

ONLINE MBA RANKINGS: THE IMPACT OF RANKINGS ON ONLINE MBA
PROGRAMS

by

Pamela Jordan

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As members of the Dissertation Committee, we certify that we have read the dissertation prepared by: Pamela Jordan
titled: The Influence of Rankings on Online MBA Programs

and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

Gary Rhoades

Gary Rhoades

Date: Apr 20, 2022

H. Brinton Milward

H Brinton Milward

Date: Apr 20, 2022

Jameson Lopez

Jameson Lopez

Date: Apr 20, 2022

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copies of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Gary Rhoades

Gary Rhoades

Dissertation Committee Chair

Center for the Study of Higher Education, Department of Educational Policy Studies and Practice

Date: Apr 20, 2022

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DEDICATION

This one is for you, Mom!

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Abstract

This study analyzed the effect that shifts in the U.S. News & World Report rankings have on input variables such as admitting grade point average (GPA), percentage of students taking the Graduate Management Admissions Test (GMAT), average incoming GMAT score, acceptance rate, tuition rates, average student debt, the proportion of students with debt, the number of tenure track faculty and the percentage of minority students. Finally, this study will examine if these correlations are more pronounced during the initial years of this ranking regime or in the most recent years.

This is not the first study to look at U.S. News & World Report business school rankings, but it is the first study to specifically look at online business school rankings. The study determined rankings influence admissions criteria and the number of tenure track faculty. Implications of this finding for further research and practical implications for administrators are discussed, and the study's limitations.

Chapter 1 -INTRODUCTION

Even as U.S. enrollment in degree-granting postsecondary institutions decreased by 6% between 2010 and 2016 (National Center for Education Statistics, n. d.), online programs are growing. They represent about one-third of the market (Lederman, 2018). Experts predict these trends will continue, with enrollment in degree-granting programs projected to fall by 15% after 2025 (Hechinger Report, n. d.), with decreases in admissions across most higher education sectors as online programs grow. Thus, while postsecondary enrollment dropped by almost 90,000 students, students who took at least some of their online courses grew by more than 350,000 (Lederman, 2018).

As more students enroll in online programs, it is essential to understand what factors impact selected input variables related to admissions in online programs. Such variables include admitting grade point average (GPA), percentage of students taking the Graduate Management Admissions Test (GMAT), average incoming GMAT score, acceptance rate, tuition rates, average student debt, the proportion of students with debt, the number of tenure track faculty, and the percentage of minority students. Research shows that rankings significantly impact such variables for face-to-face undergraduate and law programs. Specifically, research indicates that as rankings vary, admissions criteria, tuition rates, and the number of students admitted, particularly for private institutions (Bastedo & Bowmen, 2009; Monks & Ehrenberg, 1999). This study examines if rankings have similar or related impacts on a significant realm of online MBA programs.

Ranking systems, which indicate relative standing and hierarchy based on numerous factors, have been around for over a century, particularly in the case of colleges and universities. Several publishers rank higher education institutions in the U.S., including Poets and Quant,

Princeton Review, and Forbes. This study will utilize data from the *U.S. News & World Report* (USNWR) rankings as they are the most widely (popular) used ranking among MBA candidates in the U.S., with 62% of U.S. candidates using them (Graduate Management Admissions Council, 2018). These rankings are so prevalent that in 2017, the USNWR website received over 10 million views within three days of publishing its annual rankings of colleges and universities (U.S. News & World Report, n.d.).

U.S. News & World Report Rankings have permeated my world. I began my new position as Director of an online MBA program excited about the potential that technology brings to expand access to educational programs, including professional MBA programs. I believed this expanded access would include opening the door to a quality MBA program for students across all social, racial, and ethnic classes. This belief was quickly shattered when I was confronted with the fact that I was hired into the position to improve the program's rankings. Quickly I felt that the program and I were prisoners to a ranking system that favored prestige and revenue that leveraged any increase in rankings to increase revenue (by increasing tuition), to the exclusion of increasing access, diversity, and equity. Chasing reputation and revenue is a logic of consistently growing revenue.

As I worked through understanding how U.S. News & World Report rankings worked and how to improve them, I tried to create strategies that improved rankings without compromising access to the program. To that end, I have been successful, and our program is now a top-ten ranked program with the second most significant percentage of minority students among those programs ranked in the top ten. At the same time, I must note that most top-ranked programs, however, lack substantial diversity—for the field of online MBA programs, top rankings in prestige do not correlate with substantial diversity. This experience with U.S. News & World Report rankings

brought me to my research on rankings, specifically how U.S. News & World Report rankings impacted the behavior of online MBA programs that choose to chase them.

USNWR began publishing college rankings in 1983 when it published its first rankings of undergraduate programs, but it did not expand its business model to rank online programs until 2013 (U.S. & World Report, n.d.). This 30-year gap is because online programs are relatively new, flourishing with the growth of the internet. This recent technology “fueled the growth of for-profit universities for decades,” They launched online programs to improve their accessibility (Craig, 2019), venturing where traditional universities were initially reticent to go. Public universities’ foray into the online market began in 1984 when The Electronic University Network offered its first online course (Petersons, n.d.). Three years later, Aspen University in Denver launched the first 100% online MBA program (Online MBA Today, n.d.). Over 6.3 million students take online courses, including those taken to obtain an online MBA (U.S. News & World Report, n.d.). This figure represents one-third of all students in the U.S., but unfortunately, online programs have largely remained unstudied (Lederman, 2018).

The lack of research done on online programs is problematic. Though limited, most research focuses on online programs on retention and persistence (Heyman, 2010; Holder, 2007; Gazza, 2014). Research on online programs finds explicitly that online students are more engaged than their in-person counterparts. They tend to engage in “higher-order mental activities” (Chen, Gonyea & Kuh, 2008, p.8), thus helping to increase student persistence and engagement. These limited studies focus solely on student behavior. The organizational behavior of online programs is not well studied, nor is the impact rankings have on the behavior of the administrators and managers responsible for these programs.

Purpose of the Study

Utilizing the USNWR's Online MBA rankings for 2015 through 2022, this study will examine if there is a relationship between, on the one hand, rankings and ranking changes and, on the other hand, input variables such as admitting grade point average (GPA), percentage of students taking the Graduate Management Admissions Test (GMAT), average incoming GMAT score, acceptance rate, tuition rates, average student debt, the proportion of students with debt, the number of tenure track faculty and the percentage of minority students. The study will further examine if this correlation is more pronounced in private institutions than public institutions, as research has shown for face-to-face undergraduate and law programs (Bastedo & Bowman, 2009). Finally, this study will examine if these correlations are more pronounced during the initial years of this ranking regime or in the most recent years.

In exploring the above questions, the study will draw on and explore the explanatory value of three theories—resource dependency, academic capitalism, and isomorphism—in terms of the impact that college rankings systems have on admissions criteria, tuition, and the number of students admitted for online MBA programs in the U.S. The independent variable is defined as the ranking of an institution by The *U.S. News & World Report's* annual published rankings. The dependent variables will be admitting grade point average (GPA), percentage of students taking the Graduate Management Admissions Test (GMAT), average incoming GMAT score, acceptance rate, tuition rates, average student debt, the proportion of students with debt, the number of tenure track faculty and the percentage of minority students. The results of this study will advance the field by exploring online MBA programs, and the impact rankings have on administrators managing the input variables of these online MBA programs.

Chapter 2 - LITERATURE REVIEW

Introduction

Ranking systems, which indicate relative standing and a hierarchical organization of items, have been around for over a century, particularly in the case of colleges and universities. The origins of rankings systems in higher education date back to 1879. Professional exam scores and students' accomplishments as alumni were the only factors used in these early rankings (Amsler & Bolsmann, 2012). Recent attention has turned to ranking colleges and universities themselves and students. Today we rank four-year universities and separately rank graduate/professional programs in business, education, medicine, engineering, and law. The entry of commercial ranking entities has increased the importance of college rankings and prompted widespread attention of scholars and consumers.

Four major themes emerge in the research literature on college rankings. The first theme is rankings' impact on student behavior, namely college selection, and choice. The second theme that emerges in the literature on college rankings is the impact rankings have on organizational behavior. Included in this theme but not as well studied is the impact college rankings have on the "organizational field of higher education" (Bastedo & Bowman, 2010, p. 164). A third theme emerges surrounding concerns about rankings themselves and their methodologies (Bastedo & Bowman, 2010; Hazelkorn, 2011). The fourth and final theme that arises in the literature is rankings as a means of surveillance and control. This fourth theme is an alternate perspective on themes that emerges in the literature on rankings that views rankings as a "form of information intermediation, comparative orderings, or a means of surveillance and control (Rindova, V., Martins, L., Srinivas, S., & Chandler, D., 2018). Information intermediation is implied in the first

theme, and the impact rankings have on student behavior. Comparative orderings are implied in the third theme, concerns about rankings themselves.

This literature review will explore these themes after a brief look at the history of college rankings, U.S. News & World Report (USNWR) rankings, and graduate MBA rankings. Also examined in this literature review will be the stakeholders involved in rankings and the pros and cons of rankings. The literature review will conclude by discussing the growth of online programs and a look at the uniqueness of the methodology USNWR utilizes to rank online MBA programs and gaps in the literature.

The Rise of College Rankings

Initially, academic reputation was the sole criteria for rankings. The earliest history of ranking colleges and universities can be traced to the 1870s when rankings were established to inform higher education professionals (Stuart, 1995). In the early part of the 20th-century, researchers published rankings based on the number of prominent undergraduate alumni (Cattell, 1910; & Visher, 1928). Graduate school rankings began to appear in the late 1950s with the work of Hayward Kiniston. (Kiniston, 1959). These rankings were solely based on how faculty rated the reputation of graduate programs. News media got into ranking colleges and universities in 1957 when the Chicago Sunday Tribune published the results of a poll of 35 leading educators. The Tribune, in making its choices consulted "a great mass of objective data," which "strongly supported" the subjective evaluations of the academicians. Among the "objective data" included in the article was a chart in which each of 28 fields of study at the ten leading universities was rated as "distinguished" or "not distinguished." (The Harvard Crimson, 1957). During the 1960s and 1970s, graduate programs and professional schools were ranked (Roose & Anderson, 1790; Blau

& Margulies, 1973). In 1983, the United States National Research Council (NRC) began to rank doctorate programs.

U.S. News & World Report Begins to Publish Rankings

The researchers mentioned above brought attention to ranking colleges and universities, but it was not until the media ventured into this arena during the 1980s that rankings saw intensified attention. This heightened attention began in 1983 when U.S. News & World Report (USNWR) published its first rankings based solely on reputation (U.S. News & World Report, 1983). There are several reasons for this intensified attention, including declining applicant pools and the rising cost of college attendance (Meredith, 2004). As college rankings came into the spotlight, several media publishers ventured into ranking colleges and universities such as *Money*, *Business Week*, *The Wall Street Journal*, *Financial Times*, and *Forbes*. None of these publishers were as commercially successful as USNWR. (Bastedo & Bowman, 2010).

USNWR's initial rankings were based solely on the perception of university presidents. They only ranked the top 10 undergraduate institutions in four areas: national universities, national liberal arts colleges, regional universities, and regional liberal arts colleges (USNWR.com, 1983). In 1987 USNWR expanded its scope to the top 25 schools in all four categories. By 1990 USNWR had broadened its scope to include all colleges and universities (Jin & Whalley, 2007). During this twenty-year time frame, USNWR became the "gold standard" of the rankings business, preempting researchers and other media publishers (Ehrenberg, 2004, p. 146). Reasons for this dominance include the perception that USNWR has the appearance of scientific objectivity by utilizing specific weights assigned to each category and the fact that the publication ranks universities within their own categories (i.e., Liberal Arts School) and the "American public wants to know which institution is number one" (Ehrenberg, 2002, p. 147). These rankings have become so

popular that before and after USNWR publishes its annual rankings, "stories about the USNWR rankings appear in virtually every major newspaper in the United States" (Ehrenberg, 2005, p. 29). Research shows that colleges and universities know that the rankings of their program can impact enrollment, research monies, and reputation (Malette, 1995). USNWR benefits regardless of the outcome as they rake in "millions of dollars on the sales of the rankings and related publications (Machung, 1998). Table 1 summarizes the brief history of the rankings of colleges and universities by USNWR.

Table 1: History of USNWR and Rankings of Colleges and Universities	
Year	Event/Change
1983	The first ranking of top-10 undergraduate programs was published.
1987	Ranking expands to top-25.
1990	Rankings expanded to MBA programs.
1991	The ranking's criteria expanded to include graduation and acceptance rates.
1996	Rankings expanded to top-50.
2000	Methodology changed after public outcry over number nine schools moving to the number one spot.
2013	Rankings expanded to include online programs.

(Grewal et al., 2012; USNEWS, 2015)

In summary, the literature on the history of college rankings argues that while there are several researchers and publishers' rankings colleges and universities, the USNWR rankings have

become an industry (Bowman & Bastedo, 2009; Martins, 2005; Meredith, 2004), now that generates over a half million views per month (Friedman, 2007). Most scholars regard USNWR as the most prominent player in publishing college rankings.

A Brief History of Graduate and MBA Rankings

While much of the research on rankings and subsequent rankings publications have focused on undergraduate programs, ranking graduate programs began in 1925 when Professor Donald Hughes ranked U.S. graduate schools based on peer reputation (Shin, Toutkoushian & Teichler, 2011). The Carter Report published rankings of business schools beginning in 1977 based solely on research (Schatz & Crummer, 1993). After this report, *Business Week* magazine incorporated data on salaries to determine business school success. Other factors included in this survey were student scores, intellectual capital, and recruiter scores (Peters, 2007). This report supplemented the publishing of MBA program rankings, which began in 1990 by USNWR.

When USNWR began to rank MBA programs, they built on the work of *Business Week* magazine by looking at three measurements to obtain the rankings: 40% reputation, 35% placement, and 25% student selectivity. Other media publishers quickly ventured into ranking MBA programs after this with differing criteria (Peters, 2007), but as previously stated, they were not as successful.

Stakeholder Motivations

Understanding the three key stakeholders' motivations is critical regardless of how one chooses to categorize the literature on college rankings. These stakeholders are (a) students, (b) institutions of higher education, and (c) rankings publications. Each of these stakeholders has different motivations. Students seek information about the "quality" of the institution(s) they are thinking about attending. Higher education is an "experience good, where consumers

(prospective students) don't know the value of the good before their purchase (Martin, 2015, p. 53). This lack of knowledge about the value of the good being purchased (education) creates an "asymmetry" between institutions of higher education and students (Rindova et al.).

Additionally, students want a degree from a "quality" institution to obtain a better job. Rankings provide students value by assessing "quality" before a student decides to enroll. This approach is so popular that two-thirds of college applicants found rankings to be "very helpful" in their college search (Machung, 1998), and they use them to decipher the differences between schools (Alder, n.d.).

Universities play the game because they want to attract students and believe there is an advantage to having a higher ranking to attract more highly qualified students (Griffin & Rask, 2007). When rankings improve for national private and liberal arts colleges, research has found that these institutions can expect to increase applications, enrollment, and incoming SAT scores the following year (Monk & Ehrenberg, 1999). Rankings can also boost institutional morale, increase donor giving and improve alumni relations, but these benefits are more difficult to quantify (Martin, 2015).

Sales motivate publishers, including clicks from their websites that drive online revenue. While sales are the primary motivator for publishers, they have additional incentives for movement within their list because "unless university rankings are volatile, there is little news value in reporting them" (Martin, 2015, p. 53). These competing motivations create what some scholars call a "stickiness" (Dearden, Grewal & Lilien, 2014, p. 131). This stickiness is why institutions, students, and publications persist in playing this game despite the "limited prospects for non-incremental change" (Martin, 2015, p. 14). In short, institutions of higher education,

students, and rankings publishers are “stuck” together, locked, and tangled in a game some scholars call the “rankings regime” (Slaughter & Rhoades, 2009).

This "stickiness" persists, and rankings continue to prove popular with growing sales (Jin & Whalley, 2007) and increased attention to their numbers by students, parents, administrators, and faculty (Hossler, 1998). This increased popularity has some researchers and administrators in higher education expressing concerns that "rankings intensify the aspiration for prestige" (Hossler, 2000, p. 22) and "fuel the higher education expenditure race" (Ehrenberg, 2003, p. 145). It is costly to compete in the rankings. Estimates of the price tag for universities ranked in the 30th percentile to move into the 20th percentile can be as high as \$112 million (Martin, 2015, p. 52).

Pros of Rankings

Given the impact rankings have on expenses, it is not surprising that college rankings systems have been criticized for decades. While some criticism may be legitimate, it seems prudent to look at some of the essential functions rankings can serve. The most obvious of these functions is making the goal of college excellence visible. This goal occurs as rankings produce competition that encourages universities to perform better (Enserink, 2007). Another feature of rankings is that they provide publicly available data about higher education institutions that prospective students (and their parents) utilize to help choose which college or university to attend.

Supporters of rankings also point out that rankings are necessary because they are one tool that helps to provide information in a market with unequal participants. In these markets, customers cannot assess information about what they are buying. The inability to get data makes consumers (students) unequal to the producers (higher education institutions). Rankings provide

information to consumers and help equal the playing field (Connelly, Certo, Ireland, & Reutzel, 2011; Winston, 1997). The sheer number of college applicants must choose from exacerbates this problem. It can be overwhelming to gather and manage all the available information. Therefore, supporters of rankings view them as tools that make critical information more accessible and, as a bonus, motivate organizations, in this case, colleges and universities, to improve (Espeland & Sauder, 2007).

