

DISSERTATION

UNDERSTANDING THE DECISION TO ENROLL IN GRADUATE BUSINESS
PROGRAMS: INFLUENCE OF SOCIOLOGICAL AND ECONOMIC FACTORS AND
GENDER

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ABSTRACT

UNDERSTANDING THE DECISION TO ENROLL IN GRADUATE BUSINESS PROGRAMS: INFLUENCE OF SOCIOLOGICAL AND ECONOMIC FACTORS AND GENDER

This ex post facto study describes the associations of economic factors as well as social and cultural capital variables on enrollment in business master's degree programs and differences of associations by gender and race/ethnicity. Data from the *2008/2012 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12)* of those who completed a bachelor's degree in 2007-2008 and enrolled in post-baccalaureate programs were accessed and analyzed through PowerStats, a web-based data analysis tool available from the National Center for Education Statistics (NCES).

Results from the logistic regression indicated relationships between undergraduate majors with the lowest average starting salary and likelihood of enrollment in master's degrees in business. It was also found first generation female students were more likely to enroll in master's degrees in business than a first generation male student who was less likely to enroll. Findings suggested differences in influence of variables by gender and race/ethnicity. Differences in enrollment influences was also found to vary by the type of institution (public, private non-profit, and private for-profit) enrolled at. However, since a major limitation of the study was omitted variable bias and use of secondary data, caution is warranted in terms of the extent to which the findings can be generalized to the population of students in business master's degree programs. This study expands on what we know about graduate college choice models and specifically

focuses on enrollment in graduate business programs. It also contributes to the body of research on gender differences in higher education enrollment and policies and practices in graduate student recruitment, admission and enrollment.

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CHAPTER 1: INTRODUCTION

Earning a college degree is often the pathway for higher earning potential, personal enrichment and career advancement. College degree attainment has been considered the primary avenue for personal mobility. Earning an advanced degree such as a master's or professional degree can further earning potential and career advancement. How far a person goes in higher education can mean a difference of about \$3.2 million in life-time earnings (Ryan & Bauman, 2016). Women were more likely to expect to earn a graduate degree than men upon completion of their undergraduate degrees (Clune, Nunez, & Choy, 2001) earning nearly 63 percent of the master's degrees in 2009-2010 (NCES, 2012). Despite the gains in women earning advanced degrees, gender differences exist in graduate degree attainment in business, sciences and engineering with males earning the majority of graduate degrees in these fields (National Student Clearinghouse Center, 2015; Graduate Management Admission Council, 2015).

While gains have been made in the likelihood of women enrolling in medical and law school, the share of women in master's degree in business such as the Master's of Business Administration (MBA) has not risen above 37.2 percent in the last decade (Kitroeff, 2016). With women lagging behind their male counterparts in specific academic fields, it is important to understand the barriers preventing access to graduate education for particular groups and to identify predictors of their enrollment. Graduate degree attainment is becoming increasingly important for society in terms of higher earning potential and greater societal contribution (Nevill & Chen, 2007) making it imperative for higher education institutions to explore strategic and purposeful methods to enroll more students.

Understanding factors which influence student enrollment in higher education provides institutions the opportunity to develop a competitive edge in recruiting and enrollment (Chapman, 1981; Goenner & Pauls, 2006; Paulsen, 1990). One of the first steps of marketing higher education programs is to identify the needs of potential and existing students and the factors that are important in motivating them to choose a particular college (Stanton Webb, Coccari, & Cherie Allen, 1997). Identifying factors that affect students' enrollment decisions can largely guide marketing, recruitment, and enrollment policies and efforts. Successful enrollment management understands the forces influencing individual decisions about college choice which is a prerequisite to answering institutional policy-level questions guiding enrollment (Clagett, 1991). Most institutions comprehensively develop an enrollment management plan based on a strategic, integrative plan including the identification, attraction, selection, encouragement, registration, retention, and graduation of targeted student segments (Clagett, 1991; Huddleston, 2000). Thus, knowing influences on enrollment behavior can help programs find more of the targeted student segments and potentially predict enrollment behavior. Insights into how students make decisions about attending graduate school is valuable to institutional policy makers and leadership as budgets are further constrained and competition for students increases as well as identifying pathways to potentially increasing underrepresented students' enrollment.

Theoretical Framework

There are many factors considered by prospective graduate students during the college choice process. For the student, college choice and enrollment decisions are primarily grounded in sociological and economic theories. The economic approach looks at enrollment through a lens of rational decision making in estimating the economic benefits of attending college and comparing them with competing alternatives (Manski & Wise, 1983). Economic approaches to

college enrollment assume students enroll in college if the net benefits of college outweigh the advantages of all other alternatives (Don Hossler & Bean, 1990). In addition to the economic theories, sociological theories such as status attainment models draw on cultural and social capital concepts in relation to college choice and student enrollment decisions (Perna, 2004). The sociological approach uses a lens that accounts for socioeconomic characteristics and academic preparation which predisposes students' postsecondary education aspirations (Cabrera & La Nasa, 2000).

The college choice models and student enrollment decisions often drive marketing in higher education. Many of the factors students use to make enrollment decisions such as quality, reputation, financial costs, and career aspirations are also connected to the foundational and traditional marketing theory known as marketing mix theory (NAGAP, 2012). Higher education programs use price, product, place, and promotion in developing marketing efforts, which are all components of marketing mix theory (Kotler & Keller, 2006). Other factors such as brand and relationships with admissions representatives, current students, faculty, and alumni are associated with relationship marketing theory and services marketing (Vander Schee, 2010). In recruiting students, graduate programs use key personnel such as those associated with relationship marketing theory, to build relationships with prospective students in hopes those students will enroll (Mahoney, 2006) thus, utilizing relationship marketing when recruiting students (Klassen, 2002).

Statement of the Problem

Gender can largely influence predispositions to students' postsecondary educational decisions. Strong evidence within the literature (Clune et al., 2001; Colander & Holmes, 2007; Nevill & Chen, 2007; Nowell & Hedges, 1998; Perna, 2000, 2004) suggests that an individual's

gender has significant influences on a person's life experiences in regard to gender role stereotypes such as expectations, opportunities, pursuits, aspirations, motivations and choices. Nowell and Hedge's (1998) study found gender differences are still persisting in education even after several decades of scrutiny and policy changes (e.g. Title IX). While education has empowered women, and provided a source of advancement, it also reproduced gender inequality as it mirrors the social relationships in society where one's gender is related to one's educational attainment which in turn is highly related to income (Nowell & Hedge, 1998). The concept of traditionally male and traditionally female fields as determined by gender stereotypes has led to a dramatic difference in the distribution of men and women between academic majors and fields. Table one shows the distribution of men and women in master's degrees in various academic fields.

Table 1

Master's degrees conferred by postsecondary institutions, by gender of student and discipline division: 2011-12

Discipline division	Master's degrees		
	Total	Males	Females
Agriculture and natural resources	6,390	47%	53%
Area, ethnic, cultural, gender, and group studies	1,947	37%	63%
Biological and biomedical sciences	12,415	43%	57%
Business, management, marketing, and personal and culinary services	191,571	54%	46%
Communication and communications technologies	9,496	32%	68%
Computer and information sciences and support services	20,917	72%	28%
Education	178,062	23%	77%
Engineering and engineering technologies	45,097	77%	23%
Health professions and related programs	83,893	19%	81%
Mathematics and statistics	6,245	59%	41%
Physical sciences and science technologies	6,910	62%	38%
Psychology	26,834	20%	80%
Public administration and social service professions	41,680	25%	75%
Social sciences and history	21,889	50%	50%

Note: Adapted from Bachelor's, master's and doctor's degrees conferred by postsecondary institutions, by sex of student and discipline division. National Center for Education Statistics (2013).

Student selection of academic fields and majors is in general a product of the combination of the students' perceptions of labor market variables, conditions, and personality orientation, which are facilitated and enhanced by college experiences (Hu, 1995). Income differences exist among bachelor's degree fields; as gender differences exist in selection of college majors, the wage gap increases between males and females. Women with bachelor's degrees working full-time after graduation earn an average of 17 percent less than their similarly educated male colleagues (Bobbitt-Zeher, 2007). The effect of college major choice on potential earnings becomes larger as students pursue advanced degrees. For those whose highest degree is a bachelor's degree, it is estimated that 40 percent of the overall wage gap can be attributed to college major choice (Morgan, 2008). College major choice becomes more influential at the graduate level as up to 70 percent of the gender wage gap can be attributed to college major choice for those with advanced degrees (Morgan, 2008).

Despite women's increasing educational achievements in earning the majority of master's degrees overall (NCES, 2012), persistent gender inequality in the workforce continues due to gender segregation of academic majors in higher education. Bodies of social science research suggest that socialization in relation to gender norms continues to influence male and female preferences and behavior, creating barriers to certain occupations through lack of information about alternative job options as well as discouragement in pursuing male or female dominated occupations (England, 2005; Hullett, Benedick, Thomas, & Moccio, 2008). Such barriers can restrict the movement of the most qualified and motivated people into occupations that potentially suit them best, exacerbate skill shortages, and reduce economic growth (Hill, Corbett, & St. Rose, 2010). Career advancement and earnings depend not just on the level of education, but also upon the academic major of educational credentials (Babco, 1987; Daymont &

Andrisani, 1984; Frehill, 1997). Women and men's divergent career pathways begin early inasmuch that they select different majors that lead to different occupational destinations (Xie & Shauman, 2004). Successful enrollment management understands the forces that influence individual decisions about college choice necessary for answering institutional policy-level questions guiding enrollment planning (Clagett, 1991). Institutions develop a comprehensive, long-range enrollment management plans through an understanding of student decision making and institutional policies. With accurate, timely, and usable information, enrollment management plans function to influence an institution's enrollment in working toward meeting institutional goals (Claffey & Hossler, 1986; Clagett, 1991). Conceptually, enrollment management links research on student college choice, student-institution fit, and student attrition. When using marketing and student choice research, campuses can identify student market segments and types of students most likely to enroll (Hossler & Bean, 1990). Failure to understand the factors that bring students to campus limits the development of an effective enrollment management plan and interrupts the enrollment management continuum (Bateman & Spruill, 1996).

Purpose

Despite increases in overall graduate education and increases in women earning graduate degrees, barriers remain for women in specific academic fields such as business and the sciences. The purpose of this study is to further apply the combined model developed in Perna's (2004) study on understanding graduate student enrollment and gender differences in post-baccalaureate enrollment through a conceptual graduate choice model based on an expanded economic theoretical framework using data from a nationally representative, longitudinal survey of bachelor's degree recipients. Using a national sample of students from the Baccalaureate and Beyond Longitudinal Study (B&B), this study will build on Perna's (2004) combined college

choice model in which the traditional economic framework of college choice is expanded to include aspects of social and cultural theories. The combination of economic and social and cultural theories was found in Perna's (2004) study to increase the explanatory power of the traditional economic model of college choice. This conceptual model assumes the decision to enroll in post-baccalaureate program is a function of gender, race/ethnicity, expected costs and benefits, financial and academic resources, and cultural and social capital (Perna, 2004). The goal of this study is to apply Perna's combined model on the most recent Baccalaureate and Beyond Longitudinal Study to further test the combined model for graduate student choice master's degrees in business.

Differences From The Perna Study

This study is designed to further apply Perna's (2004) using a combined economic and sociological approach to graduate student choice and understand gender differences in aggregate post-baccalaureate decisions. This study will apply Perna's model to enrollment specifically in master's degree in business. The current study will be conducted using the most recent national Baccalaureate and Beyond Longitudinal Study (2012), whereas Perna's study used the 1997 Baccalaureate and Beyond Longitudinal Study. Another notable difference is an additional focus on gender differences in post-baccalaureate business programs as a further extension of Perna's conceptual model. Perna's study analyzes aggregate graduate program enrollment and does not focus on the relationship of the major field of study to decisions made by bachelor degree recipients seeking to enter graduate programs.

Recognizing the need to increase the number of women in graduate business programs, in 2015 the White House called for action, suggesting targeted outreach and engagement to help women envision earning graduate business degrees (AACSB, 2015). Changes must be

implemented to make graduate business education programs more attractive to females in order for business schools to be a relevant part of training the workforce in the twenty-first century (AACSB, 2015). The need to understand the differing life-cycle challenges in graduate student enrollment for males and females is necessary to meet student needs and expectations.

Understanding gender differences also helps improve access into the pipeline for women into business careers. By uncovering potential predictors of graduate enrollment, higher education institutions can develop recruitment and marketing techniques to aid admission and enrollment potentially giving institutions advantage in a competitive enrollment market as well as increasing underrepresented student enrollment through targeted marketing and institutional policies.

Advantages to the differences in this study include a more recent sample from the Baccalaureate and Beyond Longitudinal Study and a focus on post-baccalaureate enrollment in business programs to further analyze the conceptual model on specific academic programs.

Significance of the Study

Undergraduate college choice has been studied extensively, as evident by the broad body of literature (Braxton, Hirschy, & McClendon, 2011; Chapman, 1981), yet limited literature is available on graduate college choice (Kallio, 1995). This study aims to address the limitations in the available literature on graduate college choice through further application the conceptual model developed by Perna (2004) using a national sample of students. While many of the studies on graduate college choice involve a single institution, or program this study will use a national sample representing colleges and universities throughout the U.S., Washington, DC and Puerto Rico.

In studying graduate enrollment decisions, researchers examined student decisions across disciplines (Kallio, 1995; Perna, 2004); however, there is value to examining academic programs

separately when stark differences exist in the academic fields and applicants (Poock & Love, 2001; Smart & Elton, 1982). The relationship between the graduate field of study and the decision to enter a graduate program has not widely been studied utilizing a nationally representative sample of students. Similarly, the relationship between gender differences and college choice for graduate programs has not received much attention in comparison with studies on undergraduate college choice. With females earning fewer graduate degrees in business than males, it may be that differences in background, sociological, and economic characteristics exist between those who enroll in a graduate business program and those who do not. Table 2 shows the trend of males earning more of the master's degrees in business than females.

Table 2

Master's degrees conferred in business disciplines, by gender of student 2003-2014

Year	Male	Female
2003-04	58%	42%
2004-05	58%	42%
2005-06	58%	42%
2006-07	56%	44%
2007-08	55%	45%
2008-09	55%	45%
2009-10	54%	46%
2010-11	54%	46%
2011-12	54%	46%
2012-13	54%	46%
2013-14	53%	47%

Note: Adapted from Degrees in business conferred by postsecondary institutions, by level of degree and sex of student: Selected years, 1955-56 through 2011-2012. National Center for Education Statistics (2013).

Due to the limited number of theoretically based, methodological studies exploring sources of observed gender differences in graduate school enrollment, Perna (2004) used data from the 1993/1997 Baccalaureate and Beyond Longitudinal study to develop a conceptual

model which combined economic and sociological frameworks of college choice. In Perna's (2004) study, she cited a need for further research using longitudinal studies of bachelor's degree recipients to build on her conceptual model of expanding economic choice framework to include sociological factors. Additional research was suggested in the areas of cultural and social capital, building understanding of the sources of gender group differences, and the ways in which the post-baccalaureate enrollment process differs between women and men.

Higher education has undergone substantial changes since the 1993/1997 Baccalaureate and Beyond Longitudinal study. The explosive growth of online delivery in higher education, the Great Recession of 2008, and changes in demographics of students enrolling in higher education since Perna's study are all contributing to the significance of examining Perna's conceptual model with the 2008/2012 Baccalaureate and Beyond data.

Since 2002, enrollment in online courses and degree programs has grown from 9.6 percent of institutions total enrollment to 32 percent in 2012 (Allen & Seamen, 2013). On average the annual growth rate of online enrollment has increased 17.5 percent from 2002 to 2012 (Allen & Seamen, 2013). Approximately 6.7 million students take a least one online course annually (Allen & Seamen, 2013). The weak labor market conditions during the Great Recession encouraged college enrollments, with much of the increase in enrollment occurring outside of the most selective institutions (Barr & Turner, 2013). Total enrollment increased from 18.2 million to 21 million between fall 2007 and fall 2010 (Barr & Turner, 2013).

College populations are also slightly older with an approximate nine percent increase in students over the age of thirty-five and a 25 percent increase in students twenty-five to twenty-nine years old (Hainline, Gaines, Long-Feather, Padilla, & Terry, 2010). The trend for enrollment by women is also continuing with a projected increase to 61.5 percent of all higher

education enrollments will be women by 2018. Ethnic diversity is also changing with the percent of white non-Hispanic students projected to decrease to 59 percent of total enrollment while gains are projected in the proportion of blacks (13.0 to 14.5 percent); Hispanics (11.6 to 13.8 percent); Asian/Pacific Islanders (6.7 to 7.6 percent); and Native Americans (1.0 to 1.2 percent). College students are becoming much more diverse than past decades. Higher education will need to adapt to a student population diverse on many dimensions and in order to be successful institutions must accept and respond to this diversity. Higher education must also rethink the relative distribution of resources to graduate education in the context of the types and numbers of employment for students with graduate degrees (Hainline et al., 2010). Such changes in higher education lead to a need to better understand enrollment behavior and influencers on enrollment using more recent data than Perna originally used for her conceptual model.

This study aims to provide insight into post-baccalaureate enrollment behavior and further develop a model of graduate student choice, which can inform development of policies to increase female participation in graduate business programs. Identification of enrollment patterns and barriers experienced by graduate students contribute to the understanding of gender differences in access and achievement within graduate business programs. The findings aid institutions in evaluating the effectiveness of current recruitment efforts and provide guidance in development of new programs and policies related to enrollment management.

This research further contributes to understanding of graduate student choice by utilizing Perna's combined sociological and economic model on the most recent Baccalaureate and Beyond Longitudinal Study data to determine if the findings are similar to Perna's original results when the model is applied specifically to enrollment in business graduate programs. With the significant changes to the context, population and environment of higher education, since the

initial application of Perna's conceptual model, it is important to review the model and application to the recent data from the Baccalaureate and Beyond. Additionally, by examining gender differences in enrollment that potentially contribute to the underrepresentation of women in graduate business programs, this study contributes to the understanding of the pipeline of bachelor's degree recipients in different types of post-baccalaureate educational programs. Overall, this research examined how economic and sociological factors affects students' post-baccalaureate educational decisions. To further understanding of factors, which influence post-baccalaureate enrollment trends, future research has been encouraged to continue testing combined models of economic and sociological factors. Additional research in this area informs efforts in developing recruiting procedures and admissions policies to encourage post-baccalaureate enrollment.

Research questions

1. What is the profile of the 2007-2008 bachelor's degree recipients who enrolled in a business master's degree program as of 2009 and 2012?
2. What does Perna's model when applied to the most recent B&B: 08/12 data reveal related to enrollment in a master's degree program in business?
3. How is gender and race/ethnicity associated with cultural and social capital as well as the economic framework in regard to post-baccalaureate enrollment in business master's degree programs?
4. What is the nature of the relationship between gender and race/ethnicity and type of institution enrolled at for business master's degree programs?

Delimitations

As with any study, this research has delimitations. First, the focus of this study is graduate college choice specific to business disciplines. The study concentrates on this particular program to further test the model conceptualized by Perna (2004) because of the limited testing of the model beyond Perna's initial work and limited testing on specific academic disciplines. Additionally, the sample is limited to students who earned a bachelor's degree in 2007-2008 and participated in the 2012 follow up interviews for the Baccalaureate and Beyond Longitudinal Study. Thus, this study does not capture students who perhaps matriculated into a business master's degree program after the 2012 follow-up.

Limitations

The study is limited by the methodological approach employed by the National Center for Education Statistics (NCES) in their construction of the 2008/2012 Baccalaureate and Beyond Longitudinal Study. The use of secondary data is a limitation as the researcher cannot ask follow-up questions to the participants for more detail. The data was not collected specifically for the purpose of this study. Another limitation involves the use of complex construct such as habitus. Since the survey does not offer precise measures of student perceptions, Perna (2004) expands habitus regarding college choice to include students' background characteristics such as gender, age, cultural capital, and social capital. Additionally, the lack of variables that directly measure cultural and social capital were noted in Perna's (2004) study. It is possible to use the approximations developed by Perna as indirect measures of cultural and social capital derived from prior research. Finally, a potential limitation of any quantitative study is omitted variable bias. While regression allows researchers to narrow in on effects of individuals measures by holding constant all other variables, there is always the

potential that variables or measures not included in the analysis actually influence the dependent variable of interest.

CHAPTER 2: LITERATURE REVIEW

A plethora of literature on college choice and enrollment management focused on undergraduate, traditional-age students are available. Less literature is available on graduate student enrollment and specifically studying gender differences in enrollment and influences on student enrollment. The economic and sociological factors provided a foundational reference in development of the college choice model for graduate students. The literature on undergraduate student college choice is included due to the large amount of research in this area and the frequency of undergraduate college choice models and literature that exist in graduate student college choice research. The marketing influences on enrollment highlight the institutions' role in influencing student enrollment. Literature investigating group differences between students from different gender and ethnic backgrounds and gender stereotyping in academic programs is also included.

Building on the 2004 work of Perna, this study contributes to graduate college choice research by utilizing the Baccalaureate and Beyond second longitudinal study as well as further examining gender differences in enrollment behavior. The following review of the literature seeks to understand the elements of enrollment management related to college choice decisions, graduate student enrollment decisions, gender differences in enrollment, and marketing influences on enrollment.

College Choice Models

Knowledge of college choice behavior became vital to colleges and universities in the 1970s when faced with declining student enrollments, declining budgets and increased competition. Students became consumers of education choosing between types of colleges and

programs ranging from traditional, vocational, or professional (Kinzie, Plamer, Hayek, Hossler, Jacob & Cummings, 2004). In order to attract students, colleges had to figure out ways to influence students' enrollment decisions. The college choice process used decision-making models to explain the student enrollment decision process.

Most studies of student enrollment behavior have been conducted by education researchers with backgrounds in psychology, sociology, or economics (Becker, 2009; Hossler & Bean, 1990; Jackson, 1982; Kinzie et al., 2004; McDonough, 1997; Paulsen, 1990; Perna, 2006). The different backgrounds of the authors offered different perspectives and conceptual foundations. Psychologists emphasized the impact of academic programs, campus social climate, and overall influence of the student-institution fit (Tinto, 1987). Sociologists looked at the formation of college going aspirations as part of a general status attainment process and the development of aspirations for educational attainment (Sewell & Hauser, 1972). Economists viewed enrollment decisions as a form of investment like decision-making behavior (Becker, 2009; Jackson, 1982).

Initial research classified college choice models into either a sociological approach or an economic approach (Hossler, Braxton, & Coopersmith, 1989; Kinzie et al., 2004). Economic approaches view economic factors such as cost, value, current labor market conditions, and non-monetary benefits as most important (Cooper, 2009). Students weigh the economic benefit of college attendance, making post-secondary plans based on the perceived economic benefit of attendance (Cooper, 2009). The financial rate of return of pursuing a college or university degree is a factor in deciding to attend higher education (Bateman & Spruill, 1996).

