Women, Men, and the MBA: A Quantitative Assessment of the Impact of the MBA Degree on the Extrinsic and Intrinsic Career Outcomes of Graduates

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Abstract

The MBA degree has been studied, evaluated, and criticized from many different angles. Scholars and practitioners alike have noted the challenges facing business schools as they address the current state and prepare for the future state of the MBA. Of foremost importance is ensuring the longevity of the MBA as an important and often necessary credential for a career in business. Stakeholders from within and outside of the academy have assessed and debated the optimal path forward for ensuring quality and equality across recruiting and admissions, curriculum development, student experience, and the impact of the degree on the careers of graduates. This study addressed these elements by seeking to understand how MBA input factors influence post-MBA career success; how widely accepted extrinsic measures of career success relate to intrinsic measures; how the MBA impacts compensation and other success factors; and how these key measures and outcomes may differ between women and men.

To achieve this purpose, this study followed a quantitative approach utilizing a custom survey instrument which measured competencies, experiences, and relationships gained through an MBA program, as well as the career outcomes achieved by graduates. The research participants included nearly 800 graduates of 41 top-ranked business schools in the U.S. and Europe who graduated between 2005 and 2015. The study included nine broad research questions which explored the impact of the MBA within the context of a guiding conceptual framework. Unified under Astin's (1993) "Inputs-Environment-Outputs" model, this framework included feminist theory, critical management education, human capital and social capital theories, and career management

theory. The blend of descriptive, relational, and comparative research questions led to analysis which included a variety of inferential statistical techniques including *t* tests, regression analyses, correlations, and ANOVA.

Findings revealed that the MBA degree develops human capital in the form of key competencies that are desired by employers, and that graduates highly value the social capital acquired in the form of new relationships and networks. When examining the link between pre-MBA inputs and post-MBA outputs, the results were mixed, with some common measures of a candidate's qualifications such as years of work experience shown to have no relationship (or even an inverse relationship) to outcomes. The study also addressed the return on the investment of the MBA. Results showed that the degree does have a significant positive impact on compensation growth; however, men earn higher compensation, on average, than women at all three points of time included in this study (pre-MBA, first post-MBA, and current). Further comparisons between men and women indicated that male MBA graduates have achieved greater career advancement, span of control within the organization, career satisfaction, and other key extrinsic and intrinsic career outcomes. Despite these differences, both men and women possess a strong self-concept and belief in their abilities to be successful in business.

The findings uncovered by this research contribute perspective to each of the guiding theories. In addition, practitioners will benefit from new insights on admissions standards, career outcomes, competency and relationship development, and the expected return on the investment in an MBA. These insights open the door to future research which explores additional quantitative measures, considers other program formats or

demographic characteristics of participants, and incorporates qualitative insights into the understanding of the impact of the MBA at graduation and beyond.

Table of Contents

List of Tables

List of Figures

Women, Men, and the MBA: a Quantitative Examination of the Extrinsic and Intrinsic Career Outcomes Achieved by MBA Graduates

Chapter 1: Introduction

Scholars and practioners have long discussed the value of the Master of Business Administration (MBA) degree. This dialogue has included research on the return on the investment (ROI) of an MBA education, the culture within business schools, and the academic and co-curricular experiences of students. Adding further perspective on the topic of the impact of the MBA is research that explores the role of gender in the experience and outcomes of MBA graduates. In particular, how do key measures such as compensation, professional advancement, and career satisfaction differ between women and men who hold the same academic credential?

Examining these broad questions on the experience and outcomes of the MBA requires first understanding the current state of MBA admissions, in particular the differences in the number of women versus men who choose to pursue the degree. Despite immense outreach to women to encourage their application (Marks & Edgington, 2006), women's MBA enrollment at 34% of the total (http://www.Fortéfoundation.org) remains significantly behind that of other professional graduate programs, most notably law at 47.3% (http://www.americanbar.org/content/dam/aba/marketing/women/current_glance_statistics_july2014.authcheckdam.pdf) and medicine at 47.6% (http://kff.org/other/state-indicator/medical-school-graduates-by-gender/). Among other reasons, this may be due to lack of confidence, concern over financing the degree, and perceived inferior quantitative abilities within women (Marks & Edgington, 2006). In an effort to

better understand this disparity, Catalyst and the University of Michigan (2000) conducted an extensive analysis of the MBA environment and the impact of the MBA on the careers of women and men. This research followed other scholarly research and practical concerns that brought to light potential issues with the experience and outcomes of women MBAs (Cox & Harquail, 1991; Leeming & Baruch, 1998; Sinclair, 1995). Other scholars have since examined the experience and impact of the MBA on women and men, illustrating that many of the challenges and discrepancies that were present in 2000 remain (Arbaugh, Bento, & Hwang, 2010; Cocchiara, Kwesiga, Bell, & Baruch, 2010; Simpson, 2000).

Problem Statement

As colleges and universities contemplate the future, business schools must also respond to pressures for change. Business schools have experienced growth at a faster rate than any other part of the university, leading scholars to assert that as higher education evolves, business schools are perhaps even more susceptible to market forces such as globalization and technology (Friga, Bettis, & Sullivan, 2003). Starkey, Hatchuel, and Tempest (2004) support this premise, affirming that the growth and relevance of the business school is one of the most important issues for the future of higher education. The concerns are magnified by the impact of management education on society as whole. The leaders and managers produced by graduate and undergraduate programs in business have a direct link to economic growth and stability (Friga et al., 2003). As such, the myriad challenges explored in the literature on the relevance of MBA programs are important to address to ensure long-term viability of the MBA as an avenue for growth

and sustained revenue for universities and as a credential that leads to successful career outcomes for the graduates.

In addition to the macro trends impacting the future of MBA programs, there are concerns over the educational experience of obtaining an MBA as well as the return on the investment in the degree. As discussed throughout the forthcoming review of the literature on the impact of the MBA, many scholars question the relevance of MBA faculty and the applicability of the curriculum in preparing future business leaders (Bennis & O'Toole, 2005; Pfeffer & Fong, 2002, 2004). Others address the co-curricular or social aspects of the MBA experience, questioning the culture and inclusiveness of MBA programs (Kelan & Jones, 2010; Mavin & Bryans, 1999; Simpson, 2006; Sinclair, 1995). In terms of the impact of the degree on career outcomes, some argue that the MBA provides no apparent benefit in terms of compensation or other less tangible outcomes (Baruch & Peiperl; Pfeffer & Fong, 2002). All of these concerns point to the bigger question of whether MBA programs have failed the management profession or perhaps have failed to communicate the true value and impact of the MBA credential.

Adding complexity to the broad challenges to the MBA raised by academics and practioners, the literature on the particular experience of women MBA students and graduates reveals still more concerns. The adverse impact, both economically and equitably, if women are disinterested in or discouraged from pursuing the MBA has been studied from different angles that explore both the business school environment as well as the educational and career outcomes achieved (Sinclair, 1995). The issue surrounding gender and the MBA can be examined along three sub-issues: attracting and admitting

women into MBA programs, ensuring gender awareness and diversity of thought throughout the educational experience, and providing a pathway into senior leadership for women who obtain an MBA.

Female students represent a significant target market for MBA programs across the globe (Kelan & Jones, 2010), prompting many business schools to place a priority on improving recruitment of women. Aiding their efforts are women in business who have seemingly broken through the glass ceiling. Business leaders such as Marissa Mayer of Yahoo!, Ginni Rometty of IBM, and Indra Nooyi of PepsiCo have helped break down barriers at senior levels of the organization (Miranda, 2013). As the accomplishments of these women and others have become more widely known, conversations around how to attract more women to MBA programs have become more prominent. Yet, the challenges are many for business schools looking to increase female enrollment. Two accounts in the popular press described a "frat-house" culture within the MBA student body (Hemphill, 2013; Noyes, 2014) that is often described as "unfriendly" toward women (Noyes, 2014). Perhaps even more worrisome for the future of female MBA enrollment is the research that shows that women generally find the pursuit of the MBA to be less positive and fruitful than their male counterparts (Arbaugh et al., 2010). With approximately 58% of undergraduate degrees awarded to women (http://nces.ed.gov/fastfacts/display.asp?id =72), an MBA model of 34% female enrollment represents a missed opportunity and potential path to decline of the degree overall (Arbaugh et al., 2010).

A portion of the enrollment discrepancy and dissatisfaction with the MBA can be attributed to the actual educational experience for women. Simpson's (2006) critique of

MBA curricula revealed an emphasis on discipline-based analysis over development of softer skills, a pedagogical orientation which favors male communication styles over female styles which focus more on relationships. Kelan and Jones (2010) researched the strong masculine approach to MBA education which makes it difficult for women to feel included and thrive academically. Mavin and Bryans (1999) studied the topic of gender in business schools as well, identifying a strong stereotype of the "manager as male" (p. 99). This norm reinforces existing stereotypes of the MBA educational experience. The lack of female faculty, role models, mentors, and protagonists in case studies contributes to a notion that women in management are invisible.

What, then, does this mean for the future of the MBA degree and its influence on the profession of business? As the only universally recognized higher educational qualification in the field of management, the MBA is often considered an essential step on the path to senior management (Leeming & Baruch, 1998). If women are not recognizing the value of pursuing the MBA, they will likely be held to lower levels of the organization than their male peers due to lack of educational qualifications (Zeff, Fremgen, & Martinez, 1994). The impact is felt at both the individual and the organizational level. In the United States, women currently occupy 47% of the workforce and over half (51.5%) of the professional and managerial roles (http://www.catalyst.org /knowledge/statistical-overview-women-workforce). However, women remain underrepresented in senior leadership roles, occupying only 14% of senior executive roles and 17% of corporate board positions. Further, merely 4.2% of Fortune 500 CEOs are women (www.Fortéfoundation.org). Financially, companies with higher levels of women

in leadership roles have been shown to achieve better results, including a 53% higher return on equity versus companies with less female representation at the top (www.Fortéfoundation.org). Senior MBA administrators such as Joe Fox, Associate Dean and Director of MBA Programs at Washington University in St. Louis, have recognized that addressing the issue is going to take the coordinated efforts of multiple stakeholders (Miranda, 2013). The issues are clear and the path forward is uncertain, but most scholars and practioners agree that change is needed.

Statement of Purpose

As demonstrated by the challenges facing the MBA, including the gender inequality in MBA programs and business, further exploration and analysis of the MBA experience and outcomes for both women and men will contribute new insights and perspectives to the body of knowledge on this topic. The gaps in the existing literature expose questions over the return on investment of the MBA, the extrinsic and intrinsic benefits of the degree, and the factors that most contribute to post-MBA success. Perhaps even more prevalent are questions over why experiences and outcomes don't seem to have improved for women MBAs, or if they have, why these haven't been presented more prominently within the literature. Despite limited research that points to positive short- and long-term outcomes, there is nothing that has broadly shown achievements and perspectives of women and men who have obtained an MBA – what it has done for their lives and careers in both extrinsic and intrinsic terms. This may be due to an actual gap in the research or a lack of promoting and communicating the outcomes of studies that have yielded positive outcomes, particularly for women. Investigating the academic and

professional issues, outcomes achieved, and influences on success will contribute much to this discussion, while also providing insights that can be shared within the academy and the profession of business.