Cons of Rankings

While rankings can perform an important function, they also face many legitimate concerns. These concerns focus on four themes: disagreement with the premise of ordinal rankings, lack of consensus about quality and what represents quality in the rankings, lack of faith in the ability of one ranking system to judge all colleges and universities fairly, and the questionable behaviors they can incentivize.

Ordinal rankings have troubled many scholars. Some believe rankings are "falsely precise" and "create a vertical column where a group might more properly exist" (Clark, 2002, p.1). Some researchers believe there is an inherent danger to using "discrete scores to make subtle distinctions among schools" (Clark, 2002, p4). Clark (2002) recommends that schools use bands that indicate equal quality instead of vertical columns. Her point is that the difference between a number one ranking and a number two ranking is not statistically significant. Still, the impact of this difference in rankings is on the institution that comes in second.

Another criticism of rankings is that they may not measure educational quality. Some argue that rankings create incentives for higher education institutions to focus on specific data elements. This myopic view results in institutions focusing additional resources on particular data points that do not improve the quality of the higher education institution (Machung, 1998).

For example, research has found that the talent of students recruited to a program in terms of incoming standardized test scores impacts rankings more than the quality of instruction (Higher Ed Jobs, 2018).

Rankings can also be arbitrary. The personal taste or opinion of a ranking's publisher creates rankings. These groups of individuals choose certain variables that they deem necessary measures of quality and assign weights to them, making the whole notion of quality rankings extremely arbitrary and beyond the ability of one rankings publisher to determine (Myers & Robe, 2009). There is also the issue of rater bias towards their institution (Hazelkorn, 2007) and the perverse incentives rankings provide for institutions to "do whatever it takes" to raise their rating (Carey, 2006, p 6.). In short, high-stakes rankings create incentives for schools to publish inaccurate or misleading data (Meredith, 2015).

Finally, another criticism of rankings is that they are classed and raced. An analysis of global rankings utilizing critical theories of power found that rankings serve the "purposes of states and leading postsecondary institutions, and hence the purposes of those social groups and economic interests best able to influence both" (Pusser & Marginson, 2013, p. 20). Additional research exploring rankings systems themselves, including USNWR, from a critical race theory perspective, found that "higher-income students from college-educated families" are the primary consumers of rankings, which privilege dominant groups and undermine diversity. (Richards, Awokoya, Bridges & Clark, 2018, p. 300). In summary, rankings, and the pursuit of improved rankings, can illuminate the role that prestige and privilege play in shaping the goals, strategies, and patterns of resource allocation in higher education.

Concerns with Rankings Methodology -Theme One

One of the central themes that emerge when looking at the research on rankings is that many scholars criticize their methodologies. While earlier rankings had suggested that they could play a key role in helping high school students decide where to attend college, this did not happen until the publication of these first rankings by USNWR in 1983 (Myers and Robe, 2009). This initial publishing of rankings "shook up the college guide industry (Ehrenberg, 2005, p. 29)." It did this by adding quantifiable dimensions to a system that had previously used reputation alone as the single variable in determining quality. The new method of ranking institutions included several weighted categories attempting to measure things like the quality of faculty, admission standards, and retention rates. This system and the annual publication of results propelled USNWR to the top of the rankings industry, but not without criticism. One of the main critiques of rankings is that the methodology is flawed (Hazelkorn, 2015). Concerns over 'peer review' and the question of popularity versus quality are popular research topics.

Additionally, the multidimensionality of the measures used in rankings creates vague and arbitrary results (Dearden et al., 2014). Arguments for this perceived drawback include the opinion that institutions are compared against suitable peers because all inputs and outputs are treated similarly (Turner, 2005). The methodology USNWR uses for undergraduate and full-time MBA programs is similar and focuses almost solely on admissions, career outcomes, and pricing policies (Bednowitz, 2000, p.5.), further exacerbating the perceived flaws in rankings systems.

While University and College administrators complain about this influence, "rankings have become increasingly legitimate and nearly impossible to ignore, particularly for elite universities and liberal arts colleges." (Bastedo and Bowman, 2010, p. 164). The legitimization of rankings increased their value. Therefore, while administrators question their validity, they act strategically to improve rankings. This zero-sum game means that another institution must move

down to move up in the rankings. This game can result in questionable behaviors and misreported data. Institutions can distort or falsify the data (Ehrenberg, 2005). Research regarding these suspicious behaviors found that universities often coach their students to inflate their responses regarding their institution because it improves the ranking of their university (Dearden et al., 2014). An example of intentionally falsified data comes from the Fox School of Business at Temple University. This program was removed from the USNWR online MBA rankings in 2018 for knowingly misreporting data regarding the percentage of students who took the Graduate Management Admission Test (GMAT).

Institutional Behavior and Rankings – Theme Two

While rankings have detractors and supporters, most scholars agree that they influence the behavior of higher education institutions, as they are a force in organizational policy and decision making (Espeland and Sauder, 2007). The impact rankings have on institutions is one of the main themes that emerge when researching college rankings. Arguments have been made that suggest rankings are “tests for administrators to teach to and that society places too much value on them” (Thompson, 2000). Regardless of this sentiment, research has demonstrated that rankings have a significant impact on the behavior of colleges and universities (Hazelkorn, 2007, 2008). Research indicates that variances in ranking positions correlate with changes in admissions criteria at the undergraduate level and in law programs, particularly for private institutions (Bastedo & Bowman, 2009, Monks & Ehrenberg, 1990; Meredith, 2004). Research shows that as rankings improve, acceptance rates decline, and higher standardized test scores are required for admission (Monks & Ehrenberg, 1999; Meredith, 2004). Specifically, when rankings improve, the average SAT score of incoming first-year students increases (Monks & Ehrenberg, 1999). Additional research also demonstrates that tuition costs will escalate as

rankings increase (Bloom & Szykman, 1998; Bastedo & Bowman, 2011), and net tuition will decrease with less favorable rankings (Monks & Ehrenberg, 1999). Specifically, research shows that the average cost of attending a top-10 MBA program is 60% more than the average cost of attending a non-top ten program (Hsu, James & Chao, 2009).

It is interesting to note that although rankings are “designed largely for stakeholders outside of higher education (foundations and industry), their strongest influence is on those inside the industry such as college administrators, faculty, alumni, and students” (Bastedo & Bowman, 2011, p. 3.) This internal influence is counterintuitive. While rankings may appeal to outsiders, they are also resistant to easy management and disdained by insiders. These conditions would seem to deter tight coupling, but this is not the case. As stated above, rankings prompt broad changes and affect resource distribution. Foucault's concept of discipline helps explain this. His research found that meticulous surveillance promotes tight coupling as it encourages organizational members to internalize the control that rankings elicit (Sauder & Espeland, 2009). In this way, organizational members normalize rankings and transform them into a zero-sum game that encourages scrutiny, distrust, innovation in gaming techniques, and pressure for conformity (Sauder & Espeland, 2009).

Faculty also experience the impact of rankings. High-quality future faculty are attracted to highly ranked institutions, making ‘recruitment easier because of their good reputation’ because ‘success breeds success’ (Hazelcorn, 2008, p. 8). Research shows that good rankings have a positive impact on faculty morale, associated with “pride and honor and on academic behavior, increasing awareness of the importance of publishing high-quality research and making it easier to induce an improvement with a department head whose rankings have been declining” (Hazelkorn, 2008, p. 9). Research has also found that the ranking regime influences faculty

work, especially in producing knowledge, around four themes: *individualism*, *standardization*, *commodification*, and *homogenization*. These themes undermine faculty work because they ignore the complex and dynamic nature of teaching and learning and shift faculty efforts away from service to their community (Gonzales & Nunez, 2014). In short, because the ranking regime rewards a narrow set of activities, faculty work narrows (Gonzales & Nunez, 2014).

Rankings can also impact the organizational field of higher education. Research supports this in studies that indicate published college rankings significantly impact future peer assessment independent of changes in organizational quality and performance (Bastedo & Bowman, 2010). This phenomenon is attractive and consistent with Neo-Institutional Theory, which suggests that overall rankings influence future peer assessment of reputation. "Peer Review" rankings also illustrate the impact ranking has on the organizational field of higher education. Published studies indicate that published college rankings significantly impact future peer assessment independent of organizational quality and performance (Bastedo & Bowman, 2010). This is an exciting phenomenon consistent with Neo-Institutional Theory, which suggests that future peer assessment of reputation is influenced substantially by overall rankings.

Rankings can also impact resource allocation. Research has shown that the fierce competition surrounding rankings results in college deans diverting resources from "knowledge creation," including research, to short-term strategies (Zimmerman, 2001). Short-term strategies aimed at rankings can include placement offices, public relations campaigns, and institutional research offices that spend countless hours dissecting USNWR data to find the "silver bullet that will propel their college to higher rankings" (Daly, Maching, & Roque, 2006, p. 2).

A lack of research explores these same influences on online programs. Because online programs are one of the only sectors in higher education growing (Lederman, 2018) and rankings

are becoming increasingly influential in most institutional environments, understanding how online programs, such as online MBA programs, respond to rankings is crucial for scholars and practitioners.

Impact on College Choice – Theme Three

In addition to influencing the behavior of higher institutions, research shows that rankings also influence students' behavior, particularly regarding college choice. College rankings are essential or essential in choosing which college to attend (McDonough et al. 1998). A survey conducted by the Graduate Management Council in 2001 noted that 95% of MBA graduates surveyed cited rankings as their "most influential media source in selecting an MBA school (GMAC, 2001). One reason for this interest in MBA rankings is that students view schools with higher rankings as more reputable and more likely to help increase their income potential (Walpole, 1998).

Some researchers view student decision-making as a function of a college or university's attributes and a function of the universities' ranking, as published by USNWR (Dearden et al., 2014). Rankings can work the same way advertising does; it can either persuade or inform students. Research has found that for novice decision-makers, the information provided about university attributes is less important than the rankings of a particular university. Sophisticated decision-makers may not place as much value on an institution's ranking but may still use them as part of their decision-making process (Dearden et al., 2014). Therefore, rankings publications can appeal to both novice and sophisticated college applicants. This highlights the value of published rankings instead of published information on a particular institution's attributes. There are two reasons for this; rankings serve as a tool that simplifies college choice, and higher rankings confer a halo effect (Luca & Smith, 2013).

Rankings as a means of Surveillance and Control -Theme Four

As stated above, rankings prompt broad changes and affect resource distribution. Foucault's concept of discipline helps explain this. His research found that meticulous surveillance promotes tight coupling as it encourages organizational members to internalize the control that rankings elicit (Sauder & Espeland, 2009). In this way, organizational members normalize rankings and transform them into a zero-sum game that encourages scrutiny, distrust, innovation in gaming techniques, and pressure for conformity (Sauder & Espeland, 2009).

This pressure to conform can lead to adverse practices and consequences. In December of 2021, the former dean of the Temple Fox School of Business was found guilty of fraud. Moshe Porat was found guilty on two counts: wire fraud and conspiracy to commit wire fraud. These charges stem from the school's scheme to falsify data reported to USNWR to improve its online MBA rankings. Specifically, the school reported that 100% of their admitted students had submitted a GMAT score. This scheme helped Temple hold the number one spot in the USNWR rankings of online MBA programs (2015-2018). It was later “revealed that 19.6% of students had submitted a score.” (Penn, 2021). Dean Porat now faces up to 25 years in prison.

The Uniqueness of the U.S. News & World Report Online MBA Rankings Survey

In 2013, USNWR started ranking online MBA programs with a vastly different survey to address many concerns mentioned above (Online MBA Today, n.d.). The survey itself encompasses many more data points than other surveys utilized by USNWR. The 2022 online MBA survey included 212 questions covering five categories: student engagement (30%), admissions selectivity (15%), peer reputation (25%), faculty credentialing and training (15%), and student services and technology (15%) (U.S. News & World Report, n.d.). The survey asks each institution to provide data across 26 specific data points. Institutions must report data on

tuition rates, acceptance rates, GMAT scores and standards, number of tenure track faculty, training requirements of faculty, and other concrete data. The only vague part of this survey is the peer reputation score, which accounts for 25% of the total score (U.S. News & World Report, n.d.). (Appendix A provides a complete list of categories, weights, and percentages, while Appendix B provides details on the weights of each category from 2015-to 2022.)

The uniqueness of the USNWR survey tool for online MBA programs helps explain the vastly different results between schools ranked in the top 20 spots for MBA full-time face-to-face programs and MBA online programs. In 2019, only three schools ranked in the top 20 spots on both surveys: Carnegie Mellon, Chapel Hill, and The University of Southern California (U.S. News & World Report, n.d.). In summary, the online MBA USNWR survey instrument is more comprehensive, transparent, and different than any other survey tool USNWR uses to rank colleges and universities. However, to date, no research exists regarding the influence of this complex, comprehensive, and different survey tool has on the behavior and practices of online MBA programs.

The Growth of Online Programs

One of the reasons there is little research regarding online programs is that they are new. Online programs owe their existence and subsequent growth to the invention of the World Wide Web in 1992. This invention made online education increasingly accessible. The web is easy to use and capable of presenting multimedia; thus, the range of disciplines that could be offered online greatly expanded. The 1980s and 1990s saw enormous innovation and expansion in online education and networking at all levels of education as colleges and universities began experimenting with online courses (Harasim, 2000; Kentor, 2015). As previously stated, in 1987, Aspen University in Denver launched the first 100% online MBA program (Online MBA Today,

n.d.). However, the rapid growth of online education in traditional nonprofit institutions did not start until 1998 (Arenson, 1998). In October 1998, New York University (NYU) was the first reputable nonprofit university to create an online education subsidiary, NYU Online (Arenson, 1993). After this, online programs grew exponentially as the 2000s led to an explosion in the development and use of online technologies to deliver educational content. Today over six million students are taking online courses in the U.S., or 31% of the market (U.S. News & World Report, n.d.). As a result, the number of online programs will grow, as will the number of traditional universities using online technology (Worldwide Learn, n.d.).

Recently, the overall growth rate for new MBA programs has slowed. However, data shows higher education institutions that adapt their on-ground MBA programs for online delivery or grow their existing MBA programs see more significant increases in student enrollment than schools where MBAs stay solely on-ground (Wiley Education Services, n.d.). Research also indicates that online programs increased 57 percent since 2012, while on-ground programs decreased by 13 percent (Wiley Education Services, n.d.). Since 2012, total graduates at institutions that report only having an on-ground MBA option have declined 24 percent. Conversely, the total number of graduates (ground and online) from institutions that offer online MBAs has grown 8 percent during that same period (Wiley Education Services, n.d.). This data is a strong indicator that the preferred modality for MBA degrees is shifting to online.

Limited Research at the Graduate MBA Level

Research at the graduate level regarding college rankings is limited; this is even truer regarding MBA programs and rankings. Guillermo de Veyga filled this gap with his dissertation regarding face-to-face MBA programs, enrollment trends, and rankings. de Veyga found that

top-25 business schools decreased their acceptance rate by .173 for each ranking change (de Veyga, 2016, p. 89). Additionally, he found a correlation between increased rankings and admitting GPA. His research suggests that as rankings increase, student admitting GPAs increase by .008 (de Veyga, 2016, p. 89). This result is not significant, but to date, this is the only research available about how rankings affect the behavior of MBA programs.

Conclusion and Implications for Research

Further research is necessary to understand rankings' influence on online MBA programs. While rankings are studied exhaustively at the undergraduate level, very few articles look at the influence of rankings at the graduate program level. None examine the impact of rankings on online MBA (graduate) programs. The growing number and importance of online programs, specifically online MBA programs, and the uniqueness of the survey tool USNWR use to rank these programs suggest the need for further study. This study will advance the field by exploring the USNWR rankings survey's impact on online MBA programs. Specifically, the study will examine how variances in rankings influence admission criteria, tuition rates, and the number of admitted students. This critical study will explore a research topic that is yet uncharted. Its timing is critical as the growth in online education is projected to eclipse face-to-face programs by 2030 (Christensen, C, 2017).

Theoretical Framework

The complexity of organizational behavior makes it highly unlikely to fully describe it through only one lens. Therefore, college rankings systems and their effects on organizations can best be understood by looking at the relationship through the lenses of several theories. Resource dependency is one of these theories. In addition, two other theories which subsequently emerged, neo-institutional theory, with its idea of the isomorphic behavior that characterizes a field of

organizations, and the theory of academic capitalism, will be drawn on. An additional concept helps think about the effects of rankings, and that is tight coupling (Foucault's Theory of Discipline) associated with institutions that are playing the rankings game. Each theory and its relevance to rankings are outlined below.

The proposed study will draw from three fundamental theories: (1) resource dependency, (2) academic capitalism, and (3) isomorphism. Combining these theories will help describe the behavior seen in higher education institutions as they respond to college rankings to gain higher rankings and prestige.

Resource Dependency

In 1860, *On the Origin of Species* was published by Charles Darwin. In this treatise, Darwin argued that diversity does not result from the divine creation of an overall master plan but as an undirected, random adaptation process to environmental circumstances (Darwin, 1860). His work has been used to help understand how species adapt, develop, and compete in their environment. Part of Darwin's theory suggests that resources, specifically competition for resources, drive what he termed "natural selection." Social scientists have applied this idea to organizations and call it "resource dependence." This perspective stresses the mutual processes of interaction between organizations and their environments.

