestige is institutional endowment. While this could be an especially strong marker of institutional prestige (Vargas, 2018), the missingness on this variable was very high and therefore reduced the number of observations in each model substantially. Early analysis included this variable but it did not show any relationship with Title V engagement. SAT scores, yield rates, and faculty salaries may also offer insight into prestige at HSIs, however, the same issue occurred with these variables as with the endowment variables – large proportions of missing data. Additionally, I used NCAA membership as a prestige indicator in early iterations, however, due to multicollinearity issues was unable to utilize it in the final analyses.

Furthermore, institutional decision-making is likely function differently at different institution types, but the low number of observations on early analyses prevented me from being able to disaggregate the models by running them separately by two year or four year status. Instead I used the categorical institution type variable, which was limited in that the proportion of private two year HSIs was too low to allow for two years to be separated out by public status.

I believe there may have been some change in the way that eligibility was calculated during the time period of this study. The data provided to me by the DoE change between 2010-2012 and 2014, from a simple document with a list of institution names, OPE IDs, and locations, to an eligibility matrix (described in Ch. 5). The sample of HSIs changes between the first two and the last three years of the study. Note that while the fall enrollment was a bit higher among non-engagers in 2010 and 2012, the pattern is inversed dramatically in the subsequent years (Table 5). Moreover, the proportion of public versus private institutions between engagers and non-engagers in both 2010 and 2012 was relatively similar. After 2012, that pattern is, again,

inversed, and the difference between the two groups (e.g. engagers and non-engagers) grows dramatically.

Because the results change in the aforementioned ways from 2012 to 2014, and the format of the data changed between the two sets of years, I suspect there was some type of undocumented change in the way that Title V eligibility was determined during that time. There were no known Title V legislation changes during those years. Yet if the calculations for eligibility changed in some way, this could be the driving force between the differences in the results between the two years.

Moreover, the eligibility matrices (2014-2017 data) identified those HSIs who would be eligible on minority grounds but would need to apply for a waiver to be considered the grant. The 2010 and 2012 documents, however, do not identify this information. It is unclear how the lists were determined. Thus, these lists may also be missing a subset of eligible HSIs that, while small, may provide interesting results because those who engage with the grant and applied for a waiver to do so may be extra committed to serving their Hispanic students.

CHAPTER 7

DISCUSSION

Since the majority of HSIs were not founded with the goal of improving education for Latinx students specifically, failing to acknowledge HSI status could potentially mean that these institutions do not have structures in place to do so. Considering the opportunity and achievement gaps (Carnevale & Strohl, 2013; Krogstad, 2016), it is imperative that researchers continue working to uncover if and how institutions serve these students in the postsecondary sector. The current study therefore addressed this by investigating factors associated with the Title V grant, which is aimed at improving Hispanic and low-income student success at HSIs. In particular, variables related to an HSIs servingness context, prestige-seeking, and access behaviors were used to examine factors related to Title V engagement.

Integral to the current study is the concept of engagement. While being a Title V recipient may offer important insight into the types of institutions selected for the grant, the research questions at hand were focused on the behaviors of the colleges and universities that reach HSI status, rather than that of those who select the grant winners. I chose to include both applicants and renewals because removing renewals from the sample would have excluded the set of HSIs that are most likely to be serving their Hispanic students. The supplementary analysis shown in Model 10 excludes renewals for the purpose of investigating if the sub-sample was importantly different than the primary sample of engagers. Findings were generally similar between the two samples, suggesting that the differences between new applicants and previous recipients are modest.

While the proportion of Title V engagers varied over the years (Table 5), there was an overall decline in the percent of eligible HSIs who applied for Title V between 2010 and 2017. I suspect that there are two reasons for this that work in conjunction with one another: 1) the number of HSIs grew each year and 2) the funds for Title V did not show an overall increase between 2010 and 2017. Thus, as the raw number of HSIs has increased and the funds have remained the same, the grant has grown more competitive. This may discourage some institutions, especially those with fewer resources from applying (Mulnix, 2002). Additionally, since the number of HSIs increases annually, some institutions may not be aware of their eligibility for the grant or may not want to engage with the HSI status which could also reduce the proportion of engagers.