Understanding when students begin to see college as something to pursue; how and where they go about looking for information to facilitate their choice; what processes they use to

make the final choice; and, any changes to their perspective after a choice is made are key to understanding the student enrollment decision process.

Economic Framework

The economic perspective assumes individuals make decisions by weighing the monetary and nonmonetary costs against the monetary and nonmonetary benefits for all possible alternatives and then selecting the alternative maximizing utility with respect to individual preferences, tastes and expectations (Perna, 2004). The college choice models developed from the economic perspective were based on cost-benefit analysis where students weigh one or more of the perceived benefits of attending college, not attending, or doing something different (Kinzie et al., 2004). The final decision to attend or not is determined by what gives the student the greatest perceived benefit with the lowest cost.

In education, human capital theory is a mechanism for explaining the benefits of obtaining further education as well as the decision-making process individuals undergo when considering such additional education (Levin, 1989). Human capital theory is the most widely used approach for exploring choice decisions related to graduate and undergraduate education (Paulsen & Toutkoushian, 2006).

Human capital theory is an economic theory that posits people will invest both time and resources to improve productivity and market values. As an individual invests in him or herself, he or she is more likely to recognize higher returns (Becker, 1962). It uses the assumption that individuals perform as rational, economic-minded actors with the hope they will recoup a higher return on their training investment and education efforts (Becker, 1962). Becker (2009) further connected human capital theory to education by linking the most important investments one can make in him or herself was education and training. Participation in education and training

activities increases knowledge, skills and analytical abilities leading to greater productivity and resulting in increased earnings for the individual (Becker, 2009). With an economic approach, students will enroll in college if the net benefits of enrollment outweigh the advantages of other alternatives (Hossler et al., 1989).

Higher education is viewed as an activity raising real income which is the benefits of potential earnings with advanced education minus the direct costs, such as tuition and books, and indirect costs, such as missed wages during the time in school (Becker, 2009; Becker, 1962). This investment has both private and social returns. By investing in education, one's productivity increases and thus increases the chances in a free market to obtain higher wages; additionally this productivity also increases contribution in social productivity (Cohn & Geske, 1990). Human capital theory theorizes that an individual's ability to produce economic value is a result of the individual's knowledge, skill, and ability (Becker, 2009; Becker, 1962). For economists, the investment in human capital impacts economic productivity the same as material and physical capital (Cohn & Geske, 1990).

Using human capital theory as a mechanism for explaining the benefits of further education, it is applicable to the decision-making process individuals use when deciding to enroll in further education (Levin, 1989). Each decision is a calculation of the benefits and costs of available alternatives (Becker, 1993). Generally, the theory suggests the investment in education results in increased employment benefits then allowing individuals to contribute at a higher level and demand a higher wage (Perna & Titus, 2004). In relation to graduate student enrollment, the individual weighs the benefits of knowledge and skills acquired through an advanced degree against the costs of the price of attendance.

For an economist, it is assumed a student from a low socioeconomic background would not make the same graduate enrollment decisions as a student from a higher socioeconomic background as their preferences and definition of personal utility will differ (Perna, 2000). Studies focusing only on the economic framework have made little use of psychometric data on choices although there are studies focusing on the use of psychometrics to shape the utility function and define attributes (McFadden, 1986). In addition to the benefits and cost analysis of decisions, the decision is also shaped by an individual's preferences development through cultural and social capital making it useful to explore and integrate other theoretical concepts with human capital theory to further define graduate college choice (Perna, 2000). By focusing only on economic explanations of educational aspirations, the economic theory to college choice often ignores the influence of social and cultural influences (Cooper, 2009). The explanatory power of traditional economic foundations of college enrollment decisions is improved when measures of social and cultural capital found in the sociological framework are used as proxies for differences in expectations, preferences, tastes, and certainty about higher education investment decision (Perna, 2000).

Sociological Framework

From a sociological approach, status attainment theory has been the general research paradigm for students' postsecondary educational aspirations for almost four decades (Cooper, 2009). Status attainment is an interaction between background characteristics and subsequent experiences and achievements being subject to individual initiative (Stoecker, 1991). Attending graduate school may result in different levels of status attainment beyond the attainment of an undergraduate education; therefore, making the decisions that affect educational planning pivotal in understanding status attainment sequence (Stoecker, 1991).

The sociological concepts of social and cultural capital describe the way knowledge and information about college, as well as the value placed on obtaining a college education, may influence college enrollment decisions (Freeman, 1997; McDonough, 1997). Research in status attainment focuses on how individuals make decisions for returns in socioeconomic standing (Lin, 2002). Much like human capital, social and cultural capital are resources that may be invested to enhance profitability (Bourdieu & Passeron, 1990) and productivity (Coleman, 1988) to facilitate upward mobility. The early works of research in status attainment focused on the role of socioeconomic status in predicting students' educational aspirations (Blau & Duncan, 1967; Sewell & Shah, 1967) and in furthering status attainment theory, social-psychological constructs such as prior academic achievements and encouragement from significant others such as teachers and parents were also included (Hauser & Featherman, 1976). Utilizing cultural and social capital concepts, sociological theories are useful for understanding the ways in which context shapes an individual's perspectives about college enrollment.

Using a status attainment sociological model, Hearn (1991) explored college selection decisions for students who attended college immediately after high school finding educational aspirations, socioeconomic status, and ethnicity were significant predictors of institutional selection. Utilizing data from the 1980 and 1982 High School and Beyond survey and variables related to gender and racial-ethnic characteristics, socio-economic status; the results of the study found students with less educated or lower-income parents, female students, and black students were likely to attend a lower-selectivity university (Hearn, 1991). Hearn's (1991) sociological model explained 27 percent of the variance in students' selection of a post-secondary institution. Hearn called for additional studies updating and replicating previous research to improve models of college choice and to further develop post-secondary education policies

regarding enrollment and degree attainment. Specifically, further research in assessing interactions among students' characteristics, such as race and gender, in affecting post-secondary enrollment destinations is necessary (Hearn, 1991). Sociological models consider social and individual factors that lead to educational aspirations and assist in understanding how decisions and orientations toward college are influenced by structural constraints and opportunities (Perna, 2006), such as differences in degree attainment in gender and racial groups. Unlike the economic framework, the sociological approach considers how multiple variables beyond monetary influences can contribute to student enrollment decisions. While each framework accounts for influences on the student enrollment decision, the combination of economic and sociological approaches may help best explain student enrollment decisions from a holistic perspective.

Combining Economic Framework and Sociological Framework

Combining the economic framework with the sociological framework can result in more explanatory power because variables from both economic and sociological are used to focus the process and develop the model. By incorporating sociological concepts into a traditional economic approach, a better conceptual framework is available to predict enrollment decisions than a traditional approach alone (Perna, 2004).

One of the first combined models developed by Chapman (1981) focused on the institutional perspective to assist admission officers and administrators in formulating recruitment strategies. Chapman's (1981) model posits college choice decisions are determined by interaction between student characteristics and institutional or external factors through five stages: presearch, search, applications, choice, and enrollment. Student characteristics include: socioeconomic status, academic aptitude, academic performance, and educational aspirations (Chapman, 1981). The external factors include fixed college characteristics such as academic

programs, location, and aid as well as college recruitment strategies such as view books and campus tours (Chapman, 1981).

Initial combined models focused on decisions from the student's perspectives resulting in models built around a three-stage process. In this process students developed predispositions to attend college, searched for general information about college and made choices that lead them to enroll at a given institution of higher education (Cabrera & La Nasa, 2000; Hossler & Gallagher, 1987). Hossler & Gallagher (1987) advanced one of the initial combined models by exploring the decisions from the student's individual perspective during these three stages. The first phase, predisposition, refers to the decision to pursue higher education in lieu of alternatives such as work or military (Hossler & Gallagher, 1987). The next phase, search/exclusion, is when students identify potential institutions for enrollment (Hossler & Gallagher, 1987). The final stage occurs when students complete admission applications and ultimately select an institution (Hossler & Gallagher, 1987).

Using Hossler and Gallagher's (1987) three stage model, Bateman and Hossler (1996) found four characteristics of that model which validate the use of it in studies working to identify the predictors of enrollment: a) the model provided multiple variables which have previously correlated with college choice decisions; b) the model used college choice as a continuum from development of education aspirations to matriculation; c) the model's intention was to inform policy makers in developing strategies to influence college choice decisions; and d) the model allowed segmentation of student populations by ethnicity and gender. Using the three-stage model to compare development of postsecondary education enrollment plans of African-American and white high school students, Bateman and Hossler (1996) found the model was more predictive for white students than African-Americans. Differences were also found in

factors of enrollment decisions for African-American students than for white students with parent's expectations found to be the most powerful predictor of the enrollment decisions for African-American students (Bateman & Hossler, 1996). Both the parent's level of education and expectations were major factors for African-American students. The development of post-secondary education plans was found to be similar of white men and women and had comparable predictability for these two groups. However, they found that Black women hold higher aspirations for post-secondary education than Black men. Bateman and Hossler's (1996) study shows that the predictability of educational aspirations and development of post-secondary education plans varies between men and women of the same racial/ethnic groups.

Perna (2006) further developed Hossler and Gallagher's (1987) three stage model by proposing a conceptual model that combined human capital theory, an economic approach, and sociological theories (see Figure 1). The model assumes contextual layers starting with the broader social, economic, and policy context shape the college-enrollment decisions. The model then narrows to the higher education context, school and community context, and the individual's habitus (Perna, 2006). How the student processes information and comes to a decision is dependent upon the contextual layers influence on the individual. Perna (2006) utilized the sociological influences of social and cultural capital on economic decision-making regarding costs and benefit analyses and applied the concept to college choice decision making.

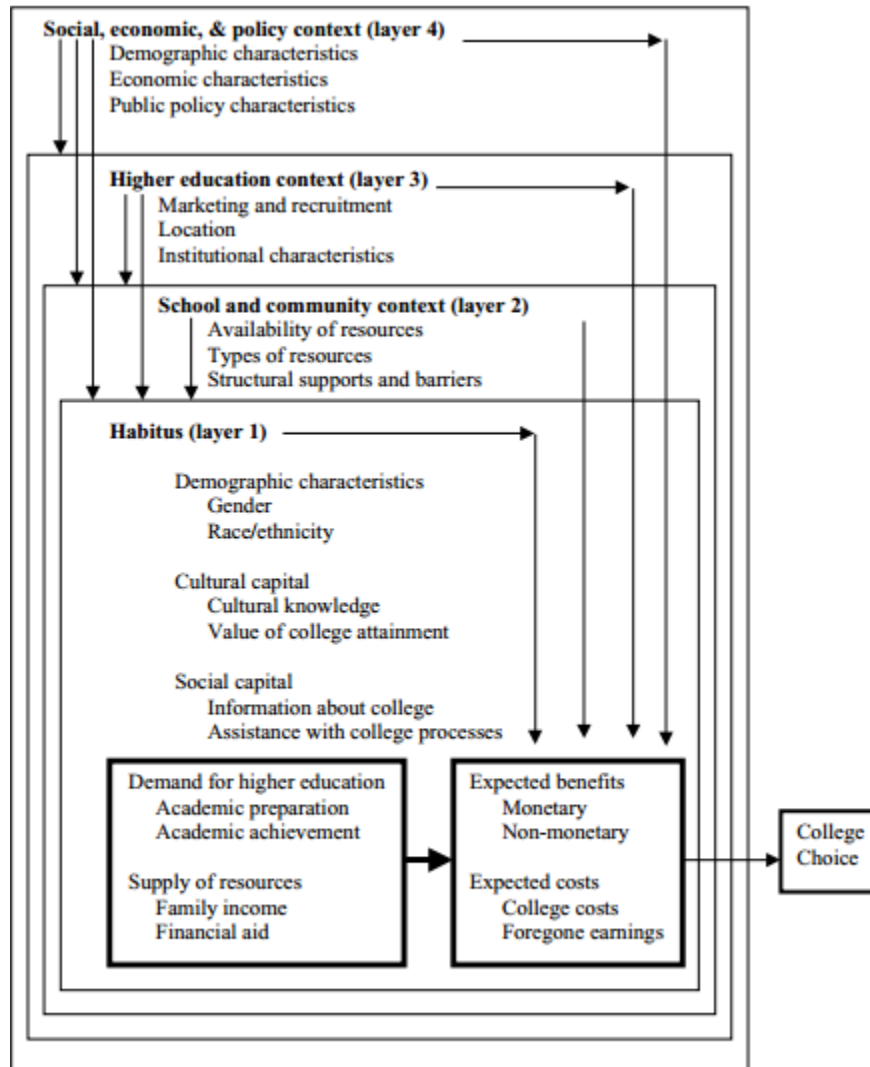


Figure 1. Perna's conceptual model of student college choice

Source: Perna, L. (2006). *Studying college access and choice: A proposed conceptual model*. Figure 3.1. Copyright 2006 by Springer/Kluwer Academic Publishers Higher Education Handbook of Theory and Research, 21, 117.

Vrontis, Thrassou, and Melanthiou (2007) developed a combined model that pulled from consumer-choice behavior models under the belief that higher education marketing and recruiting more closely resembled for-profit businesses. The five phases of their model closely resemble business marketing. The five phases are need recognition, information search, alternative evaluations, purchase and consumption, and post-consumption evaluation (Vrontis et

al., 2007). Both internal and external factors influence students as they pass through the five phases (Vrontis et al., 2007). Internal factors include customer and personal attributes. External factors consist of economic and cultural conditions, public policy factors, and influences (i.e. media, parents, counselors, peers). Limitations of Vrontis, et al's (2007) model was the lack of testing as it was merely conceptual.

The combined models hypothesized students made decisions regarding college enrollment by examining the interplay of expected benefits and anticipated costs as well incorporating the differences individuals from various backgrounds face in the college choice process (Jackson, 1982). The economic and sociological approaches tend to focus solely on the individual's context of influences without regard to the institutional influences such as academic reputation, academic program availability, location, and various other marketing factors. The vast majority of college choice research focused on the traditional aged undergraduate student; however, several themes have far-reaching applications useful to graduate student recruitment and admissions.

Graduate Student Choice

In somewhat similar fashion graduate students consider the monetary and non-monetary benefits versus the costs of attendance. Expected benefits of enrolling in an advanced degree program include enhanced social status, increased earnings, enhanced occupation status, and lower probability of unemployment (Perna, 2004). The costs of enrolling in an advanced degree include the direct cost of enrollment, accumulation of additional educational debt, and cost of forgone earnings during degree completion time (Clotfelter, Ehrenberg, Getz, & Siegfried, 2008). As Stiber (2000) found, students decided to enroll in a particular business school to

enhance both personal satisfaction and their careers viewing enrollment as the way to best be more marketable for job opportunities.

A preliminary model of graduate students' college choice by Olson and King (1985) was developed through their survey of 650 graduate students attending a large Midwestern state university to determine if there were differences between the factors influencing the initial consideration of a graduate program and the factors that ultimately influenced the students' college choice. From the survey findings, Olson and King posited three major factors influencing initial consideration of a graduate school: geographic location, personal contact with the faculty, and the reputation of the department. In the final stage of consideration, three additional factors act as determinants: a positive interaction with university personnel, personal reasons, and previous undergraduate attendance (Olson & King, 1985).

In Malaney's (1987) study, 1,073 graduate students at a large university in Ohio answered a questionnaire regarding their reasons for attending graduate school. The top responses from the students indicated intrinsic motivation was a factor in students' reasons for graduate education (Malaney, 1987). The intrinsic motivation to fulfill their desire to learn more and achieve personal satisfaction as opposed to accomplishing job-related goals were factors in students pursuit of graduate education (Malaney, 1987). The reasons for attending graduate school did differ by student characteristics such as gender and race (Malaney, 1987). Specifically, females and whites were found much more concerned than males and non-whites about the location of the graduate school (Malaney, 1987). Females were also largely influenced by their parents' level of education, with female's educational aspirations positively related to the father's education level (Malaney, 1987).

Components of Malaney's (1987) and Olson and King's (1985) graduate student college choice models have been utilized in further studies. Stoecker (1991) proposed a model that included variables thought to influence the decision to attend graduate school previously found in Malaney's study. Stoecker's model proposed student characteristics, such as gender, race, and age, influence the college choice decision as well as the intrinsic motivation of advanced learning and knowledge. Through a survey of licensed physical therapists, Stoecker's findings were that career advancement was the largest influencer for the sample of students' reasons to enroll in graduate school, differing from Malaney's (1987) original finding that intrinsic motivation for advanced learning was more influential than job related factors.

In line with human capital theory, the selection of a graduate institution is most closely tied to the benefits expected upon completion of the graduate degree (Hearn, 1987; Stiber, 2000). The perceived set of knowledge and skills that could be obtained in pursuing an advanced degree is weighed against the current price of attendance for potential students. Their decision is shaped by individual preferences and constrained by the individual budgetary limitations (Delaney, 1999). This represents consumption and investment benefits in human capital theory. Consumption refers to the increased utility experienced after the decision to take action and investment an individual's decision to take action based on the expectation of receiving positive utility in future periods such as career advancement, higher salaries, and personal satisfaction (Paulsen & Toutkoushian, 2006).

Perna's (2004) study of graduate student enrollment decisions differed as her study utilized a nationally representative sample of students with data from the Baccalaureate and Beyond Longitudinal Study from the National Center for Education Statistics. In her study, Perna (2004) noted that few theoretically based and methodologically rigorous studies explored

differences in graduate school enrollment and those studies that did explore graduate student enrollment were limited to single institutions and/or describing correlates of graduate enrollment for a particular group such as African-American doctoral students. Utilizing the national representative sample of students, Perna (2004) conceptualized a model that expanded the economic framework to include social and cultural capital. Adding the measures for cultural and social capital to the traditional economic framework of college choice, improved the explanatory power of the economic framework adding to the value of such a combined model. Perna's research forged new ground in integrating two theoretical perspectives and developing a conceptual model that better predicts post-baccalaureate enrollment decisions than just an economic framework would (Perna, 2004).

With the limited studies of applying college choice models to graduate student enrollment, Perna (2004) is one of the few that combined both economic and sociological factors in a model to predict post-baccalaureate enrollment. Further testing of Perna's conceptual post-baccalaureate enrollment model has limited further testing of the conceptual model despite Perna's call for further study to build on her attempt to operationalize the types of cultural and social capital that promote graduate enrollment along with the economic factors. As noted in the studies reviewed, limitations exist in the studies focusing on a single institution and utilizing one theoretical foundation as opposed to the combined perspective. Gender and race/ethnicity differences in enrollment influences were also noted in studies of college choice models. With the impact of gender and race/ethnicity on enrollment behavior, it is important to understand the impact of gender roles.

Gender Stereotyping

Evidence from the literature suggests an individual's gender can have significant influences on life experiences in regard to gender role stereotypes such as expectations, opportunities, pursuits, aspirations, motivations and choices. In Cross & Bagilhole (2002) study gender role stereotypes were found within professions where one gender had less than 30 percent representation of the total workforce in that occupation. Pleck (1981) also found strong evidence that an individual's gender can have significant influences on a person's life experiences in regard to gender role stereotypes. As gender stereotypes influence individual experiences and motivations, it can also affect enrollment decisions. Even though in recent years, researchers have reported females believe they are capable of performing traditionally male dominated occupations and that these occupations are appropriate for women, females nevertheless still seem to avoid such choices for themselves, instead gravitating to careers traditionally labeled female (Wigfield, Battle, Keller, & Eccles, 2002).

Student selection of a major is in general a product of the combination of the student's perceptions of labor market variables, conditions and personality orientation, which are facilitated and enhanced by the college experiences (Hu, 1995). Women tend to be concentrated in fields such as education, health, and psychology while men are prevalent in fields such as engineering, mathematics and business. The more technical fields tend to have greater financial returns than the less technical fields (U.S. Department of Education, 2000). As human capital theory suggests, individuals will invest in additional education if there is a positive return to their investment, if there is not a positive return individuals will choose not to further education. DiPrete & Buchmann (2013) found while females have experienced improved returns on the investment in additional schooling, the returns relative to males have not increased as men have

also realized increases in returns to schooling thus maintaining the existing equity gap. Similarly, Thomas and Zhang (2005) found college major choices as significant factors affecting future earnings. Students who major in fields such as business and mathematics have greater returns on educational investments than those who majored in fields such as education and history. The concept of traditionally male and traditionally female roles as determined by gender stereotypes has led to dramatic difference in the distribution of men and women between majors which can also largely influence a student's decision to enroll in post-baccalaureate programs.

Gender Differences

Gender differences in occupational choices, undergraduate majors and fields of graduate study are evident (National Science Board, 2014). Despite women earning nearly 63 percent of the master's degrees in 2009-2010 (National Center for Education Statistics, 2014), gender differences exist in graduate degree attainment in business, sciences and engineering with males earning the majority of graduate degrees in business, sciences and engineering (Graduate Management Admission Council, 2015; National Student Clearinghouse Research Center, 2015). Women continue to receive fewer of doctoral and first professional degrees compared to males (Perna, 2004). Completion rates for men in doctoral programs were ten percent higher than women leading to concern of a gender gap that is of scientific or policy interest (Most, 2008). Most's (2008) study on patterns of doctoral student degree completion suggests demographic characteristics, such as gender, have associations with post-baccalaureate degree completion and much remains to be learned in regard to demographic characteristics and post-baccalaureate degree completion.

Perna's (2004) model suggested potential sources for observed gender differences in enrollment in first-professional degree programs. Women were more represented in

undergraduate major fields in the lowest quartile of starting salaries; thus, having the lowest opportunity costs of enrollment (Levin, 1989) and not promoting enrollment of women in first-professional degree programs (Perna, 2004). However, enrollment for men in first-professional degree programs was unrelated to undergraduate major field starting salaries (Perna, 2004). Additionally, it was found those who do not take the SAT or ACT or have scores in the lowest quartile of the distribution are less likely to enroll in a first-professional degree program (Perna, 2004). The descriptive analyses from Perna's (2004) study found higher shares of women than men did not take the SAT or ACT and the women scored in the lowest quartile of distribution. With the lower quartile of scores, it promoted enrollment into a first-professional degree program for a smaller share of women than men (Perna, 2004). After controlling for measures of expected costs and benefits, financial and academic resources, and cultural and social capital, it was still found men were more likely than women to enroll in first-professional degree programs (Perna, 2004). While Perna's (2004) model did not explain the differences, the analyses suggested social capital is a factor that contributes differently for women than men in enrollment in a first-professional degree program.