The gaps identified in the subsequent literature review, along with the conceptual framework which guides this study, highlight the need for a study focused on the impact of the MBA in both objective and subjective terms with a particular emphasis on the experience and outcomes achieved by gender. As such, the purpose of this study was to better understand the widely-accepted objective measures of post-MBA success by expanding them to include a broader set of extrinsic as well as intrinsic career outcomes; to investigate key MBA inputs, such as work experience, academic credentials, and career goals, and their influence on post-MBA success; to describe any differences in the MBA experience and outcomes between men and women; and finally, to better understand the true impact of the MBA on outcomes achieved at graduation and beyond.

Research Questions

This study employed a quantitative approach, involving the design of a new, comprehensive survey instrument which examined the many components of the MBA lifecycle, including: pre-MBA attributes and decisions, relationships and networks gained in an MBA program, and career achievement at graduation and beyond. The research was grounded in a set of theoretical perspectives which illustrate the related issues, concepts, and criticisms highlighted in the literature.

The broad nature of this quantitative study addressed questions that are descriptive, relational, and comparative in nature. This allowed for examining the

experiences and outcomes of the MBA in a holistic manner. The descriptive questions in this study defined and illuminated the experiences and outcomes of the MBA through measuring or quantifying key variables. The relationship questions explored the association or impact of a variable or set of variables on key MBA outcomes. Of specific interest was an examination of which factors are most predictive of success according to extrinsic and intrinsic measures (and to what degree). The comparative research questions examined differences between or within groups such as the variability in outcomes of women versus men and the growth in compensation as a result of obtaining the MBA. One final question measured the overall satisfaction with the decision to pursue an MBA, exploring whether or not individuals would make the same decision again to obtain an MBA at the same program. The specific questions which guided this study are as follows:

1. Which key business and professional competencies do graduates believe have been the most enhanced through the process of obtaining an MBA, and how do these differ between men and women?
2. Which networks and relationships acquired through the experience of obtaining an MBA provide the most value to graduates, and how does the perception of the value of these networks and relationships differ between men and women?
3. How do years of pre-MBA work experience, academic credentials of GMAT score and undergraduate GPA, and career goal upon entering an MBA program impact the first post-MBA and current total annual compensation of MBA graduates?

4. How do years of pre-MBA work experience, academic credentials of GMAT score and undergraduate grade point average, and career goal upon entering an MBA program impact graduates' career satisfaction?
5. What is the relationship between extrinsic career outcomes and intrinsic career outcomes?
6. How do extrinsic and intrinsic career outcomes differ between men and women MBA graduates?
7. How do perceptions of business and equality differ between men and women MBA graduates?
8. What is the impact of the MBA degree on total annual compensation for the first post-MBA position and current position when compared to pre-MBA total annual compensation, and what differences exist between men and women?
9. Overall, how satisfied are MBA graduates with their decision to obtain an MBA, and what differences exist between men and women?

Chapter 2: Literature Review

The review of the literature on this topic revealed the broad picture of the issues surrounding women and the MBA while also identifying the notable gaps which led to the current study. The scholars who have studied this issue represent diverse roles and perspectives from higher education, management education, and career and organizational development. Key findings from the research conducted by these scholars is presented in this review in four broad areas which contribute to understanding the educational experience and outcomes of those who pursue the MBA: the current state of

the MBA, the particular challenge for women, the business school experience, and the outcomes achieved by obtaining an MBA. It is valuable to begin considering this topic through reviewing the current state of the MBA, including broader criticism that can be found in the popular press and scholarly literature alike. Pfeffer and Fong (2002) were among the first to question the impact of the MBA, stating the benefits of the MBA are not apparent. Other scholars have examined the relevance of the MBA and its long-term viability in a competitive market (Schlegelmilch & Thomas, 2011; Schramm, 2006; Starkey et al., 2004).

Contributing to the challenges facing the MBA are questions over the experience and outcomes specifically for women. Sinclair (1995) studied women within the male-dominated culture of MBA programs, addressing their overall disenchantment. The Catalyst report (2000), added to these concerns, revealing numerous challenges of attracting women to MBA programs and preparing them for success. Other scholars explored career success of men versus women (Cocchiara et al., 2010; Sturges, Simpson & Altman, 2003), including two studies that found that women often benefitted more from intrinsic factors of success including credibility and confidence, while men held the advantage in extrinsic benefits such as pay and status (Hay & Hodgkinson, 2006; Simpson, Sturges, Woods, & Altman, 2005).

The educational environment within business schools has been examined from both a cultural and curricular perspective. Arbaugh et al. (2010) suggested there are substantial challenges for women who are pursuing or considering an MBA degree. These challenges are largely due to the educational experience and culture found within

MBA programs. Kelan and Jones (2010) and Mavin and Bryans (1999) studied the masculine culture within graduate management education. This strongly masculine-gendered culture manifests itself in the course materials, role models, faculty, and pedagogies that are prevalent within MBA programs.

The fourth and final area for exploration in this literature review is what the MBA does for one's career. Bringing perspective to this issue are scholars who have studied the career benefits of the MBA and the career success differences between men and women MBA graduates (Cocchiara et al., 2010; Cox & Harquail, 1991). Other scholars have addressed gender discrimination within the business world with emphasis on the relationship between MBA programs and the persistent gender gap in corporate leadership (Leeming & Baruch, 1998; Simpson, Sturges, Woods, & Altman, 2004). Examining the link between business school and the profession of business provides valuable context on the potential consequences of women failing to thrive in the MBA environment and achieving inferior career outcomes. Together, these four related bodies of literature provide broad insights on the current state of the MBA and recommendations for building a sustainable and inclusive future for MBA education.

The Current State of the MBA

Reviewing and understanding the current state of the MBA provides essential knowledge around the evolution of the MBA and questions surrounding the future of the degree. The topic has been studied by academics and management professionals alike, both groups having explored many of the same issues. This foundational portion of the review focuses on the body of literature that examines two broad areas around the MBA

– the return on the investment of obtaining and MBA and the long-term relevance and viability of the degree.

Return on the MBA investment. The cost of obtaining an MBA from a highly-ranked MBA program rose 37% between 2008 and 2014 with continued increases expected (Zlomek, 2014). This brings the average cost for one year of study at a selective program to $60,000, not including living expenses. The story is nearly the same when considering all U.S. MBA programs where 2012 tuition averaged $44,476, more than a 33% increase over 2007 tuition rates. The high cost leads to questions about the return on investment of earning an MBA degree, especially given that the average MBA starting salary of $98,000 has moved very little over this same six-year period of time (Zlomek, 2014).

Pfeffer and Fong (2002) were among the first scholars to assess the question of the return on the investment of an MBA, noting a significant gap in research that examined the impact of business school on graduates as well as the management profession overall. Their questions and observations led to an examination of 40 years of data on what business schools actually do and the impact of management education on business. Of particular concern were two outcomes MBA programs consider to be the most important measures of ROI – knowledge gained and career outcomes achieved. Pfeffer and Fong (2002) concluded there was little evidence that knowledge acquired through MBA studies enhanced graduates' careers or that the MBA credential ensured career success. Similar conclusions have been drawn by other scholars and practioners who have asserted it is not clear whether there is a positive return on tuition, time, and

opportunity cost of lost salaries for MBA students at U.S. business schools (Schramm, 2006).

At the heart of the question of ROI are concerns over the relevance of MBA education to the profession of management. Clarifying the role that business schools play in society is one way to begin understanding the significance and applicability of what is being taught (Schlegelmilch & Thomas, 2011). Henry Mintzberg, an outspoken critic of the MBA, claimed that the main reason for criticism of the ROI of the MBA has to do with an MBA curriculum that lacks relevance (Bennis & O'Toole, 2005). Employers have noticed, claiming that new MBA hires often lack fundamental skills needed by their organizations. Business schools are often criticized for not delivering relevant knowledge to students, therefore providing a disservice to industry (Pfeffer & Fong, 2004). This may be due in part to an outdated approach to business education and schools that have not prepared students for economic realities (Schramm, 2006). The lack of clear evidence that either the MBA credential or grades earned in an MBA program relate to salaries or more senior positions in organizations further calls into question the ROI of the degree (Pfeffer & Fong, 2002).

Yet, employers rely on the MBA degree as a strong indication of a job candidate's competencies (Baruch & Peiperl, 2000). The degree provides a formal qualification that is perceived as important for organizations. Companies often consider MBA graduates to be part of a pre-screened applicant pool, saving them time and money in the recruiting process (Pfeffer & Fong, 2002). The potential preference for MBA graduates led Baruch and Peiperl (2000) to study the extent to which the knowledge gained in an MBA

program influences development of key competencies sought in managers. They hypothesized that the MBA would have a positive impact on achieving its aims. Specifically, they posited that the MBA would provide business knowledge and managerial skills, enhance performance as a manager, and provide career benefits including enhanced employability, career advancement, and salary. When comparing MBA graduates with a control group of non-MBAs, they found that the MBA does provide benefits primarily in the form of recognition and respect. However, the benefits in terms of compensation and career advancement were less clear with both the MBA and control groups attaining comparable salaries and similar positions within the organization.

As perhaps the most significant outcome of the acquisition of an MBA, compensation is often an essential variable in research on the ROI of the degree. Studies conducted at multiple business schools have revealed that the MBA may have an effect on *starting* compensation, but no discernable effect on *current* compensation (Pfeffer & Fong, 2002). Because the potential for a higher salary is one of the primary motivations for pursuing an MBA (Baruch & Peiperl, 2000), failure to fully realize these benefits opens the door to further questioning of the value of an MBA. In one salary study, the Graduate Management Admissions Council (GMAC) found that seven years after completing their studies, MBA graduates had higher earnings than those without the credential (Pfeffer & Fong, 2002); however, the benefits were mostly realized by those who attended prestigious business schools. Graduates from less competitive programs earned salaries that were comparable to those without MBAs.

Relevance and long-term viability of the MBA. Criticism surrounding the ROI of an MBA in terms of knowledge and compensation raise a question examined by Pfeffer & Fong (2002), "Does the past market success mean that business schools have provided important value and that their future success is also assured?" (p. 78). To answer this question, it's helpful to examine the evolution of the MBA degree as the primary credential for the profession of management. Compared to other disciplines like law and medicine, the definition of management as a profession is less clear and defined (Baruch & Peiperl, 2000), and unlike law or medical school, the MBA is not a requirement for a business career (Hemphill, 2013). The management profession was birthed from academics and a small group of managers seeking to raise their status (Schlegelmilch & Thomas, 2011). As business schools became established, turning management into a profession like law and medicine was one of their primary objectives. Despite this early mission, Schlegelmilch and Thomas (2011) pointed to research presented in a 2007 book by Khurana that claimed these schools have failed to reach the goals of their founders to educate professional managers to demand the same level of respect as doctors and lawyers.

One possible explanation for this failure is the degree of separation that business schools have from the profession they serve (Pfeffer & Fong, 2002). This is unique among professional schools which are typically more connected to their outside markets. Fewer faculty from business schools, for example, move in and out of academia and industry, and MBA curricula are often not linked to the practical concerns (Pfeffer & Fong, 2002). Research produced by business schools is often not grounded in business,

making MBA education less relevant to actual practioners (Bennis & O'Toole, 2005). Starkey and Tempest (2005) described the irony surrounding business schools' quest for academic legitimation that has ultimately created distance between scholarship and the field of business.