Resource Dependency stresses this mutual process of interaction between organizations and their environments. According to this approach, organizations are dependent on their environments, but these organizations can also influence their environments. (Pfeffer & Salancik, p. 222, 1978). In short, organizational actors pursue relationships with other organizations to obtain valuable resources with an underlying assumption that this is a rational pursuit of resources and that a linear relationship exists between shifting resources and changing

organizational behavior. To take it a step further, "to understand the behavior of an organization, you must understand the context of that behavior-that is, the organization's ecology. (Pfeffer et al., 1978). According to this theory, organizations (universities) are neutral, rational actors in this dynamic. This theory has been applied to rankings by several scholars who found that annual college rankings have a direct impact on an institution's ability to enroll quality students, attract credentialed faculty, and influence alumni and donor giving (Walpole, 1998; Dahlin-Brown, 2006; Bastedo & Bowman, 2010).

The theory has its limits and provides problematic rationales and precedence for institutions and educational systems if used to justify changes in institutional structures, missions, and personnel that compromise the mission. Invoking the idea that organizations must change to survive or make their institution less dependent on external resources can lead to mission abandonment. This framing excuses institutions from their active role in the subversion of their original mission and organizational values for financial reasons. Through this theory, institutions may portray themselves as weak and powerless organizations that are at the will of substantial external resources. However, colleges and universities are also powerful, influential organizations themselves. It is not entirely external pressures that are forcing institutions to change. In addition, these institutions internalize such pressures and bring change upon themselves.

Furthermore, this theory assumes that rational actors within the organization will act with goodwill and intent. In reality, these actors may not have the best interest of everyone in mind or are too actively focused on moving their institution to the market and towards commercialization. (Bastedo & Bowman, 2010). Public universities enhance revenue by intersecting markets and reducing distinctive involvement in local communities. This move to

the market signals fault lines in a new knowledge learning regime - a defining tenet of academic capitalism (Slaughter and Rhoades, 2009).

Academic Capitalism

Academic capitalism describes the market-like behaviors in higher education that include competition for faculty, high-quality paying students, and other external revenue. This theory positions higher education as a private market good where students are consumers and faculty are laborers. Competition, accreditation processes, rankings, and shifting public funds have exacerbated this shift to market-like behavior. Academic capitalism helps explain the influence of rankings publishers like USNWR (Slaughter, S. & Rhoades, G, 2004).

The theory explains why cultural resources, such as prestige, are vital. Academic capitalism puts universities in the driver's seat as rational actors. As university leaders move from being reactive to external political and economic environments to being proactive in promoting neoliberal values and norms (Slaughter, S., & Rhoades, G., 2009), they move to practices that actively chase students with the ability to pay full tuition without financial aid (Armstrong and Hamilton, 2013), entrepreneurial faculty, rankings, new programs, and external sources of revenue.

Academic capitalism also suggests that ethnicity and race may be related to market segmentation and the pursuit of more "privileged segments of the student market." (Slaughter, S. & Rhoades, G, 2004). In short, this theory postulates that the "raced effects in the pursuit of tuition revenue are primarily due to differential distribution of wealth among racial and ethnic groups." (Salazar, Jaquette, and Han, 2021). In other words, the privileging of the market and logic of accumulation can take universities away from and run counter to the publicly articulated access mission of the institution.

This theory also has its limits and critiques. There are inherent problems in the academic capitalist regime. These problems center around how higher education is funded, what revenue is produced, and unanticipated consequences (Slaughter & Rhoades, 2004). Academic capitalism favors a market orientation, and higher education is highly subsidized. This is contradictory. Research has also shown that the market orientation focus of academic capitalism can “absorb more revenues than they produce and create unanticipated negative consequences.” (Slaughter and Rhoades, 2004, p. 112). Additional critiques of this theory include its limited focus on higher education in the United States and its lack of “macro-level policy perspectives” that could aid in explaining the “micro-level motivations” addressed in this theory (Edgell, 2015).

Isomorphism and Foucault’s Theory of Discipline

While academic capitalism helps explain the pursuit of rankings, it does not explain why and how rankings can influence institutional behavior so that universities and their programs become tightly coupled to and compliant with the incentives in a ranking system. Foucault addresses part of this in his research regarding the concept of discipline. He found that coercive disciplinary measures (like rankings) devolve into forms of self-management that amplify institutional influences by changing members’ perceptions and behavior (Foucault, 1997). Surveillance, which effectively comes with annual changes in rankings, and normalization internally of the importance of the measures being prioritized in a ranking system, facilitate a combination of normative (through professional mechanisms), mimetic (imitation of aspirational peer programs), and coercive (through student markets and managerial hierarchies) pressures. Through surveillance and normalization, rankings become sources of anxiety, objects to resist, and alluring (Espeland & Sauder, 2009; Foucault, 1997 & DiMaggio and Powell, 1983).

Resource Dependency and Academic Capitalism help explain how universities pursue rankings to legitimize their pursuit of quality (paying) students, faculty with marketable research (Slaughter and Rhoades, 2004), and other external funds. But these theories do not fully explain the patterns of how increasing similarity over time takes place across a field of universities. Isomorphism helps explain this phenomenon. Isomorphism is the constraining process that "forces" one unit in a population to resemble other units that face the same environmental conditions, resulting in mutual awareness among participants that they are involved in a joint enterprise. This theory helps explain institutional behavior, as higher education institutions act more similar to chase rankings and resources, and how that similarity increases over time. Disciplinary measures, like rankings, devolve into forms of self-management and change institutional actors' perceptions and behavior through mimetic and normative mechanisms (DiMaggio, P. & Powell, W. 1983). This theory has been applied to rankings through the lens of mimetic and normative behavior in a study that found that rankings influence "organizations to become more alike" (Wedlin, 2007).

Both these theories have limitations as well. Foucault's work has been observed to exaggerate the pervasiveness and intricacy of disciplinary mechanisms and power relations, thus overlooking individual agency. (Borg, 2015), while DiMaggio and Powell's work was found to have limited "empirical support for their definition of isomorphic forces in an organizational field which could conflate legitimacy driven isomorphism with the concept of diffusion-driven by competing theories, such as resource dependence." (Boxenbaum & Jonsson, 2008, p. 1).

Taken together, these theories may help explain the relationship being studied in this dissertation. These three theories emerge in each of the themes embedded in the literature.

Chapter 3 - METHODS

This chapter explains the methodological approach utilized to analyze the behavior of Online MBA programs as rankings, as published by U.S. News & World Report. The approach utilized combined variables supported by research to address the research questions. As this study aimed to examine how shifts in rankings influence the behavior of Online MBA programs in the U.S., data on rankings and the study variables were examined over an eight-year time frame. In addition, most of the research on rankings is solely focused on undergraduate programs. Therefore, this study provides insight into the behavior of graduate programs, and more specifically, Online MBA graduate programs.

The following questions guided this study:

For U.S. Online MBA programs:

1. How do college rankings' shifts (increases or decreases) influence admissions criteria?
 - a. How do shifts in rankings influence admitting GPAs?
 - b. How do shifts in rankings influence reliance on standardized test scores as measured by the percentage of applicants taking the Graduate Management Admissions Test (GMAT)?
 - c. How do shifts in rankings influence average incoming GMAT scores?
 - d. How do shifts in rankings influence acceptance rates?
2. How do shifts in rankings influence financial resources?
 - a. How do shifts in rankings influence per unit tuition pricing?
 - b. How do shifts in rankings influence the amount of student debt?

- c. How do shifts in rankings influence the percentage of students taking on debt?
 - d. How do shift in rankings influence the percentage of minority students in a program?
 - e. How do shifts in rankings influence the number of tenure track faculty?
3. Do shifts in rankings influence admissions criteria more in the first four years of the study versus the last four years?
- a. How do shifts in rankings influence admitting GPAs in the first four years of the study versus the last four years?
 - b. How do shifts in rankings influence reliance on standardized test scores as measured by the percentage of applicants taking the Graduate Management Admissions Test (GMAT) in the first four years of the study versus the last four years?
 - c. How do shifts in rankings influence average incoming GMAT scores in the first four years of the study versus the last four years?
 - d. How do shifts in rankings influence acceptance rates in the first four years of the study versus the last four years?
4. How do shifts in rankings influence financial resources more in the first four years of the study versus the last four years?
- a. How do shifts in rankings influence per unit tuition pricing in the first four years of the study versus the last four years?
 - b. How do shifts in rankings influence the amount of student debt in the first four years of the study versus the last four years?

- c. How do shifts in rankings influence the percent of students taking on debt in the first four years of the study versus the last four years?
- d. How do shift in rankings influence the percentage of minority students in a program in the first four years of the study versus the last four years?
- e. How do shifts in rankings influence the number of tenure track faculty in the first four years of the study versus the last four years?

These research questions help guide whether there is a correlation between U.S. News & World Report rankings and institutional behavior shifts. In short, the study examines whether Online MBA programs modify their behavior in response to shifts in published rankings.

Data

The data selected for this study comprises eight years of Online MBA rankings published by U.S. News & World Report. Selected years for this study are 2015 – 2022. Of note is that USNWR publishes its rankings one year in arrears, and it is data from the year before. Data published in the 2015 rankings, for example, utilized data from applicants that were admitted and applied from the summer of 2013 through the spring of 2014. This timeline is illustrated in Appendix C.

The data for this study was compiled by accessing the U.S. News & World Report annual rankings of online MBA rankings published every January. During the study years 2015–2020, each data point was accessed via <https://usnews.com/educaton/online-education/mba/rankings>. The data for each school was obtained on the page for each school published in the annual rankings mentioned above. Each data point was then added to an excel spreadsheet. In 2021, the University purchased a database directly from USNWR entitled Academic Insights. This database was produced by USNWR and contained all the data reported to them for each question

on their survey for each school that responded. I was granted access to this and was trained to pull the data for 2021 and 2022 directly from it. This data is more reliable than a website; thus, the data points for study years 2015-2020 were pulled and cross-referenced with the data pulled from the website. In the few instances where they differed, the study used the data from Academic Insights.

Sample and Variables

The sample for this study was the top 100 ranked online MBA programs for each study year. In cases where several schools were tied at or near the 100 mark, the data for each of them was pulled. From 2015 to 2022, 134 individual schools hit the top 100 list. Appendix D illustrates the frequency and years that each school earned a top 100 honor. Table 2 summarizes the data from Appendix D.

Table 2-Summary of Schools in the Top 100 2015-2022	
Number of Schools on the List for:	Number
8 Years	48
7 Years	21
6 Years	12
5 Years	10
4 Years	9
3 Years	7
2 Years	11
1 Year	16

The dataset for this study consisted of the following variables:

1. Year
2. Rank
3. Undergraduate GPA
4. Admitting GMAT Score
5. Percent of New Enrollees Taking GMAT
6. Acceptance Rate
7. Tuition Cost Per Unit
8. Average Indebtedness of Students in Program
9. The proportion of Students in Programs with Student Debt
10. Number of Tenure Track Faculty
11. Percent of Minority Students Enrolled in Program

Merging and Cleaning of Data

An analysis of the descriptive statistics of 134 online MBA programs in the dataset yields the following tables and appendices; Table 3 shows the means and standard deviations for variables across eight years of data, Appendix E graphically depicts the change in means for all variables during the study period, Appendix F illustrates the Mean and Standard Deviation for all variables in total for the study years. This data is summarized in Table Three.

Table Three -Descriptive Data - 2015 - 2022 -Variables Missing

	2015	2016	2017	2018	2019	2020	2021	2022
Undergraduate GPA								
Mean	3.24	3.24	3.25	3.25	3.26	3.26	3.27	3.27
SD	0.1384	0.157	0.14	0.16	0.126	0.131	0.137	0.1357
Avg. GMAT								
Mean	534.4	538.37	535.83	545.89	549.68	551.65	549.7	552
SD	57.17	51	51.62	50.75	58.66	54.48	65.31	69.89
% Taking GMAT								
Mean	93.80%	41.70%	35.20%	28.68%	24.63%	22%	16.50%	8.47%
SD	12.76	30.48	25.66	25.01	21.65	20.31	15.38	11.32
Acceptance Rate								
Mean	70.12%	72.17%	71.98%	74.20%	74.81	77.36%	76.48%	77.96%
SD	18.11	18.56	16.64	16.4	16.38	15.81	15.57	16.99
Tuition Per Unit								
Mean	\$816.18	\$750.92	\$903.40	\$968.80	\$1,001.67	\$1,039.00	\$1,044.12	\$1,045.74
SD	\$314.69	350.18	365.57	391.72	421.4	445	466.62	480.18
Avg. Student Debt								
Mean	\$31,405.85	\$32,300.33	\$34,407.10	\$35,246.98	\$36,866.63	\$39,683.15	\$40,000.42	\$39,522.57
SD	9223.37	17526.28	17579.2	16579.92	17656.2	18043.9	20229.43	18899
% With Debt								
Mean	50%	45.15%	42.58%	44.23%	43.66%	43.25%	40.42%	38.31%
SD	19.54	19.11	17.3	16.79	18.07	16.06	16.3	15.01
# Tenure Track Faculty								
Mean	13.3	14.97	15	16.13	16.69	16.58	16.88	18.68
SD	9.35	9.99	9.2	8.96	9.96	9.04	8.56	9.27
Percent Minority								
Mean	24.39%	25.41%	26.90%	26.58%	26.80%	27.08%	28.38%	28.54%
SD	16.87	14.4	16.17	14.65	13.75	14.29	14.09	13.5
N =	102	102	101	100	104	101	108	104

The variables were merged in SPSS. Then, descriptive statistics were run each year, identifying the Mean, Median, Mode, Standard Deviation, minimum, and maximum data points.

In this data, several trends for each variable stood out.

- **Mean Undergraduate GPA** – This variable shows a steady (if stepped) increase over the study years. For example, in 2015, the Mean Undergrad GPA was 3.24, which increased to 3.27 by 2022, and this is only a .03 increase over eight years.
- **Average GMAT Score** – This variable also shows a steady increase over time, with the lowest average score occurring in 2015 (534.4) and the highest in 2022 (552). This represents an eighteen-point increase.
- **The Percent of Enrolled Students Taking the GMAT** – This variable was one of two variables that decreased over time. During year one of the study, this percentage was 93.8%. By 2022 this percentage was 8.47%. One explanation for this can be found in reviewing what happened to the Fox School of Business at Temple University. In 2015, the Fox School of Business was ranked #1. They reported that 100% of their enrolled students took the GMAT. This falsely reported data was an intentional exaggeration; only 19.6% of their enrolled students took the GMAT. Other schools followed their lead and reported the same 100% of enrolled students taking the GMAT. In fact, for 2015, the Mode percentage of enrolled students taking the GMAT was 100%. When USNWR found out that the Fox School of Business had falsified this data, they were stripped of their #1 ranking, and the Dean was brought up on charges of Fraud. When other online MBA programs heard about this, they began to answer this survey question with the actual percentage of enrolled students that took the

GMAT, noticeably less than 100%. In addition to schools being more honest in reporting this, COVID 19 hit in 2020 and closed GMAT testing centers. This pandemic led to most schools waiving this requirement for 2020 and 2021. These two factors help explain the decrease in this variable.

- **Acceptance Rate** – This variable also increased over time. For example, in 2015, the Mean Acceptance Rate was 70.12%, and by 2022 this had risen to 77.96%, an increase of 7.84%.
- **Per Unit Tuition Cost** - This variable showed a steady increase starting at \$816.18 and increasing to \$1,045.74 by 2022. While one reason for this may be inflation, it represents a 28% increase over eight years, which may not be the only factor affecting this.
- **Average Student Debt** – This variable increased over time and went from \$31,405 to \$39,522. This is a 26% increase, which may be due to the per-unit tuition cost mentioned above.
- **Percent of Students with Debt** – This is one of two variables that decreased over time. The Mean for this variable was 50% in 2015 and dropped to 38.31% in 2022. Additionally, while average student debt increased, the percentage of students taking on debt decreased. One explanation for this might be how this is reported at each institution. For most institutions, data on student debt is stored in the financial aid department, separate from the programs themselves. This data is frequently unavailable to program administrators and is often not answered on the USNWR survey. This question is the most unanswered question of all the variables in this study. The ability to collect this data may skew the results.

- **The number of Tenure Track Faculty** – this variable showed a significant increase of 40% during the study years. In 2013 the Mean number of tenure track faculty was 13.3; by 2022, it rose to 18.68. One probable reason for this is that the percent of the total rankings attributed to faculty went from 11% to 15%, thus incentivizing schools to increase their tenure track faculty to improve their rankings.
- **Percentage of Minority Students** – This variable showed a modest increase of 17% during the study years.

Of note, regarding the data set, is the fact that some data points are missing. This lack of data reporting occurs for one of two reasons. One, the school does not wish to report the data. For example, because the data is published, a school may not wish to provide their average incoming GMAT score if this number is much less than the national average. The second reason may be that the school cannot provide the data. An example of this instance is typically found in financial aid data. USNWR asks schools to provide data on the percentage of students utilizing financial aid and the average amount of this is. However, for most schools, financial aid data is some of its most sensitive data, and therefore select few have access to it. This can mean that the administrators and analysts who supply data to USNWR do not have access to this data and therefore do not provide it.

Additionally, the data set has missing data in terms of data for specific years. In this study, some schools entered the top 100 rankings for only one year, while others were part of the rankings for all eight years.

To account for the missing data, the data for this study was imputed. Data imputation is a process where estimated values are substituted for missing data. For this study, the average value for a given variable during a given year was substituted for missing data. The differences between the two data sets were minimal. Table Four illustrates Descriptive Data with variables having data points (via data imputation).