Findings herein reveal that HSIs that do and do not engage with Title V differ in important ways. The primary factors associated with Title V engagement varied over the five years included in this study as well. Overall, measures of HSI servingness context were significantly related to Title V engagement, suggesting that there may, in fact, be a relationship between servingness context and Title V engagement. This was the case in the supplementary analyses as well.

Moreover, results also indicate that HSIs that are more selective are more likely to engage with the grant than less selective HSIs. While the other prestige measure, the percent of institutional expenditures spent on research, did not show a significant relationship with grant engagement in any of the full models, this is more likely because of little variance in research expenditures among HSIs. Thus, because selectivity was rather consistent and significant in all three models, I found that prestige was positively related to engagement, contrary to my initial expectations (Chapter 4). The unexpected findings continued when looking at access measures.

The relationship between remedial education course offerings, life experience credits, and the percent of needy students at an institution was either not present or weak and never occurred in more than one year in any of the full models (Models 8-10).

Prestige, Access, and Controls

To orient my findings, I placed them within the multi-dimensional conceptual framework for understanding servingness at HSIs. As the framework explains, servingness is layered, multifaceted, and complex. To better understand the context of White supremacy discussed in the multi-dimensional framework, I used institutional theory and the theory of racialized organizations to explain two factors likely to be deeply influenced by the racialization of higher education organizations – prestige and access.

Institutional theory suggests that institutions could be shaped by prestige pressures which cause them to overlook access. Joining it with the theory of racialized organizations, however, allows me to consider a more nuanced perspective. So, while prestige literature does not explicitly discuss how it may be framed by Whiteness, I argue that the dominant norms and values within higher education, which shape HSI decision-making, per institutional theory, are fundamentally shaped by Whiteness. I bring access into the discussion of prestige because prestige comes at a cost to access (Brewer et al., 2002). The theory of racialized organizations (Ray, 2019) might also suggest that prestige factors are inherently associated with and defined by Whiteness, thus, institutions with higher levels of prestige would also be more likely to have a wider resource pool given the stratification of resources within the environment of U.S. higher education.

Prestige. Although they were modest, the findings related to prestige factors were surprising and noteworthy. There is virtually no relationship between research expenditures and

Title V engagement. This may be because, in general, HSIs have lower levels of prestige than non-HSIs and may, therefore, be less invested in research (as indicated by their low average research expenditures), and because the institutions need to address other, more immediate, concerns with their already limited funds. On the other hand, engagers were more likely to be more selective institutions (to admit fewer students) than non-engagers.

These findings, however, were not in line with the expected negative relationship between prestige and Title V engagement, but the following may help explain them. Institutions with higher levels of prestige may have an increased ability to gain institutional resources (Basetdo & Bowman, 2010), and institutions with more resources are more likely to have offices that monitor federal grant opportunities on a regular basis (Mulnix et al., 2014). Better-resourced institutions may also have the financial freedom to focus on serving targeted student populations. Thus, HSIs with higher prestige may be more likely to engage with Title V because they have more resources to put towards applying for federal grants to begin with. Vargas's 2018 findings related to institutional Whiteness suggest that the grant may be more likely to be *awarded* to institutions that are higher on prestige measures, and the supplementary analysis in the current study would suggest that there may be a relationship between Title V *application* as well.

Access. The positive, yet inconsistent, relationship between Title V and remedial education offerings aligns with the idea that an institution with access priorities, such as offering remedial education, may be more likely to apply for the grant. At the same time, HSIs that offered life experience credits demonstrated a negative relationship with Title V engagement in the (very few) years and models where it was significant. The percent of students awarded Pell grants at an HSI demonstrated a very weak relationship with Title V engagement. When prestige, control, and servingness factors were accounted for, the relationship with the access was very

weak. Taken together, the descriptive findings related to access variables, in conjunction with the relatively weak associations they showed with Title V engagement, suggest that access factors may not be strongly linked to an institution's intent to serve. Because HSIs tend to be high-access institutions, there is low variance among them on the access indicators. This may partially explain the weak relationship with servingness.