This lack of engagement with the outside world has led to much criticism over the gap between theory and practice in graduate management education. On one hand, this gap is attributed to the academic and pedagogical structure within business programs. Pfeffer and Fong (2002) suggested that "the training or education component of business education is only loosely coupled to the world of managing organizations" (p. 92). Bennis and O'Toole (2005) agreed with this assertion, stating that faculty are disconnected from the field of management. This has resulted in a sense among businesspeople that "individuals in the academy are not engaged in the same profession they practice" (p. 102). An unfortunate repercussion is that students themselves must understand and integrate this gap between discipline-based knowledge and actual business practice (Bennis & O'Toole, 2005).

Perhaps even more prevalent among critics is the perceived irrelevance of scholarly research produced by business schools. Starkey et al. (2004) advocated for a strategy of co-production whereby relevant knowledge flows both ways between the academy and practice. The ineffectual scholarly research contribution to the business profession may be attributed to a shift in the culture of business schools (Bennis & O'Toole, 2005). Rather than measuring themselves on the knowledge gained or outcomes achieved by their graduates, most business schools measure themselves on the academic

rigor of their scientific research. Although some of this research is valuable, little of it is grounded in actual management practices (Bennis & O'Toole, 2005). Even former dean Robert Kaplan of the highly regarded MBA program at Carnegie Mellon supported the idea that business school research has contributed very little to the field of business (Pfeffer & Fong, 2004). This theory-practice gap is a key factor in determining the future of MBA programs, pointing to the need for further research to understand the role of business schools in contemporary society. Schlegelmilch and Thomas (2011) posited that despite the many criticisms raised by scholars and business practioners, the MBA will survive, but not without substantial change.

The Particular Challenge for Women

An essential element of the change platform for MBA programs is the acknowledgement and improvement of the particular MBA experience and outcomes for women. The general concerns over the current state and long-term viability of the MBA described in the previous section provide context and foundational understanding. The remaining sections of this literature review will explore the specific challenges for women as they pursue, experience, and obtain an MBA. An examination of the unique challenges for women requires studying factors that lead to enrollment challenges, gender differences in motivations for the MBA, and an overall sense of disenchantment with the MBA experience as a woman.

Enrollment challenges and barriers for women. Despite some reports that female applications to MBA programs are on the rise (Miranda, 2013), the percentage of women applying to the most prominent program format, the two-year full-time MBA,

actually declined from 39% in 2013 to 37% in 2014 (Graduate Management Admissions Council, 2014). This, coupled with the continued under-representation of women versus men, has led many programs to launch special recruiting efforts designed to attract women to their programs (Marks & Edgington, 2006). Miranda (2013) illustrated these efforts with an example from Cornell, a program that has focused on attracting women to business school and helping them adjust. The school has instituted lunches with female executives, mentoring programs, a women's leadership conference, and forums on work-life balance. Efforts such as these have been shown to yield results. Top-ranked Kellogg Business School at Northwestern University has achieved increases in female enrollment by connecting prospective and current students with women leaders in a variety of professions (Miranda, 2013).

The topic of attracting women to MBA programs has been discussed and debated for well over a decade. Published in 2000, the revolutionary Catalyst report on "Women and the MBA" expanded on the broad topic of the future of the MBA with a comprehensive analysis on the challenges of attracting women to MBA programs and preparing them for success. The report focused broadly on three groups – organizations, academic programs, and women – to understand the issues and provide recommendations to reverse the trend of low female enrollment. A primary goal of this research was to gain insight into the factors that are preventing women from applying to MBA programs. Their survey of MBA graduates from 12 premier business schools revealed the following obstacles:

- perceived lack of female role models;

- belief that business is incompatible with work-life balance;
- lack of confidence and preparation with math skills;
- less encouragement of employers for pursuit of the MBA degree;
- less motivation for money – a primary reason for pursuing a business career;
- concern over the return on the investment of the degree; and
- less-relevant undergraduate degrees and work experience (p. 15).

Given these barriers to application, the Catalyst (2000) report also identified strategies to attract women to business school, including featuring more successful women business leaders as role models or mentors. Other top recommendations included involving current students and faculty in the recruiting process, an idea supported by Associate Dean Fox of the Olin Business School at Washington University who commended the efforts of current students and alumni who actively help recruit future classes (Miranda, 2013). In addition to relying on current students and alumni to engage in the recruiting process, the Catalyst (2000) research highlighted recommendations including spotlighting more female protagonists in case studies, hiring more female faculty, providing more flexibility in scheduling, and building a greater overall awareness of gender within the business school culture.

Motivations for women considering an MBA. Marks and Edgington (2006) examined these and other barriers for women in the context of the relationship between the barriers and motivators for pursing an MBA. They surveyed both men and women in order to identify key differences. The results revealed that men and women faced similar

challenges in terms of financial resources, commitment, and preparedness; however, these appear to be magnified for women when compared to men. Financial barriers, for example, may be more burdensome for women due to their lower household incomes, fewer years of work experience, and greater undergraduate debt. Women also felt less prepared for the academic rigor of an MBA program. Lastly, women expressed more concern about the commitment required of pursing an MBA and raised questions over the ROI of the degree. Like other scholars who have studied these issues, Marks and Edgington (2006) concluded by suggesting that adapting recruitment strategies to address these barriers is a worthwhile strategy for attracting more women to MBA programs.

Disenchantment with the MBA. The challenges for women do not end with the recruitment and admissions process. Sinclair (1995) studied the experiences of women MBAs while they worked toward their degrees. She explored the male-dominated culture of MBA programs, addressing the overall disenchantment with the MBA and lower numbers of women pursuing the MBA. The underlying concern inspiring her research was that women felt "disconnected and disempowered" during their MBA experience. This impacts everything from the way they learn to the careers they attain upon graduation. The Catalyst (2000) research acknowledged that although male and female MBA graduates were largely satisfied with their business school experience, women were more likely to identify problems such as an aggressive and competitive culture and lack of female faculty. Overcoming this sense of disenchantment may take broad cultural change (Sinclair, 1995); however, this change should not only increase female enrollment, but also ensure the MBA remains relevant in an increasingly diverse business

environment.

The Business School Experience of Women

A third body of literature concentrates more precisely on the curricular and co-curricular experiences within business school. These scholars have examined everything from social rituals to academic performance in business school. An underlying theme throughout this body of research is the notion that "manager equals male" (Mavin & Bryans, 1999). In other words, an internal structure and culture within MBA programs that is masculine in nature contributes to a less positive overall experience for women versus their male counterparts (Mavin & Bryans, 1999). Examining the various elements of the business school culture further highlights the challenges facing women MBA candidates.

Business school culture. Sinclair (1995) argued that management education was largely gendered masculine, leading to a mismatch in cultural fit for women in MBA programs. Simpson's (2006) research supports this premise and calls for a "feminizing of the MBA" (p. 182). Teaching discipline-based course content that emphasizes facts, tools and techniques is favored over the development of soft skills which are more closely aligned with female learning styles (Simpson, 2006). This pedagogical approach was studied by Arbaugh et al. (2010), revealing lower levels of overall satisfaction of female MBA graduates. They concluded that the culture within business schools does not build upon the natural strengths of women, resulting in a less favorable perception of the benefits of obtaining an MBA degree.

Compounding the cultural issue is the notion of denial of gender as an issue in

management education. Mavin and Bryans (1999) stated that ignoring gender in MBA education reinforces the idea that women are invisible. They argued for a more inclusive approach whereby learning capitalizes on the unique experiences and abilities of men as well as women. Kelan and Jones (2010) discussed this phenomenon of "gender fatigue" in MBA programs which they described as the reluctance to acknowledge gender inequalities (p. 28). To explore this phenomenon, they conducted 20 in-depth interviews with MBA students from a top-ranked full-time program. Their goal was to challenge the notion of "post-feminism" which assumes that gender issues have been eradicated or are no longer relevant. Their research revealed an overall sense of denial among students that gender is a relevant issue in MBA programs. MBA students seem to have constructed a gender-neutral perception of business school. One possible explanation for this is that "to risk being seen as too feminine or potentially as a feminist who is whining about the state of gender relations would not be appropriate behavior for a future business leader who expects to create opportunities wherever she goes" (Kelan & Jones, 2010, p. 39). Emphasizing gender in business school may have negative consequences, and as a result, women often distance themselves from the topic.

A strategy of gender neutrality may not seem inherently problematic; however, Kelan and Jones (2010) argued that within MBA programs this has resulted in "limited access to a critical discourse through which they might identify and challenge the systematic factors that are operating to maintain the normative masculine culture of business school" (p. 39). Because preparing future managers for a diverse workplace is a desired outcome of business schools, it is essential to inject more gender-awareness into

the curriculum and culture. Scholars have addressed this concern by identifying specific issues and strategies for the various elements of the MBA educational experience. They have acknowledged that change requires deliberately placing gender at the forefront (Mavin & Bryans, 1999) and "waiting for change through women's adaptation to the dominant MBA culture is both undesirable and unlikely to succeed" (Sinclair, 1995, p. 310). Despite these challenges, encouraging change through greater gender awareness in management education has the potential benefit of inspiring positive change in the overall business environment (Mavin & Bryans, 1999).

The masculine MBA curriculum. Kelan and Jones (2010) proposed a reinvented MBA curriculum that emphasizes more feminine competencies such as negotiating, relationship-building, and other less visible skills that are essential to effective management. They also suggested evaluating how leadership is taught in business schools and deliberately incorporating leadership characteristics such as collaboration and people skills which are often de-emphasized in favor of more masculine styles based on individual success. Integrating more of the "feminine" management skills into the curriculum would put MBA programs in closer alignment to the needs of industry. With interpersonal skills topping the list of highly-desired attributes in new MBA recruits, business schools would better support the requirements of employers by adapting course content and delivery to fulfill the goals of the marketplace.

Mavin and Bryans (1999) also advocated for greater gender awareness. They suggested three strategies for moving toward a more gender-balanced curriculum:

1. Review course delivery and content to ensure adequate coverage of

knowledge and skills that both men and women need in order to achieve success as managers.

2. Evaluate teaching and learning styles to determine if they are appropriate for the variety of learning styles of current and future students.
3. Examine whether or not they are providing knowledge and skills that prepare graduates for a diverse workplace and diverse styles of management (p. 104).

By moving gender to the forefront of curriculum discussions, it is crucial that it is not viewed simply as relating to women (Kelan & Jones, 2010). It is also important to understand that overt attempts at addressing diversity and gender issues in the curriculum may be counterproductive (Arbaugh et al., 2010). Rather, a more subtle and organic approach that deliberately builds more gender awareness into the academic experience may prove more efficacious.

Business school faculty. Business school faculty can be instrumental in this change process. A useful action is to incorporate pedagogies that strive to eliminate the masculine culture that has prevailed in business school (Mavin & Bryans, 1999). Kelan and Jones (2010) argued that doing so would create a more inclusive environment and would be beneficial to faculty and staff at all levels. However, the underlying structure and culture within business schools may inherently promote the masculine management curriculum. With women comprising only a quarter to a third of business school faculty (Arbaugh et al., 2010; Mavin & Bryans, 1999), business schools themselves are perpetuating a pattern of gender inequality (Mavin & Bryans, 1999). In addition to the

lack of women instructors, the male-dominated faculty often leads to course development and connection to industry that perpetuates the status quo (Mavin & Bryans, 1999). The resulting lack of student access to female faculty who may serve as role models is one of the more prevalent impediments to women pursuing an MBA (Arbaugh et al., 2010; Catalyst, 2000).