Table Four Descriptive Data - 2015 - 2022 -Variables Added

	2015	2016	2017	2018	2019	2020	2021	2022
Undergraduate GPA								
Mean	3.23	3.23	3.25	3.25	3.26	3.26	3.27	3.27
SD	0.12931	0.149	0.136	0.16	0.126	0.13	0.1364	0.1357
Avg. GMAT								
Mean	537.05	539.9	536.64	545.77	548.78	550.56	548.88	552.06
SD	49.47	44.61	49.31	47.85	53.01	50	59.79	61.21
% Taking GMAT								
Mean	84.42%	40.56%	35.10%	29.11%	26.65%	24%	19.40%	8.47%
SD	24.78	28.25	24.48	24.03	19.9	18.97	15.49	9.92
Acceptance Rate								
Mean	70.75%	72.31%	71.97%	74.20%	74.78	77.31%	76.48%	77.96%
SD	16.78	18	16.64	16.4	15.65	15.66	15.57	16.92
Tuition Per Unit								
Mean	\$830.58	\$762.61	\$903.85	\$968.40	\$997.18	\$1,038.16	\$1,043.25	\$1,045.74
SD	299.96	342.86	363.77	387.75	402.85	443.74	466.52	480.18
Avg. Student Debt								
Mean	\$33,609.25	\$34,199.26	\$35,080.90	\$35,513.61	\$39,292.74	\$39,419.95	\$39,559.45	\$39,522.57
SD	12106.78	31707.5	15165	15285.62	15795.51	17136.53	18685.95	17861.57
% With Debt								
Mean	47%	44.43%	42.67%	44.07%	43.51%	43.24%	40.71%	38.31%
SD	15.44	15.6	15.38	15.61	15.94	15.42	15.38	14.5
# Tenure Track Faculty								
Mean	13.48	15	15.04	16.13	16.36	16.58	16.88	18.68
SD	9.052	9.83	9.153	8.96	9.47	9	8.55	9.27
Percent Minority								
Mean	27.72%	25.60%	26.85%	26.58%	26.80%	27.08%	28.38%	28.54%
SD	15.68	13.39	15.76	14.34	12.92	14.22	13.96	13.5
N =	102	102	101	100	104	101	108	104

Data Analysis

Cross-sectional time-series data were utilized in this study to describe a causal relationship over time between the dependent variables and ranking. Rankings have a hierarchical structure, so linear models cannot analyze this data because doing so would "violate the assumption of independence (Raudenbush & Bryk, 2002). The data for this study is a panel

dataset with data over eight years with multiple observations across time. For this reason, fixed-effects (panel) regression by way of the “Least Squares Dummy Variable approach in SBSS was utilized (Crowson, 2021). Fixed effects (F.E.) can be valuable for analyzing causal relationships (Gangl, 2010). Panel data for this study was set up in a wide format, with each school and dependent variable measured chronologically by year. To perform the F.E. panel regression for this study, the data had to be changed from wide format to long format utilizing SPSS. Dummy variables were added to the data to indicate the absence or presence of the categorical data. In this case, the name of each institution in this study.

According to Best and Wolf, the equation for a fixed-effect panel regression is:

$$y_{it} = \mathbf{x}_{it}\boldsymbol{\beta} + \alpha_i + \epsilon_{it}.$$

Where:

y_{it} is the dependent variable (DV); where i = entity and t = time

X_{it} is the (1 X K) vector of covariates

$\boldsymbol{\beta}$ is the corresponding (K X 1) vector of parameters to be measured

α_i is the unobserved effects that capture time constant individual heterogeneity

ϵ_{it} is the error term (Best & Wolf, 2015, p. 328).

Limitations of the Study

This study has limitations with both external and internal validity. Internal validity allows confidence and helps establish the degree to which the relationship between dependent and independent variables can be established. In this study, the data is self-reported and therefore not verified. Self-reported data is subject to the accuracy of whoever submits it, and rankings can create pressure to improve self-report data or even lie about it. External validity refers to how a

study reflects what is happening in the real world. This study focuses on a subset of MBA business school programs, Online MBA programs. This is a subset of all MBA programs, and the results of this study may not be generalizable to other types of programs. Furthermore, participants (online MBA programs) know they are being observed through the survey of USNWR; therefore, the study does not have naturalistic observations.

Summary

This chapter outlined the methodology used in this research. Each dependent variable was described, and the data analysis procedure was outlined. Additionally, limitations of the study were presented. Finally, Chapter Four will present the findings of the analysis.

Chapter 4 - RESULTS

The research questions for this study focus on the relationship (if any) between USNWR rankings of online MBA programs and admissions criteria and financial resources. Additional research questions focus on the possible differences between the first years of USNWR published online MBA rankings and the most recent years. The study results presented in this chapter covered each research question and were analyzed using SPSS 28. The organization of the results is by their respective research question across all eight years of the study and then by study years 2015-2018, and finally by study years 2019 – 2022. Each model controlled for UGRAD GPA, percentage of applicants submitting a GMAT score, average incoming GMAT score, per-unit tuition pricing, average student debt, the proportion of students with debt, the percentage of minority students, and the number of tenure track faculty but only statistically significant results are reported.

Research Question 1

For U.S. Online MBA programs: Is there a relationship between shifts in rankings and admissions criteria?

1a) Is there a relationship between shifts in rankings and admitting GPAs?

Data Table 5.1 UGRAD GPA -Dependent Variable: UGRAD GPA -2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.001	.000	**
Per-Unit Tuition	6.204E-5	.000	*

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary**2015-2022**

Model	R²	Adjusted R²	Sig. F Change
1	.619	.520	<.001
2	.637	.537	<.001

The results also show an adjusted R-squared (R²) value of .537 in model two. Model two includes all nine of the dependent variables included in the study. R-squared values measure the amount of variation for a given dependent variable explained by an independent variable or variables. In this case, 53.7% of the variation in UGRAD GPA in this study can be explained by the other eight variables.

The results show that for each one-unit change in Tuition Per Unit, there is a .000062 change in UGRAD GPA. This result is a small but statistically significant change. Finally, the model shows that for each one-unit change in rankings (a decrease), a decrease in UGRAD GPA of .001. This result suggests that in terms of UGRAD GPAs, as rankings improve, so does the average admitting GPA.

In this model, the Coefficients Standard Error is zero (0). This result is because the UGRAD GPAs reported in this study are close in value. Over the eight years of this study, UGRAD GPA only varied from 3.23 to 3.27, and this difference is only .04. Data for UGRAD GPAs would need to be turned in as percentage or categorical data to investigate this relationship further.

1b) Is there a relationship between shifts in rankings and the average percentage of admitted students submitting a GMAT score?

Data Table 5.2-Dependent Variable: Percentage of Admitted Students Submitting a GMAT Score -2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.264	.057	***
UGRAD GPA	-36.228	10.154	***
Average GMAT Score	-.085	.030	**
Acceptance Rate	-.302	.091	***
Per-Unit Tuition	-.033	.007	***
Proportion with Debt	.238	.089	**
Number of Tenure Track Faculty	-.666	.212	**
Percentage of Minority Students	-.471	.132	***

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015-2022

Model	R ²	Adjusted R ²	Sig. F Change
1	.378	.217	<.001
2	.480	.336	<.001

This model shows that for each one-unit increase in UGRAD GPA, the percentage of applicants submitting a GMAT score decreases by 36.23%. This finding may be because most

schools waive GMAT requirements for high GPAs; therefore, fewer students may be required to submit a GMAT score as average incoming GPAs increase. Additionally, for each one-unit increase in average GMAT score, the percentage of applicants submitting a GMAT score decreases by .085%. This relationship may be explained by USNWR asking schools to report an average GMAT score. As these increases, schools may feel they do not need as many students to submit a GMAT score.

The model also shows that for each one-unit increase in acceptance rates, the percentage of students submitting a GMAT score decreases by .302%. One reason for this may be that schools with higher acceptance rates may be more likely to waive GMAT requirements.

Additional influences on the percentage of students submitting a GMAT score are tuition per unit (one-unit increases in GMAT scores, decreases tuition by .033), the proportion of students with debt (one-unit increases in this increases the percentage of students submitting a GMAT score by .238%), number of tenure track faculty (each unit increase in this decreases the number of tenure track faculty by .666); and the percentage of minority students (each unit increase in this decreases the percentage of minority students by .471). One might expect that as tuition increases, fewer students may apply and therefore submit a GMAT score. One might also expect that as the percentage of minority students increases, the percentage of students submitting a GMAT score decreases. This result may be because research shows that minority students score lower on standardized tests and, therefore, may not submit GMAT scores.

The final findings of this model suggest that as the proportion of students with debt increases by one unit, the percentage of students with debt also increases by .238, and as the number of tenure track faculty increases by one unit, the percentage of students taking the GMAT decreases by .471. A positive relationship between the proportion of students with debt

and the percentage of students taking the GMAT may exist. As more students interested in applying to graduate programs submit GMAT scores, they may incur student debt. The negative relationship between increasing the number of tenure track faculty and decreasing the percentage of students submitting a GMAT score is puzzling. As schools increase the number of tenure track faculty, the reliance on more students taking the GMAT to improve rankings may decrease. USNWR weights the tenure track faculty category higher than the percent of students taking the GMAT category.

Rankings also influence the percentage of students submitting a GMAT score. This model shows that a one-unit increase in rankings (as rankings decrease) decreases the percentage of students submitting a GMAT score by .264. This result makes sense as higher-ranked schools typically have more students submitting a GMAT score.

In summary, rank, UGRAD GPA, average GMAT score, acceptance rate, per unit tuition rate, the percentage of students with debt, the number of tenure track faculty, and the percentage of minority students all influence the percentage of students that submit a GMAT score. These results suggest a slightly statistically significant relationship between these variables.

1c) Is there a relationship between shifts in rankings and average admitting GMAT Scores?

Data Table 5.3 -Dependent Variable: Average Admitting GMAT Score-2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.273	.076	***
Average GMAT Score	-26.68	13.48	*
Per-Unit Tuition	-.148	.052	**

Significance codes: ‘***’ = p<0.001 ‘**’ = p< 0.01 ‘*’ = p < .05

Model Summary

2015-2022

Model	R²	Adjusted R²	Sig. F Change
1	.688	.607	<.001
2	.702	.619	<.001

Results for this model show negative influences only. Specifically, as UGRAD GPA and the percentage of students submitting a GMAT score increase by one unit, we see decreases in average GMAT scores of 26.68 points and the percentage of applicants submitting a GMAT score of .148, respectively. As schools increase the average admitting GPA, it can be expected that they can reduce reliance on standardized test scores. As they increase the percentage of students submitting a GMAT score, they can also reduce the reliance on the average score itself, as this category has less weight in the USNWR rankings than average admitting GPAs. This model shows that as ranking decreased by one unit, average GMAT scores decreased by .273. Again, this result is expected as higher ranked schools report higher average GMAT scores.

1d) Is there a relationship between shifts in rankings and acceptance rates?

Data Table 5.4 - Dependent Variable: Acceptance Rates -2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	.087	.025	***
Percentage Submitting a GMAT Score	-.056	.017	***

The Proportion with Debt	-.082	.038	*
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Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015-2022

Model	R ²	Adjusted R ²	Sig. F Change
1	.661	.573	<.001
2	.684	.597	<.001

For this model, three statistically significant relationships emerged. Ranking, the percentage of students submitting a GMAT score, and the proportion of debt all influence the acceptance rate. A one-unit increase in the percentage of students submitting a GMAT score and the proportion of students with debt decreased acceptance rates by .056 and .082, respectively. Increasing the percentage of students taking the GMAT could improve (lower) acceptance rates as higher ranked schools can be more selective. Increasing the percentage of students with debt may improve (lower) acceptance rates if lower acceptance rates suggest that more selective schools can decrease students' scholarships and therefore increase the percentage of students needing financial aid to attend.

Research Question 2

For U.S. Online MBA programs: Is there a relationship between shifts in rankings and financial resources?

2a) *Is there a relationship between shifts in rankings and Per Unit Tuition Pricing?*

Data Table 5.5 -Dependent Variable: Per Unit Tuition Pricing -2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
UGRAD GPA	122.61	55.22	*
Percentage Submitting a GMAT score	-.963	.210	***
Average Student Indebtedness	.002	.001	***
The Proportion with Debt	-1.085	.481	*

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015-2022

Model	R ²	Adjusted R ²	Sig. F Change
1	.911	.888	<.001
2	.919	.897	<.001

In this model, two slightly statistically significant relationships emerge, and two highly statistically significant relationships emerge. The percentage of students submitting a GMAT score and average student indebtedness slightly influence per unit tuition pricing. A one-unit increase in the percentage of students submitting a GMAT score decreases Per Unit Tuition Pricing by .963. One would expect a positive relationship between the percentage of students submitting a GMAT score and per unit tuition pricing. Average student indebtedness is positively related to per-unit tuition pricing as one-unit increases, increasing per-unit tuition pricing slightly by .002. This result is not significant.

The influence of UGRAD GPA and the proportion of students with debt show highly statistically significant results. A one-unit increase in UGRAD GPA increases per unit tuition pricing by 122.61. Schools with higher admitting GPAs are typically higher ranked and therefore believe they can charge a higher tuition amount. A one-unit increase in the proportion of students with debt decreases per-unit tuition pricing by 1.085. Schools with increasing student debt may believe they need to keep tuition pricing at a minimum to alleviate the debt burden on students and maintain enrollment in their programs.

2b) Is there a relationship between shifts in rankings and average student indebtedness

Data Table 5.6 - Dependent Variable: Average Student Indebtedness -2015-2022

	Unstandardized β	Coefficients Std. Error	Statistically Significant
Percent of Students Submitting a GMAT Score	-32.20	15.53	*
Per Unit Tuition Pricing	13.06	2.836	***
The Proportion with Debt	166.80	34.70	***

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015-2022

Model	R ²	Adjusted R ²	Sig. F Change
1	.685	.604	<.001
2	.712	.633	<.001

This model shows two slightly statistically significant relationships and one highly statistically significant relationship. Per unit tuition pricing and the proportion of students with debt show slightly statistically significant relationships with average student indebtedness. One-

unit increases in average student indebtedness by 13.06 and 166.80, respectively. One would expect that tuition increases and increasing the percentage of students with debt would naturally increase average student indebtedness. However, one-unit increases in average incoming GMAT scores decrease average student indebtedness by 32.20. The finding is expected as students with higher GMAT scores may receive scholarships and reduce their reliance on financial aid.

2c) *Is there a relationship between shifts in rankings and average student indebtedness?*

Data Table 5.7 - Dependent Variable: Proportion of Students with Debt-2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Percentage of Students Submitting	.046	.017	**
GMAT Score			
Acceptance Rate	-.086	.040	*
Per Unit Tuition Pricing	-.007	.003	*

Significance codes: ‘***’ = $p < 0.001$ ‘**’ = $p < 0.01$ ‘*’ = $p < .05$

Model Summary

2015-2022

Model	R ²	Adjusted R ²	Sig. F Change
1	.595	.489	<.001
2	.620	.515	<.001

This model shows that acceptance rate and per-unit tuition pricing exhibit a highly statistically significant relationship with the proportion of students with debt. A one-unit increase in acceptance rate (acceptance rate gets worse) decreases the proportion of students with debt by .086. A one-unit increase in per-unit tuition pricing slightly decreases the proportion of students

with debt by .007. One would expect fewer students to apply to a program and take on student debt as tuition increases. It is also highly likely that schools with higher acceptance rates are not viewed as elite as schools with lower acceptance rates, and therefore fewer students will apply and take on debt.

Additional influences on the proportion of students with debt include the percentage of students submitting a GMAT score. A one-unit increase in the percentage of students submitting a GMAT score increases the proportion of students with debt by .046.

2d) Is there a relationship between shifts in rankings and the percentage of minority students?

Data Table 5.8 - Dependent Variable: Percentage of Minority Students - 2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Percent Taking the GMAT	-.041	.012	***

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015-2022

Model	R ²	Adjusted R ²	Sig. F Change
1	.789	.734	<.001
2	.796	.740	.008

2e) Is there a relationship between shifts in rankings and the number of tenure track faculty?

Data Table 5.9 - Dependent Variable: Number of Tenure Track Faculty -2015-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.037	.011	***
Percent Submitting a GMAT score	-.023	.007	**

Significance codes: ‘***’ = p<0.001 ‘**’ = p< 0.01 ‘*’ = p < .05

Model Summary

2015-2022

Model	R²	Adjusted R²	Sig. F Change
1	.801	.749	<.001
2	.811	.759	<.001

These results indicate that for each one unit decrease in rankings, the number of tenure track faculty decreased by .037, and the percentage submitting a GMAT score decreased by .023. As rankings worsen, the number of tenure track faculty and the percentage of applicants submitting a GMAT score decreases slightly.

Table Six summarizes these results.

**Table 6- Summarized Results-Unstandardized β Results- 2015-20227
Dependent Variable in Model Two**

Other Variables	UGRAD GPA	Percent Taking GMAT	GMAT Score	A. Rate	Per-Unit Tuition	Student Debt	Pro. With Debt	Percent Minority	Number Tenure Track Faculty
Rank	X	X	X	X					X
UGRAD GPA		X			X				
Percent Tanking GMAT				X	X	X	X	X	X
GMAT Score		X	X						
Acceptance Rate		X					X		
Per-Unit Tuition	X	X	X			X	X		
Average Student Debt					X				
Proportion with Debt		X		X	X	X			
Percent Minority Students		X							
Number Tenure Track Faculty		X							

“X” indicates a statistically significant relationship between variables.

Results over eight years of this study yield 29 relationships, illustrated in the table above. The table also shows that the percentage of students taking the GMAT has a statistically significant relationship to all the other dependent variables, except for average student debt. The table illustrates that shifts in rankings influence undergraduate GPA, the percentage of students taking the GMAT, average incoming GMAT score, acceptance rate, and the number of tenure track faculty. The most significant of these relationships is the influence rankings have on the percentage of applicants submitting a GMAT score and the average incoming GMAT score.