Controls. The strongest control factor among those included was FTE Fall Enrollment. Larger institutions were more likely than smaller institutions to engage with the grant, but this relationship was never apparent in 2010 or in 2012. Whether an institution was four-year public, four-year private, or two-year revealed almost no relationship with Title V engagement, suggesting that institution type was not a major driver of engagement, contrary to previous findings (Vargas, 2018).

Servingness Context

Three primary variables were used to identify the servingness context at HSIs: HACU membership, Hispanic graduation rates (150% time), and Hispanic composition. HACU membership necessitates, at the very least, a basic acknowledgement of an institution's acknowledgement of their HSI status. When an organization does so, this may indicate a desire to improve student outcomes among Latinx students, given the advocacy work that HACU performs as "champions of Hispanic student success." Thus, I used HACU membership to represent a structure for serving under the multi-dimensional framework. Recall that structures for servingness affect HSI capacity for serving Hispanic students (Garcia et al., 2019). The most straightforward of the servingness context variables, Hispanic graduation rate, accounted for academic outcomes at HSIs. Finally, one study provides evidence signifying that the percent of Hispanic students at an institution relates positively to Hispanic student outcomes and self-

concept (Cuellar, 2015), while another shows no relationship with the percent of Latinx students and graduation rates (Garcia, 2013). Within the multi-dimensional conceptual framework, student outcomes and experiences are considered as potential indicators of servingness (Garcia et al., 2019). Due to the relationship between Hispanic composition and positive student outcomes, I used Hispanic composition as a servingness context variable. Per Garcia and colleagues (2019), Latinx composition is considered a structure for servingness.

HACU. Hispanic Serving Institutions in the U.S. face significant challenges by nature of being MSIs. Because of this, it is necessary to understand what motivates institutions to seek out funding created just for HSIs. The descriptive statistics relating to the access factors offered little insight into the differences between HACU and non-HACU members. Additionally, when compared between HACU members and non-members, research expenses did not reveal a consistent pattern across years, but academic selectivity did. According to the descriptive findings, HACU members were actually more selective than were non-HACU members in both 2010 and 2017 (Table 4). I found that HACU members demonstrated a higher mean Hispanic composition percentage than non-members and that a larger proportion of HACU members were grant engagers than were non-members in both 2010 and 2017. Institutions that are more likely to engage with Title V also tended to acknowledge their HSI status by nature of being members of the one association specifically intended to represent their interests: HACU.

Hispanic Graduation. Hispanic graduation rates at HSIs may relate strongly to institutional resource levels (HACU, 2012; Oretga et al., 2015) and student pre-college socioeconomic backgrounds (Núñez & Bowers, 2011). The descriptive results in this study complement such findings. HSIs with lower Hispanic graduation rates had a higher mean of Hispanic undergraduate students enrolled than HSIs with higher Hispanic graduation rates (Table

3). Compared to HSIs with high graduation rates, HSIs with lower graduation rates were higher on all three access measures: percent of needy students, remedial education offerings, and life experience credits. Additionally, a pattern emerged which showed that HSIs with higher Hispanic composition have lower Hispanic graduation rates. These findings are consistent with expectations and with previous literature. Schools with higher percentages of Latinx students may therefore also enroll a substantial proportion of students from under resourced K-12 schools (Gabbard & Mupinga, 2013). Students seeking out higher education may look for institutions that match their needs. Thus, students who need remedial education will attend the institutions that offer it. Similarly non-traditional students who are older or who have spent more time in the workforce may also be more likely to attend institutions that offer course credits for life experience. Again, those who need this access will attend these institutions, but because these students are poorly served throughout the K-12 and postsecondary sectors, they are also face challenges to persistence and degree completion. It follows that access measures were higher at HSIs with lower graduation rates.