Pedagogical concerns. One way the masculine structure of business schools manifests itself is within one of the primary modes of student learning – team projects. Traditionally, the practice within MBA programs has been to divide up the relatively small number of women among the various student teams – resulting in one woman per team (Noyes, 2014). Sinclair (1995) argued this can make it difficult for women to express their ideas and make meaningful intellectual contributions to the group. Joyce Russell, Vice Dean at the University of Maryland's MBA program, discussed the ineffectiveness of this team structure arguing that it facilitates an environment where it is a challenge for women to make their voices heard amongst their male team members (Noyes, 2014).

The struggle to "fit in" is perhaps amplified by the gender-neutral or male norm in management research and literature (Mavin & Bryans, 1999). Because academic research is regularly used as a learning tool in the classroom, this reinforces the masculine learning environment. The same is true of case studies, a widely-used learning method in MBA programs. Harvard Business School pioneered the case method and publishes the vast majority of cases used in business schools across the globe. Currently, only about ten percent of Harvard cases include women in prominent roles. Acknowledging this

deficiency, Harvard Dean Nitin Nohria committed to doubling this percentage over the next five years (Noyes, 2014). This is one visible step toward fulfilling the stated desire to see more women leaders in case studies and other course materials (Catalyst, 2000).

The co-curricular experience. Outside of the formal classroom, the lack of mentors, role models, and a critical mass of women to support one another are key contributing factors to challenges faced by women in MBA programs (Mavin & Bryans, 1999). Arbaugh et al. (2010) presumed these factors would lead to women being more likely to seek support to cope; however, they argued that business schools are not providing sufficient student services focused on the needs of women to offset the cultural issues they face. This validates the findings from the Catalyst (2000) research which showed that women identified "providing additional support" as the top strategy for attracting more women to MBA programs (p. 17). Featuring more women as role models, involving more women in recruitment, and highlighting successful women as examples in the classroom may prove to facilitate and sustain a more inclusive MBA culture.

MBA Outcomes and Success Factors

Perceived discrimination felt by women throughout their time in business school may extend into their post-MBA careers. Cocchiara et al. (2010) argued that these feelings and experiences explain in part why numerous studies have shown that women often do not receive the same benefit from their MBA degree as men. The final body of literature for this review explores MBA outcomes and success factors, primarily in terms of career achievement. When examining the topic of MBA career success, a useful starting point is to understand the overall impact of the degree on one's career. From

there, exploring the differences in career outcomes of women versus men provides perspective on MBA benefits and success realized by women. Finally, reviewing the implications of these differences on the profession of management yields insight into the implications and strategies for business schools and employers.

Impact of the MBA on career success. In order to determine the impact of the MBA, it is useful to first understand which factors contribute to longer-term career development and success. Sturges et al. (2003) studied a group of Canadian MBA graduates to gain an understanding of their perceptions of various career competencies. Their findings showed that completion of an MBA program develops career competencies in many ways, not only contributing to more measurable outcomes like pay and promotions, but also leading to greater career clarity and confidence.

Hay and Hodgkinson (2006) also studied career outcomes of MBAs. They broadened the definition of career success to include the *internal* career (defined by a person's own subjective judgment of their achievements) rather than only the *external* career (measured in terms of society's definition of achievement). The qualitative approach to their study allowed for uncovering various meanings given to MBA career success which were conveyed in more descriptive terms than the commonly accepted definitions of success focused on earnings and advancement. Their findings revealed that a definition of MBA career success that was focused on external measures such as status and salary was provided by only a small group, typically men and younger women. Conversely, career success was more often defined according to internal measures such as increased confidence and career choice. Simpson et al. (2005) also studied this

concept, finding that among MBA graduates, young men gained the most in terms of extrinsic benefits such as pay. They found that both men and women benefit from intrinsic benefits, although in different ways. Men reported greater levels of confidence due to their improved skills, while women said they gained confidence from increased self-worth. Both of these studies suggest that, for women, qualitative outcomes of the MBA may prevail over the more quantitative, extrinsically focused measures typically associated with career success. These findings provide a more complex look at MBAs and careers which challenged the prior, purely objective definitions of success.

Zhao, Truell, Alexander, and Hill (2006), sought to understand the impact of the MBA on career development, hypothesizing that the MBA would have positive impacts on graduates' careers. To test their hypothesis, the authors surveyed a group of MBA graduates from an accredited MBA program at a Midwestern state university. The results showed that the MBA did indeed have a positive impact on employment, salary and advancement in both the short and long term. In addition, respondents viewed themselves as performing better than their peers without MBAs in key areas such as problem-solving, leadership skills, and team management. The final component of the study analyzed potential differences given key demographic factors such as gender and ethnicity. They found no statistically significant differences in career outcomes for any of the demographic factors. The positive results of this study are in conflict with earlier research that showed that the MBA does not impact salary or career success, including the frequently cited conclusions drawn by Pfeffer and Fong (2002).

In addition to these studies which explore the overall impact of the MBA, two

other groups of scholars examined one of the pre-MBA inputs which is of critical importance in MBA admissions decisions - years of work experience prior to beginning the program. Dreher and Ryan (2002) explored the impact of work experience on key career outcomes such as compensation, career satisfaction, and number of promotions. Their findings indicated that there is no relationship between years of prior work experience and compensation or number of promotions. In addition, the results of their analysis revealed that MBA graduates with fewer years of pre-MBA work experience have higher levels of career satisfaction. Yeaple, Johnston, and Whittingham (2010) also studied years of pre-MBA work experience, focusing on the career outcome of salary for the first post-MBA position and at key intervals after graduation. Their study found a weak relationship between salary for the first-post MBA position and years of pre-MBA work experience, but no relationship between work experience and salary beyond the first post-MBA position. Although prior work experience is only one of the many pre-MBA input variables, the findings of these two studies open the door to exploring other key admissions criteria and how they do or do not impact career outcomes.

Career outcomes of women versus men. Additional research has yielded contradictory results over whether or not there are differences in the career outcomes of men versus women. Cox and Harquail (1991) specifically explored these potential differences, citing a dearth of research that focused on career path comparisons between the two genders. They also noted the inconsistent outcomes produced by other studies on key components of career success such as employer mobility, hence their desire to conduct an analysis of gender, career success, and career paths in combination. They

hypothesized that women would achieve lower levels of salary progression, career satisfaction, and upward mobility. They then incorporated the career path variable into their research by examining whether or not career success is enhanced by line versus staff assignments (career paths) and how salary progression, career satisfaction, and mobility are impacted by differences in these two trajectories. The results revealed that women did indeed experience lower levels of salary advancement as compared to men; however, there were no significant differences in career satisfaction between men and women. Women were awarded similar numbers of total promotions, but lagged behind in number of management promotions. Line versus staff positions were shown to have some positive effect on job mobility. Although, women and men reported similar levels of career satisfaction, the authors suggested that women are at a disadvantage compared to men in their overall career experience due to gender differences in starting salaries, starting job levels and seniority within the organization.

Cocchiara et al. (2010) studied career outcomes for MBAs, specifically examining differences in women versus men who hold the same educational credentials. They found that after obtaining an MBA, women received lower salary increases and felt less satisfied with their career advancement. On the contrary, they reported higher job satisfaction and hierarchical levels than men. The Catalyst report (2000) revealed key indicators that show men have advanced farther than women, despite overall consistent levels of career satisfaction between men and women (83% and 85%, respectively). This study revealed three factors that were most likely to contribute to job satisfaction: line positions, higher salaries, and positions closer to the top of the organization (p. 22). The

research found that women were less likely than men to work in line positions (37% versus 45%), a gap that widened at higher levels of the organization where women held only 6.8% of line jobs. Catalyst (2000) found that women were less satisfied than men with compensation and career advancement. This may be due in part to difficulty finding mentors and coaches within the organization. Whereas 44% of men in this study reported that finding mentors had been easy, only 33% of women felt the same. Lower levels of satisfaction with advancement may also be attributed to women being more likely to take time out of the workforce or reduce their workload for family reasons. A much smaller percentage of women than men in this study had continuously worked full time since they graduated (29% and 61%, respectively). There is evidence this phenomenon continues today. A study of MBA graduates of the University of Chicago's Booth School of Business ten years after degree completion found that women were 22% more likely to have experienced a "career interruption" than men (Hemphill, 2013), calling into question the return they have earned on their investment in the MBA degree.

The gender gap in corporate leadership. A review of the MBA experience and outcomes for women would not be complete without a brief examination of literature on the gender gap within the business world. Simpson et al. (2004) studied the "MBA effect," or the impact of obtaining an MBA on reducing career barriers and facilitating success. Their results showed that although the MBA can reduce gender disadvantages in the workplace, it will not eliminate them. Leeming and Baruch (1998) explored the broader topic of discrimination in management which informs the topic of MBA career development and success. They explored discrimination perceived by managers, and also

evaluated the effect of obtaining an MBA as a factor to reduce discrimination. The impetus for this study was data from multiple sources that showed that women make up a considerable number of lower-level management positions typical of recent MBA graduates; however, the proportion of women declines as the level within the organization gets higher. The findings of their study pointed to gender discrimination that is perceived to be stronger in graduates' working lives than during their MBA studies. Those who felt discriminated against reported lower income and felt they had fewer professional opportunities.

Given these findings, Leeming and Baruch (1998) described strategies for employers as well as business schools to reduce the effects of gender discrimination in business. A first step for employers is to eliminate gender preconceptions from the recruiting process. Then, companies should provide more support to eliminate the isolation often felt by women as they advance their careers. Finally, exploring alternate working structures that allow women and men to balance work and family life would encourage retention and bring discussions around stereotypes and prejudice to the forefront. Leeming and Baruch (1998) asserted that incorporating similar strategies into the business school environment would also reduce discrimination. They suggested finding ways to create more awareness of issues faced by women MBAs, supporting women to become more vocal in the classroom, hiring and promoting more female faculty, and increasing the visibility of female role models and mentors. These recommendations are consistent with the Catalyst (2000) research which identified many

of the same key strategies for making business school more inclusive to women, ensuring strong outcomes and a business environment that values diversity.

Gaps in the Literature

Each of the four broad areas examined in the literature review on the broad topic of the impact of the MBA has an established body of literature; however, several options were identified for more comprehensive research based upon gaps identified within the literature. In particular, three significant gaps surfaced, all of which were addressed by the current study. The first is the absence of a holistic analysis of the issues surrounding women and the MBA. Most research on this topic focuses on one narrow aspect such as the culture within business schools or a specific outcome such as career satisfaction. In addition, with the exception of a few studies highlighted in this review (Arbaugh et al., 2010; Catalyst, 2000; Marks & Edgington, 2006; Simpson et al., 2004), most research has focused on students or graduates of only one MBA program, rather than studying women from a broad spectrum of programs. This leads to the obvious challenge of making it difficult to generalize results to a broader population. It also reveals a gap in understanding that could have clear practical applicability for MBA marketing and recruiting, curriculum design, faculty hiring, student services, career development, and numerous other functions within the business school. Taking a holistic approach to the topic by studying women and men from multiple types of MBA programs, while also accounting for key factors such as years of experience and career goals, provides perspective that is useful for scholars, MBA program faculty and staff, and business professionals.