Business education programs often are categorized into the social sciences and in graduate programs females tend to enroll and complete social science graduate education programs more than males (Nevill & Chen, 2007). However, male enrollment in business graduate education programs outnumbers female enrollment (GMAC, 2015). Researchers have also noted potential barriers to enrollment perceived by women in entering first-professional degree programs such as a Master of Business Administration (MBA). Kelan & Jones (2010) interviews with female and male MBA students led the authors to conclude gender was shaping the culture in significant ways in business schools and challenging the masculine norms of

business schools was suggested to encourage female enrollment. Women MBA graduates from Kelan and Jones' (2010) study cited the lack of female role models (56 percent), incompatibility of careers in business with work/life balance (47 percent), lack of confidence in math skills (45 percent) and a lack of encouragement by employer (42 percent) as barriers keeping women from pursuing MBA degrees.

Aligned with the combined models of undergraduate college choice, Marks and Edgington (2006) found the primary motivating factors of women's decisions to pursue an MBA degree were career enhancement, career switching, and personal development. The factors that gave females reservations about pursuing an MBA degree were preparedness barriers, financial barriers, and commitment barriers (Marks & Edgington, 2006). The preparedness barriers may stem from lower female enrollments than male enrollments in undergraduate business programs. Researchers found that coursework in undergraduate business majors are most helpful in preparation for an MBA (Heales, 2005; Kaighobadi & Allen, 2008; Truell & Woosley, 2008). Business majors, such as economics, tend to have fewer women yet economics is often part of the core classes in an MBA (Colander & Holmes, 2007). Women describe their experiences in economics classes with feelings of anxiety and lack of confidence (Colander & Holmes, 2007; Dynan & Rouse, 1997), which may also contribute to the lower enrollments in undergraduate business programs for females, and feelings of lacking preparedness for business graduate programs.

As noted in the previous studies, enrollment in graduate education varies by gender. The decision to enroll differences may be due to men and women assessing the benefits of graduate education differently. Family and children may largely influence women who may consider the cost benefit of time off due to childbearing and then may realize less benefits in the long-term

(Perna, 2004). Women were found to consider the influences of marriage and childbearing in graduate education attainment more than men (Clune et al., 2001) and were also found more likely to enroll in first professional or doctoral degree programs if they were not married than if they were married or they were parents (Nevill & Chen, 2007). Non-financial aspects such as parental approval and the ability to balance work and family obligations explain about 85 percent of college major choices for women but only 55 percent for men (Zafar, 2013). Explanatory power of financial returns are four times as large as non-financial aspects for men while these two aspects are of equal value for women (Zafar, 2013).

Marketing and Influence of Institutions

A marketing approach to college admissions began in the late 1970s driven mainly by a shrinking enrollment pool as baby boomers graduated and greater economies of scale were realized in higher education, thus increasing the competition between institutions for enrollments (Massad & Tucker, 2000). As a pioneer in the application of marketing theory to non-profit organizations, Kotler (1979) defined marketing as the analysis, planning, implementation, and control of programs designed to bring voluntary exchanges of values with target markets in order to achieve organizational objectives. Marketing theories and literature suggest institutions must determine their target markets needs and desires, and use effective pricing, communication, and distribution to inform, motivate, and service the markets (Kotler, 1979). With increasing competition, diversity of products, prices and market maturity, it is likely the institutions practicing effective marketing will be more likely to prosper (Nicholls, Harris, Morgan, Clarke, & Sims, 1995).

Marketing theories are essential in college choice and ultimately enrollment management as the first step in marketing educational programs is to identify the needs of potential and

existing students. Some studies have applied marketing theories in understanding how student background characteristics, goals and aspirations, achievements, and student expectations of college influence students' choices (Chapman, 1981; Iloh & Tierney, 2014; Jackson, 1982; Lewison & Hawes, 2007). The marketing research approach in analyzing selection criteria doctoral students use in selecting private and public institutions found students at both public and private schools selected their universities on the basis of academic reputation, accreditation status, and placement reputation (Stanton Webb, Coccari, & Cherie Allen, 1997). Academic reputation was significantly ($p < 0.00$) more important to students in private schools while public school students rated low costs, close proximity and facilities higher than private school students (Stanton Webb et al., 1997). As well completion time was significantly ($p < 0.00$) more important to the public school students (Stanton Webb et al., 1997).

Institutional characteristics such as cost, financial aid availability, location, rankings, and program reputations are influential in student decision-making as students process information to determine where to enroll. An institution's characteristic influence can be dependent on how the contextual layers influence the individual as indicated in Perna's (2006) combined model. Some students are most influenced by cost and financial aid as that is the sociological context most influential to those students and some students will not be influenced by cost as rankings and reputation are most influential as that is the context those students exist within (Perna, 2006). The influence of academic reputation and institutional location Olson and King (1985) posited were tested in Kallio's (1995) study that surveyed 2,834 students admitted to the master's and doctoral programs at the University of Michigan. Academic environment, specifically reputation and quality of programs as well as location were found to influence graduate student enrollment decisions.

Similarly, Iloh & Tierney (2014) studied the information students utilized in making their decision regarding why they enrolled at a non-profit public college or a for-profit college. Iloh and Tierney's (2014) study found specific college characteristics influenced students' decisions on where to enroll; however, the characteristics most influential differed among student groups. The non-traditional, adult students reported finishing a particular degree program in a timeframe agreeable to their goals was the most influential characteristic of a for-profit institution they chose to enroll at (Iloh & Tierney, 2014). On the other hand, traditional age students chose to enroll in a non-profit, public community college because of the college's environment and academic reputation (Iloh & Tierney, 2014).

Roszkowski and Spreat (2010) studied students' importance rating of an institution's characteristics and if it could potentially predict enrollment in that institution. Using the Admitted Student Questionnaire (ASQ), Roszkowski and Spreat (2010) analyzed data from ASQ respondents indicating the degree of importance certain college characteristics had to a student in the college selection process. The characteristics were: academic reputation, availability of majors of interest, availability of special academic programs, personal attention to students, quality of academic facilities, availability of recreational facilities on campus, quality of on-campus housing, surroundings, attractiveness of campus, cost to students' family, quality for social life, access to off-campus cultural and recreational opportunities and opportunities to participate in extracurricular activities (Roszkowski & Spreat, 2010). Findings indicated the importance rankings proved a useful discriminator in the college selection process as the difference between two colleges rankings in the students' perspective best explained the students' college choice, where the ranking of the college he or she chose to attend did not explain the choice (Roszkowski & Spreat, 2010).

Marketing in Higher Education

Utilizing marketing concepts, universities recognize the importance of identifying and fulfilling the needs of their chosen clientele in a manner consistent with the institution's educational purpose (Trivett, 1978). The students' needs and the principle of client satisfaction are the sources driving continuing support and new clientele (Trivett, 1978). The marketing concept of institutional image explains why some institutions are perceived for some set of attributes or are sought after by specific markets (Trivett, 1978). The concepts of exchange relationships, publics, and markets developed through marketing theories are instructive to institutions in admissions and enrollment (Trivett, 1978).

Relationship Marketing

Relationship marketing is defined as personal, on-going relationships between the organization and the customers that begin before and continue after the sale (Kerin, Hartley, Rudelius, & Steffes, 2012). This marketing paradigm focuses on customer retention where it is more profitable to maintain a current customer than to attract a new one (Harrison-Walker, 2010). Following the same marketing paradigm, higher education recognized student retention as a strategy for success (Hennig-Thurau, Langer, & Hansen, 2001; Sauer & O'Donnell, 2006). With admissions, relationship marketing is not necessarily about meeting demands so much as it is about anticipating needs of the consumer (Gyure & Arnold, 2001).

In a meta-analysis of relationship marketing, Palmatier, Dant, Grewal, & Evans, (2006) identified several effective strategies in relationship marketing such as: relationship benefits, seller expertise, communication, and interaction frequency (Doney & Cannon, 1997). Much like for-profit organizations, higher education faces many of the same challenges making relationship marketing a viable strategy for customer retention (Arnett, Wittmann, & Wilson, 2004). In

admitting and matriculating students, personal attention must be paid to applications by the institution utilizing the relationship marketing approach to provide accurate information and initiate an enrollment relationship with prospective students (Vander Schee, 2009).

In Vander Schee's (2009) study, relationship marketing strategies were applied to the recruitment process at private liberal arts institutions to measure the effectiveness of such strategies on increasing enrollments. Admissions and enrollment staff were trained on the concept of building a relationship with students from the moment of inquiry and building a relationship with the institution via the enrollment officer along with training in communication, problem solving skills, and built extensive knowledge or seller expertise on specific policies and procedures in the enrollment process (Vander Schee, 2009). Recruitment efforts experienced positive gains as more students made a connection with the institution and chose to enroll (Vander Schee, 2009). Admissions yield increased from a three-year average of 57.9 percent before the relationship marketing implementation to 70.2 percent the year after implementation (Vander Schee, 2009). Outside of the implementation of relationship marketing strategies, little changed in recruitment operations (Vander Schee, 2009), showcasing the potential effectiveness of relationship marketing on recruitment and admissions.

A critical application of marketing often neglected, misunderstood and mismanaged by many organizations including higher education is targeting customers for long-term profitability (Harrison-Walker, 2010). While not all customers are profitable, a foundation of marketing is finding the right customers who the organization can serve well and profitably, while the wrong customers are those who the institution cannot profitably serve (Jones & Sasser, 1995). It is widely accepted in business that organizations should set priorities among customers and allocate resources that correspond to such priorities (Zeithaml, Lemon, & Rust, 2001).

From the marketing paradigms that are customer focused, customer prioritization is the degree to which customers are treated differently with respect to marketing instruments according to their importance to the organization (Homburg, Droll, & Totzek, 2008). Similarly to other industries, higher education's right or most profitable customers are those identified as most profitable to the institution (Harrison-Walker, 2010). The wrong customers are those who require extra servicing and who are not profitable for the organization (Harrison-Walker, 2010). Wrong customers of higher education may also be those who negatively impact right customers during the service process or chase them away (Harrison-Walker, 2010). Customers can influence the satisfaction and dissatisfaction of other customers in a phenomenon called customer compatibility (Martin & Pranter, 1989). Customer compatibility greatly affects schools and universities, as rising education levels seem to correspond to an increase in the selectivity of other individuals with whom consumers wish to associate (Martin & Pranter, 1989). It is then important to identify the specific customer characteristics or behaviors that serve as antecedents of compatibility (Martin & Pranter, 1989).

Within higher education there are critical ways in which customers might be compatible related to similar levels of academic preparation upon entering an institution and sharing of goals or benefits sought. An example is high standards for admissions assuring all students entering have a similarly high level of academic preparation (Harrison-Walker, 2010). Academic compatibility at institutions with high admission standards would be expected to be higher as opposed to institutions where the admissions standards are set low and students have a high variability in academic preparation (Harrison-Walker, 2010). The lower compatibility or possible incompatibility can lead to lower student satisfaction and greater probability those students who

are dissatisfied will potentially unenroll or transfer to another institution (Harrison-Walker, 2010).

The grouping of right and wrong customers and customer prioritization strategies has also been met with resistance. The concept of targeting profitable customers can also be viewed as discouraging potentially wrong customers and the ethics behind such actions specifically for higher education are questionable (Harrison-Walker, 2010). This discouragement has been referred to as demarketing which was first defined by Kotler & Levy, (1971) as the aspect of marketing that deals with discouraging customers in general or a certain group of customers in particular on either a temporary or permanent basis. Customer prioritization may also leave lower priority customers dissatisfied which may lead to those customers spreading negative word of mouth marketing and potentially leading to decreased profits (Hogan, Lemon, & Libai, 2003). The notion of firing wrong customers seems inappropriate for higher education in the sense institutions should actively divest or fire wrong customers. Some in favor of firing wrong customers contend that with limited resources of classroom space and faculty it may be in the best interest to allow unprofitable or incompatible students to voluntarily switch to other institutions better suited to their needs and make space for more profitable and compatible students (Harrison-Walker, 2010). In recruiting and enrolling students, the notion of firing wrong customers may be efficient in the sense graduate programs should focus on recruitment efforts on the right customers who are likely to enroll and succeed. However, this can also lead to furthering gaps in gender and racial/ethnic group differences in graduate program enrollment as some groups may be viewed as less likely to complete a graduate program and thus considered the wrong customers.

Services Marketing

A service is defined as any act or performance one party can offer to another that is essentially intangible (Kotler & Keller, 2006). Higher education does not produce a tangible physical product; however, it does offer a service in providing education. It is difficult for consumers to judge the technical quality of services in making buying decisions (Kotler & Keller, 2006). There are characteristics of a service a buyer can evaluate before purchasing with such characteristics being high in search qualities (Kotler & Keller, 2006). The experience qualities of a service can be evaluated after purchase while credence qualities are the characteristics a buyer normally finds hard to evaluate even after consumption (Kotler & Keller, 2006). Services are generally high in experience and credence qualities making a consumer experience more risk with their purchase (Kotler & Keller, 2006). Typically, consumers rely on word of mouth rather than advertising while also relying on price, provider, and physical cues to judge quality (Kotler & Keller, 2006).

While a physical product can be seen before it is bought, a consumer cannot see the results of a service before the purchase (Kotler & Keller, 2006). To reduce such uncertainty or risk, consumers look for evidence of quality by drawing inferences from the place, people, communication material, symbols and price (Kotler & Keller, 2006). Industries providing services can demonstrate their quality through physical evidence and presentation (Kotler & Keller, 2006). Service marketing includes people, physical facilities and processes to influence the consumer on determining quality of a service (Ivy, 2008). Higher education institutions should pay attention to physical facilities such as buildings and grounds, communication materials, website design, and human resources as prospective students utilize cues from such variables to infer quality and influence decision-making (Ivy, 2008).

With marketing playing a larger part in how colleges work to attract and enroll students, it has become a necessary component to college choice models. As the literature outlined, institutional characteristics such as cost of attendance, academic reputation, services provided were all considered by students in making a decision of where to enroll. With the combined models of college choice, it was solely variables attributed to the students' social and cultural capital and perceived benefits and costs with no variable regarding the institution and marketing influences. The marketing theories outlined above will also serve as a foundation for this study in understanding what influences students' choice of institution to enroll at for post-baccalaureate programs.

Making Decisions

As outlined in the college choice models, multiple factors influence a student's decision-making process. Cues from an institution such as reputation, ranking, testimonials, infer potential benefits for the student such as social status, increased earnings, and reputation, are all factored into a student's decision-making rationale (Briggs & Wilson, 2007). A student determines his or her personal needs and then will seek an institution and academic program to meet his or her personal needs through the perceived service offered by an institution (Kotler & Keller, 2006).

Students, much like consumers, make decisions under a certain degree of uncertainty regarding a specific higher education institution (Kotler & Keller, 2006). With education considered a professional service, Freiden & Goldsmith (1989) contend the purchase of a professional service is considered high in perceived risk due to intangibility and variability of services in comparison to tangible products. In deciding which institution and academic program to attend, prospective students may face financial risks (amount invested in tuition and return for potential higher salary), functional risks (if the investment will fulfill requirements for an

advanced career), and social risks (what others may think regarding the decision to attend a certain institution) (Simoes & Soares, 2010). To reduce such risk, students search for information, gauge the reputation of an institution, and compare services (Lovelock, 2001). When evaluating education programs and institutions, students consider product attributes such as price, quality, and size (Simoes & Soares, 2010). In addition to the product attributes, choice may be affected by factors external to the institution, such as opinion of others and situational factors (Simoes & Soares, 2010). Webb (1992) specified choice factors for business school selection that included academic reputation, potential degree marketability, proximity, and reputation in the community.

In Delaney's (1999) study on motivation and enrollment decision processes of students accepted into a Master of Business Administration (MBA) program, the overwhelming majority rated the institution's academic reputation followed by the quality of teaching and value of the degree as very important factors in the decision to enroll in the MBA program. The study also found prospective students' experiences during the admission process represented a potentially definitive influence on their enrollment decision regarding a particular graduate school (Delaney, 1999).

Similarly, in Stack's (2009) study on graduate student enrollment at a private university's MBA program found the most critical time for the university to influence an enrollment decision was the zero to six month period following an initial inquiry to the university. Thus making the recruitment and admission process a vital time to positively influence graduate student enrollment. Further statistical analyses of the inquiry and admissions experiences for prospective graduate students identified significantly higher mean ratings on admission experiences for the school in which the student enrolled compared to competitor graduate schools including

promptness of reply to requests, individual attention, and correspondence with admissions staff and visiting campus (Delaney, 1999). Through a survey of 334 students accepted for a MBA program, Delaney (1999) found statistically significant differences between enrolling and non-enrolling students in factor scales in academic quality, program characteristics, career network, and diversity/international programs (Delaney, 1999). Students were significantly more likely to enroll based on the extent they rated the school in Delaney's (1999) study positively on program characteristics, student diversity and international programs, career networks, graduate school ratings, and academic quality of the program. Those variables were found to accurately predict the enrollment decision of 77 percent of the respondents (Delaney, 1999).

Ivy & Naudé (2004) conducted a study to identify the most influential factors on students' decisions to enroll in a specific MBA program. Conducted in South Africa, the researchers explored if their marketing analysis model realistically captured the factors students evaluated to select an MBA program. The 5P marketing analysis model is a set of controllable variables (product, price, place, promotion, and people) an institution uses to produce the response it wants from various publics (Ivy & Naudé, 2004). From the analysis, the range of electives and choice of emphases in the MBA degree are the most important aspects in the selection of an MBA program leading to the conclusion the product (the MBA degree program) variable can influence students' decisions to enroll in a particular MBA program. Prominence or reputation of the staff and faculty and the reviews the business schools received were also largely influential (Ivy & Naude, 2004). The potential marketability of a student as a job candidate after earning the degree was also found as a marketing factor that influenced business students' college decisions (Webb, 1992). The price including tuition and fees and flexibility tuition payment was the third most important factor (Ivy & Naude, 2004).

Taking into account cost, which included tuition and percentage of students using financial aid, Montgomery (2002) examined the influences in selection of graduate business programs. Using the factors of cost, school quality, convenience of attending, and potential financial and career gains from earning a graduate degree; two significant results were found in cost and residency (Montgomery, 2002). The higher the cost for the student the less likely they were to enroll and the closer they were to an institution's location the more likely they were to enroll (Montgomery, 2002). Aligned with economic models of college choice, the factors resulting in a higher cost to the individual were found to deter enrollment due to a perception of less benefits with a higher cost.

Summary

In general, the existing literature is limited in its ability to provide comprehensive understanding of graduate student college choice. Further there are not any known theories or models specific to the college choice decisions of graduate students with the studies on graduate enrollment trends utilizing undergraduate theories and college choice models. As outlined in the literature, different groups of individuals have varying reasons to pursue advanced education. To continue to build upon Perna's work, further study of graduate student enrollment is needed to better understand graduate student enrollment and gender differences in post-baccalaureate programs. While studies have been conducted to understand enrollment trends for graduate students at individual institutions and choices driving their enrollment decisions at that institution, there appears to be a lack of further application utilizing the national data set of post-baccalaureate enrollment and understanding the institutional characteristics that may also influence student enrollment. In Perna's (2004) work of understanding gender and racial/ethnic group differences in graduate enrollment, she called for additional research to continue to build

the understanding of sources of gender differences in post-baccalaureate enrollment. In addition to further understanding of enrollment differences, Perna (2004) also called for identifying the most effective policies and practices in raising post-baccalaureate enrollment for traditionally underrepresented groups of students such as women in business graduate programs.

CHAPTER 3: METHODOLOGY

This study seeks to further apply the combined college choice model developed by Perna (2004) that expanded the traditional economic framework of college choice to include aspects of social and cultural theories. The purpose of this quantitative study is to apply Perna's combined model to the most recent Baccalaureate and Beyond Longitudinal Study data to further examine the explanatory power of an expanded economic framework of college choice. This study used a non-experimental research design and more specifically an association approach. The purpose of an associational research group is to identify the relationships or associations between two or more characteristics within the same group of participants (Gliner, Morgan, & Leech, 2011).

Research Questions

The research questions that guided this study focused on what influences students to enroll in business graduate programs and the relationship of race and gender on these influences. Building on Perna's research that examined and tested the appropriateness of an expanded economic framework for understanding gender and racial/ethnic group differences in post-baccalaureate enrollment, this study uses data from the 2012 follow up to the Baccalaureate and Beyond Longitudinal Study of 2007/2008 bachelor's degree recipients (B&B:08/12) to address the following research questions:

1. What is the profile of the 2007-2008 bachelor's degree recipients who enrolled in a business master's degree program as of 2009 and 2012?
2. What does Perna's model when applied to the most recent B&B: 08/12 data reveal related to enrollment in a master's degree program in business?

3. How is gender and race/ethnicity associated with cultural and social capital as well as the economic framework in regard to post-baccalaureate enrollment in business master's degree programs?
4. What is the nature of the relationship between gender and race/ethnicity and type of institution enrolled at for business master's degree programs?

Baccalaureate and Beyond Longitudinal Study

The Baccalaureate and Beyond Longitudinal Study (B&B: 08/12) dataset serves as the source of data for this study. The B&B: 08/12 was developed by the National Center for Education Statistics (NCES) to track the experiences of individuals who received their bachelor's degree. The B&B:08/12 tracks bachelor's degree recipients who earned their degree during the 2007-2008 academic year with follow-ups in 2009 and 2012. The first follow-up occurred one year after earning the degree (2009) and the second follow-up occurred three years after that (2012). B&B examines students' education and work experiences after they complete a bachelor's degree. B&B gathers extensive information on bachelor's degree recipients' workforce participation, income and debt repayment, undergraduate experience, demographic backgrounds, expectations regarding graduate study, entry into and persistence through graduate programs, and work, and participation in community service. B&B: 08/12 data allows researchers to address questions regarding bachelor's degree recipients' undergraduate experiences, entrance into and progress through post-baccalaureate education. Table 3 lists the sections and topics of the data collected in the B&B:08/12 survey.