Research Question 3

For U.S. Online MBA programs: Do shifts in rankings influence admissions criteria more in the first four years of the study versus the last four years?

3a) Is there a difference in how shifts in rankings influence admitting GPAs in the first four years of the study versus the last four years?

Data Table 5.10 -Dependent Variable: UGRAD GPA -2015-2018

	Unstandardized β	Coefficients Std. Error	Statistically Significant
Rank	-.002	.000	***
Number Tenure Track Faculty	-.003	.002	*

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015-2018

Model	R ²	Adjusted R ²	Sig. F Change
1	.707	.553	<.001

2 .730 .573 .012

For study years 2015 – 2018, rank and the number of tenure track faculty influenced UGRAD GPA. A one-unit increase in rank (rankings got worse) resulted in a .002 decrease in UGRAD GPA, while a one-unit increase in the number of tenure track faculty resulted in a slight decrease (.003) in UGRAD GPA. The model did not yield any significant relationships for 2019-2022, and these results differ from 2015-2022, where the model found a statistically significant relationship between UGRAD GPA and rank and per-unit tuition.

3b) Is there a difference in how shifts in rankings influence the percentage of applicants submitting a GMAT score during the first four years of the study versus the last four years?

Data Table 5.11 - Dependent Variable: Percentage of applicants submitting a GMAT Score -2015-2018

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.651	1.48	***
UGRAD GPA	-42.893	19.79	*
GMAT Score	-.193	.075	*
Percentage of Minority Students	-.503	.238	*

Significance codes: ‘***’ = $p < 0.001$ ‘**’ = $p < 0.01$ ‘*’ = $p < .05$

Model Summary

2015 - 2018

Model	R ²	Adjusted R ²	Sig. F Change
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1	.414	.107	.20
2	.485	.188	<.001

Data Table 5.12 -Dependent Variable: Percentage of applicants submitting a GMAT Score -2019-2022

	Unstandardized β	Coefficients Std. Error	Statistically Significant
Number Tenure Track Faculty	-.491	.166	**

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015 - 2018

Model	R ²	Adjusted R ²	Sig. F Change
1	.639	.475	<.001
2	.659	.489	.056

The percentage of applicants providing a GMAT score was negatively influenced by rank, UGRAD GPA, GMAT score, and the percentage of minority students for study years 2015-2018. For study years 2019-2022, only the number of tenure track faculty negatively influenced this variable. Again, this differs vastly from the results shown over all eight years of the study when all study variables, except average student indebtedness, influenced the percentage of students providing a GMAT score.

3c) Is there a difference in how shifts in rankings influence average incoming GMAT scores during the first four years of the study versus the last four years?

Data Table 5.13 - Dependent Variable: Average Incoming GMAT Score -2015-2108

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.317	.126	*
Percent Taking GMAT	-.133	.051	*
Proportion with Debt	.351	.150	*

Significance codes: '****' = $p < 0.001$ '***' = $p < 0.01$ '**' = $p < .05$

Model Summary

2015 - 2018

Model	R ²	Adjusted R ²	Sig. F Change
1	.812	.714	<.001
2	.827	.727	.013

Data Table 5.14 - Dependent Variable: Average Incoming GMAT Score -2019-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
UGRAD GPA	-92.47	25.84	***

Significance codes: '****' = $p < 0.001$ '***' = $p < 0.01$ '**' = $p < .05$

Model Summary

2019 - 2022

Model	R ²	Adjusted R ²	Sig. F Change
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1	.704	.569	<.001
2	.724	.585	.020

This model shows that during 2015-2018, average incoming GMAT scores were influenced by rank, percentage of applicants taking the GMAT, and the proportion of students with debt, while only UGRAD GPA influenced average GMAT scores for 2019-2022. Over the entire study, rank, UGRAD GPA, and the percentage of applicants providing a GMAT score influenced average incoming GMAT scores.

3d) For U.S. Online MBA programs: Is there a difference in how shifts in rankings influence acceptance rates in the first four years of the study versus the last four years?

Data Table 5.15 - Dependent Variable: Acceptance Rate - 2015-2108

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	.132	.053	**
Proportion with Debt	-.132	.063	*

Significance codes: '****' = p<0.001 '***' = p< 0.01 '**' = p < .05

Model Summary

2015-2018

Model	R ²	Adjusted R ²	Sig. F Change
1	.741	.606	<.001
2	.760	.621	.025

Data Table 5.16 - Dependent Variable: Acceptance Rate - 2019-2102

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	.073	.036	*

Significance codes: ‘***’ = p<0.001 ‘**’ = p< 0.01 ‘*’ = p < .05

This model shows that rank influenced acceptance rates for 2015-2018 and 2019-2022. Additionally, the model shows that the proportion of students with student debt influenced the acceptance rate from 2015to 2018. However, this differs from the results over all eight years of the study in that the percentage of applicants providing a GMAT score influenced acceptance rates.

Research Question Four

For U.S. Online MBA programs: Is there a difference in the relationship between shifts in rankings and financial resources during the first four years of the study versus the last?

4a) Is there a difference in the relationship between shifts in rankings and Per Unit Tuition Pricing during the first four years of the study versus the last?

No relationships exist for 2015-2018, which is also true for 2019-2022. This differs from results over all eight years of the study, which found that UGRAD GPA, the percentage of applicants taking the GMAT, average student indebtedness, and the proportion of students with debt influenced per-unit tuition.

4b) Is there a difference in the relationship between shifts in rankings and average student indebtedness during the first four years of the study versus the last?

Data Table 5.17 -Dependent Variable: Average Student Indebtedness-2015-2108

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Proportion with Debt	219.45	52.93	***

Significance codes: '***' = $p < 0.001$ '**' = $p < 0.01$ '*' = $p < .05$

Model Summary

2015 - 2018

Model	R ²	Adjusted R ²	Sig. F Change
1	.715	.565	<.001
2	.741	.591	.003

This model shows that for study years 2015-2018, with a one-unit increase in the proportion of students with debt, average student indebtedness increased by 219.45. No significant results were noted for study years 2019-2022. Over the entire study, the percentage of applicants providing a GMAT score, per-unit tuition pricing, and the proportion of students with debt influenced average student indebtedness.

4c) Is there a difference in the relationship between shifts in rankings and the proportion of students with debt during the first four years of the study versus the last?

Data Table 5.18 - Dependent Variable: Proportion with Debt- 2015-2108

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant

Average GMAT Score	.060	.025	*
Acceptance Rate	-.128	.061	*

Significance codes: ‘****’ = p<0.001 ‘***’ = p< 0.01 ‘**’ = p < .05

Model Summary

2015 - 2018

Model	R ²	Adjusted R ²	Sig. F Change
1	.686	.522	<.001
2	.722	.561	<.001

This model shows that from 2015-to 2018, for every one-unit increase in average incoming GMAT scores, average student indebtedness increases by .060. However, the model also shows that for every one-unit increase in acceptance rate, average student indebtedness decreases by .128. Again, this differs from results seen over all eight years of the study, which indicate that the percentage of applicants submitting a GMAT score, acceptance rate, per-unit tuition, and average student indebtedness all influence the proportion of students with debt.

4d) Is there a difference in the relationship between shifts in rankings and the percentage of minority students during the first four years of the study versus the last?

Data Table 5.19 - Dependent Variable: Percentage of Minority Students -2015-2108
Unstandardized Coefficients Statistically

	β	Std. Error	Significant
Percent Taking GMAT	-.034	.016	*

Significance codes: ‘***’ = $p < 0.001$ ‘**’ = $p < 0.01$ ‘*’ = $p < .05$

Model Summary

2015 - 2018

Model	R²	Adjusted R²	Sig. F Change
1	.814	.717	<.001
2	.821	.718	.369

The percentage of applicants providing a GMAT score is the only variable influencing this model's percentage of minority students. Specifically, the model shows that for every one-unit increase in the percentage of applicants providing a GMAT score, the percentage of minority students decreases by .034. No significant relationships were shown in the study years 2019-2022. These results are remarkably similar to those seen over all eight years of the study, which showed that for every one-unit increase in the percentage of applicants providing a GMAT score, the percentage of minority students decreased by .041.

4e) Is there a difference in the relationship between shifts in rankings and the number of tenure track faculty during the first four years of the study versus the last?

Data Table 5.20 - Dependent Variable: Number of Tenure Track Faculty -2015-2108

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
UGRAD GPA	-5.573	2.5	*

Significance codes: ‘***’ = p<0.001 ‘**’ = p< 0.01 ‘*’ = p < .05

Model Summary

2015 - 2018

Model	R²	Adjusted R²	Sig. F Change
1	.888	.829	<.001
2	.893	.831	.206

Data Table 5.21- Dependent Variable: Number of Tenure Track Faculty -2019-2022

	Unstandardized	Coefficients	Statistically
	β	Std. Error	Significant
Rank	-.046	.018	**

Significance codes: ‘***’ = p<0.001 ‘**’ = p< 0.01 ‘*’ = p < .05

Model Summary

2015 - 2018

Model	R²	Adjusted R²	Sig. F Change
1	.821	.740	<.001
2	.833	.749	.02

This model shows that for study years 2015-2018, UGRAD GPA influences the number of tenure track faculty, while for study years 2019-2022, rank influences the number of tenure track faculty. This differs slightly from results shown over all eight years of the study, which show that rank and the percentage of applicants providing a GMAT score influence the number of tenure track faculty.

Summary

Study years 2015-2018 and 2019-2022 are summarized in tables 7 and 8 below.

**Table 7- Summarized Results-Unstandardized β Results- 2015-2018
Dependent Variable in Model 2**

Other Variables	UGRAD GPA	Percent Taking GMAT	GMAT Score	A. Rate	Per-Unit Tuition	Student Debt	Pro. With Debt	Percent Minority	Number Tenure Track Faculty
Rank	X	X	X	X					
UGRAD GPA		X							X
Percent Tanking GMAT			X					X	
GMAT Score		X					X		
Acceptance Rate							X		
Per-Unit Tuition									
Average Student Debt									
Proportion with Debt			X	X		X			
Percent Minority Students		X							
Number Tenure Track Faculty	X								

"X" indicates a statistically significant relationship between variables.

**Table 8- Summarized Results-Unstandardized β Results- 2019-2022
Dependent Variable in Model 2**

Other Variables	UGRAD GPA	Percent Taking GMAT	GMAT Score	A. Rate	Per-Unit Tuition	Student Debt	Pro. With Debt	Percent Minority	Number Tenure Track Faculty
Rank				X					X
UGRAD GPA			X						
Percent Tanking GMAT									
GMAT Score									
Acceptance Rate									
Per-Unit Tuition									
Average Student Debt									
Proportion with Debt									
Percent Minority Students									
Number Tenure Track Faculty		X							

“X” indicates a statistically significant relationship between variables.

Results from this analysis differ when looking at the study over eight years versus splitting the study into the first four years versus the last four years. As previously stated, results over all eight years of the study yielded 29 relationships, while the first four years yielded only 16 relationships, and in the last four years, only four. The influence of rankings was different as well. For the first four years, rankings influenced UGRAD GPA, the percentage of applicants submitting a GMAT score, average incoming GMAT score, and acceptance rate. Rankings only influenced two variables in the last four years of the study, acceptance rate and the number of tenure track faculty. The closing chapter will discuss these findings and suggestions for future research and practitioners.

Chapter 5 – CONCLUSION

Ranking systems permeate the higher education industry. They gained popularity over the past several decades as they claim to offer applicants the ability to compare the quality of colleges and universities (Brown, 2009). The entry of commercial ranking entities increased the importance of college rankings and prompted widespread attention of scholars and consumers.

As discussed in the previous chapters, the research questions in this study focus on the influence online MBA program rankings has on admissions criteria and allocation of resources. Research at the graduate level is limited; this is even truer regarding online programs. This study filled the void by analyzing the influence rankings have on graduate-level (MBA) online programs as previous studies on rankings' influence on the behavior of colleges and universities focused on undergraduate programs.

This study analyzed how one rankings entity (USNWR) influenced the behavior of online MBA programs in pursuit of higher rankings. Overall, the results of this dissertation indicate that online MBA rankings influence over time, even given the fact that they are new (2013). However, the behaviors they influence differ over time, as does their level of influence.

Discussion of Key Findings

Research Question One

For study years 2015-2022, is there a relationship between shifts in online MBA rankings and admissions criteria defined by undergraduate GPAs, the percentage of admitted students submitting a GMAT score, average incoming GMAT scores, and acceptance rates.

The model shows that rankings influence undergraduate GPA, the percentage of applicants submitting a GMAT score, average incoming GMAT scores, and acceptance rates; all four of the independent variables in this study measure admissions criteria. This finding is

significant and suggests that colleges and universities alter admission criteria and the number of tenure track faculty to pursue higher rankings. What is interesting is that they have different amounts of influence.

Results show that as rankings decrease, undergraduate GPAs only decrease by .001. This decrease is minimal. It suggests rankings need to decrease significantly before undergraduate GPAs decrease. The model further shows that as rankings decrease, the percentage of applicants submitting a GMAT score decreases. This influence is more significant. Specifically, the model shows that for each one-unit decrease in rankings, the percentage of students submitting a GMAT score decreases by .264. Rankings also influence the average incoming GMAT score. Results show that a one-unit decrease in rankings decreases these test results by .273. This result is a reasonably considerable influence and again more influential than undergraduate GPAs.

Finally, the model suggests that a one-unit decrease in rankings decreases acceptance rates by .087 and the number of tenure track faculty by .037.

In summary, the model shows that as rankings fall, schools decrease their admissions criteria. This result is not surprising and suggests that the opposite is true; as schools seek to improve rankings, they increase admissions criteria, increasing barriers that could negatively influence marginalized students. What is interesting about these results is that the influence is small; rankings need to increase or decrease substantially to influence admissions criteria significantly.

The Adjusted R^2 values were strong in each of these relationships. They were as follows:

Table 9 – Adjusted R^2 Values

Independent Variable	R^2	Adjusted R^2 – Model 2
UGRAD GPA	.637	.537

Percentage of Applicants with GMAT Score	.48	.336
Incoming Average GMAT Score	.702	.619
Acceptance Rate	.684	.597
Number of tenure track faculty	.811	.759

The R^2 value shows that for all the variables (UGRAD GPA, average incoming GMAT score, acceptance rate, and the number of tenure track faculty), over 60% of the variation is explained by the model. The adjusted R^2 helps explain that after taking the number of covariates into account, this model explains over 50% of the variation in the same three variables. These variables are highly related to one another. This finding is not surprising as the survey USNWR uses to rank online MBA programs is, for the most part, transparent. Except for Peer Rankings, which account for 25%, all categories and weights are clearly defined. Schools that wish to improve their rankings are given precise data on how. USNWR provides schools with methodology and category weights that indicate that schools with higher undergraduate

GPA's, average incoming GMAT scores, higher percentages of applicants submitting GMAT scores, and lower acceptance rates will see higher rankings.

One final finding emerged in the results from question one. While rankings influenced all four variables regarding admissions criteria, no other variable had this influence. In addition, per-unit tuition pricing was the only variable to influence two or more of the admission criteria variables (percentage of students submitting a GMAT score and average incoming GMAT score).

Research Question Two

For study years 2015-2022, is there a relationship between shifts in online MBA rankings and financial resources as defined by per-unit tuition pricing, average student indebtedness, the proportion of students with debt, the percentage of minority students, and the number of tenure track faculty?

The model shows that shifts in rankings only influence one of these variables, the number of tenure track faculty. Specifically, the model shows that for every one-unit decrease in rankings, the number of tenure track faculty also decreases by .037. This result is not surprising; 9% of the total ranking score in the USNWR survey is attributed to the number of tenure track faculty a school has. Schools with a higher number of tenure track faculty are ranked more favorably than those with fewer tenure track faculty.

What is surprising about these results is that the only financial resource to influence rankings is the number of tenure track faculty. Per-unit tuition pricing, student debt, the proportion of students with debt, and the percentage of minority students show no statistically significant relationship. Of these, per-unit tuition pricing is the most surprising. Over the eight years of the study, per-unit tuition pricing steadily increased from an average of \$816.18 to an average of \$1,045.74. This result is a 28% increase. It could be expected that some of this could be attributed to schools increasing tuition as their rankings improved. However, the model does not indicate this. Instead, the model indicates that per-unit tuition pricing influences undergraduate GPA, the percentage of applicants submitting a GMAT score, average incoming GMAT scores, average student debt, and the proportion of students with debt. This result is expected as increased tuition increases student debt and the proportion of students with debt. It also makes sense that increased tuition would result in higher undergraduate GPAs and GMATs.

Again, the lack of evidence suggesting that increased rankings do not influence per-unit tuition pricing is surprising.

One reason for the lack of evidence to support a correlation between improving rankings and increasing tuition might be competition. In 2015, 151 online MBA programs participated in the USNWR rankings; by 2022, this number increased to 328. This result is a 117% increase in online MBA programs. As more schools create online MBA programs, the market for students gets smaller. The irony here is that competition usually brings down prices. Unfortunately, this is not the case for the online MBA program. One way to help schools compete may be price. Schools may keep tuition down to compete with all the new schools entering the market, especially in price-sensitive markets like California and Texas, where students can choose from several schools.

Research questions three and four evaluate the differences in how shifts in rankings influence admissions criteria and financial resources between study years 2015-2018 and study years 2019-2022.

Research Question Three

Is there a difference in the relationship between shifts in online MBA rankings and admissions criteria defined by undergraduate GPAs, the percentage of admitted students submitting a GMAT score, average incoming GMAT scores, and acceptance rates between study years 2015-2018 and 2019-2022?