Another gap is found with the link between different types of benefits and outcomes provided by the MBA. Most of the existing literature looks at only one aspect of these, but a more complete look at the relationship between extrinsic and intrinsic outcomes, for example, will provide value to scholars and higher education practitioners. In particular, the literature reviewed for this paper did not include a study that explores the intrinsic outcomes of the MBA such as career satisfaction, individual beliefs about success, and self-concept, and their linkage to extrinsic (competencies, career advancement, and career projection) outcomes. Viewing the impact of the MBA from this interconnected perspective would allow for a more comprehensive examination of both the objective and subjective returns on the MBA investment.

A final gap that exists in the research is an examination of the factors that most contribute to the outcomes of obtaining an MBA. In other words, which factors inherent to the individual are most predictive of academic and professional success? Most existing research in this area focuses on studying some aspect of success – either academic or professional – but does not delve into the underlying factors that may have led to this success. Very little has been written on the examination of an individual's pre-MBA work experience, undergraduate grade point average, and career goals (e.g., changing functions or industries versus accelerating on the same path) and the subsequent outcomes achieved upon graduation. Including key demographic factors such as gender contributes additional insights on the topic, potentially comparing predictors and outcomes of men versus women. The results will provide insights to scholars and practitioners, contributing to the collective knowledge of what leads to successful MBA

outcomes.

Theoretical Foundation

Upon review of different theoretical approaches employed by scholars that have studied the impact and value of the MBA, several theories have surfaced which form the framework for the current study. Two of these theories might best be considered foundational theories in that they are fundamental to the topic of the experiences and outcomes of women MBAs. These include feminist theory, which seeks to better understand the experiences of women (Ropers-Huilman & Winters, 2011), and critical management education (CME), which questions conventional approaches to management education and explores the role of management in fostering inequality and oppression (Grey, 2008).

The literature on the experience and outcomes of women MBAs reveals three other prominent theories: human capital theory (HCT), social capital theory (SCT) or social identity, and career competency theory. Although they are distinct theoretical foundations, human capital and social capital (or social identity), when examined together, provide a full picture of the MBA experience. Human capital theory, as applied to higher education, describes how individuals invest in their education which, in turn, provides knowledge, skills, and experiences which increase an individual's productivity and income (Tan, 2014). Social capital also addresses the return on the investment in higher education, but examines the value that derives from the depth and breadth of relationships, networks, and status provided by the educational experience. In the context of this study, this refers to an individual's social identity obtained by relationships built

throughout the pursuit of the MBA degree (Cocchiara, et al., 2009; Baruch & Peiperl, 2000).

Career competency theory, another essential component of the theoretical framework for this study, maintains that the MBA experience provides a set of competencies which lead to outcomes achieved upon graduation and throughout one's career. This theory describes career outcomes in terms of a person's performance and his or her ownership and facilitation of career development and advancement (Sturges et al., 2003). Within this broader theoretical foundation, the notion of the "boundaryless career" has emerged as a career development model describing the evolution of one's career through different roles, functions, or organizations (DeFillippi & Arthur, 1994). This type of career model emphasizes mobility, flexibility, knowledge, and networks. Career competency theory claims that individuals build career capital through acquisition of "knowing-how," "knowing-why," and "knowing-whom" competencies (Sturges et al., 2003). Within the parameters of this research, graduate business education is viewed as an important means for building competencies in these three key areas. For example, "knowing-how" and "knowing-why" competencies are developed through the curriculum and coursework. "Knowing-whom" competencies, on the other hand, are developed through the various relationships and networks a student builds throughout the MBA program. These may include relationships with faculty, peers, staff, alumni, and employers.

In addition to these five theories that form the basis for this study, another broad theory in higher education connects them together into a cohesive model. Astin's (1993)

conceptual framework for studying student outcomes, otherwise known as the Inputs-Environment-Outcomes (I-E-O) model, provides the ideal structure that links the other theories together in a unified and logical manner. Because it is a broader theory for studying student outcomes, the I-E-O model provides a simple yet comprehensive look at what students bring into their academic experience, how they learn and engage during their education, and the results they obtain after their educational journeys are complete. The following detailed examination of each of these theoretical perspectives describes each theory individually and as part of the broader conceptual framework that guides this study.

Inputs-Environment-Outcomes Model. Astin's (1993) study of college impact provides the container which unifies the other theories that form the foundation of this study. Astin's research was motivated by a desire to explore the impact of college attendance on student development. He asserts that understanding the impact of higher education has many benefits including addressing questions over the value of a college degree. Although his model is focused on undergraduate education, the questions he presents regarding the value of higher education are equally relevant in discussions surrounding the MBA or other graduate degrees. In addition, Astin's attention to the educational experience and impact of that experience align well with the objectives of this study which examines both in the context of the MBA.

The basic elements of Astin's (1993) model include inputs (characteristics of the student at the time they enter the program), environment (programs, policies, faculty, peers, and experiences gained throughout the educational journey), and outcomes (the

student's characteristics after exposure to the academic environment). This simple model serves as a logical framework to house the other theories that are prominent in past studies on this topic. The I-E-O model also provides a basis for describing the educational experience and understanding what is actually achieved by MBA students at graduation and beyond.

Feminist Theory. An analysis of the impact of the MBA by gender requires gathering knowledge and insights about women's experiences, a phenomenon that fits squarely within the definition of feminist research. Feminism places gender at the center with emphasis on fostering change (Ropers-Huilman & Winters, 2011). In the context of this study, feminist theory underscores that the perspectives and experiences of women as they obtain their MBA and pursue their careers are essential for taking action to improve both the number of women seeking an MBA and their experience and outcomes during the program and beyond. Ropers-Huilman and Winters (2011) suggested a three-part definition of feminism that first assumes that women have something valuable to contribute, then that women have experienced oppression and lack of available options, and finally, that change is desired. In the context of the MBA environment, this change could come in the form of empowering more women to pursue the MBA, while also improving the outcomes of their careers and lives upon obtaining the degree.

Feminist theory is prominent in studies such as the one conducted by Simpson (2000) that directly analyzed the impact of the MBA for men versus women. The foundation of Simpson's (2000) study was to examine the phenomenon of oppression which was later described in Ropers-Huilman's and Winters' (2011) definition of

feminist research. Simpson (2000) posited that in order to compete in business equally with men and overcome barriers, women may perceive that they must embark on higher qualifications such as the MBA. In other words, the MBA may be seen as a requirement in order to overcome gender disadvantage. In a later study, Simpson et al. (2005) examined the benefits of the MBA with specific emphasis on how these benefits vary by gender. They also studied the academic structure of the MBA, noting that there is little indication that course content or design has moved toward a more feminist approach. The implications of their research point to the need for change – a "feminization" of the MBA that includes more cooperative work and self-reflection rather than traditional masculine MBA values such as competition and individualism. They concluded that their findings can bring about change in how MBA programs are designed and marketed to prospective students and in how students are prepared for an ever-changing career environment.

Sinclair (1995) also advocated for change with a strong feminist theoretical foundation to her research on gender and the MBA. She argued for a "radical reconstruction" of the MBA that places gender at the center. Her research focused specifically on how gender shapes the MBA experience, addressing the value of women, oppression, and need for change that are described in the articulation of feminism defined by Ropers-Huilman and Winters (2011). Sinclair described the obstacles women face in business, including practices and policies assumed to be "gender neutral" that may, in fact, favor men. Like Simpson et al. (2005), Sinclair (1995) explained the intensity and competition that are inherent to the MBA educational experience. She also addressed questions over the return on investment for women, given that raising children may cut

into their long-term earning potential and ability to recoup the high cost of the degree. These factors, she claimed, contribute to an overt discrimination against women that fosters the need for reform. In its current state, "the culture of the MBA, reinforced by the wider body of management theory and practice, is a powerful agent for the perpetuation of the masculinity of management" (Sinclair, 1995, p. 310). She noted the irony in the fact that many women pursue the MBA to overcome barriers and to be seen as equals to their male peers in business, but in reality, the MBA is part of the problem. At worst, the MBA perpetuates inequality in business; at best, it leaves gender out of the discussion entirely.

The notion of leaving gender out of the MBA experience was studied by Kelan and Jones (2010). They described a culture of "gender fatigue" within business schools, whereby gender is taken for granted. This illuminates a postfeminist theoretical foundation which believes that feminism was so successful at achieving gender equality that discourses about gender equality are no longer needed (Kelan & Jones, 2010, p. 27). Their qualitative study of MBA students revealed that they downplayed gender and claimed it had little relevance in their educational experiences. Some students had not even considered the possibility that the culture of business school might be gendered, constructing their MBA program as gender-neutral. Kelan and Jones (2010) stated that although it is not necessarily surprising that men would believe this, it is, however, striking that women didn't consider or perceive gender discrimination. They suggested that perhaps this denial of gender as relevant is because ambitious female MBA students do not want to be perceived as part of an oppressed or disadvantaged group. Like the

other scholars who have studied the MBA through a feminist or post-feminist theoretical foundation, Kelan and Jones (2010) also advocate for widespread changes to the MBA including moving gender to the forefront of the curriculum, providing more female role models, and increasing awareness of these issues among faculty and staff.

All of these scholars share a desire for deeper understanding of the challenges faced by women as they move through business school and into their careers. The focus on creating social change is a common thread. The call for change is perhaps best exemplified by Simpson (1995) when she declared that "waiting for change through women's adaptation to the dominant MBA culture is both undesirable and unlikely to succeed." These scholars encourage inclusion and amplification of the voices of women when studying the MBA and making the case for change.

Critical Management Education. Another theoretical foundation that questions conventional management education and advocates for change is critical management education (CME). Similar to feminist theory, CME emphasizes the role of management in the persistence of inequality and oppression (Grey, 2008). Critical management education evolved from the related research tradition of critical management studies (CMS) which is based on critical examination of the moral and political foundations of management, and advocates for radical transformation of management practice (Simpson, 2006). Conceptually, CME makes two broad criticisms of management education: that it ignores ethics, morality, and values; and that it neglects factors such as unintended consequences and uncertainty that may undermine management techniques (Grey, 2008). Critical management education also calls attention to the belief that management

suppresses important issues such as power, inequality, and ethics. One early source of work based upon CME criticized the intellectual deficiency of mainstream management education and its inability to deliver effective managers (French & Grey, 1996).

Many of the broad criticisms of the MBA connect to the tradition of critical management education. CME focuses on two of the key facets of the MBA described in detail earlier in this paper – the educational process of obtaining an MBA and the content delivered to students (Grey, 2008). Simpson (2006) explored this in detail in a paper on the masculinity of management education. She maintains that management education has failed in its continued reproduction of masculine values and practice in MBA education. Calling for a "feminization" of the MBA, Simpson (2006) critiqued the underlying values inherent to an MBA such as the prioritization of analytic "hard" skills over "soft" skills such as communication and interpersonal development. She asserts that management education has largely ignored the impact of the masculine discourses that guide what and how MBA students learn the skills and behaviors they need as managers.