Table 3

B&B:08/12 Interview Core Data Elements

Section	Topic
Eligibility	<ul style="list-style-type: none"> • Confirm completion of bachelor's degree requirements at the NPSAS institution between July 1, 2007, and June 30, 2008 • Confirm award of bachelor's degree at the NPSAS institution between July 1, 2007, and June 30 2008 • Marital status/financial responsibilities shared with another/household composition
Undergraduate Education	<ul style="list-style-type: none"> • NPSAS first postsecondary institution • Undergraduate enrollment at other postsecondary schools between high school and bachelor's degree • Date first enrolled and last enrolled at other postsecondary schools • Credits attempted to transfer from other postsecondary schools/proportion that were accepted at the NPSAS institution • Ability to complete bachelor's degree without attending 2-year college • Satisfaction with quality of education received at the NPSAS institution • Satisfaction with undergraduate major choice
Postbaccalaureate Education/Training	<ul style="list-style-type: none"> • Enrolled for degree or certificate since completing bachelor's degree • For each postbaccalaureate degree or certificate: <ul style="list-style-type: none"> – Name of Institution – Enrollment status – Degree type – Date first enrolled for degree or certificate, and date last enrolled for degree or certificate – Primary major – Date degree or certificate awarded – Master's degree earned en route to doctoral degree and date received – Enrollment intensity (full-time, part-time, or mixed) – Hours worked per week while enrolled

Table 3

B&B:08/12 Interview Core Data Elements continued

	<ul style="list-style-type: none"> – Type of financial aid received – Ratio of financial aid to out-of-pocket costs – Stress of paying for and attending school • Delivery mode (online/weekend/at night) of classes taken • Alternative plans if not enrolled in postbaccalaureate education • Nondegree coursework and reasons for enrolling • Type of undergraduate loans • Federal student loans for all education (status and repayment amount) • Private student loans for all education (total amount/borrowed/owed, status, interest rate, and repayment amount) • Satisfaction with degree or certificate program • Number of other schools applied to/accepted • Help from family/friends in repaying loans • Level of stress due to education-related debt • Preparation for postbaccalaureate program (applied, reason for not attending, entrance exams) • Probability of enrolling in another postbaccalaureate program • Factors in choosing postbaccalaureate program
Postbaccalaureate Employment	<ul style="list-style-type: none"> • Worked since earning bachelor's degree • For all employment since bachelor's degree <ul style="list-style-type: none"> – Employer name and location – Job title and duties – Salary, average hours worked per week, months worked, and full-time or part-time status – Reason for breaks in employment • For a maximum of three jobs with reported employment for three months or more: <ul style="list-style-type: none"> – Type of employer and industry – Employer benefits offered and overtime/bonuses/commission earned – Reason working more or less than full-time and preference

Table 3

B&B:08/12 Interview Core Data Elements continued

	<ul style="list-style-type: none"> – Job related to degree(s) – Occupation licenses (type of license, requirements, relevance to work) – Description of noncareer path job – Job satisfaction – Reason no longer working for employer
	<ul style="list-style-type: none"> • Activities during periods of unemployment • Primarily a student or employee • Job search activities (months looking for work, importance of benefits) • Status while not working (enrolled in school, traveling volunteering, disabled, homemaker, temporarily laid off).
Student Background	<hr/> <ul style="list-style-type: none"> • Demographics (date of birth, citizenship) • High school attended (sector) • Native language • Military service • Age of dependent children and total number of dependents • Day care costs for dependent children • Assets and investments (retirement fund, home value, value of assets compared to debt) • Housing payment and vehicle loan payments • Income for calendar year 2011 from all sources • Spouse's or partner's information (employment status, income for 2011, attended college in 2012-13 school year, amount borrowed or owed in student loans, repayment amount, highest level of education completed) • Highest level of education completed by mother, father • Perception and influence of education costs • Financial stress • Civic and volunteer activity (type, hour per month) <hr/>

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12) Data File Documentation

B&B: 08/12 data are available as restricted use data files or as public use data via the NCES web tools, QuickStats and PowerStats. These tools permit analysis without disclosing individual respondents' data to the user. In addition, QuickStats and PowerStats suppress or flag estimates that fail to meet reporting standards. QuickStats generates simple tables and graphs. PowerStats generates more complex tables and logistic regression models.

Sample

The sample used for the B&B:08/12 is considered representative of the approximately 1.6 million students who completed a baccalaureate degree between July 1, 2007 and June 30, 2008. To be eligible for inclusion in the B&B:08 survey a student must have been a student at an institution included in the National Postsecondary Student Aid Study (NPSAS:08). To be eligible for the NPSAS:08 sample, institutions had to meet certain criteria during the 2007-08 academic year. They must have:

- Been eligible to distribute Title IV funds;
- Offered an educational program designed for persons who had completed at least a high school education;
- Offered at least one academic, occupational, or vocational program of study lasting at least three months or 300 clock hours;
- Offered courses that were open to persons other than the employees or members of the company or group (e.g. union) that administers the institution;
- Been located in one of the 50 states, the District of Columbia, or Puerto Rico; and
- Not been a U.S. service academy.

The final NPSAS:08 sample included 1,960 institutions and was selected from 46 institution strata based on state, institution level and control, and highest level of degree offering. Of those

1,960 institutions, about 1,940 were eligible to participate in NPSAS:08. Table 4 shows the number of institutions that were sampled, the number of eligible institutions, and the number of unweighted and weighted percentages of eligible institutions providing enrollment lists, by institutional characteristic.

Table 4

NPSAS:08 sampled and eligible institutions and enrollment list participation rates by institution characteristics: 2007-08

Institution characteristics	Sampled institutions	Eligible institutions	Institutions providing lists		
			Number	Unweighted percent	Weighted percent
All institutions	1960	1940	1730	89	90.1
Institution level					
less than 2-year	130	120	100	82.6	83.2
2-year	570	560	510	89.7	90.7
4-year non doctorate-granting	700	700	630	89.7	91.9
4 year doctorate granting	560	560	500	88.8	88.6
Institution control					
Public	960	960	880	91.9	91.2
Private nonprofit	650	640	560	87.4	86.7
For-profit	350	340	290	83.6	88.2
Institution type					
Public					
Less than 2-year	20	20	20	90.9	93.2
2-year	450	450	410	91.7	91.2
4-year non-doctorate granting	200	200	190	94.4	95.4
4-year doctorate granting	290	290	260	90.7	89.2
Private nonprofit					
Less than 4-year	20	20	20	84.2	84.7
4-year non-doctorate granting	370	370	320	88.2	87.9
4-year doctorate granting	260	260	230	86.5	85.9
For-profit					
Less than 2-year	100	90	70	80.4	81
2-year or more	260	250	210	84.8	90.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12) Data File Documentation

To be eligible for NPSAS:08, students had to be enrolled in a NPSAS-eligible institution in any term or course of instruction at any time from July 1, 2007 through June 30, 2008. Students also had to meet the following requirements:

- Be enrolled in any of the following: an academic program; at least one course for credit that could be applied toward fulfilling the requirements for an academic degree or an occupational or vocational program that required at least three months or 300 clock hours to instruction to receive a degree, certificate, or other formal award;
- Not be current enrolled in high school; and
- Not be enrolled solely in a General Educational Development (GED) or other high school completion program.

B&B:08/12 –eligible persons were individuals who completed requirements for a bachelor’s degree from a NPSAS:08-eligible institution between July 1, 2007, and June 2008, and were awarded their baccalaureate degree by the institution from which they were sampled no later than June 30, 2009.

Approximately 137,800 undergraduate students were sampled for the 2007-2008 National Postsecondary Student Aid Study (NPSAS:08). Approximately 17,110 students were determined to be eligible for B&B:08/12; thus, N=17,110.

Research Design

The dependent variable measures if the student enrolled in a master’s degree program in business by 2012, four to five years after earning their bachelor’s degree. Independent variables are the social and cultural capital factor and economic factors in college choice. Perna’s combined model assumes the decision to enroll in a master’s degree program (dependent variable) is a function of the following independent variables: gender, race/ethnicity, expected costs and benefits, financial and academic resources, and cultural and social capital (Perna, 2004).

Descriptive Statistics

Descriptive analyses are used to compare the characteristics of bachelor's degree recipients who enrolled in post-baccalaureate by 2012 with particular attention to enrollees of business graduate programs. Descriptive analyses are also included to compare characteristics of women and men bachelor's degree recipients.

Logistic Regression

There are several reasons for using logistic regression analyses in this study. First, many recent empirical examples of college choice research used this form of analysis and this research adds to the current body of literature by applying a commonly used methodology to Perna's combined model of college choice with the less often studied graduate student college choice enrollment. Second, it was appropriate to use a like methodology for purposes of comparison to other study results. Regression analysis is a statistical tool utilizing the relation between two or more quantitative variables so one variable can be predicted from the other. Regression analysis can also be used to determine whether the relationship between the dependent variable and predictor variable is significant; and how much variance in the dependent variable is accounted for by the predictor variable. Logistic regression is an appropriate multivariate technique when the outcome variables are dichotomous (enrollment in a master's degree program or no enrollment in a master's degree program) and the independent variables are of any type. In the present study, logistic regression was used to determine the likelihood of enrollment within a master's degree program in the business disciplines. The contribution of social and cultural capital and economic factors on post-baccalaureate enrollment were examined along with gender. Using the variables as defined in Perna's conceptual model, logistic regression was used to apply Perna's model to the most recent data from the B&B: 08/12. After the initial analysis of

Perna's model applied to B&B: 08/12, revisions were made to the variables to include enrollment status (part-time and full-time); online and on-campus courses; and, GMAT or GRE score as measure of institutional quality.

Logistic regression is a generalized linear model used for binominal regression and is utilized in predicting the likelihood an event occurring or not occurring given the levels of the independent variables (Menard, 2010). The defined relationship between the dichotomous dependent variable and independent variables form an S-shaped curve. If the predicted probability is greater than .50, then the prediction is event occurrence, less than .50 prediction results in event nonoccurrence. These predictions, the probability of an event divided by the probability of no event are otherwise known as an odds ratio that can be expressed as Equation 1:

$$\frac{Prob(event)}{Prob(NoEvent)} = e^{B_0 + B_1X_1 + \dots B_nX_n}$$

The estimated logistic regression coefficients ($B_0, B_1, \dots B_n$) are measures of the changes in the ratio of the probabilities.

To determine the probability of an event, the following Equation 2 is used:

$$P\left(Y_i = \frac{1}{X_{1,i} \dots X_{n,i}}\right) = \frac{e^{B_0 + B_1X_1 + \dots B_nX_n}}{1 + e^{B_0 + B_1X_1 + \dots B_nX_n}}$$

Categorical and continuous independent variables can be used in the logit model. Different from multiple regression, logistic regression does not have distributional assumptions on the predictors.

Logistic regression was used to model the relationship of the independent variables on the dichotomous outcome variable: enrolled in a business master's degree program. The results of the logistic regressions were presented as odds ratios for the likelihood of an event occurring.

Odds ratios are also utilized to demonstrate the change in probability of graduate enrollment over a reference category. Odds ratios greater than one indicate the probability of the event occurring is increased, while odds ratios less than one suggest the probability of an event occurring is decreased. When the odds ratio is one, the odds are unchanged (Menard, 2009).

Variables

Perna's combined model includes traditional economic college choice framework that is expanded to include social and cultural theories. This combined model assumes the decision to enroll in a post-baccalaureate program (dependent variable) is a function of the following independent variables: gender, race/ethnicity, expected costs and benefits, financial and academic resources, and cultural and social capital (Perna, 2004). Table 5 lists the dependent variable.

Table 5

Description of Dependent Variable

Variable Description	B&B:08/12 Label	Definition (variable type)
Enrollment in Master's Degree in Business, Management, and Marketing	B2HIEMAJ	Ever enrolled in a Master's program in business as of 2012 (dichotomous: yes or no)

Expected Costs and Benefits

Graduate and professional enrollment is assumed to be based on a national market rather than state or regional markets (Perna, 2004), thus it is assumed all bachelor's degree recipients face the same direct costs of attendance and the direct costs are not included in the analyses. The major field of a bachelor's degree is used to determine the foregone earnings and other labor

market opportunities when pursuing a graduate degree (Perna, 2004). Using starting salaries for bachelor's degree recipients who enter the workforce rather than enroll in further education are used for the foregone earnings measurement (Perna, 2004; Weiler, 1991). Perna (2004) grouped earnings into three fields based on the earnings of graduates through published data describing starting salaries by major field. With the differences in starting salaries across major fields, the groups were organized into four groups reflecting lowest to highest salaries: lowest quartile (education, history, and psychology), second quartile (humanities, social sciences, public affairs and social services, and other), third quartile (business and management), and highest quartile (math and other sciences, health professions, and engineering) (Perna, 2004).

In applying human capital theory, individuals consider the number of years over which increased earnings may be realized including additional earnings that may result from post-baccalaureate enrollment (Perna, 2004). Perna (2004) considered individuals who delay entry into undergraduate education after graduating high school or require longer than four years to complete a bachelor's degree less likely to invest in further education because of the shorter time period to realize an increase in lifetime earnings. The delay in entrance is measured by the time between graduating high school and earning a bachelor's degree.

In assessing the costs and benefits of further education, marital status and parental status may affect the assessment (Perna, 2004). Marital status is measured as married rather than not the student had dependents in 2008. Table 6 lists the variables for expected costs and benefits.

Table 6

Independent variables for expected costs and benefits

Variable Description	B&B:08/12 Label	Definition (variable type)
Salaries for majors	QF11BAC	Four groups reflecting lowest to highest salaries (Categorical: Lowest quartile; Second quartile; Third quartile; Highest quartile)
Delaying entry and time to complete bachelor's degree	HS_BA	Months between high school graduation and 2007-2008 bachelor's degree award date (Continuous)
Marital Status	B1MARR	Marital Status in 2009 (Categorical)
Parent Status	B1DEPS	Any dependents in 2009 (Dichotomous: yes or no)

Financial and Academic Resources

Using Becker's (1962) human capital theory, Perna (2004) utilized financial resources as influencing the assessment of benefits and costs of post-baccalaureate enrollment. Undergraduate education debt was one measure of financial resources (Perna, 2004). Financial support sources also influence on post-baccalaureate enrollment (Perna, 2004). Income and dependency status of the bachelor's degree recipient is an additional measure of financial resources (Perna, 2004). From the economic perspective, academic ability is a measure of individual's stock in human capital and it influences the individual's assessment of likelihood of completing further education and realizing the expected benefits (Perna, 2004). Perna (2004) measured academic achievement by cumulative undergraduate grade point average and SAT/ACT quartile.

Table 7

Independent variables for financial and academic resources

Variable Description	B&B:08/12 Label	Definition (variable type)
Income	CINCOME	Dependent's parents & independents' income (Continuous)
Undergraduate GPA	GPA	Undergraduate GPA as of 2007-2008 (Continuous)
ACT/SAT score	TEACTDER	ACT composite score or SAT I combined score converted to an estimated ACT composite score (Continuous)
Undergraduate debt	B1BORAT	Cumulative loan amount borrowed for undergraduate through 2007-2008 (Continuous)

Cultural and Social Capital

Social and cultural capital are included to reflect individual preferences and desire for graduate education (Perna, 2000; Perna, 2004). This also includes the values and beliefs in an individual's habitus (Perna, 2004; Paulsen & St. John, 2002). Measures for cultural capital are parental educational attainment and whether the language that is most often spoken in the home is English (Perna, 2004). Parental education is a measure of social and cultural capital and is measured by the highest level of education attained by either parent (Perna, 2004). Parental education attainment is measured by the highest level of education attained by either parent ranging from no more than high school to a professional or doctoral degree.

How a person values education is also included as measure of social capital included in the combined model. In the B&B:08/12 survey, respondents were asked to rate the importance of choosing a graduate program. The factors included ability to balance work and family, earnings

potential, level of interest in the subject, likelihood of a job, contribution to society, and aptitude in the field.

Social networks are also considered to influence graduate enrollment and is measured by characteristics of the bachelor's degree granting institution as Carnegie classification, tuition, and location (Perna, 2004). The Carnegie classification reflects the relative emphasis of the institution on research and graduate education (Perna, 2004). Tuition is a measure of institutional quality (Perna, 2004). The location of the institution is a measure of the breadth of the peer network and is measured by whether the student received a bachelor's degree from an institution in the student's home state or outside the student's home region (Perna, 2004).

Table 8

Independent variables for social capital

Variable Description	B&B:08/12 Label	Definition (variable type)
Undergraduate Institution Carnegie Classification	CC2000B	Carnegie code for 2007-2008 bachelor's degree-granting institution (Categorical)
Undergraduate Tuition and Fees	TUITION2	Tuition and fees paid in 2007-2008 (Continuous)
Location of Undergraduate Institution	SAMESTAT	2007-2008 bachelor's degree granting institution was in the same state as legal residence in 2007-08 (Dichotomous)

Table 9

Independent variables for cultural capital

Variable Description	B&B:08/12 Label	Definition (variable type)
Parent's educational level attainment	PAREduc	Highest education level attained by either parent in 2007-2008 (Categorical)
Language at home is English	PRIMLANG	English was the primary language spoke at home growing up (Dichotomous)

Internal and External Validity for Study

To manage for measurement error, internal and external validity needed to be considered (Gliner et al., 2011). The internal validity conveyed the extent to which the independent variable predicted a relationship with the dependent variable (Gliner et al., 2011). In this study regression modeling was used to measure the impact of several input and environmental factors (Gliner et al., 2011). Gliner, et al. (2011) notes there are three conditions for determining causation: the independent variable must precede the dependent variable; the independent variable must be related to the dependent variable; and finally, there must be no other variables that could explain why the independent variable is related to the dependent variable. The third condition is never possible in the comparative and associational approaches (Gliner et al., 2011). Researchers are cautioned not to predict causation to imply a generalized relationship; thus, the strength of the relationship and influence of the independent variables on the dependent variable is included in this study. Although associational approaches are limited in what can be concluded about causation, it can lead to strong evidence about differences between groups and associations

between variables (Gliner et al., 2011). In a non-experimental study there is also a threat to internal validity given the difficulty in controlling for equivalence of groups given there is no control group and participants are not randomly assigned.

External validity refers to how generalizable the study was to the broader population (Gliner et al., 2011). Use of a secondary data set such as the B&B: 08/12, can provide access to large sample sizes, relevant measures and longitudinal data allowing researchers to formulate a generalizable answer to high impact questions (Smith, Zyanian, Covinsky, Landon, McCarthy, Wee, & Steinman), 2011). External validity of findings does hinge on the assumption that research participants represent the population from which they were drawn. Use of the B&B: 08/12 data strengthens the external validity in the sense it is a nationally representative longitudinal study that provides a more representative sample than data from a single institution would provide. While it is possible certain characteristics or demographics may not be represented equally over time, the nationally representative data set from B&B: 08/12 contributes to the external validity.

Reliability

Reliability in quantitative research designs determines a study's effectiveness. The extent to which results were consistent over time and an accurate representation of the total population under study is referred to as reliability as well as if the results of a study could be reproduced under a similar methodology (Gliner et al., 2011). A study would be reliable when its results and observations were repeatable or replicable. Some threats to reliability do exist. Environmental changes that occurred between the measurements in the B&B: 08/12 may influence the measurements being taken making it impossible to ensure that the same individual is measured in identical conditions. Participant changes is also a threat to reliability as it is possible for

participants to have changed in some way potentially creating an error that reduces the reliability.

Data Analysis

PowerStats was the data analysis tool used to calculate the descriptive statistics (i.e. percentage distributions, averages) and inferential statistics (logistic regression) for the study. PowerStats can create three types of descriptive statistics tables: 1) percentage distribution, 2) averages, medians, and percent, and 3) centiles. Percent distribution tables are capable of computing values for categorical variables, while the latter two tables are capable of computing values for continuous variables. Three types of regression tables (i.e. linear regression, logistic regression, correlation matrix) can also be created. The linear regression table in PowerStats is restricted to inputs that are continuous or ordered, categorical dependent variables. PowerStats explicitly describes the logistic regression as appropriate when the data examined includes categorical variables. Lastly, the correlation matrix in PowerStats takes pairs of variables and measures their linear association.

Descriptive Statistical Analysis

Descriptive statistical analyses of student-related variables were conducted in PowerStats. Through descriptive statistics (i.e. percentage distributions, averages, and medians), comparisons were made among students who enrolled in a graduate business program and those that did not enroll. Results indicated differences, if any, among the variables.

To conduct the descriptive statistical analyses of those who enrolled and those who did not enroll in graduate business programs, a new averages table was created using the B&B:08/12 dataset in PowerStats. The “Averages, means, and centiles” table was selected. The variables income, undergraduate grade point average, ACT composite score, cumulative undergraduate

debt were selected from the list of variables from the B&B:08/12 dataset and each placed for use as a “Column Variable.” The variable Ever Enrolled in a Master’s Degree as of 2012 was placed into the “Row Variable” section. The “Filter” feature was used to identify students enrolled in business, management, and marketing programs by inputting the variable “Highest post-baccalaureate enrollment Field of Study” in the filter selection and selecting business, management and marketing to ensure the results would include only business related graduate programs.

Next, descriptive statistical analyses were performed for the independent, categorical variables. A new “Percentage distribution” table and the B&B:08/12 dataset were selected. Gender, Race/Ethnicity, Marital Status, Living with any dependents, and Parents’ highest level of education were selected from the list of all variables from the B&B:08/12 dataset and placed for use as a “Column Variable.” The variable, “Highest Post-Baccalaureate Enrollment Degree Type” was placed into the Row Variable section and Master’s Degree was selected to ensure only those enrolled in Master’s Degrees included. The “Filter” feature was used to identify students enrolled in business, management, and marketing programs by inputting the variable “Highest post-baccalaureate enrollment Field of Study in the filter selection and selecting business, management and marketing to ensure the results would include only business related graduate programs.

Logistic Regression

In addition to descriptive analyses, logistic regression was employed to identify associations of the independent variables on the outcome variable: enrollment status. Logistic regression is useful for situations in which researchers would want to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variables (Menard,

2009). To perform logistic regression analysis, PowerStats requires the user to input the dependent and independent variables. Dummy variables were used for the categorical variables in order to offer a base or reference group for perspective purposes. Variables were loaded into the PowerStats tool to process the logistic regression analysis to return the following statistical outcomes: Odds Ratio Results and Estimated Full Sample Regression Coefficients.

PowerStats reports the Odds Ratio, Lower 95% (the lower limit for the confidence interval), Upper 95% (the upper limit for the confidence interval; t value (defined as the odds ratio divided by the standard error); p value and b value (the natural log of the Odds Ratio). The Odds Ratio reported by PowerStats is defined as the probability of an event occurring divided by the probability of that event not occurring. All else being equal, the odds ratio represents the proportional change in the probability that the dependent variable equals one for each additional unit of the independent variable (NCES, 2013). If the odds ratio is greater than 1, this means that as the value of the predictor variable increases so does the odds of occurrence of the independent variable (Menard, 2012). In logistic regression when using either a dichotomous indicator or binary dummy variable, the outcome is measured in relation to a reference group and a conclusion is drawn. For example, if the variable GENDER had an odds ratio result of .875 for enrolling in a master's degree program in business, this is interpreted as the odds of females enrolling in a master's degree program in business are only 87% as great as the odds of males (the reference group) enrolling in a master's degree program in business. Another way to state this is that females were 13% less likely than males to enroll in a master's degree program in business.