The model shows related results between all eight years of the study and the first four years. Specifically, rankings are shown in this model to influence all four admission criteria variables, which is much the same way they did for all eight years of the study. Again, these influences are only slight. During all eight years of the study, rankings influenced the average

incoming GMAT the most, while rankings influenced the percentage of applicants submitting a GMAT score the most during the first four years of the study. Again, this result is just a slight difference.

The R^2 value again was high, indicating that after taking the number of covariates into account, this model explains over 50% of the variation in the same three variables. This value adds more evidence to the claim that these variables are highly related.

Results are quite different for study years 2019-2022. The model for these years shows that the only influence rankings have on admissions criteria is acceptance rates. Specifically, one-unit decreases in rank slightly decrease acceptance rates by .073. These results indicate that shifts in rankings did not influence admissions criteria from 2019-to 2022 but did from 2015-to 2018. Perhaps rankings influence the behavior of schools differently over time.

Research Question Four

Is there a difference in the relationship between shifts in online MBA rankings and financial resources as defined by per-unit tuition pricing, average student debt, the proportion of students with debt, the percentage of minority students, and the number of tenure track faculty between study years 2015-2018 and 2019-2022?

Here the model shows comparable results compared to all eight years of the study. Specifically, the model shows that rankings do not influence financial resources for study years 2015 to 2018, while for study years 2019 to 2022, they slightly influence the number of tenure track faculty.

This study shows that rankings do not influence financial resources, except for the number of tenure track faculty. The study does show, however, that rankings influence

admissions criteria. Moreover, this influence was seen more clearly during the first four years of the study than in the last four years of the study. Potential reasons for this are discussed below.

This study yielded two overarching results. The first addressed in the following section is that rankings influenced admissions criteria differently between the first four years of the study and the last. The second overarching result is that while the study shows that rankings influence admissions criteria and the number of tenure track faculty, the influence is minimal. This is discussed in the implications for practitioners section.

A Tie to the Study Theories

The complexity of organizational behavior makes it highly unlikely to describe through only one lens. Therefore, this study utilized several theories to analyze college rankings systems and their effects on organizations. Resource dependency is one of these theories. In addition, two other theories which subsequently emerged, neo-institutional theory, with its idea of the isomorphic behavior that characterizes a field of organizations, and the theory of academic capitalism, were drawn on.

Neo-institutionalism was developed in the 1970s to explain organizational behavior that did not reflect the rational behaviors examined in earlier organizational theories, such as resource dependency. Neo-institutionalism presumes a cultural rather than a rational or economic explanation for post-secondary organization and actor behavior. Because the goods produced by higher education (knowledge production) are not easily measured, it is labeled a cultural field. As a result, resources like prestige and legitimacy are sought after. Thus, colleges and universities work hard to meet the standards set forth by accreditation bodies and ranking agencies to pursue prestige and legitimacy. While neo-institutionalism explains why cultural goods get "offered up" (Gonzales & Nunez, 2014), it does not explain why cultural measures that were initially developed

for and by academics (they could define and reward it) are now being used by commercial outfits for the express reason of creating a higher education field that behaves more like the market. Gonzalez and Nunez (2014) employ a second concept to frame their research, neoliberalism, to address this concern.

Neoliberalism, like academic capitalism, focuses on the principles of the free market and downplays the importance of government oversight or public investment in public goods. It assumes that all activities and goods should be measured for comparative and competitive purposes. This theory diminishes the boundary between private and public, university and industry, and primary and applied research. It also has significant implications on resource allocation in a university and the rewarded behaviors. Thus, while neo-institutionalism explains why cultural resources such as prestige are more sought after, neoliberalism puts universities in the driver's seat as university leaders move from being responsive to external political and economic environments to being proactive in promoting neoliberal values and norms from within higher education (Slaughter, S., & Rhoades, G., 2009). These two theories can co-exist, as this study has shown.

The results of this study indicate that during the first four years of the study, colleges and universities acted as if they were in the driver's seat. They chased rankings as academic capitalists and tried to pull any levers (such as increasing admissions criteria) to improve rankings. This neoliberal behavior resulted in slightly increasing incoming GPAs, the number of applicants submitting a GMAT score, average GMAT score, and slightly decreasing acceptance rates.

This behavior changed in 2018 when former dean Moshe Porat was brought up on wire fraud charges for lying about data his school (Fox School at Temple University) supplied to

USNWR regarding their admissions criteria. News of this arrest and false data reporting became the talk of the industry. Countless articles were written about the scandal, and countless conversations occurred at industry conferences. As a result, Fox School was stripped of its number one ranking, and dean Porat was sentenced to 14 months in prison (Mulligan, 2022). A clear message was sent—lie about admissions criteria (or any other data supplied to rankings organizations) and face a potential jail sentence.

This incident could explain the change in behavior shown in this study between the first four years and the last. It is not feasible to believe that Fox School was the only school that lied about admissions criteria between 2015 and 2018. The results of this study support this statement. This study shows that schools reported that 47.3 % of applicants submitted a GMAT score from 2015 to 2018, while the reported average from 2019-to 2022 was 19.63%. Schools started to behave more rationally after this scandal and sought to improve rankings by acting more homogenous through the lens of neo-institutionalism.

The work of scholar Pam Tolbert supports this assumption. She found that theories that currently guide research do not have to be competitive. Instead, they could complement one another. (Tolbert, 1985, p. 12). Her research shows that one theory may be more predictive at different points in time than another. Specifically, her research suggests that by “combining resource dependency and institutionalization perspectives, a fuller explanation” could be provided. (Tolbert, p. 12). In this study, schools exhibited rational behavior as one would expect through the lens of resource dependency and neoliberal behavior as one would expect through the lens of academic capitalism. The difference was time dimensional. In short, the time dimension affects what sort of theory is most predictive. To improve rankings, colleges and

universities exhibited market-like behaviors at the beginning and more logical resource-driven behavior at the end.

While the arrest of dean Porat influenced the observed change in behavior, other factors, such as the pandemic, undoubtedly had an influence. Further research will be needed to determine precisely what influence each of these incidents had and what other factors may be involved.

Implications for Practitioners

One of the study's main goals was to examine the influence rankings have on admissions criteria and financial resources to assist practitioners in determining which strategies to use to deal with the influence rankings may have on their organization. There is an underlying assumption that practitioners should seek to improve rankings, increase prestige and reputation, and increase revenue through increased enrollment. Given this assumption, practitioners should seek to increase admissions criteria and add tenure track faculty as their rankings improve to improve their rankings further. While this study does indicate that as schools improve their rankings, they are increasing admissions criteria and the number of tenure track faculty, it should be questioned whether there is a need to do so. There are several reasons to question the need to increase admissions criteria in pursuit of higher rankings.

First, while this study does show that schools increase admissions criteria and add tenure track faculty as rankings increase, the influence is minimal. Increasing the GPA requirement, required GMAT scores and the percentage of applicants taking the GMAT and decreasing acceptance rates yield minimal rankings changes. Additionally, research shows that while some schools may shift up or down, "rankings remain largely consistent from year to year" (Higher Ed Dive, n.d.); if any movement occurs, it is likely a change made by the rankings organizations themselves in terms of changing the weights of a different variable. In this study,

48 of the 134 schools represented in the study were in the top 100 all eight years, illustrating that online MBA rankings show little change year over year, like other college rankings. Given this minimal influence and rankings change little year over year, why change behavior or create policies that yield negligible results?

Another reason to question the need to increase admissions criteria is that it will not significantly improve rankings. Still, it may make it much more difficult for marginalized students to apply and get accepted into an online MBA program. A significant body of research supports that marginalized populations do not perform as well on standardized exams. By increasing the need to take the GMAT exam and the score needed to gain acceptance, online MBA programs create barriers that marginalized populations may not be able to overcome. Online programs were created to increase the opportunity for non-traditional students, such as marginalized populations, to attend college. By inflating admissions criteria such as reliance on standardized exams, they do the opposite. They are making it more difficult, if not impossible, for these students to attend. Rankings have influenced admissions criteria (Bastedo & Bowman, 2009; Monks & Ehrenberg, 1999), making them raced and classed. Unfortunately, this study shows they have a similar influence on online MBA programs. Online programs should not decrease access; they should increase it. An opportunity exists for practitioners to change this trajectory that should not be overlooked. There are no significant advantages to increasing admissions criteria to improve rankings, but there are significant advantages to improving access for all students.

Finally, research has shown that strategies that focus on increasing external validation (rankings) neglect core activities and divert resources from core purposes (Perrow, 1961). Again, this study shows that strategies to improve rankings by increasing admissions criteria yield

minimal results. Focusing on strategies that yield minimal results diverts attention from improving access (addressed above) and improving quality and the student experience.

Rankings focus on inputs (admissions criteria) and outputs (employment and salary). Little attention is paid to the process in the middle. Practitioners should shift their focus on the processes that improve their program and away from input and outputs. Examples of processes that could improve the student experience include but are not limited to limiting class size, increasing experiential learning, improving retention rates, and supporting peer evaluation and training of faculty. Each of these endeavors is part of the core purpose of an MBA program and should warrant significant attention by practitioners. Spending less time focusing on rankings (input and outputs) could spend more time on these essential core processes of an MBA program.

Implications for Research

This study attempted to bridge the gap in research on the influence rankings have on institutional behavior for online programs. Much has been written about the relationship between rankings and institutional behavior at the undergraduate level. A few articles have written about the relationship between rankings and in-person graduate programs, but none have been written about how rankings influence online graduate programs. This study examined the influence rankings have on online MBA programs and their admissions criteria and allocation of resources. This study provides a basis for future research by expanding or changing it in the following ways.

The first way to expand the study would be to evaluate further one of the study variables - the percentage of applicants providing GMAT scores. As previously stated, this variable is problematic. The study relied on self-reported data, and this variable was falsely reported. The study found a correlation between this variable and all other variables except average student

debt over the eight-year study period. If this variable is included in future studies, researchers must be sure it has been accurately reported.

Another study variable that warrants further investigation is UGRAD GPA. The model for this study showed that the Coefficients Standard Error is 0 when investigating the relationship between rankings and admitting GPAs. This was because the UGRAD reported GPAs for this study were very close in value. They only varied from 3.23 to 3.27 over the eight years of the study. To expand the study, categorical variables could be used instead of the actual values so that this relationship could be investigated further without the Coefficients Standard Error being 0. Additionally, per unit tuition pricing may warrant this approach as well.

Two ways to expand the study include adding more rankings organizations and extending years to the study. This study focused on USNWR and its methodologies. Other rankings organizations that rank online MBA programs include Poets & Quant, Fortune, Princeton Review, and Forbes. It would be interesting to examine if the same relationships exist or if others do. Integrating other rankings systems into this study could provide more comprehensive results. Another way to expand the study would be to add more years. Online MBA rankings are relatively new and should be examined over more than eight years. The study could also be replicated in the future to help validate these results.

An additional way to validate the study would be to add a qualitative piece. The model shows the correlation in the data but does not show what drives change. For example, do the changes in rankings drive the changes in the variables, or do the changes in variables drive rankings. A survey would have to ask practitioners about their lived experiences with rankings to ascertain what drives the change. This approach could look inside the university and challenge the assumption that administrators make rational decisions. It could be the case that

administrators cannot make rational decisions as this may be beyond their purview. Certain decisions may be made at the Provost or higher level. Interviewing administrators would provide insight into this.

Expanding the study to focus on tuition pricing could further add to the body of knowledge on this topic. The study did not find any relationship between rankings and tuition, but per-unit tuition pricing increased by 28% throughout the study. Other variables influenced per-unit tuition pricing. What were they? What impact did they have? How does the notion of place and local markets play into this? A study could examine online tuition pricing and the factors that influence it.

Finally, most schools now have many MBA programs. Some schools have full-time in-person programs, part-time in-person programs, and an online program. This means that they have multiple External organizations among their multiple MBA programs. Gathering information on how they balance rankings' influence on all their programs would further the research on rankings greatly.

Conclusion

This study aimed to bridge the gap in research regarding the influence rankings have on online MBA programs and examine if the influence rankings had on admissions criteria and the allocation of resources was the same studied in undergraduate programs. The study found that rankings influence admissions criteria and the number of tenure track faculty, but this influence is minimal. All the jockeying that online MBA programs do early on settles down over time as programs realize that they are on a "hamster wheel," spinning their time and resources but not getting far. So chill out; stability is good and allows programs to focus on attracting qualified, diverse students and delivering a quality program to them.

Appendix A– Descriptive Data 2015-2022
With and Without Missing Data

Descriptive Data – 2015- Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.24	3.23	3.30	.1384	2.90	3.69
GMAT	534.4	536.5	492.0	57.17	356	648
Percent Taking GMAT	93.80%	100%	100%	12.76	24.82%	100%
Acceptance Rate	70.12	73.21	75	18.11	26.67	100
Per Unit Tuition	\$816.18	\$766.00	\$728.00	314.69	\$245.00	\$1815.00
Average Student Debt	\$31405.85	\$30276.00	\$5517.00	9223.37	\$5517.00	\$74571.00
The Proportion of Students with Debt	50%	48%	42%	19.54	6.0%	100%
Number of Tenure Track Faculty	13.30	11	9	9.35	0	51
Percent Minority Students	24.39%	20.60%	7.72%	16.87	4.35%	100%

Descriptive Data – 2016-Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.24	3.24	3.31	.157	2.78	3.74
GMAT	538.37	542	529	51	389	654
Percent Taking GMAT	41.70%	41.07%	100%	30.48	0%	100%
Acceptance Rate	72.17	74.66	100	18.56	34.14	100
Per Unit Tuition	\$750.92	\$739	\$739	350.18	\$161	\$1875
Average Student Debt	\$32300.33	\$32480	\$0	17526.28	0	\$70608.00
The Proportion of Students with Debt	45.15%	43.5%	35%	19.11	0%	100%
Number of Tenure Track Faculty	14.97	12	9	9.99	0	55
Percent Minority Students	25.41%	21.5%	21%	14.4	5%	80%

Descriptive Data – 2017 -Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.25	3.3	3.3	.14	2.9	3.6
GMAT	535.83	538	538	51.62	435	670
Percent Taking GMAT	35.20%	28.72%	28.57%	25.66%	1%	100%
Acceptance Rate	71.98	73.59	83.72	16.64	37	100
Per Unit Tuition	\$903.40	\$822.50	\$739.00	365.57	\$286.00	\$1920.00
Average Student Debt	\$34,407.10	\$34065.00	\$4005.00	17579.20	\$4005.00	\$96969.00
The Proportion of Students with Debt	42.58%	43.50%	50.0%	17.30	3%	90%
Number of Tenure Track Faculty	15	13	10	9.2	0	53
Percent Minority Students	26.9%	23%	23%	16.17	3%	100%

Descriptive Data – 2018- Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.25	3.3	3.3	.16	2.7	3.6
GMAT	545.89	544	520	50.75	416	652
Percent Taking GMAT	28.68%	21.5%	8%	25.01	0%	100%
Acceptance Rate	74.2%	77%	92%	16.40	34%	100%
Per Unit Tuition	\$968.80	\$877.50	\$739.00	391.72	\$300.00	\$1998.00
Average Student Debt	\$35246.98	\$32390.00	\$5400.00	16579.92	\$5400.00	\$90445.00
The Proportion of Students with Debt	44.23%	47%	50%	16.73	1%	89%
Number of Tenure Track Faculty	16.13	14.5	16	8.96	0	44
Percent Minority Students	26.58%	23%	21%	14.65	3%	75%

Descriptive Data – 2019- Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.26	3.3	3.3	.126	2.9	3.5
GMAT	549.68	555	550	58.66	404	669
Percent Taking GMAT	24.63%	18%	1%	21.65	1%	83%
Acceptance Rate	74.81%	77%	88%	16.38	31%	100%
Per Unit Tuition	\$1001.67	\$900.00	\$900.00	421.4	\$308.00	\$2063.00
Average Student Debt	\$36866.63	\$36477.00	\$8409.00	17656.2	\$8409.00	\$96094
The Proportion of Students with Debt	43.66%	43%	34%	18.07	8%	100%
Number of Tenure Track Faculty	16.39	15	15	9.96	0	54
Percent Minority Students	26.80%	24%	16%	13.75	6%	75%

Descriptive Data – 2020-Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.26	3.25	3.2	.131	2.9	3.6
GMAT	551.65	557	550	54.48	398	671
Percent Taking GMAT	22.00%	15%	1%	20.31	1%	83%
Acceptance Rate	77.36%	80%	76%	15.81	25%	100%
Per Unit Tuition	\$1039.00	\$900.00	\$900.00	445	\$320.00	\$2125.00
Average Student Debt	\$39683.15	\$36418.00	\$18067.00	18043.90	\$6821.00	\$103233.00
The Proportion of Students with Debt	43.25%	42%	40%	16.06	7%	79%
Number of Tenure Track Faculty	16.58	15	12	9.04	1	52
Percent Minority Students	27.08%	22%	20%	14.29	5%	80%

Descriptive Data – 2021 -Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.27	3.3	3.2	.1370	3.0	3.7
GMAT	549.7	548.5	510	65.31	367	710
Percent Taking GMAT	16.50%	13%	4%	15.38	1%	73%
Acceptance Rate	76.48%	79.5%	91%	15.57	28%	100%
Per Unit Tuition	\$1044.12	\$900.00	\$739.00	466.62	\$320.00	\$2215.00
Average Student Debt	\$40000.32	\$35880.50	\$8260.00	20229.43	\$8260.00	\$120464.00
The Proportion of Students with Debt	40.42%	40.5%	24%	16.30	6%	79%
Number of Tenure Track Faculty	16.88	16	9	8.56	4	47
Percent Minority Students	28.38%	26%	19%	14.09	6%	81%