Grey (2004) also questioned the content of management education and why it isn't meeting the needs of students and managers. He claimed that "it promises something entirely illusory, something that in principle couldn't possibly exist" (p. 181). The research of Pfeffer and Fong (2002; 2004) criticized the overall effectiveness of management education and questioned the return graduates receive on their investment in the MBA. Simpson (2006) also suggested that the MBA is not delivering on the key management skills expected of students and graduates. Although her research focused on the masculinity of management education as the cause of the failure of management

education, her examination of the skills and benefits of the MBA is firmly rooted in a philosophy of critical management education. The common thread throughout CME-based research is that management and management education are broken, which supports the numerous criticisms of the MBA levied by scholars and practioners alike.

Human Capital and Social Capital/Identity Theories. When studying the topic of women and the MBA, various scholars have centered their research on a foundation of human capital theory and/or social capital and social identity theories. As these theories relate to this study, they are discussed as a group due to the interconnected nature of the benefits and outcomes of increasing one's human or social capital that result from obtaining an MBA. The concept of social identity, although a distinct theoretical foundation, has been discussed throughout some of the research as another important factor in the evolution of a student who pursues the MBA. In their research on the impact of the MBA, some scholars have considered these to be distinct theories (Cocchiara et al., 2009), while others have included social capital and identity as a component of human capital (Baruch, 2009; Gupta & Bennett, 2013). Therefore, all three of these theoretical foundations are discussed together with specific emphasis on how these scholars have employed one or more of them to understand the impact and effects of an MBA.

Human capital theory was first introduced in the 1950's at the Chicago School of Economics by Theodore Schultz and Gary Becker (Tan, 2014). The theory became widely used in the field of economics, but its comprehensive foundation eventually gained broader applicability to a more comprehensive set of disciplines in business, health, and human affairs (Tan, 2014). One such area where this theoretical foundation

has gained wide acceptance is as an instrument to shape education and understand its impact on the economy. Tan (2014) described the essence of the theory as suggesting that "education increases the productivity and earnings of individuals; therefore, education is an investment" (p, 412). In this way, education is placed at the core of economic development.

Human capital describes the knowledge and skills one gains through education and training. The theory postulates that this education and training, in turn, increases the individual's productivity in the workplace, leading to higher levels of income. As such, individuals invest in their education with the hope and expectation of gaining a higher salary (Tan, 2014). In terms of the MBA, HCT would assert that a student pursues an MBA to increase the set of available opportunities with higher income potential. Although this has clear benefits for the individual, the collective higher levels of productivity gained by multiple people should, according to HCT, lead to national and global economic growth (Tan, 2014). The advantages of increased human capital, therefore, extend to the individual, the organization, and society as a whole.

In the context of the MBA degree, Baruch (2009) asserts that the ultimate goal of the MBA is for graduates to improve their human capital. He described three types of human capital that universities provide to their students: scholastic capital (knowledge), social capital (relationships and networks), and cultural capital (the value society places on education). Baruch (2009) followed the tenants of HCT with research that studied the impact of the MBA on the individual, the organization, and society. His findings revealed that the MBA can indeed provide significant benefits to an individual's career and to their

organizations. Gupta and Bennett (2013) also studied the human capital benefits of the MBA on individuals and their employers. Like Baruch, they included social capital as a component of human capital along with administrative capital, ingenious capital, and logical capital. The purpose of their research was to better understand the value of the MBA and the human capital link with organizational performance. The findings showed that the MBA adds value to both the individual and the organization. The main source of the value is in the academic knowledge acquired by the MBA graduate which manifests itself in the form of higher productivity for the organization.

Included within the findings of Gupta and Bennett (2013) is support for their hypothesis that the MBA affects social capital as a component of human capital. Social capital theory, as it pertains to acquiring an MBA, measures the relationship benefits of the MBA such as reputation, status, and networks (Cocchiara et al., 2009). Baruch and Peiperl (2000) and Cocchiara et al. (2009) acknowledged the impact that the social capital and social identity obtained and developed through the MBA has on an individual's life and career. Although the knowledge and skills gained through an MBA are certainly important, so too are the networks and relationships built through the educational experience (Baruch & Peiperl, 2000). This social capital is described in career competency theory as "knowing-whom" competencies which are essential throughout one's career (Cocchiara et al., 2009). MBA programs provide entry into valuable social and professional networks that provide respect, recognition, and enhanced social identity. This is the foundation of social identity theory which describes identity as both individual and as part of a network (Baruch & Peiperl, 2000). The MBA provides

affiliation with a group of alumni, peers, and professionals which can be a powerful advantage for those who obtain the degree. When combined with the more tangible human capital benefits, it is clear that this group of theoretical foundations form another solid base from which to study the experience and outcomes of women MBAs.

Career Competency Theory. While Cocchiara et al. (2009) and Baruch and Peiperl (2000) focused their research on foundations of human capital and/or social capital theory, both of their studies also included discussion of career competencies obtained by MBA graduates. Baruch and Peiperl (2000) discussed the premise that competencies can be learned and developed, and therefore, can be influenced by the MBA. Cocchiara et al. (2009) referenced the concept of "knowing-whom" competencies which are a direct result of acquired social capital. These "knowing-whom" competencies are part of a broader framework of career competencies that also include "knowing-how" and "knowing-why" competencies (DeFillippi & Arthur, 1994). Whereas "knowing-whom" competencies focus on the acquisition of social capital, "knowing-how" addresses the career skills and functional knowledge needed to perform a job, and "knowing-why" relates to an individual's values and interests that shape his or her career development. These three concepts are often considered essential for career success, and all three can be developed through pursuit of the MBA.

The three groups of career competencies are fundamental to the idea of the "new career," commonly referred to as a "boundaryless career" which acknowledges that an individual's career is likely to span more than one organization (Sturges et al., 2003). In this type of career environment, individuals must take responsibility for their own career

development. It would follow that if a successful career is desired, a person must be proactive about accumulating experience, training, and networks that can be helpful as he or she establishes and grows a career (Sturges et al., 2003). In this context, graduate business education can be seen as a conduit to career development and success within a boundaryless environment. Including key career competencies as variables within the conceptual framework allows for deeper understanding of skills gained through the MBA and how they may influence outcomes of the degree.

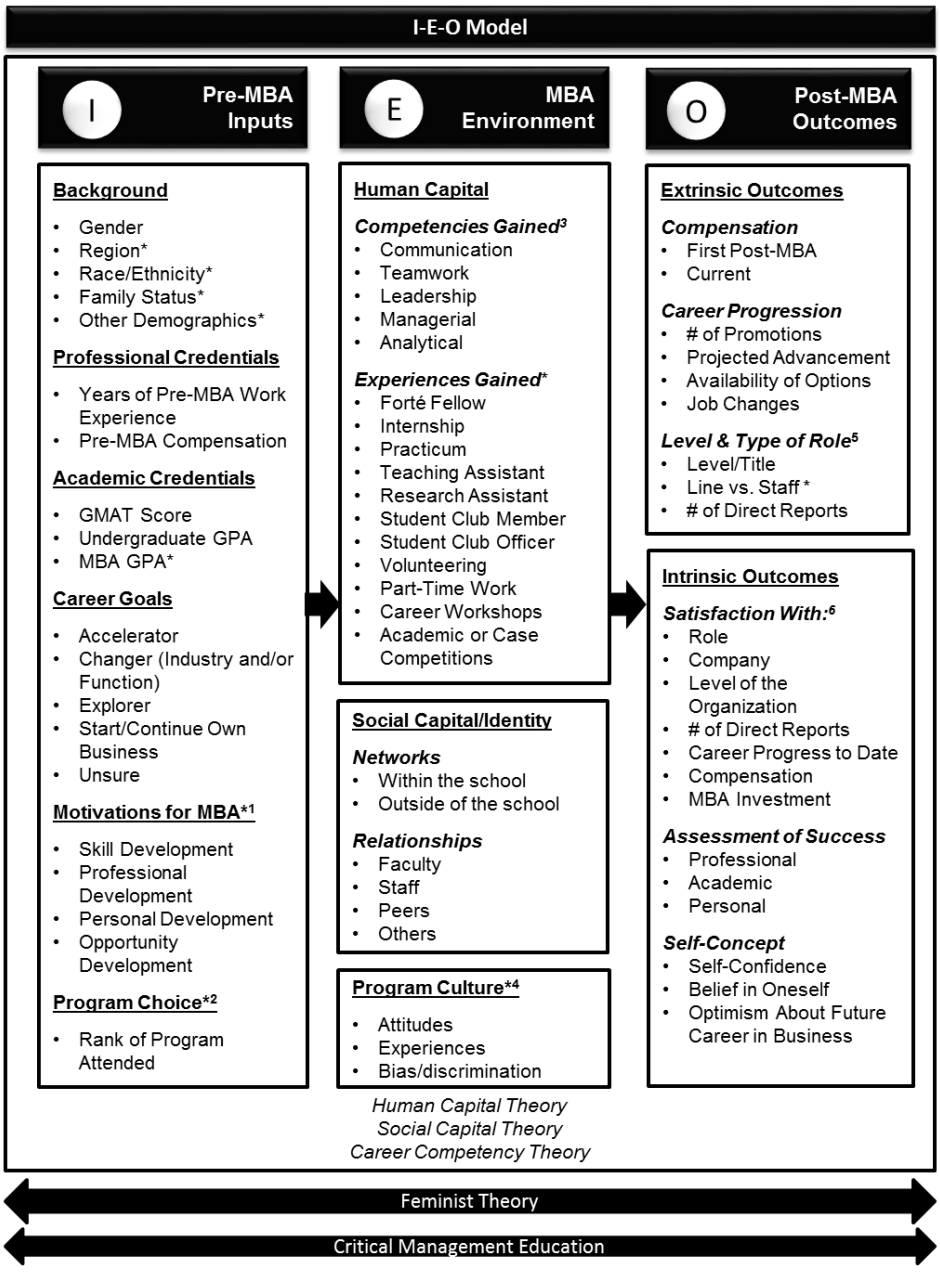
Conceptual Framework

Each theory described in the previous section could individually serve as the foundation for research on the experience and outcomes of MBA graduates. Because the current study connects to each of these theories to some extent, it is helpful to understand where each one is situated within the lifecycle of an MBA – from pre-MBA, through the academic environment and experience, and to graduation and beyond. Using Astin's I-E-O model (1993) as a central framework, Figure 1 provides a high-level visual of this lifecycle, including theories that are prominent within each phase. At the bottom of the figure, two threads run throughout all phases – feminist theory and critical management education. As described earlier, these two theories are fundamental to the topic of the impact of the MBA. Because a significant portion of the current study focuses on experience and outcomes by gender, feminist theory guides the investigation and differences achieved by women versus men. Similarly, much of the literature around the MBA is critical of the academic experience and value of the MBA, making critical management education a consistent theme explored in greater depth in this study.

Examining the MBA through a frame of inputs-environment-outcomes allows for a clearer understanding of how the remaining theories link together to form a new model for the current study. Examining inputs first, each individual student brings a set of pre-MBA inputs which can be grouped into four categories: demographic factors such as age, gender, and work experience; academic credentials such as grades and test scores; career goals and motivations; and program choice. Including these factors as part of the conceptual framework allows for examining how they may act to influence the impact of key variables on outcomes. Moving into the MBA environment portion of the lifecycle, the research has shown that at the highest levels, the MBA provides human capital (including key career competencies) and social capital (including networks and relationships) to the student. Much of the literature in this area has focused on how the knowledge, skills, relationships, and networks are developed and nurtured throughout the educational experience which includes the elements of curriculum, faculty, pedagogies, and co-curricular activities. The capital gained from the MBA and a student's perceptions of the experience, in turn, contribute to the third phase of the lifecycle, post-MBA outcomes. The review of the literature shows that these benefits manifest themselves in the form of extrinsic benefits which are often more easily evaluated according to objective results such as compensation and job promotions, and intrinsic benefits which are less obvious and more subjective such as job satisfaction and self-concept.