The "Lower 95%" and "Upper 95%" values that are reported by PowerStats form the 95% confidence interval for the odds ratio (NCES, 2013). The confidence level of 95% is the

most common because it provides a good balance between precision and reliability (Triola, 2013). A confidence interval tells us that the process we are using will result in confidence interval limits that contain the odds ratio 95% of the time. The t value that is reported in the Odds Ratio results (note this value is different than the t value reported in the Estimated Full Sample Regression Coefficients section detailed below) is the log-odds ratio (denoted as “b” and detailed below) divided by the standard error. This t value converts the log-odds ratio into a test statistic. A test statistic is a standardized score. This t value is the same as in linear regression and is used when the underlying distribution of the data is not normal. The purpose of the t value is to evaluate the significance of the study. The computed t value is compared to the critical value of 1.96 (two standard deviations) to determine whether the coefficient for the predictor variable is significant at the 95% confidence level. This critical value is the number that separates sample statistics that are likely to occur from those that are unlikely (Triola, 2013). For example, if the t value for an outcome is -1.825 its absolute value, 1.825, is less than 1.96, so the coefficient for this outcome is not statistically significant at the 95% level. The p -value reported by PowerStats is the probability of the test statistic. It measures the probability a sample would have yielded a coefficient of this magnitude due to sampling error if the true value of the coefficient were zero. Typically, a result is considered statistically significant if the p -value is less than 0.05. Pampel (2000) cautioned regarding the use of p -values because large samples can produce significant p -values for small and unimportant effects. Thus, the p -value was used as recommended by Pampel (2000) as an initial hurdle and other values relating to significance generated by PowerStats were examined to determine statistical significance. The “b” value reported by PowerStats is logged-odds ratio, which is the natural logarithm of each odds ratio. It is also known as the unstandardized coefficient. This log-odds ratio can be used to calculate the predicted probability

that the dependent variable equals one for specific values of any independent variable (NCES, 2013). Note that for the purpose of consistency, the results in the Odds Ratio Results were compared to all values listed below to ensure that no discrepancies exist with the results from the other sections of the report.

Summary

This study used a non-experimental design and more specifically logistic regression to determine relationships between the independent variables of economic factors and social and cultural capital and the dependent variable, enrollment in a master's degree program in business. This study aims to advance the conceptual model of graduate school choice developed by Perna (2004) based primarily in the economic theory of human capital and sociological concepts of cultural and social capital. Using data from the 2008/12 Baccalaureate and Beyond Longitudinal Study; this data is more current than the bulk of the previous research, which featured the 1992-1993 Baccalaureate and Beyond cohort. Use of this data set allows for exploration of recent policy and macro-level economic changes that occurred recently such as tuition increases as well as sociological changes in gender make-up of higher education. The research questions were answered using descriptive statistics and logistic regression to determine the associations between the economic factors and sociological and cultural capital and enrollment in a master's degree program in business. This chapter presented the methods used to complete the research study, a description of the dataset and questions, population and sample description, data collection, and data analysis procedures. The next chapter presents the results of the findings from these data analyses.

CHAPTER 4: RESULTS

This study used descriptive statistics and logistic regression analyses to examine influences of enrollment in a master's degree program in business from a national sample of 2007-2008 bachelor's degree recipients. An examination of secondary data collected by the National Center of Education Statistics' (NCES) Baccalaureate and Beyond Longitudinal Study is provided. The Baccalaureate and Beyond Longitudinal Study (B&B: 08/12) dataset serves as the source of data for this study. The B&B: 08/12 was developed by the National Center for Education Statistics (NCES) to track the experiences of individuals who received their bachelor's degree. The B&B:08/12 tracks bachelor's degree recipients who earned their degree during the 2007-2008 academic year with follow-ups in 2009 and 2012. (NCES, 2015). This chapter presents the findings for each of the following research questions:

1. What is the profile of the 2007-2008 bachelor's degree recipients who enrolled in a business master's degree program as of 2009 and 2012?
2. What does Perna's model when applied to the most recent B&B: 08/12 data reveal related to enrollment in a master's degree program in business?
3. How is gender and race/ethnicity associated with cultural and social capital as well as the economic framework in regard to post-baccalaureate enrollment in business master's degree programs?
4. What is the nature of the relationship between gender and race/ethnicity and type of institution enrolled at for business master's degree programs?

Research question one is addressed through descriptive statistics of 2007-2008 bachelor's degree recipients who enrolled in a master's degree program in business as of 2012. To address

Research question two, the results of logistic regression analyses are presented. Research question two examined Perna's model (2004) on enrollment in master's degree programs in business using the B&B: 08/12. Research question three used logistic regression to examine the impact of gender and ethnicity on cultural and social capital as well as economic framework in regard to enrollment in master's degree programs in business. Research question four is addressed through descriptive statistics and logistic regression to examine the association of gender and ethnicity and type of institution (public, private nonprofit, and private for-profit) enrolled at for a master's degree in business. PowerStats was the data analysis tool used to calculate the descriptive statistics (i.e. percentage distributions, averages) and inferential statistics (logistic regression) for the study. PowerStats can be used to generate complex averages, percentages, medians, and centile tables. It can also perform linear and logistic regressions and correlation matrices. Users are able to select from a complete list of thousands of variables. The description of the analysis and methods employed is provided in chapter three. The analysis and findings for each question is presented below.

Research Question One

The first research question was to identify the characteristics of those enrolled and those not enrolled in master's degree programs in business. The variables included in the descriptive statistical analyses for research question one were derived from the variables proposed by Perna (2004) for the economic factors, social capital and cultural capital. To maintain consistency with reporting of student information in previous publications and within the parameters of PowerStats, Table 10 was constructed by summarizing the averages outputs from PowerStats for variables with continuous values (i.e. Undergraduate GPA, Income, Cumulative Amount

Borrowed for Undergraduate, Months between High School Graduation and Bachelor's Degree Received, and ACT Composite Score).

Table 10

Means for Enrollees in Master's Degrees in Business and Enrollees in Master's Degrees Not in Business

Variable	Business	Non business
Months between high school graduation and 2007-08 bachelor's degree award date	84.49	86.63
Undergraduate GPA as of 2007-08	3.28	3.34
ACT composite score	23.39	23.61
Average Income (dependents' parents and independents) in 2006	70,869.32	77,329.46
Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	17,835.39	19,768.82

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

As shown in Table 10, those enrolled in business master's degrees had similar means of undergraduate GPA and ACT composite to those enrolled in other master's degrees. The months between high school graduation and bachelor's degree award date for those enrolled in business master's degrees (84.5 months) was slightly less than those enrolled in other master's degree programs (87 months). Average income (includes family income for students classified as dependent) for those enrolled in business master's degrees (\$70,869) was less than those enrolled in all other master's degree programs (\$77,329). The cumulative amount borrowed in federal loans as an undergraduate was higher for those enrolled in other master's degrees (\$19,769) than those enrolled in business master's degrees (\$17,835).

Percentage distributions were constructed for categorical variables. Table 11 summarizes the percentage distributions for the weighted sample of those enrolled in master's degree programs in business and those enrolled in other master's degree programs.

Table 11

Percentages of Demographics by Enrollee in Non Business and Business Master's Degree programs as of 2012

	Non Business	Business
Gender		
Male	33.36	48.99
Female	66.64	51.01
Race/Ethnicity		
White	73.33	64.95
Black or African American	9.84	15.57
Hispanic or Latino	9.12	8.56
Asian	4.23	5.42
American Indian or Alaska Native	0.32	0.63
Native Hawaiian or other Pacific Islander	0.28	‡
Other	0.25	0.38
Two or more races	2.62	4.09
Race/Ethnicity & Gender		
American Indian or Alaska Native male	0.13	‡
American Indian or Alaska Native female	0.19	‡
Asian male	2.45	2.53
Asian female	2.54	3.08
Black or African American male	1.98	4.50
Black or African American female	8.01	10.87
Hispanic or Latino male	3.25	4.53
Hispanic or Latino female	5.82	3.89
Native Hawaiian or other Pacific Islander male	0.13	‡
Native Hawaiian or other Pacific Islander female	0.15	‡
White male	24.64	33.96
White female	47.89	31.22
Other male	0.19	‡
Other female	‡	‡
Male of two or more races	0.60	2.52
Female of two or more races	1.98	1.51
Marital Status		
Not married	62.92	62.13
Married	37.08	37.87
Parent Status		
No Dependents	79.23	75.81
Yes, Dependent	20.77	24.19

Table 11

Percentages of Demographics by Enrollee in Non Business and Business Master's Degree programs as of 2012 continued

Carnegie Classification of Undergraduate Institution		
Associate's degree	0.34	1.20
Research and doctoral	47.42	49.18
Master's	37.95	39.10
Baccalaureate	14.29	10.52
Attend institution in same state as legal residence		
Yes	81.07	83.71
No	18.93	16.29
Parents Highest Level of Education		
Did not know either parent's education level	1.31	2.06
Did not complete high school	3.26	4.04
High school diploma or equivalent	16.41	20.05
Vocational or technical training	4.56	6.01
Less than 2 years of college	6.89	7.86
Associate's degree	8.76	6.04
2 or more years of college but no degree	3.25	2.71
Bachelor's degree	25.99	25.09
Master's degree or equivalent	18.68	16.88
First-professional degree	6.07	5.10
Doctoral degree or equivalent	4.81	4.16
English Primary Language at Home		
No	8.87	11.38
Yes	91.13	88.62

‡ Reporting standards not met.

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

As evidenced in Table 11 those who enrolled in business master's programs are similar to those who enrolled in all other master's programs with the exception of the race/ethnicity and gender variables. While females were largely the majority of enrollees in the non-business master's degrees (67%), in business master's degrees male and female enrollment was similar

(49% male and 51% female). In further detail of race/ethnicity, a larger percentage of Black or African Americans were enrolled in master's degrees in business (16%) than other master's degree programs (10%). The percentage of Whites enrolled in business master's degrees (65%) was less than the percentage enrolled in nonbusiness master's degrees (73%).

As further detailed in Table 11, White males made up 34% of all enrolled in business master's degrees. White females made up 31% of all enrolled in business master's degrees. Although Black or African American students made up about 16% of the enrollment in business master's degrees, the majority were female (11%) while Black or African American males were 5% of the enrollment in business master's degrees. Within the racial/ethnic and gender variables, Hispanic females or Latinas were a smaller percentage enrolled in business master's degree (4%) than in nonbusiness master's degrees (6%). White females were also a smaller percentage in business master's degrees (31%) than those enrolled in nonbusiness master's degrees (48%). However, Black or African males (5%) and females (11%), Hispanic or Latino males (5%), Asian males (3%) and females (3%), and White males (34%) all had higher percentages enrolled in master's degrees in business than other master's degrees. This may indicate an opportunity in terms of recruitment of diverse students into business master's degree programs where there are slightly higher percentages than nonbusiness master's programs. Potentially increasing the representation of diverse students in graduate education.

Research Question Two

Logistic regression analyses were used to determine the results of Research Question 2: What does Perna's model, when applied to the most recent B&B: 08/12 data, reveal related to enrollment in a master's degree program in business? Specifically, the independent variables defined by Perna's model and their association with the dependent variable of enrollment in a

master's degree in business were examined. The examination of enrollment includes individuals from the B&B:08/12 who enrolled in a master's degree in business as of 2012. In order to analyze the association of the independent variables on enrollment in a master's degree program in business, the criterion variable (enrolled in a master's degree program in business) underwent regression in PowerStats on the following independent variables:

- Marital Status
- Living with any children or dependents
- Months between high school graduation and bachelor's degree award date
- Income (dependent's parents and independent's) in 2006
- Undergraduate GPA as of 2007-2008
- ACT composite score
- Cumulative amount borrowed in federal loans for undergraduate as of 2012
- Highest education level attained by either parent as of 2007-2008
- English as a primary language growing up
- Carnegie code for 2007-2008 institution
- Gender
- Race/Ethnicity

The results of the regression reflected the total weighted sample of bachelor's degree completers in 2007-2008 who enrolled in a master's degree in business by 2012. The independent variable, English as a primary language growing up was removed due to collinearity. The primary characteristics of the reference group was a White male, not married, does not live with dependents, who's parent earned a college degree, and the 2007-2008 undergraduate institution was a Carnegie code Baccalaureate.

PowerStats generated results in the form of Odds Ratio Results. Table 12 details the impact of the variables from the logistic regression.

Table 12

Odds Ratio Results

	Odds Ratio	Lower 95%	Upper 95%	t	P- value	b
Intercept	0.11	0.00	31.11	-0.78	0.437	-2.24
Marital status in 2012						
Married	1.48	0.49	4.46	0.70	0.483	0.39
Living with children or dependents in 2012						
Yes, live with dependents	0.97	0.19	4.88	-0.03	0.973	-0.03
Months between high school graduation and 2007-08 bachelor's degree award date	1.01	0.97	1.05	0.41	0.679	0.01
Income (dependents' parents and independents) in 2006	1.00	1.00	1.00	0.37	0.714	0.00
Undergraduate GPA as of 2007-08	0.99	0.98	1.00	-1.54	0.124	-0.01
ACT composite score	1.08	0.96	1.21	1.32	0.189	0.08
Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	1.00	1.00	1.00	0.37	0.714	0.00
Highest education level attained by either parent as of 2007-08						
high school	1.22	0.26	5.65	0.25	0.801	0.20
some college	0.61	0.11	3.29	-0.58	0.562	-0.50
Carnegie code for 2007-08 institution						
Master's	1.84	0.34	10.01	0.71	0.477	0.61
Research	1.12	0.24	5.12	0.15	0.884	0.11
Tuition and fees paid in 2007-08	1.00	1.00	1.00	0.56	0.578	0.00
Salary Category by Undergraduate Major						
Highest Salary	0.78	0.15	3.95	-0.30	0.763	-0.25
*Lowest Salary	2.51	0.99	6.37	1.95	0.053	0.92
Race/ethnicity						
Black or African American	0.17	0.00	13.08	-0.80	0.422	-1.77
Hispanic or Latino	0.77	0.01	80.87	-0.11	0.912	-0.26
Other	0.95	0.09	10.42	-0.04	0.969	-0.05
Gender						
Female	0.99	0.37	2.67	-0.02	0.983	-0.01

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12
Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

*Denotes statistical significance

Gender and Race/Ethnicity

With an odds ratio of 0.17 and a 95% confidence interval of 0.00 to 13.08, Black or African American students were 83 percent less likely to enroll in a business master's degree than White students. Hispanic or Latino students were 23 percent times less likely to enroll in a business master's degree (95% confidence interval of 0.00 to 80.87) than White students. For gender, females were 1 percent less likely to enroll than males with a 95% confidence interval of 0.37 to 2.67.

Expected Costs and Benefits

Variables include marital status, parent status (measured by living with dependents or not living with dependents), months between high school graduation and bachelor's degree award date, salary category (as measured by undergraduate major). Looking closer at the variables for expected costs and benefits, students who were married were 48 percent more likely to enroll than those who were not with a 95% confidence interval of 0.49 to 4.46. Those living with dependents were 3 percent less likely to enroll with a confidence interval of 0.19 to 4.88. In regard to salaries, those in the lowest salary category were 150 percent more likely to enroll in a business master's degree with a 95% confidence interval of 0.99 to 6.37. Those in the highest salary category were 22 percent less likely to enroll in a business master's degree with a 95% confidence interval of 0.15 to 3.95. For months between high school graduate and bachelor's degree award date (1.01) all levels of this variable were as likely to enroll in a business master's degree with a confidence interval of 0.97 to 1.05.

Financial and Academic Resources

Variables for financial and academic resources included income, undergraduate GPA, ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount

borrowed in federal loans at the undergraduate level. As ACT scores increase, students are 8 percent more likely to enroll with a confidence interval of 0.96 to 1.21. For income (1.00 odds ratio; 95% confidence interval of 1.00 to 1.00), undergraduate GPA (0.99 odds ratio; 95% confidence interval of 0.98 to 1.00) and cumulative amount borrowed in federal loans at the undergraduate level (1.00 odds ratio; confidence interval 1.00 to 1.00) the odds ratio result was 1.00 indicating all levels of those variables were equally likely to enroll in a business master's degree.

Social Capital

Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned and undergraduate tuition and fees paid in 2007-08. Students who earned their bachelor's degree at a Master's Institution were 84 percent more likely to enroll in a business master's degree program than students who earned their degree at a Baccalaureate Institution with a 95% confidence interval of 0.34 to 10.01. Those who earned their bachelor's degree at a Research Institution were 12 percent more likely to enroll in a business master's degree program with a 95% confidence interval of 0.24 to 5.12. All levels of undergraduate tuition and fees were as likely to enroll with an odds ratio of 1.00 and 95% confidence interval of 1.00 to 1.00.

Cultural Capital

Variables for cultural capital included highest level of education attained by a parent. Those whose parents had earned a high school diploma were 22 percent more likely to enroll in a business master's degree than those whose parents earned a college degree with a confidence interval of 0.26 to 5.65. Students whose parents had some college credits but no degree were 39 percent less likely to enroll in a business master's degree with a confidence interval of 0.11 to

3.29. This may indicate an enrollment trend of first generation college students continuing their education into post-baccalaureate programs. Some researchers have also found family educational background ceases to have significance when undergraduate students become college graduates (Mullen, Goyette, & Soares, 2003).

Research Question Three

Research question three sought to examine the association of cultural and social capital as well as economic factors with gender and race/ethnicity on enrollment in master's degree programs in business. Descriptive statistics and logistic regression were employed to explore the associations.

Enrollment by Gender and Race/Ethnicity

For the weighted sample of students in business master's degree programs, the percentage distributions of those enrolled in 2009 and 2012 according to their demographic variables of gender and race/ethnicity are listed in Tables 13 through 15.

Table 13

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients enrolled in a master's degree program in business by Gender

	Male	Female
Estimates (%)	(%)	(%)
Enrollment as of 2009	53.6	46.4
Enrollment as of 2012	50.7	49.3

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Table 14 shows the percentages of students enrolled in 2009 and 2012 by race/ethnicity. The majority were White in 2009 (62.9%) and in 2012 (63.5%). Hispanic or Latino students increased from 6.7% in 2009 to 8.8% in 2012.

Table 14

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients enrolled in a master's degree program in business by Race/Ethnicity

Race/Ethnicity	2009	2012
White	62.9	63.5
Black or African American	16.0	15.6
Hispanic or Latino	6.7	8.8
Asian	7.2	5.4
Other	7.2	6.8

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Table 15 shows the percentages of students enrolled in 2009 and 2012 by race/ethnicity and gender. In 2012, Black females were the only females with higher percentage enrollment (11.2% versus 4.9%) than males in the same race/ethnicity group. While the percentage of white males decreased from 2009 to 2012 (from 42% to 35.7%) the percentage of white females increased from 2009 to 2012 (24.3% to 29.2%). Enrollment by Latinos also increased (2% to 4.4%), yet Latinas' enrollment decreased (6% to 4%).

Table 15

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients enrolled in a master's degree program in business by Gender and Race/Ethnicity

Race/Ethnicity	Enrollment Estimates (%)	
	2012	2009
Asian male	2.4	1.5
Asian female	3.3	5.0
Black or African American male	4.9	6.5
Black or African American female	11.2	7.3
Hispanic or Latino male	4.4	2.0
Hispanic or Latina female	4.0	6.0
White male	35.7	42.0
White female	29.2	24.3
Other male	2.4	1.3
Other female	1.5	3.4

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Cultural Capital

Variables for cultural capital included highest level of education attained by a parent and English as the primary language spoken while growing up. Tables 16 and 17 show the percentage distribution for the cultural capital variables.

Table 16

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients enrolled in a master's degree program in business by highest level of education attained by either parent

	Did not know parent's education level	Did not complete high school	High school diploma or equivalent	Vocational or technical training	Less than 2 years of college	Associate's degree	2 or more years of college but no degree	Bachelor's degree	Master's degree or equivalent	First- professional degree	Doctoral degree or equivalent
Gender											
Male	‡	4.77	18.96	6.76	5.66	5.44	2.23	25.94	21.30	4.06	3.61
Female	2.82	3.33	21.09	5.30	9.97	6.61	3.18	24.26	12.65	6.10	4.69
Race/ethnicity											
White	‡	0.78	15.50	6.24	7.19	6.93	2.30	29.55	20.83	6.85	3.82
Black or African American	6.07	8.10	26.49	10.69	9.19	5.98	6.35	13.58	12.66	‡	‡
Hispanic or Latino	11.77	12.73	32.87	‡	7.06	‡	‡	10.79	7.98	4.18	4.52
Asian	‡	‡	21.76	‡	‡	‡	‡	24.99	‡	‡	21.30
Other	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Two or more races	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Race/ethnicity and gender											
Other male	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Other female	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
White female	‡	‡	19.29	5.14	7.12	7.19	2.16	28.98	15.94	8.84	4.46
White male	‡	2.47	12.92	7.04	7.00	6.45	2.35	29.32	24.59	4.78	3.11
Hispanic or Latina female	‡	12.86	19.22	‡	‡	‡	‡	16.78	‡	‡	‡
Hispanic or Latino male	‡	12.62	44.58	‡	‡	‡	‡	5.65	‡	‡	‡
Black or African American female	8.56	2.88	26.93	6.62	11.12	8.42	7.59	16.56	10.50	‡	‡
Black or African American male	‡	20.61	26.03	‡	4.47	‡	‡	6.29	17.79	‡	‡
Asian female	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Asian male	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Hispanic or Latino were the highest percentage (33%) of the race/ethnicity groups with parents whose highest education was a high school diploma or equivalent. White students were the highest percentage with parents whose highest education was a bachelor's degree (30%) and master's degree (21%). Asian students had the highest percentage of the race/ethnicity groups with parents whose highest education was a doctoral degree (21%). Black males had the highest percentage (21%) of parents who did not complete high school.

Table 17

Percentage distribution of English as a primary language growing up

	No	Yes
Gender		
Male	9.49	90.51
Female	13.18	86.82
Race/ethnicity		
White	3.39	96.61
Black or African American	4.82	95.18
Hispanic or Latino	48.76	51.24
Asian	54.75	45.25
Other	‡	‡
Two or more races	‡	‡
Race/ethnicity and gender		
Other male	‡	‡
Other female	‡	‡
White female	7.77	92.23
White male	2.82	97.18
Hispanic or Latina female	43.06	56.94
Hispanic or Latino male	53.66	46.34
Black or African American female	1.72	98.28
Black or African American male	13.09	86.91
Asian female	‡	‡
Asian male	‡	‡

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Asian students had a higher percentage (55%) that did not grow up with English as the primary language while White students had the highest percentage (95%) that grew up with English as the primary language. Hispanic or Latino males had the highest percentage (54%) that did not grow up with English as the primary language while Black or African American females had the highest percentage (98%) that grew up with English as the primary language.