HSIs with higher graduation rates demonstrated slightly higher means of research spending and lower average admissions rates (thus, they were *more* selective), indicating that those with higher Hispanic graduation rates were also higher on the prestige indicators than those with lower graduation rates. Taken with previous literature, these descriptive findings related to prestige and graduation support the idea that HSIs with more prestige, likely associated with increased institutional resources (Basetdo & Bowman, 2010), are also more likely to produce higher Hispanic graduation rates.

Hispanic graduation was negatively related to Title V engagement, although this was not evident across all years. I suspect that the negative relationship emerged because HSIs with

lower Hispanic graduation rates may be aware of this issue. In particular, this awareness is likely to be linked to the descriptive findings indicating the potential for an inverse relationship between Hispanic graduation rates and Hispanic composition. If this is the case, then the visibility of this population may then be encouraging HSI administrators to apply for Title V funding.

Hispanic Composition. Some HSI research indicates that Latinx composition is not enough on its own to guarantee an institution's servingness (Garcia, 2013; Garcia et al., 2019) and that institutions must move beyond enrollment levels in order to serve their Hispanic students (Garcia, 2013). Still, having a critical mass of students on campus is positively associated with improvements in campus climate and student identity (Guardia & Evans, 2008; Garcia & Ramirez, 2018). Thus, I used the percent of Hispanic undergraduate students at an institution as a key variable in this study.

There was only minor consistency across years when looking at the average prestige indicators according to the percent of Latinx undergraduates at an institution and the findings relating to access and Latinx composition were unclear. Remedial education showed no obvious pattern, a higher proportion of HSIs with low Hispanic undergraduate composition offered credit for life experiences (unexpected direction), and more students were awarded Pell at HSIs with high composition compared to those with low composition (expected direction). Finally, institutions with higher Hispanic compositions, whose climates may have improved while Hispanic enrollments grew, were more likely to engage with the Title V grant. Hispanic composition is not, in and of itself, an indicator of how well an institution serves its Hispanic students, but it may be a motivator for an HSI to do so, which could explain why it was positively associated with Title V engagement.

When a relationship was evident, the greater the percent of Hispanic students at an HSI, the greater the likelihood that the HSI either renewed or applied for Title V. The supplementary analysis (Model 9) further supported the positive relationship detected between Title V engagement and Latinx enrollments because the relationship was even stronger than was initially evident in the earlier models which also accounted for HACU membership. When HACU was excluded, Hispanic composition became the only predictor in the model to show a relationship with engagement across all five years. This variable also showed similar (yet slightly weaker) results to the primary model (Model 8) when the sample only included new applicants and excluded grant renewals (Model 10). In contrast with the current findings, Vargas's study on Title V grant *recipients* indicated that HSIs with *higher* Latinx composition were *less* likely receive the grant. The conflicting findings between the current study and Vargas's research might be explained by looking at the two samples. While Vargas's sample included recipients only, I included both renewed grants *and* applicants. Thus, Vargas's findings may indicate more about the award process than about the engagement process, overall.

Implications and Future Research

Rather than external environmental pressures to conform to normative prestige standards, via isomorphism, it seems that internal environmental pressure may be swaying decision-makers instead. Even if an institution did not seek out Latinx student enrollments, it may be the case that once this population reaches a certain threshold, institutions become more likely to take active steps towards serving Hispanic students. This might occur because there is an increased visibility of this population on campus, as suggested earlier. Thus, future research should test for whether there is a distinct critical mass threshold that relates to changes in decision-making and the implementation of structures for servingness at HSIs. The relationship between Title V and low

graduation also suggests a need for this. Low graduation rates among a large enough or growing population may urge decision-makers to take some type of action by engaging with the Title V grant. Although it is a positive sign that institutions with larger Hispanic populations are more likely to engage in servingness, it also brings forth an additional question for further study: what, if anything, are HSIs with *smaller* Latinx populations doing to serve their Hispanic students?