The following conceptual model depicts the high-level variables to be examined in this study. Some of these variables (as noted in the footnotes of Figure 1) have been identified from past studies or widely-accepted classifications of the different factors that

are part of this model. These will be discussed in further detail in the Instrumentation section later in this paper.



Note. *Variables to be included in future research. [1]GMAC Application Trends (2015); [2]As ranked by U.S. News and World Report for year graduated; [3]GMAC Corporate Recruiters Survey (2014); [4]See Leeming & Baruch (1998) and Kelan & Jones (2010); [5]See Cox & Harquail (1991); [6]See Baruch (2009) and Zhao, et al. (2006)

Figure 1. Conceptual framework. This figure illustrates a framework of the relationship of key theories to different stages of the MBA lifecycle.

Chapter 3: Methodology

Research Methodology

The intent of this study was to test the theories presented in the conceptual framework (Figure 1) to determine the impact of pre-MBA inputs, as well as knowledge, experiences, relationships, and networks, on intrinsic and extrinsic post-MBA outcomes. Of particular interest was whether or not these outcomes differ between women and men who attended full-time MBA programs. This study employed a quantitative research methodology utilizing a survey as the instrument. The instrument was designed specifically for this study, and was grounded in past research and the foundational theories presented in the conceptual framework. The study was cross-sectional in nature, with data collected at one point in time (Creswell, 2014). Surveys were distributed to alumni of the 46 full-time MBA programs noted in Appendix A of this paper and discussed in the following section. Responses were received from graduates of 41 of the 46 schools. The survey was administered electronically via Qualtrics, an online survey platform (https://www.qualtrics.com/). The sophistication built into the Qualtrics tool allowed for developing a customized instrument to meet the exact goals of this study. The online nature of the tool also provided accessibility to women and men across the United States and in other countries.

The survey included 64 questions which provided necessary information for analysis of each guiding research question. The broad nature of this study required a variety of types of dependent and independent variables, including categorical (e.g., gender and program attended), ordinal (e.g., Likert scale responses), and continuous (e.g.,

compensation and number of promotions). The survey primarily consisted of closed-ended questions including single and multiple answer multiple choice, and short text entry. The main purpose of the subsequent data analysis was to explore how the independent variables, individually or in combination, relate to the dependent variables which included numerous types of extrinsic and intrinsic outcomes of obtaining an MBA.

Participants and Sampling Design

Participants. This study focused on graduates from full-time MBA programs. The total group of participants included 787 men and women who graduated between 2005 and 2015 from 41 highly-ranked full-time MBA programs located in the United States and Europe. More than 99% of participants attended one of the top 50 MBA programs as presented in the 2015 Bloomberg BusinessWeek's "Best Business Schools" rankings of U.S. and international MBA programs (http://www.bloomberg.com /features/2015-best-business-schools/). Participants represent a variety of job functions, industries, experiences, and perspectives. Over 88% of them reside in the United States in 38 different states, and 11.5% reside in other countries. Regional dispersion of respondents is presented in Table 1. The full group of participants was comprised of 45% men and 53% women (2.4% consider themselves to be transgender, other, or did not provide an answer). The gender percentages vary slightly between research questions, dependent upon missing responses to individual survey questions.

Table 1

Geographic Regions, All Respondents

Variable	Frequency	Percent
United States		
New England	80	11.8%
Mid-Atlantic	138	20.3%
South	89	13.1%
Midwest	76	11.2%
Southwest	140	20.6%
West	156	23.0%
Other Countries		
Europe	29	34.1%
Asia	22	25.9%
South/Central America	17	20.0%
Mexico	8	9.4%
Canada	7	8.2%
Other	2	2.4%

The study sample was obtained through collaboration with the Forté Foundation and its member schools. Forté is a non-profit consortium of top business schools and corporate partners who share the common goal of increasing the pursuit of graduate business education and business careers among women. The organization was founded in 2001 with a mission to correct the disparity in the number of women in MBA programs by encouraging them to pursue the degree and secure meaningful careers in business. This mission aligns perfectly with one of the primary intentions of this study - to explore differences in the impact of the MBA on the lives and careers of women versus men.

The Forté Foundation launched a fellowship program in 2005 which, in conjunction with partner business schools, provides scholarships, professional development, and other support for women as they pursue their MBA education and grow their careers. Although all Forté fellows are women, the organization maintains strong ties to each of the member business schools, which allowed for survey distribution to a broader set of female and male graduates from the same period of time.

Sampling design. The design of this study followed a non-probability, purposive sampling approach, whereby the sample was selected based on the knowledge and judgement of the researcher rather than on random selection (Fink, 2017). In accordance with a purposive sampling approach, participants were chosen based upon a characteristic – in this case, completion of an MBA between 2005 and 2015 from a subset of business schools. Participants in this study were identified as alumni from one of the Forté Foundation's 46 partner MBA programs.

There are strong theoretical and practical reasons why non-probability sampling was the optimal design for this study, leading to a sample that is perhaps more representative of the full-time MBA population than a sample obtained through probability techniques. Ease of survey distribution and the inherent diversity of respondents from a broad set of programs are two of the particular strengths of this purposive sampling design. Quantitative studies that employ purposive techniques are often not focused on generalizing findings to the greater population (Rudestam & Newton, 2014). However, in this case, the diversity of the business schools that were part of this study in terms of geography, program rank, program size, curricular emphasis, and

other key factors leads to the ability to draw inferences from the sample being studied to the wider population of MBA graduates from these top-ranked programs and beyond.

Sample size. There is no definitive source for the actual number of MBA graduates across the globe each year, which presents challenges when attempting to determine the desired number of respondents as a percentage of the overall population of MBA graduates. The best estimate of the overall population for this particular study includes total enrollment of the MBA programs that were contacted for this study. In order to calculate this population, enrollment numbers for 2015 were extrapolated for the 11 years (2005-2015) included in this study, resulting in an approximate overall population of 138,969 graduates from the 46 programs (Appendix B). In general, with a total estimated population that exceeds 100,000, the ideal number of survey respondents would be 384 or greater with a margin of error of 5% and a confidence level of 95% (http://www.qualtrics.com/blog/calculating-sample-size/).

Although the total group of respondents for the current study exceeds the minimum of 384, in order to more accurately calculate a desired sample size for this research, a power analysis was conducted to understand the optimal number of participants required for different statistical tests. Statistical power measures the likelihood of finding statistical significance in a sample if the effect truly exists in the overall population. It is determined by sample size, alpha level, and effect size (Rudestam & Newton, 2014). For this study, an "a priori" power analysis was conducted using G*Power (http://www.gpower.hhu.de/en.html), a tool that allows for analyzing power and determining the optimal sample size for the variety of types of statistical analyses

employed in this study including *t* tests, regressions, correlations, and ANOVA. Table 2 shows the required minimum sample sizes for each statistical test. These power calculations assume a medium effect size, significance level of .05, and power of .95 (1 minus the probability of a Type II error). The required minimum sample size ranges from 36 to 210, depending on the type of analysis. The actual sample obtained for this study, 787, is more than adequate to ensure an appropriately powered study that is likely to avoid a Type II error and obtain significant findings if they do, in fact, exist in the overall population.

Table 2

Sample Size Calculations Based on Power Analysis, Key Statistical Tests

Statistical Test	Total Sample Size Required
Independent Samples *t* Test	210
Multiple Regression	129
Pearson Correlation	138
Repeated Measures ANOVA	36

Note: Medium effect size, significance level of .05, power of .95

Instrumentation

This quantitative study utilized a survey as the instrument. This was the preferred method of data collection for this study because it allowed the ability to reach a wide audience of participants in an efficient manner. A comprehensive quantitative tool to investigate the research questions posed in this study did not exist; therefore, the survey was designed specifically for this research (Appendix C). This new instrument was informed by a variety of past studies that have examined the impact of the MBA, and it closely followed the conceptual framework guiding this research. The survey included

four primary sections along with an introductory letter, completion instructions, and statement of informed consent. The four primary sections are as follows:

- Section 1: Pre-MBA inputs (experience, motivations for the MBA, career goals, and program choice);
- Section 2: Environmental elements (competencies, experiences, networks, relationships, and school environment);
- Section 3: MBA outcomes (intrinsic and extrinsic outcomes);
- Section 4: Demographic information (during the MBA program and current).

The creation of a new survey instrument required establishing the validity and reliability of the survey. Validity is the extent to which useful and meaningful insights can be drawn from data collected through the survey (Fink, 2015). There are two primary types of validity important to this study – external validity and content validity. External validity establishes the generalizability of the results, while content validity ensures the survey actually measures what the researcher wants to know (Fink, 2015). The breadth of participants in this study and the sample size contributed to the external validity of the instrument. To measure content validity, the instrument was reviewed with subject matter experts in the field, and a subsequent pilot test was conducted. For this study, 12 individuals reviewed the survey and provided input. This group of experts included MBA program leaders and directors, career center directors and staff, and admissions professionals from the University of Minnesota, University of Houston, Emory University, Washington University in St. Louis, and the University of the Pacific. In addition, several members of the Forté Foundation's senior leadership team served as

subject matter experts. All participants in the test were asked to thoroughly review the survey and then answer four broad questions designed to gather input on survey content (Appendix D).

In addition, pilot testing was conducted with a group of individuals who were not participants in the actual study. These pilot test participants included 16 MBA graduates from the University of Minnesota and Washington University in St. Louis. These individuals completed the full survey, and then provided input on the content and format. The pilot test not only assisted in establishing content validity, but it also served as a measure of reliability, identifying any concerns with questions, format, and scales included in the survey. The feedback from the both the subject matter expert review and pilot test was reviewed and incorporated into the final version of the survey.

Data Collection Procedures

The survey was created and executed through Qualtrics, an online survey tool (http://www.qualtrics.com/). It was distributed via email to the past fellows of the Forté Foundation along with a broader group of women and men who attended the same MBA programs and graduated between 2005 and 2015. The Forté Foundation maintains a large database of former Forte fellows and other MBA graduates, which allowed for ease of distribution of the survey to a wide audience in an efficient manner. The survey was distributed to 1,402 Forte alumni fellows and another 3,400 MBA alumni who were also part of the foundation's database. To capture input from men and non-Forté women, a letter was sent to MBA program directors of Forté member schools asking for volunteers to distribute the survey to male and female graduates from the same periods of time. Both

invitation letters are included in Appendix E. Five MBA programs volunteered to distribute the survey to a broader set of alumni, including: Massachusetts Institute of Technology (MIT), the University of Virginia (Darden), the University of Texas (McCombs), George Washington University (School of Business), and Rice University (Jesse H. Jones Graduate School of Business). The graduates from these five programs reside in many different states and countries, and graduated from both public and private universities with programs of differing sizes and ranks.