Descriptive Data – 2022 -Missing Data						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.27	3.3	3.4	.1357	2.9	3.5
GMAT	552	564	560	69.89	385	740
Percent Taking GMAT	8.47%	4%	1%	11.32	1%	51%
Acceptance Rate	77.96%	83%	84%	16.99	22%	99%
Per Unit Tuition	\$1045.74	\$886.00	\$750.00	480.18	\$258.00	\$2316.00
Average Student Debt	\$39522.57	\$36756.00	\$7000.00	18899	\$7000.00	\$99910.00
The Proportion of Students with Debt	38.31%	36%	38%	15.01	7%	81%
Number of Tenure Track Faculty	18.68	17	14	9.27	4	53
Percent Minority Students	28.54%	25%	19%	13.5	8%	80%

Descriptive Data 2015-2022**Missing Data Imputed**

Descriptive Data – 2015 Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.23	3.25	3.25	.12931	2.90	3.69
GMAT	537.047	544.8	544.8	49.47	356	648
Percent Taking GMAT	84.42%	100%	100%	24.78	24.82%	100%
Acceptance Rate	70.75%	74.49%	74.49%	16.78	26.67%	100%
Per Unit Tuition	\$830.58	\$804.00	\$949.7	299.96	\$245.00	\$1815.00
Average Student Debt	\$33609.25	\$37024.5	\$37024.5	12106.78	\$5517.00	\$74571.00
The Proportion of Students with Debt	47.19%	43%	43%	15.44	6.0%	100%
Number of Tenure Track Faculty	13.48	112	16	9.052	0	51
Percent Minority Students	27.72%	24.09%	26.83%	15.68	4.35%	100%

Descriptive Data – 2016						
Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.23	3.25	3.25	.149	2.78	3.74
GMAT	539.90	544.80	544.80	44.61	389	654
Percent Taking GMAT	40.56%	34.46%	34.04%	28.25	0%	100%
Acceptance Rate	72.31%	74.49%	74.49%	18.00	34.14%	100%
Per Unit Tuition	\$762.61	\$744.50	\$949.7	342.86	\$161	\$1875
Average Student Debt	\$34199.26	\$37024.5	\$37024.5	13707.5	0	\$70608.00
The Proportion of Students with Debt	44.43%	43.0%	43%	15.60	0%	100%
Number of Tenure Track Faculty	15.00	12.5	9	9.83	0	55
Percent Minority Students	25.60%	24.5%	26.83%	13.39	5%	80%

Descriptive Data – 2017						
Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.25	3.3	3.3	.136	2.9	3.6
GMAT	536.64	540	544.8	49.31	435	670
Percent Taking GMAT	35.10%	34.04%	34.04%	24.48	1%	100%
Acceptance Rate	71.97%	73.59%	83.72%	16.64	37%	100%
Per Unit Tuition	\$903.85	\$824.00	\$739.00	363.77	\$286.00	\$1920.00
Average Student Debt	\$35080.90	\$37024.50	\$37024.5	15165	\$4005.00	\$96969.00
The Proportion of Students with Debt	42.67%	43.0%	43.0%	15.38	3%	90%
Number of Tenure Track Faculty	15.04	14	10	9.153	0	53
Percent Minority Students	26.85%	23%	23%	15.76	3%	100%

Descriptive Data – 2018						
Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.25	3.3	3.3	.16	2.7	3.6
GMAT	545.77	544.8	544.8	47.85	416	652
Percent Taking GMAT	29.11%	23.00%	34.04%	24.03	0%	100%
Acceptance Rate	74.2%	77%	92%	16.40	34%	100%
Per Unit Tuition	\$968.40	\$890.00	\$739.00	387.75	\$300.00	\$1998.00
Average Student Debt	\$35513.61	\$36835.5	\$37024.5	15285.62	\$5400.00	\$90445.00
The Proportion of Students with Debt	44.07%	43%	43%	15.61	1%	89%
Number of Tenure Track Faculty	16.13	14.5	16	8.96	0	44
Percent Minority Students	26.58%	23.5%	21%	14.34	3%	75%

Descriptive Data – 2019						
Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.26	3.3	3.3	.126	2.9	3.5
GMAT	548.78	546.40	544.8	53.01	404	669
Percent Taking GMAT	23.65%	26%	34.04%	19.90	1%	83%
Acceptance Rate	74.78%	75.25%	74.49%	15.65	31%	100%
Per Unit Tuition	\$997.18	\$949.70	\$949.70	402.84	\$308.00	\$2063.00
Average Student Debt	\$39292.74	\$37024.5	\$37027.5	15795.51	\$8409.00	\$96094
The Proportion of Students with Debt	43.51%	43%	43%	15.94	8%	100%
Number of Tenure Track Faculty	16.36	15	16	9.47	0	54
Percent Minority Students	26.80%	25%	26.83%	12.93	6%	75%

Descriptive Data – 2020						
Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.26	3.25	3.2	.130	2.9	3.6
GMAT	550.56	547	544.8	50.00	398	671
Percent Taking GMAT	24.19%	24%	34.04%	18.97	1%	83%
Acceptance Rate	77.31%	79%	76%	15.66	25%	100%
Per Unit Tuition	\$1038.16	\$900.00	\$900.00	443.74	\$320.00	\$2125.00
Average Student Debt	\$39419.92	\$37024.5	\$37024.5	17136.53	\$6821.00	\$103233.00
The Proportion of Students with Debt	43.24%	43%	43%	15.42	7%	79%
Number of Tenure Track Faculty	16.58	15	12	9.0	1	52
Percent Minority Students	27.08%	22%	20%	14.22	5%	80%

Descriptive Data – 2021 Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.27	3.3	3.2	.1364	3.0	3.7
GMAT	548.88	544.8	544.8	59.79	367	710
Percent Taking GMAT	19.4%	15%	34.04%	15.49	1%	73%
Acceptance Rate	76.48%	79.5%	91%	15.57	28%	100%
Per Unit Tuition	\$1043.25	\$900.00	\$739.00	466.52	\$320.00	\$2215.00
Average Student Debt	\$39559.45	\$37024.5	\$37024.5	18685.95	\$8260.00	\$120464.00
The Proportion of Students with Debt	40.71%	42.5%	43%	15.38	6%	79%
Number of Tenure Track Faculty	16.88	16	9	8.55	4	47
Percent Minority Students	28.38%	26%	19%	13.96	6%	81%

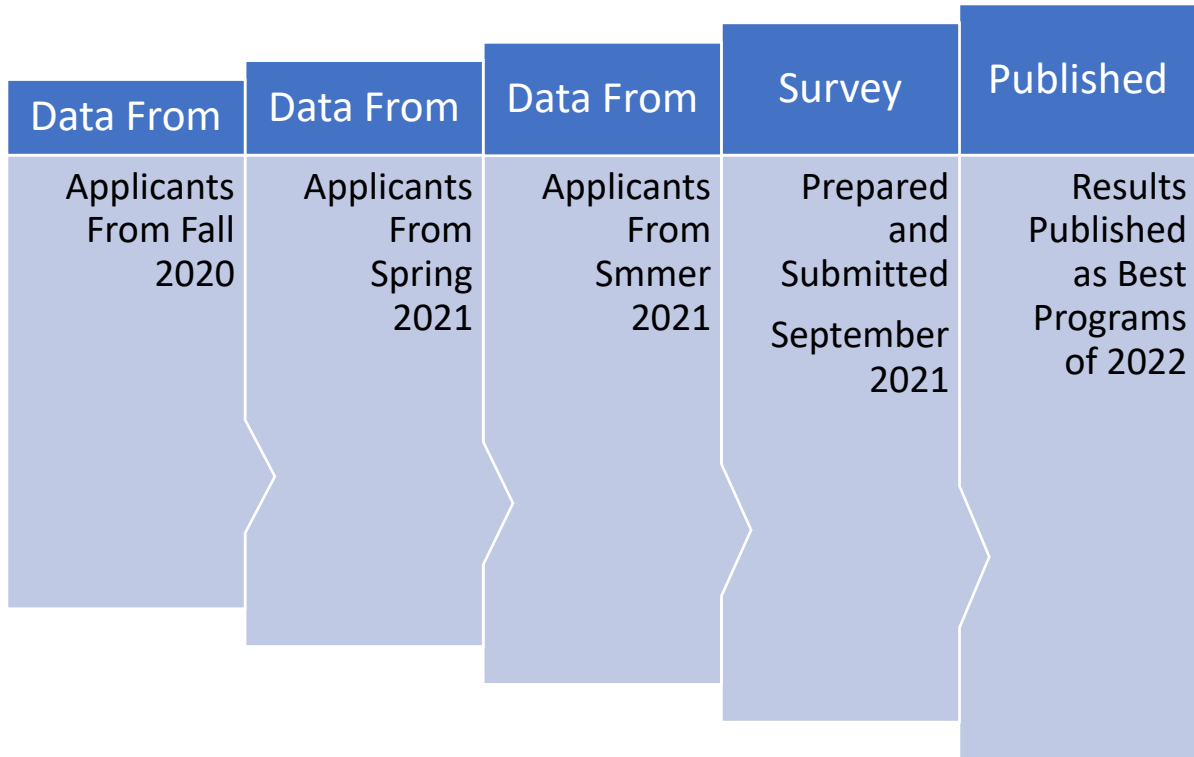
Descriptive Data – 2022						
Missing Data Imputed						
Variable	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
UGRAD GPA	3.27	3.3	3.4	.1357	2.9	3.5
GMAT	552.06	552.1	552.1	61.21	385	740
Percent Taking GMAT	8.47%	7%	8.48%	9.92	1%	51%
Acceptance Rate	77.96%	83%	84%	16.92	22%	99%
Per Unit Tuition	\$1045.74	\$886.00	\$750.00	480.18	\$258.00	\$2316.00
Average Student Debt	\$39522.57	\$38483.00	\$39522.6	17861.57	\$7000.00	\$99910.00
The Proportion of Students with Debt	38.31%	37.5%	38.3%	14.50	7%	81%
Number of Tenure Track Faculty	18.68	17	14	9.27	4	53
Percent Minority Students	28.54%	25%	19%	13.5	8%	80%

Appendix B					
U.S. News & World Report Weights, Categories, and Changes Over Time					
Year	Category	Student Services and Technology	Student Excellence	Peer Reputation	Engagement
	Faculty Credentials and Training				
2015	11%	11%	25%	25%	28%
2016	11%	11%	25%	25%	28%
2017	11%	11%	25%	25%	28%
2018	11%	11%	25%	25%	28%
2019	11%	11%	25%	25%	28%
2020	15%	15%	15%	25%	30%
2021	15%	15%	15%	25%	30%
2022	15%	15%	15%	25%	30%

Appendix C

Timeline for U.S. News & World Report

2022 Survey



APPENDIX D									
OMBA Institutions Ranked in the Top 100 for Years 2015-2022 -Page One									
Institution Name	2015	2016	2017	2018	2019	2020	2021	2022	Total
Boise State University								1	1
Bryant University								1	1
Drake University								1	1
Florida Southern College							1		1
Kent State University					1				1
Louisiana Tech University								1	1
Mercer University--Atlanta								1	1
Queens University of Charlotte		1							1
Salisbury University					1				1
Troy University						1			1
University of Iowa								1	1
University of Louisville								1	1
University of South Dakota								1	1
University of Wyoming					1				1
Valdosta State University		1							1
Western Kentucky University								1	1
Ashland University			1		1				2
California State Bernardino			1	1					2
Oregon State University							1	1	2
Rice University							1	1	2
Santa Clara University							1	1	2
St. John's University							1	1	2
Texas A&M University--Central Texas				1	1				2
Texas Tech University							1	1	2
University of Southern Indiana							1	1	2
University of Southern Mississippi						1	1		2
Wright State University			1	1					2
Bentley					1	1	1		3
George Mason University	1	1						1	3
Montclair State University						1	1	1	3
University of Denver						1	1	1	3
University of St. Francis	1			1	1				3
Virginia Commonwealth University						1	1	1	3
Xavier University						1	1	1	3
Clarion University	1	1	1	1					4
Queens University of Charlotte		1	1	1	1				4
Shippensburg University of Pennsylvania	1	1	1	1					4
The Citadel					1	1	1	1	4
University of Alabama--Birmingham					1	1	1	1	4
University of Pittsburgh					1	1	1	1	4
University of South Florida					1	1	1	1	4
University of Washington					1	1	1	1	4
William & Mary					1	1	1	1	4

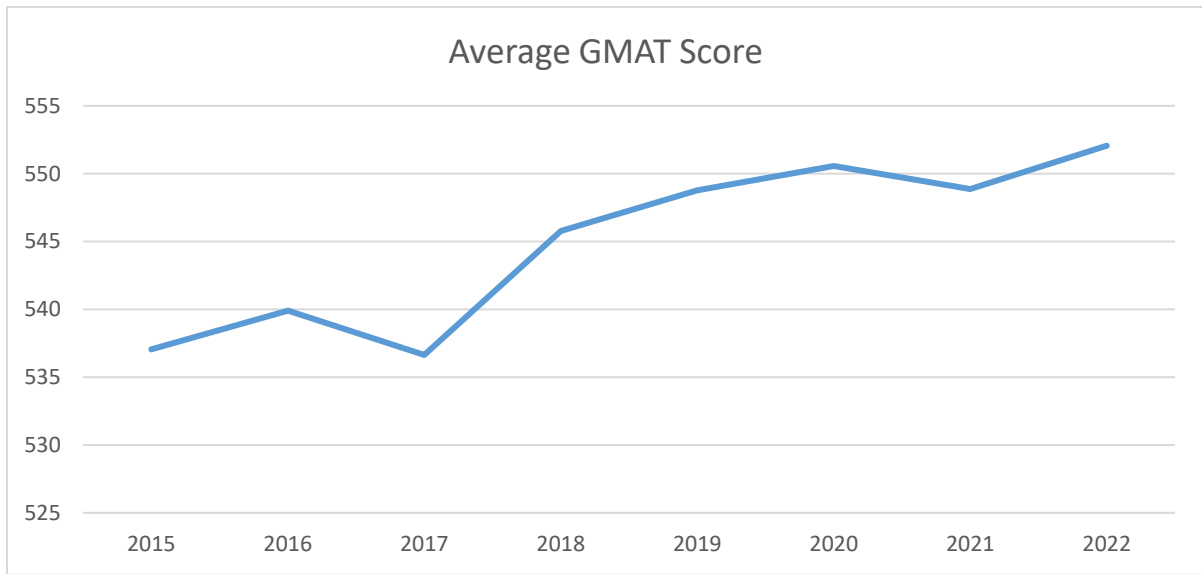
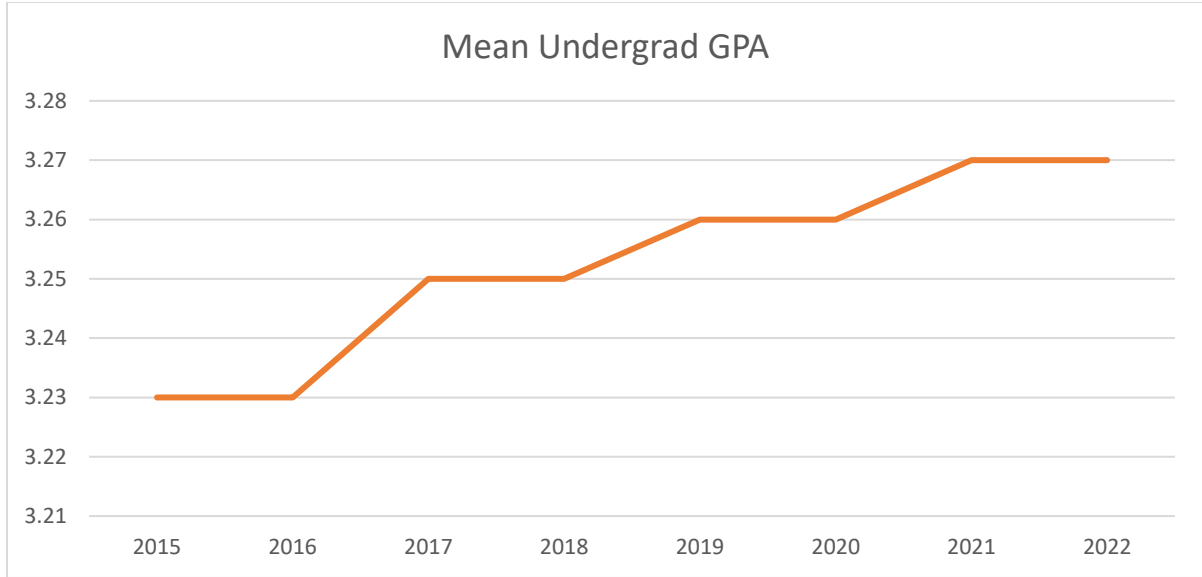
APPENDIX E