Although HSI scholars highlight the significance between Title V engagement and intent to serve (Garcia et al., 2019), research also shows that Title V grants benefit White and Asian students more so than Hispanic students (Vargas & Villa-Palomino, 2018). Even though Latinx students do still benefit from it, the positive relationship between Title V and Whiteness comes full circle in light of the current study: HSIs with more resources are more likely to engage in servingness, but even efforts towards servingness are still framed within the context of racialized organizations.

This dissertation helped tell part of the servingness story by uncovering factors related to Title V engagement, but there is much left to learn. My findings deeply emphasized the importance of HACU membership. Scholars may therefore choose to direct their study towards distinguishing the motivations related to HACU membership. Future research may also consider if and how servingness varies among different institution types (e.g. two-year/four-year; public/private) and between HSIs with different graduation rates and Hispanic composition levels. The direct effects of Title V engagement as well as receipt may also be a worthwhile and crucial scholarly pursuit for the advancement of HSIs and their students.

Overall, this research contributes to the literature in substantial ways by being among the first to quantitatively examine Title V (Vargas, 2018; Vargas & Villa-Palomino, 2018) and the first, to date, to examine all Title V applicants in a given year. Most importantly, the current

study is among the first to quantitatively test for servingness using the multi-dimensional conceptual framework for understanding servingness at HSIs. In doing so, I recognize that quantitative data has significant limitations, especially in relation to measuring servingness.

I was able to use prestige within the racialized organizations lens to understand the outermost level of the servingness framework, but the measures were imperfect. I was unable to use variables measuring endowments, yield rates, faculty salaries, SAT scores, and NCAA membership in the current study (Ch. 6), but HSI scholars may consider using these variables in future work relating to prestige at HSIs. It would additionally be useful to have more information regarding outcomes and experiences related to the multidimensional servingness framework, however, the data did not allow me test for these beyond graduation rates and Hispanic composition, which was only a proxy variable.

Among the more interesting variables for consideration include labor market outcomes, course completion, Spanish-speaking peers, faculty, and staff, academic self-concept, racial identity, and graduate school aspirations (Garcia, et al., 2019). Thus, this study could be deeply enriched by employing qualitative methodologies to include these variables, which are otherwise unavailable in large-scale data relating to HSIs. While I focused on federal legislation relating to HSIs and servingness context, it may be useful for the study of HSIs to focus on local and state legislation affecting these institutions. State and local contexts may have important effects on decision-making and may reveal a lot about the motivations of institutions, especially as they relate to funding incentives and initiatives. Generally, future HSI studies should continue to employ this essential framework to create a more cohesive understanding of servingness at HSIs.

The primary policy recommendation I would make based off the current study would be to increase Title V funding because of the growing number of HSIs and the increasing

competition among them. Few scholars are fortunate enough to witness desired policy changes during the time in which they begin and end a study but, in 2018, an increase in funding available to HSIs, including Title V, actually occurred (HACU, 2018b). Yet as HACU's statement regarding the increase states, Title V funding is now at its highest ever ($123.2 million), but "it still fails to keep pace with the growth in the number of HSIs… Less than 50% of HSIs have been awarded a grant" (HACU, 2018b) The collective effort among advocates, policy makers, and researchers has been instrumental in the development and modification of HSI legislation and I hope that the current study is employed for advancing policy as well as research in the future. To underscore HACU's statement, while the Title V funding was an accomplishment for those invested in HSIs, there is still work to be done. I recommend that policy and programs are implemented in a way that targets lower-prestige (e.g. lower resourced) HSIs as well as HSIs with lower Latinx composition levels.