Financial and Academic Resources

Variables for financial and academic resources include income, undergraduate grade point average (GPA), ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount of federal loans at the undergraduate level. Average tables can be produced in PowerStats for continuous variables. The means of the variables for financial and academic resources by gender and race/ethnicity are presented in Table 18 below. They include the means for all students enrolled in a master's degree program in business, management, and marketing through the end of the B&B:08/12 survey.

Table 18

Means and Medians for Income, Undergraduate GPA, ACT composite score and Cumulative Amount in Federal Loans

Variable	Average Income	Median Income	Average Under- graduate GPA	Median Under- graduate GPA	Average ACT composite score	Median ACT composite score	Average Cumulative amount borrowed in federal loans at undergraduate level	Median Cumulative amount borrowed in federal loans at undergraduate level
Total	81,521.34	64,947.00	3.28	3.32	23.57	23	19,591.72	17,125.00
Gender								
Male	86,606.88	65,583.00	3.26	3.29	24.48	24	17,066.13	16,691.00
Female	76,774.91	64,290.00	3.3	3.35	22.68	22	21,431.99	19,034.00
Race/ethnicity								
White	94,742.29	81,172.00	3.3	3.34	24.4	24	19,026.35	17,125.00
Black or African American	46,673.11	35,082.00	3.09	3.08	19.71	20	24,331.75	24,486.00
Hispanic or Latino	64,102.09	57,764.00	3.44	3.55	22.89	23	15,328.77	14,662.00
Other	‡	‡	3.44	3.51	‡	‡	‡	‡
Race/ethnicity and gender								
Black or African American male	49,823.83	35,082.00	2.98	3	‡	‡	‡	‡
Black or African American female	45,405.75	31,486.00	3.14	3.1	19.6	20	25,202.82	25,141.00
Hispanic or Latino male	53,512.95	57,764.00	3.55	3.63	‡	‡	‡	‡
Hispanic or Latino female	76,445.32	70,413.00	3.3	3.38	‡	‡	‡	‡
White male	98,342.73	76,899.00	3.25	3.3	25.23	25	17,101.71	16,691.00
White female	90,224.51	81,338.00	3.35	3.4	23.52	23	20,691.03	17,925.00
Other male	‡	‡	‡	‡	‡	‡	‡	‡
Other female	‡	‡	‡	‡	‡	‡	‡	‡

‡ Reporting standards not met.

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

As shown in Table 18, males enrolled in business master's degree programs had a higher average income (\$86,607) than females (\$76,775). In the race/ethnicity groups, White students enrolled in business master's degree programs had the highest average income (\$94,742). Black students had the lowest average income (\$46,673) of those enrolled in business master's degree programs. White males also had the highest average income (\$98,342) and black females had the lowest average income (\$45,405).

The average undergraduate GPA was similar for males (3.26) and for females (3.3). Hispanic or Latino students enrolled in master's degrees in business had the highest average undergraduate GPA (3.44) for the race/ethnicity groups. Black males had the lowest average undergraduate GPA (2.98) while Hispanic or Latino males had the highest average undergraduate GPA (3.55).

In cumulative loan amounts accrued at the undergraduate level, females had higher average loan totals (\$21,432) than males (\$17,066). For race/ethnicity groups, Black students had the highest average loan totals (\$24,486) and Hispanic or Latino students had the lowest average loan totals (\$14,662). Black females had the highest average loan totals (\$25,141) for race/ethnicity and gender groups while White males had the lowest average loan totals (\$16,691).

Expected Costs and Benefits

Variables for expected costs and benefits included salary categories as defined by bachelor's degree major, marital status, parent status as defined by living with or not living dependents, and months between high school graduation and completion of bachelor's degree. Percentage distributions for salary categories, marital status, and parent status are shown in Tables 19 to 21.

Table 19

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients enrolled in a master's degree program in business by Marital Status and Gender and Race/Ethnicity

	Not married	Married
Gender		
Male	62.96	37.04
Female	61.34	38.66
Race/ethnicity		
White	56.52	43.48
Black or African American	71.30	28.70
Hispanic or Latino	66.12	33.88
Asian	92.15	7.85
Other	‡	‡
Race/ethnicity and gender		
Other male	‡	‡
Other female	‡	‡
White female	53.29	46.71
White male	61.06	38.94
Hispanic or Latina female	73.94	26.06
Hispanic or Latino male	59.40	40.60
Black or African American female	73.97	26.03
Black or African American male	65.07	34.93
Asian female	‡	‡
Asian male	‡	‡

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

As shown in Table 19, White females were the highest percentage (47%) of those enrolled in business master's programs and were married. Hispanic or Latina females (26%) and Black or African American females (26%) were the lowest percentage of those enrolled and married.

Table 20 shows the percentage distribution of students enrolled in a master's degree program in business with and without dependents.

Table 20

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients with dependents enrolled in a master's degree program in business by Gender & Race/Ethnicity

	Does not live with dependents	Yes, live with dependents
Gender		
Male	77.64	22.36
Female	74.06	25.94
Race/ethnicity		
White	78.91	21.09
Black or African American	63.41	36.59
Hispanic or Latino	64.25	35.75
Asian	90.67	9.33
Other	‡	‡
Race/ethnicity and gender		
Asian male	‡	‡
Asian female	‡	‡
Black or African American male	64.68	35.32
Black or African American female	63.01	36.99
Hispanic or Latino male	67.42	32.58
Hispanic or Latino female	60.55	39.45
White male	80.26	19.74
White female	78.25	21.75
Other male	‡	‡
Other female	‡	‡

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

For those enrolled in a business master's degree, Asian students were the highest percentage with no dependents (91%) while Black or African American students were the lowest percentage (63%) with no dependents. For race and gender, Hispanic or Latina female were the highest percentage with dependents (39%) while White males were the lowest percentage with dependents (20%).

Table 21 shows the students' salary category defined by bachelor's degree major for those who enrolled in a master's degree program in business.

Table 21

Percentage Distribution of 2007-2008 Bachelor's Degree Recipients Salary Categories who enrolled in a master's degree program in business by Gender & Race/Ethnicity

	Highest quartile	Third quartile	Second quartile	Lowest quartile
Gender				
Male	13.33	63.24	21.36	2.06
Female	11.34	56.07	28.26	4.32
Race/ethnicity				
White	11.47	56.77	27.82	3.93
Black or African American	10.47	69.47	18.41	†
Hispanic or Latino	14.53	48.82	32.51	4.15
Asian	34.64	57.90	6.99	†
Other	†	†	†	†
Race/ethnicity and gender				
Other male	†	†	†	†
Other female	†	†	†	†
White female	8.65	54.69	31.44	5.22
White male	13.96	58.47	24.97	2.61
Hispanic or Latina female	14.19	33.49	44.74	7.58
Hispanic or Latino male	14.82	61.97	22.01	†
Black or African American female	14.16	61.37	22.14	†
Black or African American male	1.47	89.27	9.27	†
Asian female	†	†	†	†
Asian male	†	†	†	†

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

The highest percentage of students enrolled in master's degree programs in business were from the third quartile which was defined as students with majors in business for their bachelor's

degree. Hispanic or Latina females had the highest percentage from the second quartile (45%) salary category that enrolled in a master's degree program in business.

Social Capital

Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned, location of the institution (defined by in the state of the student's legal residence or not), and undergraduate tuition and fees paid in 2007-08. Percentage distributions for Carnegie classification and location of the institution are included in Tables 22 and 23.

Table 22

Percentage Distribution of Carnegie Classification of 2007-2008 Bachelor's Degree Recipients Undergraduate Institutions who enrolled in a master's degree program in business by Gender & Race/Ethnicity

	Research and doctoral	Master's	Baccalaureate
Gender			
Male	49.49	39.05	11.46
Female	50.07	40.09	9.84
Race/ethnicity			
White	52.10	36.96	10.94
Black or African American	43.32	47.59	9.09
Hispanic or Latino	33.90	50.58	15.52
Asian	81.30	18.68	†
Other	†	†	†
Race/ethnicity and gender			
Asian male	†	†	†
Asian female	†	†	†
Black or African American male	58.78	38.28	†
Black or African American female	36.35	51.88	11.77
Hispanic or Latino male	19.57	60.64	19.79
Hispanic or Latino female	51.42	38.29	10.29
White male	50.62	37.11	12.27
White female	51.58	37.72	10.69
Other male	†	†	†
Other female	†	†	†

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

As shown in Table 22 Hispanic and Latino male students were the largest percentage (61%) who completed their bachelor's degree at a master's institution and enrolled in a business master's degree program and were the least percentage (20%) who completed their bachelor's degree in research and doctoral universities. Black or African American males were the highest percentage (59%) who completed their bachelor's degree at a doctoral or research university and enrolled in a master's degree program in business. In regard to the race/ethnicity groups, Asian

students had the largest percentage (81%) who completed their bachelor's degree at a research or doctoral university and enrolled in a business master's degree program. Hispanic or Latino students were the largest percentage who completed their bachelor's degrees at master's institutions (51%) and baccalaureate institutions (16%) and enrolled in a business master's degree.

Table 23

Percentage distribution of location of undergraduate institution in state of legal residence in 2007-2008

	Yes	No
Gender		
Male	84.51	15.49
Female	77.81	22.19
Race/ethnicity		
White	78.58	21.42
Black or African American	75.16	24.84
Hispanic or Latino	93.40	6.60
Asian	93.88	†
Other	†	†
Race/ethnicity and gender		
Other male	†	†
Other female	†	†
White female	76.07	23.93
White male	80.90	19.10
Hispanic or Latina female	87.34	12.66
Hispanic or Latino male	98.59	1.41
Black or African American female	71.26	28.74
Black or African American male	84.53	15.47
Asian female	†	†
Asian male	†	†

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

A larger percentage of males (84%) completed their bachelor's degree at an institution in the same state as their legal residence than females (78%). Asian students had the highest percentage (94%) who completed their bachelor's degree in the same state as their legal residence for the race/ethnicity groups. African American or Black females were the lowest percentage (71%) who completed their bachelor's degree in the same state as their legal residence.

To further analyze the association of the independent variables with the dependent variable, logistic regression was employed to examine the association of the independent variables on enrollment in a business master's degree by gender. The examination of enrollment includes individuals from the B&B:08/12 who enrolled in a master's degree in business as of 2012. In order to analyze the association of the independent variables on enrollment in a master's degree program in business, the criterion variable (enrolled in a master's degree program in business) underwent regression on the following independent variables in PowerStats:

- Marital Status
- Living with any children or dependents
- Months between high school graduation and bachelor's degree award date
- Income (dependents' parents and independents) in 2006
- Undergraduate GPA as of 2007-2008
- ACT composite score
- Cumulative amount borrowed in federal loans for undergraduate as of 2012
- Highest education level attained by either parent as of 2007-2008
- English as a primary language growing up
- Carnegie code for 2007-2008 institution

The results of the regression reflected the total weighted sample of bachelor's degree completers in 2007-2008 who enrolled in a master's degree in business by 2012. The independent variable, English as a primary language growing up was removed due to collinearity. The primary characteristics of the reference group was a White, not married, does not live with dependents, who's parent earned a college degree, and the 2007-2008 undergraduate institution was a Carnegie code Baccalaureate. A filter was applied to examine each gender separately. PowerStats generated results in the form of Odds Ratio Results. Table 24 details the impact of the variables from the logistic regression for females enrolled in a master's degree in business.

Table 24

Odds Ratio Results for Females Enrolled

	Odds Ratio	Lower 95%	Upper 95%	t	p-value	b
Intercept	0.47	0.00	4565.57	-0.16	0.873	-0.75
Marital status						
Married	2.24	0.34	14.85	0.84	0.400	0.81
Living with children or dependents in 2012						
Yes, live with dependents	0.44	0.03	6.93	-0.59	0.558	-0.82
Months between high school graduation and 2007-08 bachelor's degree award date	1.01	0.94	1.08	0.30	0.767	0.01
Income (dependents' parents and independents) in 2006	1.00	1.00	1.00	1.16	0.249	0.00
Undergraduate GPA as of 2007-08	0.98	0.96	1.01	-1.43	0.156	-0.02
ACT composite score	1.11	0.89	1.39	0.91	0.362	0.10
Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	1.00	1.00	1.00	-0.77	0.440	0.00
Highest education level attained by either parent as of 2007-08						
high school	3.97	0.37	42.82	1.14	0.254	1.38
some college	1.73	0.14	21.61	0.43	0.669	0.55
Carnegie code for 2007-08 institution						
Master's	0.69	0.03	17.43	-0.22	0.823	-0.37
Research	0.54	0.02	12.20	-0.39	0.696	-0.62
Tuition and fees paid in 2007-08	1.00	1.00	1.00	0.62	0.539	0.00
Salary Category by Undergraduate Major						
Highest Salary	3.53	0.10	121.15	0.70	0.482	1.26
Lowest Salary	3.77	0.42	34.19	1.19	0.236	1.33

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Expected Costs and Benefits

Variables includes marital status, parent status (measured by living with dependents or not living with dependents, months between high school graduation and bachelor's degree award date, salary category (as measured by undergraduate major). Looking closer at the variables for expected costs and benefits, for females who enrolled in a business master's degree those

married were 124% more likely to enroll than those not married with a 95% confidence interval of 0.34 to 14.85. Females living with dependents were 56% less likely to enroll in a business master's degree program with a 95% confidence interval of 0.03 to 6.93. In regard to salaries, females in the lowest salary category were 277 percent more likely to enroll in a business master's degree with a 95% confidence interval of 0.42 to 34.19. Females in the highest salary category were 253% more likely to enroll in a business master's degree with a 95% confidence interval of 0.10 to 121.15. For months between high school graduation and bachelor's degree, the odds ratio was 1.01 and a 95% confidence interval of 0.94 to 1.08, indicating all levels had as likely of chance to enroll in a business master's degree.

Financial and Academic Resources

Variables for financial and academic resources included income, undergraduate GPA, ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount borrowed in federal loans at the undergraduate level. Income, undergraduate GPA, and cumulative amount borrowed in federal loans at the undergraduate level have an odds ratio of 1.00 indicating all levels have as likely of chance of enrolling in a business master's degree. The ACT composite score indicated as the ACT score increases, females are 11% more likely to enroll in a business master's degree with a 95% confidence interval of 0.89 to 1.39.

Social Capital

Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned and undergraduate tuition and fees paid in 2007-08. Females who earned their bachelor's degree at a Master's Institution were 31% less likely to enroll in a business master's degree program than females who earned their degree at a Baccalaureate Institution with a 95% confidence interval of 0.03 to 17.43. Females who earned their bachelor's

degree at a Research Institution were 46% less likely to enroll in a business master's degree program with a 95% confidence interval of 0.02 to 12.20. With an odds ratio of 1.00 and 95% confidence interval of 1.00 to 1.00, all levels of tuition and fees had as likely of a chance of enrolling in a business master's degree.

Cultural Capital

Variables for cultural capital included highest level of education attained by a parent. Females whose parents had earned a high school diploma were 297% more likely to enroll in a business master's degree than those whose parents earned a college degree with a 95% confidence interval of 0.37 to 42.82. Females whose parents had some college credits but no degree were 73% times more likely to enroll in a business master's degree than those whose parents earned a college degree with a 95% confidence interval of 0.14 to 21.61.

Table 25 details the impact of the variables from the logistic regression for males enrolled in a master's degree in business.

Table 25

Odds Ratio Results for Males Enrolled in Business Master's Degrees

	Odds Ratio	Lower 95%	Upper 95%	t	p- value	b
Intercept	0.02	0.00	15422.44	-0.57	0.568	-3.95
Marital status						
Married	0.73	0.01	70.44	-0.14	0.891	-0.32
Living with children or dependents						
Yes, live with dependents	1.93	0.02	200.06	0.28	0.781	0.66
Months between high school graduation and 2007-08 bachelor's degree award date	1.01	0.95	1.08	0.26	0.796	0.01
Income (dependents' parents and independents) in 2006	1.00	1.00	1.00	-0.05	0.964	0.00
Undergraduate GPA as of 2007-08	1.00	0.98	1.02	-0.23	0.821	0.00
ACT composite score	1.08	0.89	1.32	0.79	0.429	0.08
Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	1.00	1.00	1.00	0.42	0.676	0.00
Highest education level attained by either parent as of 2007-08						
high school	0.70	0.03	18.17	-0.22	0.829	-0.36
some college	0.21	0.00	14.15	-0.73	0.469	-1.54
Carnegie code for 2007-08 institution						
Master's	2.11	0.01	539.29	0.27	0.791	0.75
Research	1.26	0.01	298.72	0.08	0.934	0.23
Tuition and fees paid in 2007-08	1.00	1.00	1.00	0.24	0.809	0.00
Salary Category by Undergraduate major						
Highest Salary	0.74	0.04	15.32	-0.20	0.842	-0.31
Lowest Salary	2.29	0.41	12.65	0.95	0.341	0.83

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Expected Costs and Benefits

Variables includes marital status, parent status (measured by living with dependents or not living with dependents, months between high school graduation and bachelor's degree award date, salary category (as measured by undergraduate major). Looking closer at the variables for expected costs and benefits, for males who enrolled in a business master's degree those married were 27% less likely to enroll than those not married with a 95% confidence interval of 0.01 to 70.44. Males living with dependents were 93% more likely to enroll in a business master's degree program than those not living with dependents with a 95% confidence interval of 0.02 to 200.06. In regard to salaries, males in the lowest salary category were 129% more likely to enroll in a business master's degree with a 95% confidence interval of 0.41 to 12.65. Males in the highest salary category were 26% less likely to enroll in a business master's degree with a confidence interval of 0.04 to 15.32. With an odds ratio of 1.01 and 95% confidence interval of 0.95 to 1.08, months between high school graduation and bachelor's degree indicated all levels were as likely to enroll in a business master's degree.

Financial and Academic Resources

Variables for financial and academic resources included income, undergraduate GPA, ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount borrowed in federal loans at the undergraduate level. As males' ACT scores increased, they are 8% more likely to enroll in a business master's degree with a 95% confidence interval of 0.89 to 1.32. For income, undergraduate GPA, and cumulative amount borrowed in federal loans for undergraduate, the odds ratio was 1.00 indicated all levels were as likely to enroll.

Social Capital

Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned and undergraduate tuition and fees paid in 2007-08. Males who earned their bachelor's degree at a Master's Institution were 111% more likely to enroll in a business master's degree program than males who earned their degree at a Baccalaureate Institution with a 95% confidence interval of 0.01 to 539.29. Males who earned their bachelor's degree at a Research Institution were 26% more likely to enroll in a business master's degree program with a 95% confidence interval of 0.01 to 298.72. Undergraduate tuition and fees had an odds ratio of 1.00 and 95% confidence interval of 1.00 to 1.00 indicating all levels were as likely to enroll in a business master's degree.

Cultural Capital

Variables for cultural capital included highest level of education attained by a parent. Males whose parents had earned a high school diploma were 30% less likely to enroll in a business master's degree than those whose parents earned a college degree with a 95% confidence interval of 0.03 to 18.17. Males whose parents had some college credits but no degree were 79% less likely to enroll in a business master's degree with a 95% confidence interval of 0.00 to 14.15.

Research Question Four

Research question four sought to examine the association of cultural and social capital as well as economic factors with gender and race/ethnicity on enrollment in master's degree programs in business by type of institution (public, private nonprofit, and private for-profit). Descriptive statistics and logistic regression were employed to explore the associations.

Enrollment by Gender, Race/Ethnicity, and Type of Institution

Table 26 shows the percentage distributions of those enrolled in business master's degree programs and the type of institution enrolled at (public, private nonprofit or private for profit) by gender and race/ethnicity.

Table 26

Percentages of Gender and Race/Ethnicity and Enrollment in Business Master's Degree by Institution Type

Variable	Public	Private non profit	Private for profit
Gender			
Male	40.60	49.25	10.15
Female	33.69	44.68	21.63
Race/ethnicity			
White	40.49	48.01	11.50
Black or African American	15.74	40.57	43.69
Hispanic or Latino	32.05	57.90	10.05
Asian	71.02	28.98	‡
Other	‡	‡	‡
Race/ethnicity and gender			
Other male	‡	‡	‡
Other female	‡	‡	‡
White female	35.18	49.02	15.80
White male	44.23	48.64	7.14
Hispanic or Latina female	24.49	62.94	12.56
Hispanic or Latino male	38.54	53.58	7.89
Black or African American female	19.77	33.49	46.75
Black or African American male	6.70	57.35	35.95
Asian female	‡	‡	‡
Asian male	‡	‡	‡

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

As evidenced in Table 26 the White males were the least percentage of the gender and race/ethnicity groups enrolled in private for-profit institutions (7%) as well the largest percentage

enrolled at public institutions (44%). Black females were the largest percentage enrolled at private for-profit institutions (47%). Hispanic or Latina females were the largest percentage to enroll at private nonprofit institutions (63%). Black males were the smallest percentage to enroll at public institutions (7%) while the largest percentage of Black males enrolled at private nonprofit institutions (57%). Overall the largest percentage of males (49%) and females (45%) enrolled at private nonprofit institutions. The majority of White (48%) and Hispanic or Latino (58%) students enrolled at private nonprofit institutions. While the majority of Black or African American students enrolled at private for profit institutions (44%). Asian students had the largest percent of students to enroll at public institutions (71%).

To further analyze the association of the independent variables with the dependent variable, logistic regression was employed to examine the association of the independent variables on enrollment in a business master's degree by type of institution. The examination of enrollment includes individuals from the B&B:08/12 who enrolled in a master's degree in business as of 2012. In order to analyze the association of the independent variables on enrollment in a master's degree program in business, the criterion variable (enrolled in a master's degree program in business) underwent regression on the following independent variables in PowerStats:

- Marital Status
- Living with any children or dependents
- Months between high school graduation and bachelor's degree award date
- Income (dependents' parents and independents) in 2006
- Undergraduate GPA as of 2007-2008
- ACT composite score
- Cumulative amount borrowed in federal loans for undergraduate as of 2012
- Highest education level attained by either parent as of 2007-2008
- English as a primary language growing up
- Carnegie code for 2007-2008 institution

The results of the regression reflected the total weighted sample of bachelor's degree completers in 2007-2008 who enrolled in a master's degree in business by 2012. The independent variable, English as a primary language growing up was removed due to collinearity. The primary characteristics of the reference group was a White, not married, does not live with dependents, who's parent earned a college degree, and the 2007-2008 undergraduate institution was a Carnegie code Baccalaureate. A filter was applied to examine each type of institution separately. PowerStats generated results in the form of Odds Ratio Results.

Private Nonprofit Institutions

Table 27 details the impact of the variables from the logistic regression for those enrolled in a master's degree in business at private nonprofit institutions.