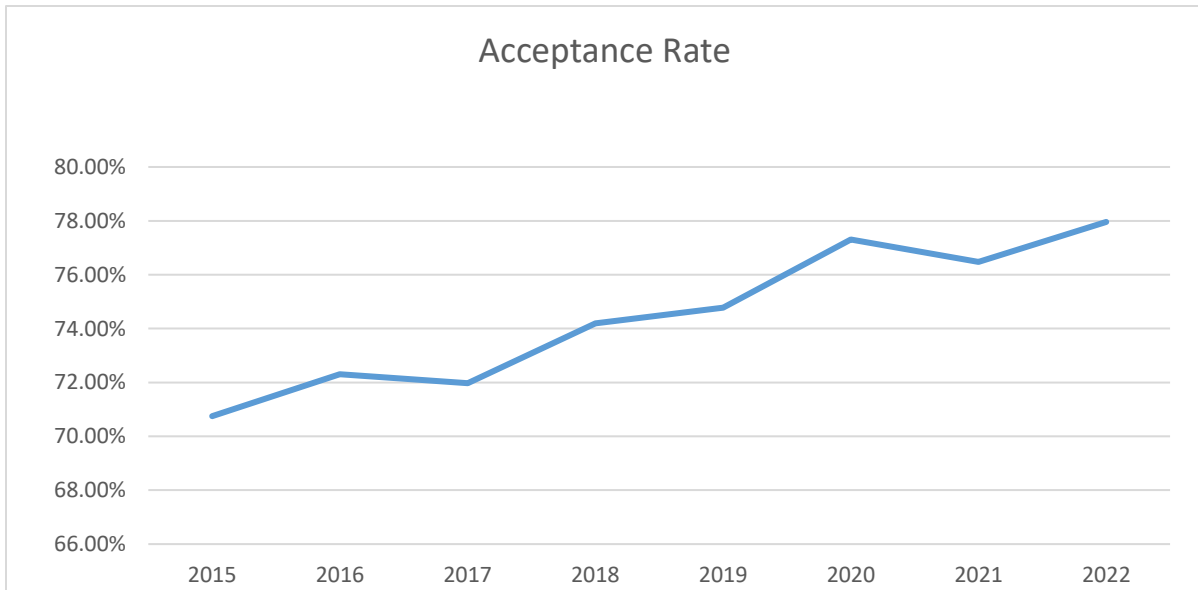
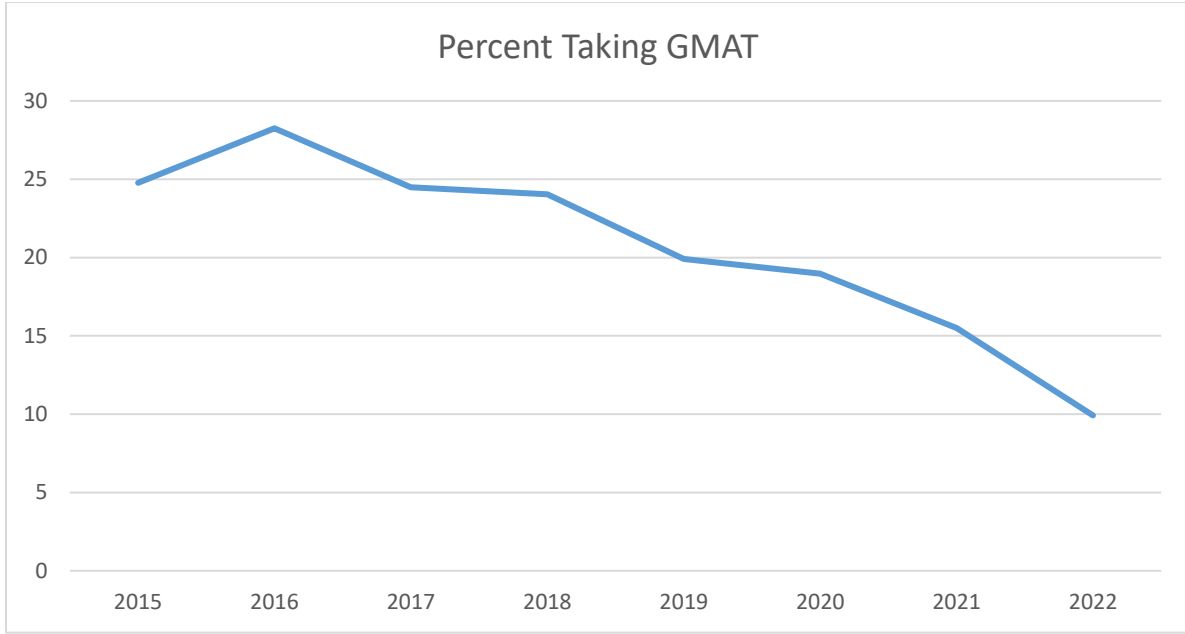
Table 1 -U.S. World News and Report Online MBA Survey Methodology - 2022		
Category and Percent	Subcategory and Percent	Components and Percentage
Student Engagement 30%	Best Practices – 40%	Accreditation – 50%
		ADA Policy - 5%
		Antiplagiarism Policy – 5%
		Certified Instructional Designers – 5%
		Collaborative Coursework – 5%
		Required Course Evaluations – 5%
		Course Evaluation Response Rate – 5%
		Formal Copyright Policy – 5%
		Number of Faculty Office Hours – 5%
		Students Sign Ethics Statement – 5%
Track Students after Graduation – 5%		
	Graduation Rate – 30%	Three Year Graduation Rate – 30%
	Class Size – 10%	Mean and Maximum Class Size – 10%
	One Year Retention Rates – 10%	Re-enrollment rates – 10%
	Time to Degree Deadline-10%	Time to Degree – 10%
Admission Selectivity/Student Excellence -15%	GMAT/GRE Score – 40%	Mean GMAT/GRE Scores and Percentage of Students That Took Exam – 40%
		Work Experience – 20%
		Work Experience, Letters of Recommendation, and Percentage Sponsored by Employer – 20%
		Acceptance Rate – 20%
		Acceptance Rate – 20%
	Undergraduate GPA – 20%	Undergraduate GPA – 20%

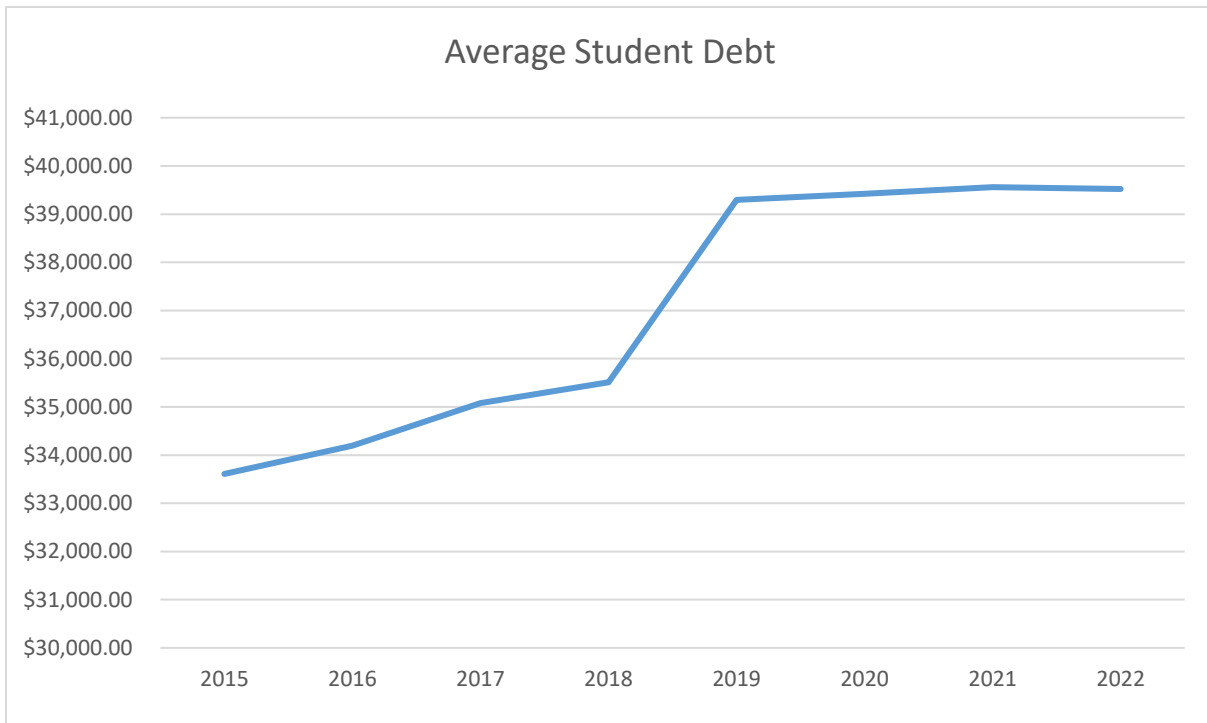
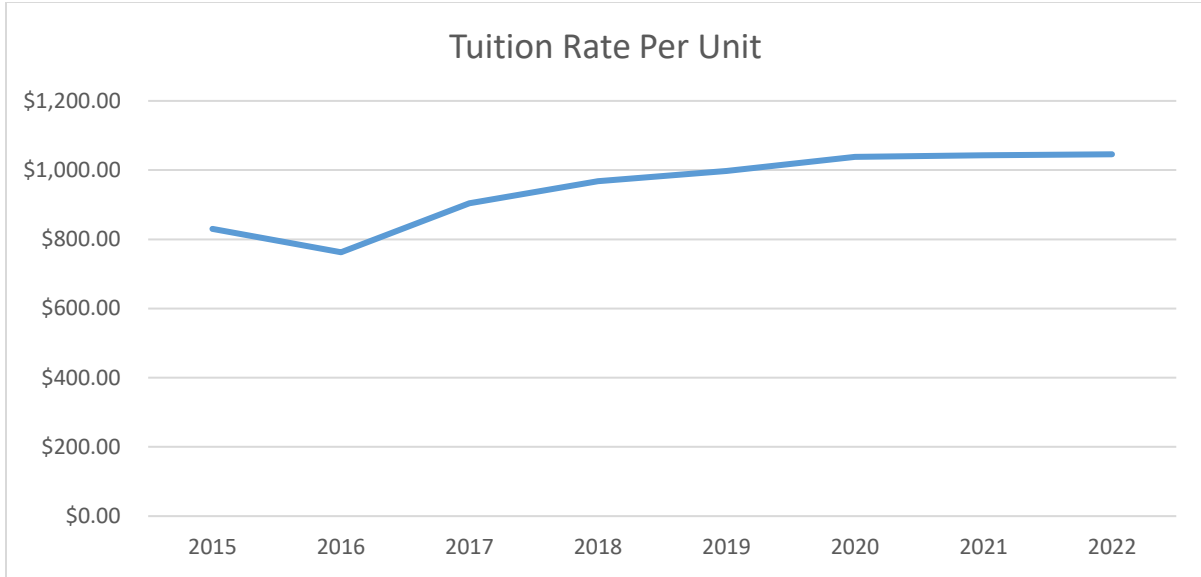
Peer Reputation – 25%	Peer Reputation – 100%	Peer Reputation – 100%
Faculty Credentials – 15%	Terminal Degree – 40%	Terminal Degree – 40%
	Faculty Training – 40%	Faculty Trained to Teach Online and Number of Required Training Hours – 40%
	Tenured faculty – 20%	Tenured faculty – 20%
Student Services and Technology – 15%	Student Indebtedness – 50%	Mean Student Debt – 50%
	Technological Infrastructure – 25%	Remote Access to Technology – 25%
	Support Services – 25%	Student Services - 25%

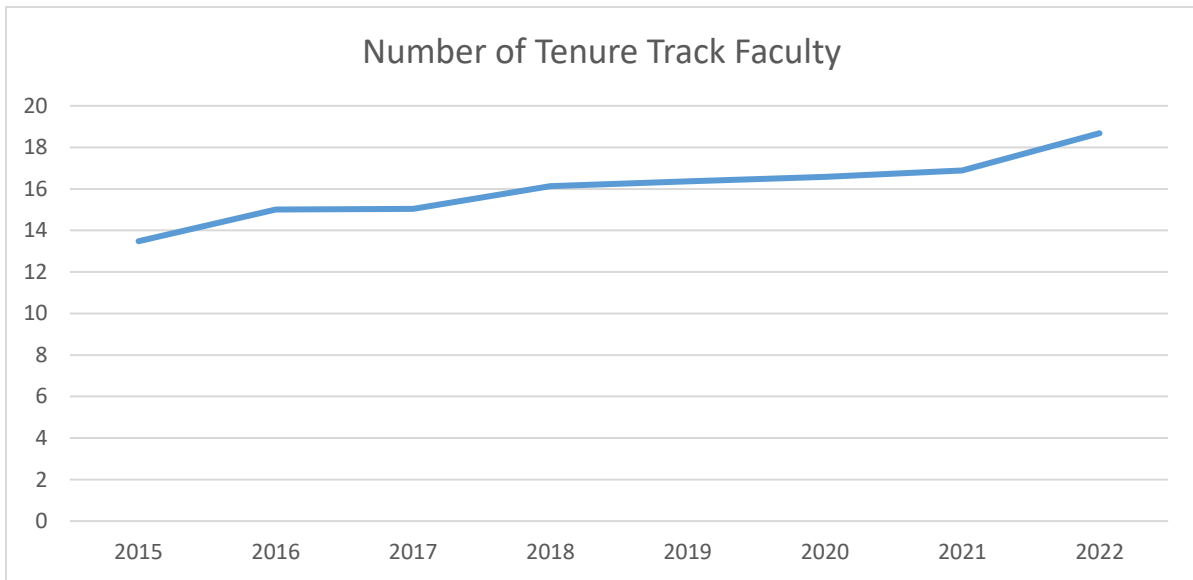
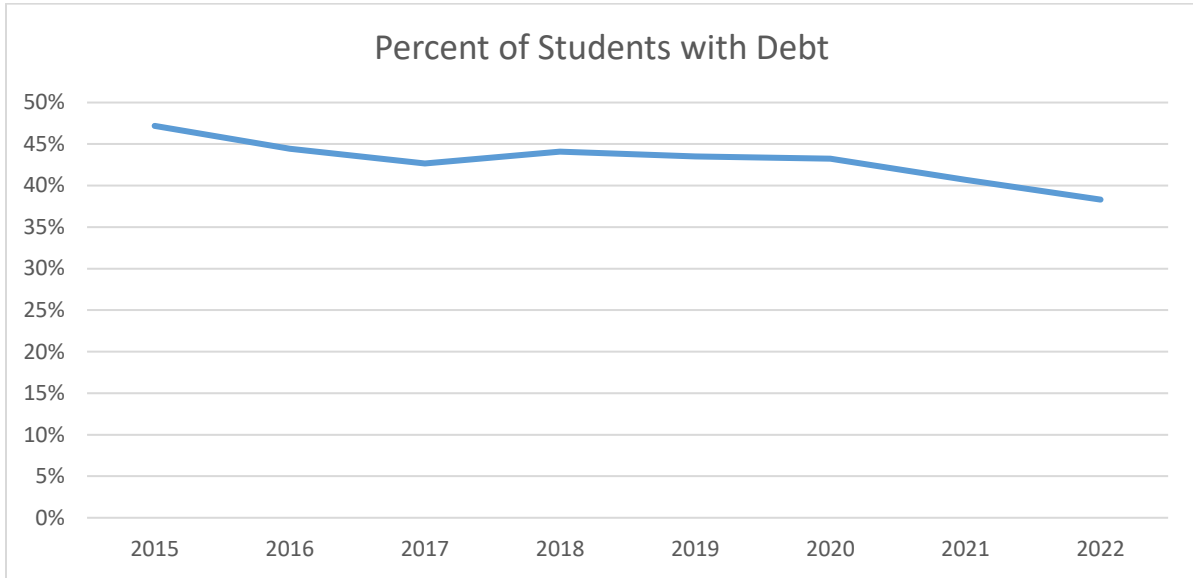
APPENDIX F

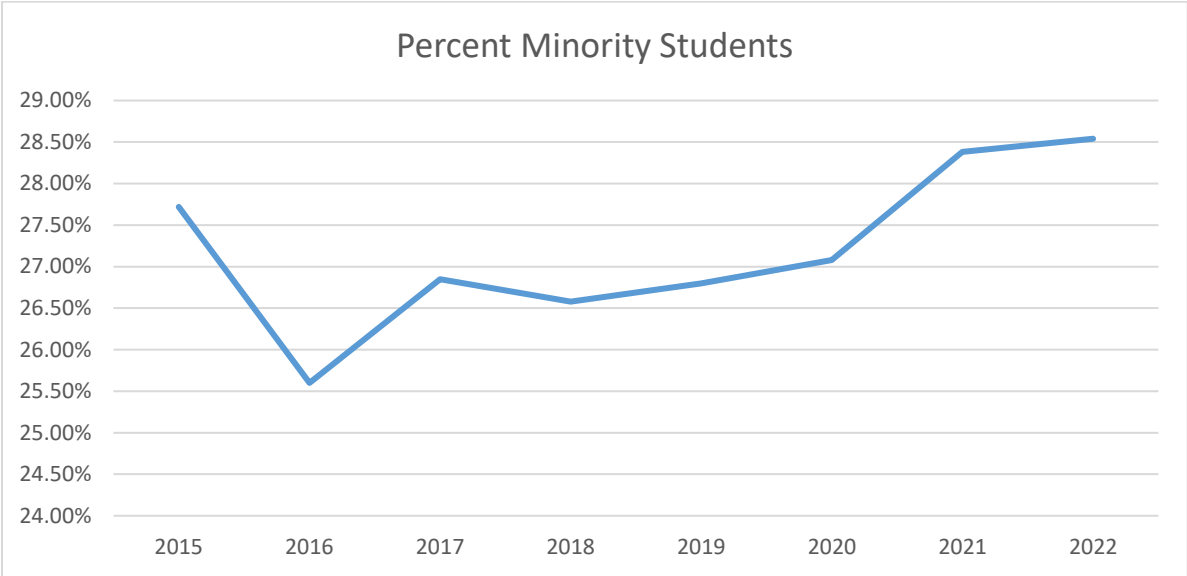
Study Variables 2015-2018











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