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APPENDICES

Table 14. 2010 Descriptive Statistics

	Mean	S.D.	Min	Max
Applied	0.76	0.43	0.00	1.00
HACU	0.71	0.46	0.00	1.00
% H. Grad	23.50	16.73	0.00	100.00
% H. FT Ug	45.83	16.64	25.05	95.53
Rsrch. % Expend.	1.35	4.56	0.00	32.00
% Admitted	90.72	18.39	23.00	100.00
Remed.	0.95	0.22	0.00	1.00
Life Exp. Crd.	0.40	0.49	0.00	1.00
% Pell	59.01	15.68	0.00	100.00
4yr Pub	0.25	0.43	0.00	1.00
4yr Pri	0.13	0.34	0.00	1.00
2yr All	0.62	0.49	0.00	1.00
FTE Fall Enr.	7862.16	6854.63	161.00	39725.00

Table 15. 2010 Correlation Matrix

	Applied	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
Applied	1.00												
HACU	0.14	1.00											
% H. Grad	0.08	0.20	1.00										
% H. FT Ug	(0.05)	0.08	(0.08)	1.00									
Rsrch. % Expend.	0.03	0.12	0.41	0.04	1.00								
% Admitted	(0.06)	(0.22)	**(0.51)**	0.11	(0.29)	1.00							
Remed.	0.08	(0.13)	(0.31)	0.00	(0.46)	0.32	1.00						
Life Exp. Crd.	(0.04)	(0.14)	(0.08)	(0.17)	(0.12)	(0.01)	0.03	1.00					
% Pell	(0.10)	0.11	(0.36)	0.47	(0.18)	0.15	0.03	0.07	1.00				
4yr Pub	0.00	0.17	0.32	0.04	0.48	**(0.51)**	(0.29)	(0.16)	(0.01)	1.00			
4yr Pri	0.09	0.19	0.39	(0.03)	(0.09)	(0.33)	0.01	0.04	0.01	(0.19)	1.00		
2yr All	0.15	0.00	**(0.54)**	(0.02)	(0.38)	**0.57**	0.25	0.11	0.00	**(0.61)**	(0.41)	1.00	
FTE Fall Enr.	(0.07)	0.03	0.06	(0.03)	0.26	(0.13)	(0.12)	(0.02)	(0.17)	0.33	(0.25)	(0.12)	1.00

Table 16. 2012 Descriptive Statistics

	Mean	S.D.	Min	Max
Applied	0.66	0.48	0.00	1.00
HACU	0.67	0.47	0.00	1.00
% H. Grad	25.02	16.10	2.00	100.00
% H. FT Ug	46.68	17.15	25.26	100.00
Rsrch. % Expend.	1.67	5.84	0.00	54.00
% Admitted	89.19	19.05	20.00	100.00
Remed.	0.93	0.25	0.00	1.00
Life Exp. Crd.	0.43	0.50	0.00	1.00
% Pell	58.79	13.83	26.00	100.00
4yr Pub	0.25	0.43	0.00	1.00
4yr Pri	0.14	0.35	0.00	1.00
2yr All	0.62	0.49	0.00	1.00
FTE Fall Enr.	8057.09	7883.25	78.00	42550.00

Table 17. 2012 Correlation Matrix

	Applied	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
Applied	1.00												
HACU	0.30	1.00											
% H. Grad	0.04	0.16	1.00										
% H. FT Ug	0.08	0.09	(0.07)	1.00									
Rsrch. % Expend.	0.01	0.10	0.30	(0.05)	1.00								
% Admitted	(0.13)	(0.16)	**(0.52)**	0.20	(0.25)	1.00							
Remed.	0.15	(0.06)	(0.28)	0.06	(0.27)	0.29	1.00						
Life Exp. Crd.	(0.09)	(0.21)	(0.12)	(0.30)	(0.16)	0.03	(0.02)	1.00					
% Pell	(0.14)	0.12	(0.17)	0.44	(0.20)	0.10	(0.09)	0.00	1.00				
4yr Pub	0.12	0.27	0.39	(0.04)	0.47	**(0.45)**	(0.23)	(0.17)	(0.10)	1.00			
4yr Pri	(0.01)	0.09	0.44	(0.01)	(0.11)	(0.36)	(0.11)	0.05	0.14	(0.21)	1.00		
2yr All	0.13	0.01	**(0.66)**	0.04	(0.33)	**0.54**	0.28	0.11	(0.02)	**(0.54)**	(0.42)	1.00	
FTE Fall Enr.	(0.07)	0.12	0.11	(0.06)	0.20	(0.20)	(0.05)	(0.08)	(0.18)	0.40	(0.29)	(0.14)	1.00