Table 27

Odds Ratio Results for Enrollees in Business Master's Degrees at Private Non Profit Institutions

	Odds Ratio	Lower 95%	Upper 95%	t	P- value	b
Intercept	0.03	0.00	0.22	-3.51	0.001	-3.46
Marital status						
Married	1.28	0.82	2.00	1.10	0.272	0.25
Living with children or dependents in 2012						
Yes, live with dependents	1.04	0.54	2.00	0.12	0.905	0.04
Months between high school graduation and 2007-08 bachelor's degree award date	1.00	0.98	1.01	-0.44	0.661	0.00
Income (dependents' parents and independents) in 2006	1.00	1.00	1.00	1.28	0.203	0.00
Undergraduate GPA as of 2007- 08	1.00	1.00	1.00	0.46	0.645	0.00
*ACT composite score	1.07	1.02	1.11	3.07	0.002	0.07
*Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	1.00	1.00	1.00	3.11	0.002	0.00
Highest education level attained by either parent as of 2007-08						
high school	0.71	0.42	1.20	-1.28	0.203	-0.34
some college	1.11	0.61	2.00	0.34	0.731	0.10
Carnegie code for 2007-08 institution						
Master's	1.14	0.66	1.94	0.47	0.641	0.13
*Research	1.82	1.14	2.91	2.53	0.012	0.60
*Tuition and fees paid in 2007- 08	1.00	1.00	1.00	-2.11	0.036	0.00
Salary Category by Undergraduate Major						
*Highest Salary	1.98	1.02	3.85	2.03	0.044	0.68
Lowest Salary	1.31	0.72	2.37	0.89	0.374	0.27
Gender						
Female	0.82	0.57	1.16	-1.13	0.258	-0.20
Race/ethnicity students						
Black or African American	0.53	0.23	1.23	-1.49	0.138	-0.63
Hispanic or Latino	1.15	0.59	2.22	0.41	0.680	0.14
Other	1.89	1.12	3.19	2.40	0.018	0.64

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

*Denotes statistical significance

Gender and race/ethnicity. With an odds ratio of 0.53 and a 95% confidence interval of 0.23 to 1.23, Black or African American students were 47% less likely to enroll in a business master's degree at a private nonprofit institution than White students. Hispanic or Latino students were 15% more likely to enroll in a private nonprofit institution than White students with a 95% confidence interval of 0.59 to 2.22. For gender, females were 18% less likely to enroll than males with a 95% confidence interval of 0.57 to 1.16.

Expected costs and benefits. Variables includes marital status, parent status (measured by living with dependents or not living with dependents, months between high school graduation and bachelor's degree award date, salary category (as measured by undergraduate major). Looking closer at the variables for expected costs and benefits, for those who enrolled at a private nonprofit institution those married were 28% more likely to enroll than those not married with a 95% confidence interval of 0.82 to 2.00. Those living with dependents were 4% more likely to enroll in a business master's degree program than those not living with dependents with a 95% confidence interval of 0.54 to 2.00. In regard to salaries, those in the lowest salary category were 31% more likely to enroll in a business master's degree with a 95% confidence interval of 0.72 to 2.37. Those in the highest salary category were 98% more likely to enroll in a business master's degree with a 95% confidence interval of 1.02 to 3.85. With an odds ratio of 1.00 and 95% confidence interval of 0.98 to 1.01, all levels of the variable months between high school graduation and bachelor's degree are as likely of enrolling in a business master's degree.

Financial and Academic Resources. Variables for financial and academic resources included income, undergraduate GPA, ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount borrowed in federal loans at the undergraduate level. As the ACT composite score increases enrollment at a nonprofit private institution is 7%

more times as likely with a 95% confidence interval of 1.02 to 1.11. Income, undergraduate GPA and cumulative amount borrowed in federal loans had an odds ratio of 1.00 indicating all levels were as likely to enroll in a nonprofit private institution.

Social capital. Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned and undergraduate tuition and fees paid in 2007-08. Those who earned their bachelor's degree at a Master's Institution were 14% more likely to enroll in a private nonprofit institution than those who earned their degree at a Baccalaureate Institution with a 95% confidence interval of 0.66 to 1.94. Those who earned their bachelor's degree at a Research Institution were 82% more likely to enroll in a private nonprofit institution with a confidence interval of 1.14 to 2.91. Undergraduate tuition and fees had an odds ratio of 1.00 and a 95% confidence interval of 1.00 to 1.00 indicating all levels were as likely to enroll in a nonprofit institution.

Cultural Capital. Variables for cultural capital included highest level of education attained by a parent. Those whose parents had earned a high school diploma were 29% less likely to enroll in at a private nonprofit institution than those whose parents earned a college degree with a 95% confidence interval of 0.42 to 1.20. Those whose parents had some college credits but no degree 11% more likely to enroll at a private nonprofit institution with a 95% confidence interval of 0.61 to 2.00.

Table 28 details the impact of the variables from the logistic regression for those enrolled in a master's degree in business at private for-profit institutions.

Table 28

Odds Ratio Results for Enrollees in Business Master's Degrees at Private For-Profit Institutions

	Odds Ratio	Lower 95%	Upper 95%	t	p-value	b
Intercept	0.29	0.00	78.47	-0.44	0.661	-1.25
Marital status						
Married	1.03	0.28	3.73	0.04	0.969	0.03
Living with children or dependents in 2012						
Yes, live with dependents	0.40	0.07	2.14	-1.08	0.281	-0.92
Months between high school graduation and 2007-08 bachelor's degree award date	1.00	0.97	1.03	-0.16	0.870	0.00
Income (dependents' parents and independents) in 2006	1.00	1.00	1.00	1.10	0.274	0.00
Undergraduate GPA as of 2007-08	0.99	0.98	1.00	-1.27	0.205	-0.01
ACT composite score	1.06	0.92	1.23	0.79	0.433	0.06
Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	1.00	1.00	1.00	1.73	0.085	0.00
Highest education level attained by either parent as of 2007-08						
high school	0.35	0.05	2.27	-1.10	0.271	-1.04
some college	1.31	0.29	5.88	0.35	0.724	0.27
Carnegie code for 2007-08 institution						
Master's	3.18	0.78	12.91	1.63	0.106	1.16
Research	2.39	0.46	12.46	1.04	0.301	0.87
Tuition and fees paid in 2007-08	1.00	1.00	1.00	0.91	0.366	0.00
Salary category by Undergraduate Major						
Highest Salary	1.26	0.14	11.73	0.20	0.839	0.23
Lowest Salary	1.21	0.26	5.54	0.25	0.804	0.19
Gender						
Female	1.56	0.41	5.99	0.66	0.512	0.45
Race/ethnicity						
Black or African American	1.67	0.01	1.53	-1.66	0.099	-2.27
Other	1.18	0.25	5.56	0.21	0.834	0.17

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Gender and Race/Ethnicity. With an odds ratio of 1.67 and a 95% confidence interval of 0.01 to 1.53, Black or African American students were 67% more likely to enroll at a private for-profit institution than White students. For gender, females were 56% more likely to enroll at a private for-profit institution than males with a 95% confidence interval of 0.41 to 5.99.

Expected costs and benefits. Variables includes marital status, parent status (measured by living with dependents or not living with dependents, months between high school graduation and bachelor's degree award date, salary category (as measured by undergraduate major). Looking closer at the variables for expected costs and benefits, for those who enrolled at a private for-profit institution those married were 3% more likely to enroll than those not married with a 95% confidence interval of 0.28 to 3.73. Those living with dependents were 60% less likely to enroll in at a private for-profit institution than those not living with dependents with a 95% confidence interval of 0.07 to 2.14. In regard to salaries, those in the lowest salary category were 21% more likely to at a private for-profit institution with a 95% confidence interval of 0.26 to 5.54. Those in the highest salary category were 26% more likely to enroll at a private for-profit institution with a 95% confidence interval of 0.14 to 11.73. Months between high school graduation and bachelor's degree had an odds ratio of 1.00 and a 95% confidence interval of 0.97 to 1.03 indicating all levels were as likely to enroll at a private for-profit institution.

Financial and academic resources. Variables for financial and academic resources included income, undergraduate GPA, ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount borrowed in federal loans at the undergraduate level. As the ACT composite score increases enrollment at a for-profit private institution is 6% more likely with a 95% confidence interval of 0.92 to 1.23. Income, undergraduate GPA and

cumulative amount borrowed in federal loans had an odds ratio of 1.00 indicating all levels were as likely to enroll in a for-profit private institution.

Social capital. Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned and undergraduate tuition and fees paid in 2007-08. Those who earned their bachelor's degree at a Master's Institution were 218% more likely to enroll in a private for-profit institution than those who earned their degree at a Baccalaureate Institution with a confidence interval of 0.78 to 12.91. Those who earned their bachelor's degree at a Research Institution were 139% more likely to enroll in a private for-profit institution with a 95% confidence interval of 0.46 to 12.46. Undergraduate tuition and fees had an odds ratio of 1.00 and a 95% confidence interval of 1.00 to 1.00, indicating all levels were as likely to enroll in a nonprofit institution.

Cultural capital. Variables for cultural capital included highest level of education attained by a parent. Those whose parents had earned a high school diploma were 65% less likely to enroll in at a private for-profit institution than those whose parents earned a college degree with a 95% confidence interval of 0.05 to 2.27. Those whose parents had some college credits but no degree 31% more likely to enroll at a private for-profit institution with a 95% confidence interval of 0.29 to 5.88.

Public Institutions

Table 29 details the impact of the variables from the logistic regression for those enrolled in a master's degree in business at public institutions.

Table 29

Odds Ratio Results for Enrollees in Business Master's Degrees at Public Institutions

	Odds Ratio	Lower 95%	Upper 95%	t	p- value	b
Intercept	1.56	0.37	6.67	0.61	0.544	0.45
Marital status						
Married	1.00	0.73	1.36	-0.01	0.988	0.00
Living with children or dependents in 2012						
Yes, live with dependents	1.01	0.64	1.59	0.05	0.960	0.01
Months between high school graduation and 2007-08 bachelor's degree award date	1.00	0.99	1.01	-0.13	0.898	0.00
Income (dependents' parents and independents) in 2006	1.00	1.00	1.00	0.63	0.528	0.00
*Undergraduate GPA as of 2007-08	0.99	0.99	1.00	-3.64	0.000	-0.01
ACT composite score	1.04	0.99	1.08	1.69	0.092	0.03
Cumulative amount borrowed in federal loans as of 2012 - undergraduate level	1.00	1.00	1.00	0.90	0.370	0.00
Highest education level attained by either parent						
high school	1.13	0.78	1.64	0.63	0.528	0.12
some college	0.91	0.62	1.34	-0.47	0.642	-0.09
Carnegie code for 2007-08 institution						
Master's	0.79	0.52	1.20	-1.12	0.262	-0.24
Research	0.95	0.63	1.45	-0.22	0.828	-0.05
Tuition and fees paid in 2007-08	1.00	1.00	1.00	0.72	0.470	0.00
Salary Category by Undergraduate Major						
Highest Salary	1.45	0.89	2.36	1.50	0.135	0.37
Lowest Salary	1.34	0.82	2.18	1.18	0.240	0.29
Gender						
Female	1.02	0.76	1.36	0.12	0.907	0.02
Race/ethnicity						
Black or African American	0.93	0.55	1.57	-0.26	0.793	-0.07
Hispanic or Latino	1.46	0.76	2.82	1.14	0.254	0.38
Other	1.21	0.72	2.03	0.73	0.467	0.19

Source: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

*Denotes statistical significance

Gender and race/ethnicity. With an odds ratio of 0.93 and 95% confidence interval of 0.55 to 1.57, Black or African American students were 7% less likely to enroll at a public institution than White students. Hispanic or Latino students were 46% more likely to enroll at a public institution than White students with a 95% confidence interval of 0.76 to 2.82. For gender, females were 2% more likely to enroll at a public institution than males with a 95% confidence interval of 0.76 to 2.82.

Expected costs and benefits. Variables includes marital status, parent status (measured by living with dependents or not living with dependents, months between high school graduation and bachelor's degree award date, salary category (as measured by undergraduate major). Those living with dependents were 1% more likely to enroll in at a public institution than those not living with dependents with a 95% confidence interval of 0.64 to 1.59. In regard to salaries, those in the lowest salary category were 34% more likely to at a public institution with a 95% confidence interval of 0.82 to 2.18. Those in the highest salary category were 45% more likely to enroll at a public institution with a 95% confidence interval of 0.89 to 2.36. Months between high school graduation and bachelor's degree had an odds ratio of 1.00 and a 95% confidence interval of 1.00 to 1.00, indicating all levels were as likely to enroll at a public institution.

Financial and academic resources. Variables for financial and academic resources included income, undergraduate GPA, ACT composite score (SAT scores were converted to ACT composite scores), and cumulative amount borrowed in federal loans at the undergraduate level. As the ACT composite score increases enrollment at a public institution is 4% more likely with a 95% confidence interval of 0.99 to 1.08. Income, undergraduate GPA and cumulative amount borrowed in federal loans had an odds ratio of 1.00 indicating all levels were as likely to enroll in a public institution.

Social capital. Variables for social capital included the Carnegie classification of the institution where the bachelor's degree was earned and undergraduate tuition and fees paid in 2007-08. Those who earned their bachelor's degree at a Master's Institution were 21% less likely to enroll in a public institution than those who earned their degree at a Baccalaureate Institution with a 95% confidence interval of 0.52 to 1.20. Those who earned their bachelor's degree at a Research Institution were 5% less likely to enroll in a public institution with a 95% confidence interval of 0.63 to 1.45.

Cultural capital. Variables for cultural capital included highest level of education attained by a parent. Those whose parents had earned a high school diploma were 13% more likely to enroll in at a public institution than those whose parents earned a college degree with a 95% confidence interval of 0.78 to 1.64. Those whose parents had some college credits but no degree 9% less likely to enroll at a public institution with a 95% confidence interval of 0.62 to 1.34.

Summary

Descriptive statistics (i.e. averages, percentage distribution) of those enrolled in a business master's degree provided a context to examine the enrollment. Logistic regression was used to examine the relationships of social and cultural capital as well as economic factors on enrollment in a business master's degree. Following, logistic regression was used to examine the relationship of social and cultural capital as well as economic factors on enrollment in a business master's degree by gender and type of institution. Odds ratio results identified the relationships of the variables on enrollment in a business master's degrees. In Chapter Five the findings are discussed in relation to enrollment in business master's degree programs and implications for higher education recruitment, admissions, and enrollment.

CHAPTER 5: DISCUSSION

The purpose of this study was further to apply the combined model developed in Perna's (2004) study on understanding graduate student enrollment and racial/ethnic and gender differences in post-baccalaureate enrollment through a conceptual graduate choice model based on an expanded economic theoretical framework using data from a nationally representative, longitudinal survey of bachelor's degree recipients. Using a national sample of students (average age was 25 years old) from the Baccalaureate and Beyond Longitudinal Study (B&B), this study applied Perna's (2004) combined college choice model in which the traditional economic framework of college choice is expanded to include aspects of social and cultural theories. The association of gender and race/ethnicity with cultural and social capital as well as the economic framework and type of institution on enrollment in business master's degree programs was also explored. This chapter discusses the study's findings, limitations of the study, future research direction, and implications for policy and practice.

Discussion of Findings

This study found parallels to previous finding in previous studies on graduate student enrollment. Demographics noted by percentage distributions of gender and race/ethnicity for those enrolled in business and non-business master's degrees found similarities to previous studies with some unexpected differences in gender distributions. In utilizing the variables defined by Perna (2004) for economic factors, social capital, and cultural capital the findings concluded similar results to Perna's original study with some notable differences that may be attributable to the specifics of graduate programs in business. Investigating the variables and differences in association with enrollment in business master's degrees by gender and

race/ethnicity, the findings indicated variances in the variables influences. For type of institutions and association with enrollment by gender and race/ethnicity, the type of institution has some association with the enrollment of specific gender and race/ethnicity groups. Statistical significance was found in the lowest salary by major and its influence on enrollment in master's degrees in business. Statistical significance was also found for enrollment at a private non-profit institution in regard to ACT composite scores, cumulative debt amounts from undergraduate, earning an undergraduate degree at a Research Institution and undergraduate tuition and fees. These variables are discussed below in regard to the relationship of the statistical significance and consideration on enrollment. While the majority of variables were not statistically significant, several patterns and associations were found in the data analysis. Without statistical significance, caution must be used when interpreting the odds ratios and attention can be paid to the confidence intervals when interpreting the findings. A larger confidence interval can indicate a low level of precision for the odds ratio while the smaller the confidence interval the higher the precision of the odds ratio (Szumilas, 2010). Despite the lack of statistical significance, the findings can be used to guide further in-depth study on the associations and patterns utilizing alternative or original data as secondary data such as the B&B: 08/12 can be limiting. Overall, the findings discussed below represent previous findings with notable differences warranting further investigation.

Demographics

The National Center for Education Statistics (NCES) reported women earned the majority of all master's degrees (NCES, 2013). Interestingly, this study also found a slightly higher percentage of those enrolled in a master's degrees in business were women with 51 percent to males at 49 percent. This is in contradiction to the degree attainment trends reported

by the Association to Advance Collegiate Schools of Business (AACSB) and the National Center for Education Statistics (NCES) that reported higher numbers of males earning master's degrees in business than females. In this study, the percentage distribution of gender indicates a higher number of females enroll in business master's programs contradicting the findings that a higher percentage of males earn business master's degree. Thus, suggesting a possible gap in those who enroll versus those who complete a master's degree in business. In comparison to the percentage distribution of those enrolled in a master's degree other than business, females largely dominated with 67 percent to males' 33 percent enrollment. Thus, suggesting differences do exist in business master's programs among genders when compared to the overall enrollment in master's degree programs.

While a slightly higher percentage of females were enrolled in business master's degrees than males when only controlling for gender, white males were the largest percentage for gender and race/ethnicity. This is aligned with the demographics noted in the literature with white males noted as the majority enrolled in business master's degree programs (AACSB, 2015). The percentage of white males enrolled in business master's degrees decreased from 2009 to 2012. Latino males, African American or Black males, African American or Black females, and White females' percentages enrolled increased from 2009 to 2012 potentially indicating more underrepresented students enrolling in business master's degree programs. Black or African American students were 0.17 times or 83 percent less likely to enroll in a business master's degree program than White students. Latino students were 0.77 times or 23 percent less likely to enroll than White students.

The diversity of students is predicted to increase over the next decade. The percentage of white students projected to decrease while gains in the proportion of total enrollment for Blacks,

Hispanics or Latinos, and Asians is predicted to increase (AAC&U, 2010). Similar increases are seen from this study with enrollment for white males decreasing while African-American or Black and Latino or Hispanic enrollment increased. Institutions and their enrollment management plans will need to adapt to a student population that is growing in diversity. Such enrollment management plans will also need to identify factors influencing student enrollment in order to adapt recruitment, admissions, and enrollment policies and procedures to best support student enrollment and retention in graduate education programs.

Analysis of Perna's Model

The variables utilized in this study were defined by Perna in her 2004 study on the differences in enrollment by gender and race/ethnicity in graduate education. Perna also noted limitations in her study regarding the definition of social capital based on the variables available in the Baccalaureate and Beyond Longitudinal Study. The variables used to define social capital were the Carnegie classification of the institution a student's bachelor's degree was earned at, location of the undergraduate institution and tuition and fees paid at the undergraduate level. The definition of social capital is focused on the value of social networks to build relationships and bond with similar people. Often social capital is thought of as specific social structures utilized as a resource in making decisions and pursuing certain avenues. It can be argued the variables utilized for social capital in this study defined by Perna do not accurately measure social capital. While the undergraduate institution's classification can somewhat reflect potential social structures that may provide support and resources to influence enrollment decisions, it does not account for family, community, or other social networks available to students.

The variable used to measure a student's income in Perna's study and this study was the income reported in 2006 of independent respondents and parents of dependent respondents. The

income most likely reflects the family income of the student and not necessarily the student him or herself based upon average age of the students in the sample and the likelihood of being categorized as a dependent. This variable is limiting as it does not reflect the students' income to accurately reflect financial resources. The family income is still valuable in analyzing enrollment factors as it may reflect the social capital of a student in the context of their family. This is explored in more detail below regarding financial resources and enrollment.

Lastly, Perna's model did not include age and the association with enrollment. As indicated previously, the average age of the B&B: 08/12 respondents (M=25) likely indicates the majority of students are traditional aged students. Age may also be a factor influencing enrollment also given the changing demographics of students and current context of higher education which is seeing increases in non-traditional age students. The findings below largely reflect a traditional-age student group and should be interpreted in such context.

Enrollment Factors

Paulsen & St. John (2002) indicated construct of enrollment decisions and the pattern of education attainment is not a universal concept; it varies across racial/ethnic and other groups such as gender, academic disciplines and types of institutions. This study had similar findings with varying differences of association for the variables depending upon the group.

Expected costs and benefits influence

Multiple studies (Kinzie et al., 2004; Levin, 1989; Paulsen & Toutkoushian, 2006; Perna, 2004) indicated the influence of economic factors on enrollment in graduate programs such as cost of tuition and opportunity for increased income with further education. Perna (2004) identified expected costs and benefits that may influence enrollment such as marital status, parent status, delaying entry into a bachelor's degree, and salary potential based on

undergraduate major and found having a major in the lowest salary category promoted enrollment in master's degree programs. The variable for lowest salary by major was statistically significant ($p < .05$) indicating a strong relationship of those in the lowest salary by major category and enrollment in a graduate business program. In line with human capital theory, those in the lowest salary category based on undergraduate majors were 150% more likely to enroll in a business master's degree than those in the mid salary category ($p < .05$). Those in the highest salary were 0.78 times less likely to enroll. Similar to Perna's (2004) findings in which females in the lowest salary category were more likely to enroll in graduate education than those in the highest salary category, this study also found females in the lowest salary category were 277% more likely to enroll. Similarly, males in the lowest salary category were 129% more likely to enroll. Statistical significance was not found specifically by gender so caution must be utilized when interpreting the relationship specifically for females in the lowest salary category by major as well as males specifically. However, the statistical significance found in the lowest salary by major category when analyzing female and male enrollment combined is notable in there is a relationship between the lowest salary by major category and enrollment in master's degrees in business.

As indicated in human capital theory, those with lower salaries from their undergraduate majors may be more likely to invest in further education to further their income opportunities (Becker, 2009). Similarly, those in the higher salary category may not feel it necessary to further their education in hope of increased salary opportunities. Students weigh the economic benefit of college attendance and develop enrollment plans based on the financial rate of return (Cooper, 2009; Bateman & Spruill, 1996). With those in the lower salary category more likely to enroll, it presents an opportunity to highlight the potential earnings increase through completing graduate

education as a mechanism for influencing enrollment decisions. Decisions to enroll are often based on the expectation of receiving positive utility in future periods such as higher salaries and career advancement (Paulsen & Toutkoushian, 2006).

The difference between men and women and their likelihood of enrollment based on salaries may also reflect the higher representation of women in the lowest salary category. Women are more represented in undergraduate major fields in the lowest quartile of starting salaries (Levin, 1989) and the likelihood of enrollment in graduate business programs increased among females in this category. With the increase in likelihood of enrollment among this category, it presents an opportunity for developing recruitment messages shaped around the potential salary increase benefits of a graduate business degree. Highlighting the opportunity of increased salary may influence females with lower salary opportunities to enroll in a graduate business program. With a larger salary opportunity as a benefit, this may be more influential than other variables for females in the lowest salary category. Additionally, as students analyze cost and benefit, the larger benefit of higher salaries over the cost of tuition may also help influence a student into deciding to enroll.

The odds ratio results indicated little to no differences in likelihood for enrollment based on ACT scores, undergraduate GPA, family income in 2006, and cumulative amount borrowed in federal loans at the undergraduate level. However, for the average and media income there were differences for income and cumulative amount borrowed in federal loans at the undergraduate level. The variable for income is the total 2006 income of independent respondents and parents of dependent respondents. The income reported in this study is largely from the parents of dependent respondents and must be considered in determining the influence of income on enrollment in graduate business programs.

In terms of academic and financial resources based on income of the student's family if considered a dependent, differences were found in the averages of income. Based on the average age of the students sampled (M=25 years old), it is plausible the average income likely represented family income as the majority of the students were likely classified as dependents and total family income was reported for the variable. Financial resources influence the assessment of costs and benefits of graduate school enrollment (Perna, 2004). An individual's and/or family financial resources is also influential on enrollment as students may rely on their parents or significant others to assist with costs of tuition and loss of income due to graduate school attendance (Stiber, 2000).

Females had lower average income in 2006 (\$76,774) than males (\$86,606). Black or African American females had the lowest average income in 2006 (\$45,405). Females also had higher undergraduate loan debt (\$21,431) than males (\$17,066). Black or African American females had the highest average of undergraduate loan debt (\$25,202). As found in Marks and Edgington's (2006) study, financial barriers were a primary factor contributing to females' reservations for pursuing an MBA. The lower income along with higher undergraduate loan debt, is a potential inhibition to pursuing graduate degrees for females. Often those who are averse to debt or have accumulated high levels of debt from undergraduate study are less likely to pursue graduate enrollment (Ehrenberg, 1991; Perna, 2004) and the lower financial resources of female student and their family may also inhibit enrollment.

While family income and financial resources can influence the decision to enroll in graduate education, the influence may differ among race/ethnicity groups. Latina females with an average income of \$76,445 and Latino or Hispanic students having the lowest average undergraduate loan debt (\$15,328) were less represented in business master's degrees (9%) than

Black or African American (16%) or White students (65%). Hispanic or Latino students were also 23% less likely to enroll in a business master's degree. Despite less financial barriers with higher family income and less undergraduate loan debt, Latino or Hispanic students are less represented in master's degree in business than Black or African American students. The lower representation of Hispanic or Latino students could stem from other barriers such as lack of role models in higher education or lack of confidence in academic skills that previously was found to inhibit students from pursuing graduate education (Kelan & Jones, 2010). To understand the decisions behind enrollment decisions for Latino or Hispanic students, further investigation is necessary to understand potential barriers inhibiting enrollment in graduate business programs beyond financial resources.

The costs and benefits of graduate education may also be influenced by preferences for family and marriage status. Clune et al (2001) found women to consider the influence of marriage and childbearing in graduate education attainment more than men. This study found females who were married 2.24 times more likely to enroll than those not married while males were 0.73 times less likely to enroll if they were married. Females living with dependents were 0.44 times less likely to enroll while males living with dependents were 1.93 times more likely to enroll. Differences in the assessment of costs and benefits may be influenced by gender as women must consider the cost of childbearing and time out of the labor force which may impact the time to realize the benefits of increased opportunity from graduate education (Poock & Love, 2001). However, this study found women more likely to enroll if they were married than not married which differs from Nevill & Chen's study in 2007 that found women more likely to enroll in graduate degree programs if they were not married than if they were married or they were parents. As the previous studies indicated women who were not married were more likely

to enroll, this present study finding women who were married more likely to enroll may indicate a shift in culture norms and perceptions in regard to marriage and gender roles. Since the previous studies were conducted over ten years ago, marriage has undergone changes such as declining rates of marriage and increased divorce rates (Greenwood, Guner, Kocharkov, & Santos, 2016). While child-bearing may still be as influential since females with dependents were less likely to enroll, marriage may not be as influential or more influential for females who are married than previously found.

Social capital.

Social capital refers to social networks and is acquired through an individual's relationships with others particularly in social structures (Coleman, 1998). A notion of social capital in relation to educational enrollment is the influence of education experiences on further education experiences (Perna, 2004). Social capital can be understood as the means for individuals to gain access to other forms of capital (human capital and cultural capital) as well as institutional resources and support (Coleman, 1998). The Carnegie classification of an institution is used to measure the social network within higher education of a student as well as the resources and support available to students (Perna, 2004). The difference in Carnegie classifications for undergraduate institutions' influence on male and female enrollment in business master's degrees indicate social capital may influence enrollment. Males from research and master's degree institutions were more likely to enroll than those who earned their bachelor's degrees at baccalaureate institutions. While females who earned their bachelor's degrees at master's degree and research institutions were less likely to enroll than those who earned their bachelor's degree from a baccalaureate institution. Undergraduate institutional influence differs from males to females. The interaction between the background characteristics

and achievements are subject to individual initiative (Stoecker, 1991) which may explain the difference in Carnegie classification influence among males and females. The decisions that affect education planning such as previous education experiences at the undergraduate level are pivotal for understanding status attainment which is largely a social capital concept driving why a student may pursue graduate education (Stoecker, 1991). The findings also align with Perna's study (2004) in which the contribution of social capital was found to be different for women than for men. However, the findings differed in the sense that Perna's study found the social networks and resources associated with attending a research university were most influential for promoting enrollment into graduate programs. While Perna studied all graduate programs, this study focused on enrollment in business master's degrees in which the influence of social capital may differ for business programs as opposed to all graduate programs. Business master's degrees or MBA's differ from other master's degrees as well as other graduate programs such as doctoral degree programs. While doctoral programs and some master's programs are largely centered around research, MBA programs often include a capstone experience that may not be as largely centered around research. The influence of a research institution as an undergraduate may not be as influential for enrollment in a master's business degree potentially because of the less academic research component of an MBA versus a doctoral program or other master's degrees with a thesis requirement. Another notable difference from master's degrees in business versus all graduate programs is the recommended work experience often tied to admission to a business master's program. The average total years of work experience for students enrolled in MBA programs is four years with three to five years of work as the standard recommendation for admission consideration (AACSB, 2015). Social capital in Perna's (2004) study was centered on social networks and resources associated with attending a research university. This definition of

social capital as Perna defined it may not be as applicable to master's degree in business given the work experience criteria used in admissions decisions. Social capital for students applying to business master's degrees may be more influenced by the social networks developed by students during their work experience as opposed to their undergraduate experience. The networks of relationships developed through the work experience required for admission to a business master's degree may be a better definition of social capital for influencing enrollment in addition to the social networks developed through a student's undergraduate experience.

Further investigation into social capital and how to define it is necessary in order to continue understanding its influence. Perna (2004) noted this limitation in her original study and called for further definition. As noted in this study, social capital as the variables indicated may not be best measure of social capital. Utilizing the definition of social capital from Perna's study is limiting to understanding the effects of social capital on postsecondary education enrollment.

Cultural capital

Cultural capital is referred to as the system of factors that is derived from one's parents and it defines the individual's class status (Bourdieu & Passeron, 1977). The highest level of education attained by either parent was measured for cultural capital. Females whose parent earned a high school diploma were 3.97 times more likely to enroll than those whose parent earned a college degree. Yet for males whose parent earned a high school diploma, they were 0.70 times less likely to enroll in a business master's degree. Much of the research done on first generation college students often indicates having parents without a college degree can lead to barriers in enrollment in higher education. However, this study found females whose parents earned only a high school diploma to be more associated with enrollment in a business master's degree than those whose parents earned a college degree. Males were similar to the previous

research on first generation college students in they were less likely to enroll in a business master's degree if their parent only attained a high school diploma or some college credits but no degree. Much of the studies completed for first generation college student enrollment often focus on undergraduate enrollment. The present study's findings are specific to master's degree enrollment yet found first generation college students more likely to enroll in a master's degree in business. The influence of being a first-generation college student may affect enrollment in master's degree programs differently than enrollment in undergraduate programs. A potential pipeline from undergraduate to graduate enrollment may also be an opportunity worth investigating for further enrollment in graduate programs for first generation college students. With the present study's findings of first generation college students more likely to enroll, it may be an indication of further investigation into first generation college student post-baccalaureate enrollment.

Type of Institution and Enrollment Influence

Institutional influence may also impact students' decisions on enrollment in a business master's degree. In the logistic regression analysis for enrollment in a private non-profit institution, ACT composite score (odds ratio of 1.07; $p=.002$), cumulative loan debt from undergraduate (odds ratio of 1.00; $p=.002$), earning an undergraduate degree at a Research institution (odds ratio of 1.82; $p=.012$), and undergraduate tuition and fees (odds ratio 1.00; $p=0.36$) were statistically significant. The statistical significance and odds ratio indicated a strong relationship between completion of an undergraduate degree at a Research institution and an 82% more likely chance of enrollment at private non-profit institution for a master's degree in business. The statistical significance of the ACT composite score variable also indicated a strong

relationship as the ACT score increases and a 7% more likely chance of enrollment of in a master's degree in business at a private non-profit institution.

The majority of Black or African-American females who enrolled in a business master's degree program did so at private for-profit institutions. In comparison, the majority of White females enrolled at a private non-profit institution. White males were the majority enrolled at public institutions. Overall females were more likely than males to enroll at a private for-profit institution. As the literature indicated, students evaluate the benefits and risk for enrollment. To reduce such risk, students search for information, gauge the reputation of an institution, and compare services (Lovelock, 2001). The private for-profit institutions may offer services or benefits that lessen the risk to students, other types of institutions may not. These services and benefits include opportunities such as scholarships, guaranteed admission, personal admission counseling, or flexible course schedules to accommodate other responsibilities. In addition to the product attributes, choice may be affected by factors external to the institution, such as opinion of others and situational factors (Simoes & Soares, 2010). As indicated earlier, females with dependents are less likely to enroll. The situational factors for females in combination with the services or benefits offered by private for-profit institutions in comparison to other institutions may influence females' decisions on where to enroll for a business master's degree.

Private for-profit institutions may market a specific institutional image that is perceived for some set of attributes and potentially sought after by specific markets such as females. The image and product provided through services by for-profit institutions may align with the needs of females enrolling in graduate education. Utilizing services marketing concepts in which customers draw from communication materials, symbols, prices, and processes this then influences the consumer on determining value of such a service (Kotler & Keller, 2006; Ivy,

2008). Institutional characteristics such as the services an institution can provide play a large part in how colleges work to attract and enroll students. Understanding the differentiation between institutional characteristics of the types of institutions may also offer some explanation as to what characteristics are influencing enrollment by gender and race/ethnicity groups. Vander Schee, (2009) increased admissions yields by implementation relationship marketing strategies such as further training for admissions and enrollment staff on building relationships with prospective students. The increased likelihood of female enrollment in graduate degree programs at private for-profit institutions may indicate specific admissions policies or procedures that influence female enrollment more so than public or private non-profit institutions. Understanding those specific policies or procedures may lead to increased knowledge regarding removal of barriers preventing female or specific racial/ethnic groups from enrolling.

The construct of enrollment decisions varies across racial/ethnic groups and gender groups in addition to academic disciplines and types of institutions. Higher education administrators and enrollment managers should consider the differences in education attainment patterns and constructs of enrollment decisions when developing enrollment management plans. Consideration in how expected costs and benefits, cultural and social capital influence enrollment by race/ethnicity and gender must be included in developing recruitment, admission and enrollment strategic plans. Further understanding of recruitment, admissions, and enrollment policies and procedures at the different types of institutions should also be investigated as further insight as to potential avenues for why certain groups enroll at private for-profit over a public university may be useful in removing barriers and developing policies that support enrollment. Future consideration and research as well as implications for practice is discussed in the following section.

Implications for Practice and Future Research

This research study furthered the use of enrollment variables developed by Perna (2004) and more specifically how such variables apply to business master's degree program enrollment. The empirical findings of this research study focused on economic factors as well as social and cultural capital from the B&B: 08/12 study compared to related literature as determinants of enrollment in graduate education. While several variables were statistically significant, this study serves as a starting point for further research in graduate business education enrollment as well as differences among groups such as gender and race/ethnicity in graduate enrollment. The findings of this study can provide guidance for further study utilizing qualitative methods and applicability of the variables and model to specific institution recruitment and admissions.

Future Research

This study supports the need to continue studying how the influence of variables on enrollment is not universal and can differ for certain groups. Additional research is needed to continue to build the understanding of sources of gender and racial/ethnic group differences in enrollment in post-baccalaureate programs. In the previous Baccalaureate and Beyond Longitudinal studies, the cohorts were followed over ten years. With the B&B: 08/12 longitudinal study the final follow up is scheduled for 2018. Additional studies utilizing the data from the 2018 follow up may provide further insight in the economic factors as well as social and cultural capital in relation to enrollment influences. Utilizing the follow up data, which will be available after 2018, can potentially provide more insight into applying enrollment variables as more data may be available as more participants in the survey may continue to enroll into graduate education as well as potential cultural and social changes that can influence enrollment in various ways.

The following key points for further research are discussed below:

- Policies and procedures in recruitment, admission, and enrollment practices by type of institution.
- First generation student enrollment in graduate education.
- Enrollment variables influence on different academic disciplines.
- Enrollment and retention of females in business master's degrees.
- Continued development of variables representing cultural and social capital.

Specifically, further research is needed in understanding the types of institutions (private non-profit, private for-profit, and public) and the relationship of the institutions to gender and race/ethnic group differences in enrollment. With the majority of African American or Black females enrolling at private for-profit institutions, more investigation into the influences on their enrollment decisions can assist in understanding how institutional characteristics can support enrollment for underrepresented student populations. Potential policy implications may be gathered from a greater understanding of how certain institutions are supporting enrollment of students who are less likely to enroll in graduate education programs.

Aligned with further investigation needed into the type of institution, further research is also needed into the different academic disciplines and the enrollment variable influences. As previously indicated, enrollment decisions and patterns of educational attainment varies across groups in academic disciplines (Paulsen & St. John, 2002). As this study found, enrollment influences for business graduate programs differed from Perna's (2004) study that investigated aggregate graduate enrollment. The influence of enrollment variables may differ across academic disciplines and further understanding is necessary to identify potential gaps in student enrollment and barriers inhibiting admission and enrollment.

First generation college students were found more likely to enroll in business master's degrees, which warrant further investigation into enrollment patterns and influences of first generation college students into post-baccalaureate programs. Most studies focus on undergraduate enrollment of first generation college students. Additional studies should research post baccalaureate enrollment of first-generation college students.

This study focused on enrollment in business master's degree programs. Other studies (AACSB, 2015; NCES, 2015) indicated males earned a majority of master's degrees in business. While this study found females were a slightly larger majority enrolled in business master's degree, it warrants investigation into if females are completing master's degrees at a greater percentage than previously found or if there are barriers once enrolled in a business master's degree preventing females from finishing the degree. In recruiting and enrolling students, the notion of targeting certain groups of students may be efficient in the sense graduate programs should focus on the students who are likely to enroll and succeed. However, this can also lead to furthering gaps in gender and racial/ethnic group differences in graduate program enrollment as some groups may be viewed as less likely to complete a graduate program and thus not targeted for recruitment and enrollment. Further research is necessary in regard to the gap from enrollment to degree completion to identify potential barriers preventing those who enroll from completing a business graduate degree. Additionally, for institutions to have successful enrollment management plans, recruitment and enrollment of students who are most likely to complete the degree is crucial. While it is important to understand the barriers preventing degree completion to support access and success of all students, it is also crucial for institutions to identify what students are most likely to enroll and succeed in order to develop strategic recruitment and admissions procedures. The further investigation into the variables that most

likely influence enrollment as well as degree completion will assist institutions in developing strategic enrollment management plans that cover recruitment, admissions, enrollment, retention and graduation; thus, furthering students and the institutions' graduate programs.

The variables defined by Perna (2004) for social and cultural capital should also be examined and determined if still relevant and best measures of social and cultural capital. The findings of this study indicated the variables for social capital associated differently than Perna's findings for influence on graduate enrollment. Examining the variables that best define social and cultural capital in graduate enrollment is useful to further understand the influence of such variables on enrollment.

Implications for Policy and Practice

The intent of this dissertation was to determine the association of factors with enrollment in business master's degrees for targeted modifications to current policy and practice as well as to potentially support underrepresented student enrollment in graduate business programs. Institutions can also use the identified variables to review and understand the influential factors on enrollment at individual institutions. This information can lead to development of enrollment management plans and strategic recruitment and admissions policies and procedures. Additionally, the factors identified in this study can also assist institutions in understanding potential barriers preventing students from enrolling in post-baccalaureate programs as well as understanding the opportunity for enrollment growth by identifying areas that can remove barriers for students.

As indicated previously, specific racial/ethnicity groups and genders were more or less likely to enroll at the different types of institutions (public, private nonprofit, and private for-profit). Thus, through identification of those populations of students who were more likely to

enroll at a specific type of institution it is hoped that a review of policies and practices is justified in relation to both those students more likely to enroll and the institutions they enroll at. Areas of barriers and opportunities based upon institutional procedures and policies in recruitment and admissions may provide links to understanding how to best support underrepresented student enrollment. As the findings identified, the majority of Black or African-American females enrolled in a business master's degree did so at a private for-profit institution. Attention should be paid to admissions and enrollment policies and procedures at private for-profit institutions that are encouraging Black or African-American females to enroll. In comparison to public and private non-profit institutions, the private for-profit institutions may have admission policies and procedures that removed barriers the students may encounter elsewhere. The admission standards including GRE or GMAT requirements and GPA requirements may differ between institutions and be worthy for review if they are encouraging enrollment or preventing certain students from enrolling. Other areas to explore are the formats of programs which may be more compatible with students' needs. If the private for-profit institutions are offering more online or evening courses which provide flexibility for students to attend courses, this may be an avenue for other institutions to explore in implementing similar programs to encourage enrollment.

As noted from the literature, the relationship the student developed with the institution through the admissions process was of notable influence and often the most vital part of influencing student enrollment (VanderSchee, 2009). The process and relationship thus developed during that process from a specific type of institution may present opportunity for exploration and implementation of recruitment and admission procedures to build such relationships. As found in previous studies, incorporation relationship building practices into the recruitment and admissions phase, institutions can largely influence a student's decision to

enroll. With differences found in the type of institution different student groups were enrolling in for business master's degree programs, enrollment management administrators can identify specific relationship building tactics to incorporate that may influence enrollment.

With Black or African-American students being the smallest percentage enrolled in public institutions for business master's degrees, investigation is necessary into potential barriers preventing enrollment at public institutions as well as the policies and procedures that encourage enrollment at institutions other than public universities. As also identified in this study, Black or African-American students had lower average incomes and higher cumulative loan debt from undergraduate which may affect the financial resources available to attend specific institutions. Public universities should investigate if the costs of tuition without scholarship or other financial support from an institution is preventing Black or African-American students from pursuing graduate business degrees. Also identified is the potential lack of role models in the faculty and staff for students to identify with (Kellan & Jones, 2010). With a small percentage of Black or African-American students enrolling at public universities, investigation into the relation of faculty and staff demographics may be necessary to understand if the lack of role models is a barrier to enrollment at public universities. Public universities may be able to review their staffing plans to not only encourage a diverse student population but also a diverse faculty and staff population.

Attention to first generation college students is largely centered around undergraduate enrollment. Several programs, policies and procedures have been implemented to increase the admission, support and retention of first generation college students at the undergraduate level. Attention must also be given to those first-generation college students who enroll in post-baccalaureate programs. The support programs and understanding of recruitment and retention

practices used at the undergraduate level should also be evaluated for similar implementation for post-baccalaureate programs for first generation college students.

Administrators in higher education are also tasked with strategically managing enrollment to meet enrollment and diversity goals. Increased competition among institutions as well as changing student demographics requires institutions to develop strategic enrollment management plans. Institutions must develop comprehensive, long-range enrollment management plans utilizing an understanding of what influences students' enrollment and institutional policies (Clagett, 1991). Additionally, institutions must understand the influences of enrollment in specific academic disciplines to best develop comprehensive enrollment management plans. Through identifying student market segments and types of students most likely to enroll by understanding student choice and marketing research, institutions can develop effective enrollment management plans. This study provided insight into forces that influence enrollment in graduate education programs that can be utilized by higher education administrators to develop institutional policies guiding enrollment planning and management.

Limitations of the Study

While numerous factors of enrollment influences exist in the literature, this study focused on understanding how an existed conceptual model applied to more recent data and specifically to an academic discipline, business master's degree programs. By using the B&B: 08/12, the study was delimited to students who completed their bachelor's degree in 2007-08 and enrolled in a master's degree program in business by 2012. This also presented a major limitation of the study through the use of a secondary data source (B&B: 08/12) as the researcher cannot ask follow-up questions to the participants for more detail and the data was not collected specifically for the purpose of this study.

The inability to control for covariates from the B&B: 08/12 dataset that might account for enrollment in a business master's degree is also a limitation. Eliminating highly correlated covariates causing multicollinearity in order to solve the regression equations of the research questions further limited the exploratory purposes of the study. The impact of the missing covariates on enrollment in business master's degree programs could not be measured.

The lack of statistically significant findings is also a limitation of this study. While the study presented patterns and associations of the variables on enrollment, the findings should be interpreted with caution due to the amount of uncertainty. The lack of statistical significance does not discredit the entire study as the findings can be utilized to guide further studies such as qualitative research utilizing focus groups, guiding the development of target markets, and creating surveys regarding enrollment influences to continue the study of enrollment patterns and the effects of certain variables.

Conclusion

The identification of variables influential to enrollment in a master's business degree will hopefully serve as a driver for changes in policy and practice to support enrollment. With cultural and social capital influences evolving along with the changing student demographics, it is very important to understand the influences behind enrollment and to support students in pursuing graduate education. Additionally, it is the hope the findings of this dissertation will drive further study of graduate college choice models and the differences of influential variables by racial/ethnic groups and gender. Ultimately the hope is the dissertation will continue to spur research and investigation into increasing equity and access for all students to graduate education.

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