Table 18. 2014 Descriptive Statistics

	Mean	S.D.	Min	Max
Applied	0.72	0.45	0.00	1.00
HACU	0.62	0.49	0.00	1.00
% H. Grad	28.83	16.37	0.00	91.00
% H. FT Ug	46.98	16.35	25.01	97.42
Rsrch. % Expend.	1.34	5.14	0.00	53.00
% Admitted	88.90	19.22	29.00	100.00
Remed.	0.93	0.25	0.00	1.00
Life Exp. Crd.	0.46	0.50	0.00	1.00
% Pell	56.75	14.81	20.00	100.00
4yr Pub	0.21	0.41	0.00	1.00
4yr Pri	0.19	0.36	0.00	1.00
2yr All	0.61	0.49	0.00	1.00
FTE Fall Enr.	7351.92	7447.29	8.00	42254.00

Table 19. 2014 Correlation Matrix

	Applied	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
Applied	1.00												
HACU	0.28	1.00											
% H. Grad	(0.10)	0.10	1.00										
% H. FT Ug	0.14	0.18	(0.06)	1.00									
Rsrch. % Expend.	0.04	0.17	0.26	(0.01)	1.00								
% Admitted	(0.09)	(0.18)	**(0.58)**	0.11	(0.34)	1.00							
Remed.	0.17	(0.06)	(0.33)	0.10	(0.27)	0.33	1.00						
Life Exp. Crd.	(0.11)	(0.12)	(0.14)	(0.12)	(0.15)	0.07	0.07	1.00					
% Pell	(0.04)	0.07	(0.10)	0.42	(0.15)	0.04	(0.07)	0.07	1.00				
4yr Pub	0.14	0.28	0.29	0.02	0.42	**(0.51)**	(0.19)	(0.15)	(0.04)	1.00			
4yr Pri	(0.14)	(0.04)	0.40	(0.16)	(0.11)	(0.32)	(0.13)	0.08	(0.01)	(0.26)	1.00		
2yr All	0.00	(0.20)	**(0.54)**	0.11	(0.30)	**0.59**	0.27	0.06	0.04	**(0.57)**	(0.55)	1.00	
FTE Fall Enr.	0.19	0.21	0.09	0.01	0.23	(0.24)	(0.02)	(0.10)	(0.10)	0.45	(0.29)	(0.14)	1.00

Table 20. 2015 Descriptive Statistics

	Mean	S.D.	Min	Max
Applied	0.76	0.43	0.00	1.00
HACU	0.71	0.46	0.00	1.00
% H. Grad	23.50	16.73	0.00	100.00
% H. FT Ug	45.83	16.64	25.05	95.53
Rsrch. % Expend.	1.35	4.56	0.00	32.00
% Admitted	90.72	18.39	23.00	100.00
Remed.	0.95	0.22	0.00	1.00
Life Exp. Crd.	0.40	0.49	0.00	1.00
% Pell	59.01	15.68	0.00	100.00
4yr Pub	0.25	0.43	0.00	1.00
4yr Pri	0.13	0.34	0.00	1.00
2yr All	0.62	0.49	0.00	1.00
FTE Fall Enr.	7862.16	6854.63	161.00	39725.00

Table 21. 2015 Correlation Matrix

	Applied	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
Applied	1.00												
HACU	0.39	1.00											
% H. Grad	(0.16)	(0.06)	1.00										
% H. FT Ug	0.14	0.26	(0.10)	1.00									
Rsrch. % Expend.	0.13	0.12	0.26	(0.05)	1.00								
% Admitted	(0.15)	(0.12)	**(0.46)**	0.16	(0.37)	1.00							
Remed.	0.12	0.13	(0.44)	0.09	(0.30)	0.29	1.00						
Life Exp. Crd.	(0.04)	(0.04)	(0.12)	(0.14)	(0.15)	0.02	0.17	1.00					
% Pell	0.00	0.02	0.01	0.41	(0.13)	0.08	(0.10)	0.10	1.00				
4yr Pub	0.20	0.19	0.26	(0.01)	0.45	**(0.53)**	(0.14)	(0.07)	0.00	1.00			
4yr Pri	(0.15)	(0.14)	0.36	(0.11)	(0.10)	(0.29)	(0.13)	0.14	0.12	(0.24)	1.00		
2yr All	0.00	(0.01)	**(0.50)**	0.10	(0.31)	**0.66**	0.22	(0.06)	(0.10)	**(0.52)**	(0.58)	1.00	
FTE Fall Enr.	0.29	0.28	0.05	0.00	0.29	(0.23)	0.05	(0.05)	(0.13)	0.41	(0.32)	(0.10)	1.00

Table 22. 2017 Descriptive Statistics

	Mean	S.D.	Min	Max
Applied	0.55	0.50	0.00	1.00
HACU	0.52	0.50	0.00	1.00
% H. Grad	33.11	18.19	0.00	100.00
% H. FT Ug	48.01	16.34	25.00	98.11
Rsrch. % Expend.	1.28	4.35	0.00	39.00
% Admitted	91.07	17.27	22.00	100.00
Remed.	0.87	0.33	0.00	1.00
Life Exp. Crd.	0.52	0.50	0.00	1.00
% Pell	55.28	16.73	0.00	100.00
4yr Pub	0.24	0.43	0.00	1.00
4yr Pri	0.21	0.41	0.00	1.00
2yr All	0.55	0.50	0.00	1.00
FTE Fall Enr.	6648.18	7436.26	11.00	42499.00

Table 23. 2017 Correlation Matrix

	Applied	HACU	% H. Grad	% H. FT Ug	Rsrch. % Expend.	% Admitted	Remed.	Life Exp. Crd.	% Pell	4yr Pub	4yr Pri	2yr All	FTE Fall Enr.
Applied	1.00												
HACU	0.36	1.00											
% H. Grad	(0.06)	(0.03)	1.00										
% H. FT Ug	0.16	0.17	(0.08)	1.00									
Rsrch. % Expend.	0.09	0.14	0.26	(0.07)	1.00								
% Admitted	(0.12)	(0.22)	**(0.45)**	0.16	(0.47)	1.00							
Remed.	0.15	0.12	(0.35)	0.08	(0.29)	0.30	1.00						
Life Exp. Crd.	(0.05)	0.04	(0.12)	(0.13)	(0.22)	0.08	0.11	1.00					
% Pell	(0.09)	(0.09)	0.05	0.34	(0.15)	0.12	(0.13)	0.14	1.00				
4yr Pub	0.20	0.28	0.14	(0.09)	0.46	**(0.43)**	(0.12)	(0.17)	(0.10)	1.00			
4yr Pri	(0.11)	(0.02)	0.39	(0.09)	(0.12)	(0.23)	(0.20)	0.14	0.17	(0.26)	1.00		
2yr All	0.01	0.01	**(0.44)**	0.15	(0.30)	**0.53**	0.26	0.03	(0.05)	**(0.51)**	(0.47)	1.00	
FTE Fall Enr.	0.25	0.32	0.04	(0.03)	0.35	(0.25)	0.04	(0.07)	(0.19)	0.47	(0.32)	(0.14)	1.00