Data collection via the survey began on April 7, 2016 and remained open for approximately six weeks until May 22, 2016. During this period of time, three reminders were sent to participants to encourage their participation. Recipients of the email invitation to participate were informed of the intent of the study, the voluntary nature of their participation, and the confidentiality of their responses. The statement of informed consent was included in the introduction to the survey (Appendix C). Participants confirmed their desire to participate by clicking on the "begin survey" link.

All responses were kept completely confidential and were protected by the rigorous security standards employed by Qualtrics. The Qualtrics servers are protected by secure firewall systems which are regularly scanned for vulnerabilities. Survey data is stored in a specific location with complete data back-ups conducted nightly. In addition, Qualtrics uses Transport Layer Security (TLS) encryption (also known as HTTPS) for all transmitted data, ensuring protection, confidentiality, and reliability of data (https://www.qualtrics.com/security-statement/).

Data Analysis Procedures

The set of research questions included in this study required a variety of types of statistical analyses common in survey research. Descriptive statistics were used to identify patterns and summarize data in a meaningful way. Then, inferential statistical tests were conducted to draw deeper conclusions, compare groups, make predictions, and generalize from the study's sample to the overall population of MBA graduates. Three major categories of statistical tests were part of this inferential analysis: differences (independent samples *t* tests, and ANOVA), correlations (Pearson correlations), and multiple regressions. The comprehensive conceptual framework that guides this study contains many different types of variables. Some of the independent variables are continuous (e.g., years of work experience and GPA); other variables are categorical (e.g., career goal and gender); and still others are ordinal (e.g., competencies and relationships). Similarly, the dependent variables of MBA outcomes are also a mix of continuous (e.g., compensation), categorical (e.g., job title), and ordinal (e.g. self-concept) variables. This mix of variables required different types of statistical tests appropriate to the relationship or phenomenon being studied. Table 3 provides a summary of the types of variables and statistical analyses used for each research question.

Table 3

Quantitative Data Analysis Summary

Research Question 1: Which key business and professional competencies do graduates believe have been the most enhanced through the process of obtaining an MBA, and how do these differ between men and women?

Type and Description of Variables	Type(s) of Analysis
Independent: Categorical • Gender (Male/Female) Dependent: Likert (to be analyzed as continuous) • Key competency scales: Communication, Leadership, Strategic, Managerial, Analytical • 21 total dependent variables combined into five scales measure the degree to which the graduate agrees or disagrees that the MBA enhanced their skills and knowledge in each key area	• Descriptive statistics (mean and standard deviation) to understand which competencies are most developed by the MBA and independent samples *t* test to understand which differences may exist between women and men.

Research Question 2: Which networks and relationships acquired through the experience of obtaining an MBA provide the most value to graduates, and how does the perception of these networks and relationships differ between men and women?

Type and Description of Variables	Type(s) of Analysis
Independent: Categorical • Gender (Male/Female) Dependent: Likert (to be analyzed as continuous) • Relationship and network scales: Faculty, Staff, Peers; 15 variables combined into three scales • Benefits of networks scale which includes five variables combined into one scale	• Descriptive statistics (mean and standard deviation) to understand which relationships and networks are most valued by graduates and independent samples *t* test to understand which differences may exist between women and men.

Research Question 3: How do years of pre-MBA work experience, academic credentials of GMAT score and undergraduate grade point average, and career goal upon entering an MBA program impact the first post-MBA and current total annual compensation of MBA graduates?

(continued)

Type and Description of Variables	Type(s) of Analysis
Independent: Continuous and Categorical • Three continuous variables of years of pre-MBA work experience, GMAT score, and GPA plus one categorical variable of career goal upon entering the program (accelerate, change, other) Dependent: Continuous • Total annual compensation for the first post-MBA position and current position	• Pearson correlation to measure the relationship between the continuous independent variables and continuous dependent variables. • Independent samples *t* test to examine the relationship between the categorical variable (career goal) and the continuous dependent variables. • Multiple linear regression to examine all of the independent variables to determine which of the MBA inputs contribute to higher post-MBA compensation.

Research Question 4: How do years of pre-MBA work experience, academic credentials of GMAT score and undergraduate grade point average, and career goal upon entering an MBA program impact graduates' career satisfaction?

Type and Description of Variables	Type(s) of Analysis
Independent: Continuous and Categorical • Three continuous variables of years of pre-MBA work experience, GMAT score, and GPA plus one categorical variable of career goal upon entering the program (accelerate, change, other) Dependent: Likert (to be analyzed as continuous) • Six continuous variables combined into the career satisfaction scale; includes satisfaction with role, company, compensation, level, career progression, and number of direct reports	• Pearson correlation to measure the relationship between the continuous independent variables and continuous dependent variable. • Independent samples *t* test to examine the relationship between the categorical variable (career goal) and the continuous dependent variable. • Multiple linear regression to examine all of the independent variables to determine which of these MBA inputs contribute to higher levels of career satisfaction.

(continued)

Research Question 5: What is the relationship between extrinsic career outcomes and intrinsic career outcomes?

Type and Description of Variables	Type(s) of Analysis
Independent: Continuous • Seven extrinsic career outcome variables including compensation at completion of the MBA and current, level in the organization, number of promotions, number of job changes, number of direct reports, and intent to seek a new position in the next year Dependent: Continuous • 13 intrinsic variables combined into one overall intrinsic outcomes scale	• Pearson correlation to measure the relationship between each continuous independent variables and the continuous dependent variable (intrinsic scale). • Multiple linear regression to examine the linkage between intrinsic career outcomes and extrinsic predictors.

Research Question 6: How do extrinsic and intrinsic career outcomes differ between men and women MBA graduates?

Type and Description of Variables	Type(s) of Analysis
Independent: Categorical • Gender (Male/Female) Dependent: Continuous • Seven extrinsic career outcome variables including compensation at completion of the MBA and current, level in the organization, number of promotions, number of job changes, number of direct reports, and intent to seek a new position in the next year • 13 intrinsic career outcome variables that combine into the career satisfaction scale (6 variables), assessment of success scale (3 variables), and self-concept scale (4 variables)	• Independent samples *t* test to examine the differences in outcomes achieved by women and men.

(continued)

Research Question 7: How do perceptions of business and equality differ between men and women MBA graduates?

Type and Description of Variables	Type(s) of Analysis
Independent: Categorical • Gender (Male/Female) Dependent: Likert (to be analyzed as continuous) • Four variables that examine graduates' views on gender, equality, and business combined into one scale	• Independent samples *t* test to examine the differences in perceptions between women and men.

Research Question 8: What is the impact of the MBA degree on total annual compensation for the first post-MBA position and current position when compared to pre-MBA total annual compensation, and what differences exist between men and women?

Type and Description of Variables	Type(s) of Analysis
Independent: Continuous • Total annual compensation for the last pre-MBA position Dependent: Continuous • Total annual compensation for the first post-MBA and current positions	• Two-way mixed ANOVA to compare group means for gender over three points in time (pre-MBA, first post-MBA, and current)

Research Question 9: What is the impact of the MBA degree on total annual compensation for the first post-MBA position and current position when compared to pre-MBA total annual compensation, and what differences exist between men and women?

Type and Description of Variables	Type(s) of Analysis
Independent: Categorical • Gender (Male/Female) Dependent: Likert (to be analyzed as continuous) • Three key variables that measure satisfaction with investment in the MBA, and willingness to pursue an MBA at the same program if one had to make the decision again	• Independent samples *t* test to understand which differences may exist between women and men.

The nature of research questions one and two lead to the choice of descriptive statistics to summarize the data, along with an independent samples *t* test to uncover

potential differences between women and men. Research question one examines MBA graduates' assessment of the extent to which their MBA program enhanced key business and professional competencies (human capital), while research question two explores the career impact of the networks and relationships (social capital) acquired by graduates during the MBA program. Both of these research questions also explore whether or not women and men differ in the value they place on the skills, experiences, relationships, and networks acquired through the attainment of an MBA.

Research questions three and four explore the relationship between several independent variables that are considered to be inputs to an MBA. These variables are both continuous and categorical, including GMAT test score, GPA, years of pre-MBA work experience, and career goal upon entering the MBA program. The dependent variables are continuous. Research question three examines the impact of pre-MBA inputs on the outcomes of total annual compensation for the first post-MBA position and current position, and research question four looks at the impact of these same inputs on the intrinsic outcome measure of career satisfaction. For both questions, Pearson correlations examine the relationship between the continuous independent variables and continuous dependent variables of first post-MBA compensation and career satisfaction, and an independent samples *t* test analyzes the relationship between the categorical variable of career goal and the dependent variable of compensation and career satisfaction. Finally, multiple linear regression examines the relationship between the independent variables on the outcome variables.

Research questions five seeks to understand the relationship between extrinsic and intrinsic career outcomes. In other words, this question examines how the traditional measures of career success such as compensation and number of promotions relate to the more intrinsic career outcomes like satisfaction, self-concept, and assessment of success. To examine this relationship, a series of Pearson correlations analyze the relationship of each extrinsic measure on the combined intrinsic career outcomes scale. Multiple regression is also part of the analysis for this research question, exploring the link between intrinsic career outcomes and the extrinsic predictors.

Research questions six and seven analyze differences between groups. Specifically, these questions explore the differences in career outcomes achieved by female versus male MBA graduates as well as differences in perceptions of business and equality between genders. Independent samples *t* tests are utilized to understand how men compare to women on the extrinsic outcomes such as compensation, level in the organization, and number of promotions, as well as intrinsic measures of career satisfaction, assessment of success, and self-concept.

Research question eight examines compensation growth as a result of obtaining an MBA by looking at within group and between group differences for pre- and post-MBA total annual compensation. This question examines the impact of the MBA on compensation obtained at graduation as well as current compensation, allowing for the opportunity to examine the financial impact of the MBA beyond graduation. Two-way mixed ANOVA was used to measure the differences in group means for gender over time (Green & Salkind, 2010).

Finally, as a more intrinsic measure of the return on the investment of the MBA, research question nine explores satisfaction with investment in the MBA, and participants' willingness to pursue the MBA again at the same program if they had to make the decision again. In particular, the question examines any differences that may exist between women and men. These three elements are measured by independent samples *t* tests to understand these differences. When combined with the compensation outcomes from research question eight, this question provides a broader assessment on the return on the investment of the MBA.

Chapter 4: Findings

Introduction

This chapter presents the analysis and findings from the data collected for this study. It begins with background on data preparation and participant demographics. Descriptive statistics for the dataset are presented, followed by the complete overview of statistical procedures and findings for each of the nine guiding research questions.

This study employed a 64-question online survey administered via Qualtrics. A total of 4,800 potential participants were contacted via an initial email invitation, followed by three reminders sent to non-respondents approximately two weeks apart. The target participant group included alumni of 46 different full-time MBA programs in the U.S. and Europe who obtained their MBA degrees between 2005 and 2015. The survey remained open for 45 days, and a total of 787 surveys were completed from graduates of 41 different business schools. Upon closing the survey, the full dataset was exported from Qualtrics into IBM SPSS Statistics for analysis.

Data Preparation

The analysis for this study was restricted to the 787 valid cases present for all dependent variables. Prior to conducting the statistical analyses, several data preparation steps were taken. One of the more substantial steps to this process involved the creation of 14 different scales from 71 Likert-type survey questions or sub-questions. This allowed for reporting mean scores for a composite index of items that measure the same broad concept. For example, in order to understand respondents' overall career satisfaction, several different measures of satisfaction were included in the survey instrument as five-point Likert-type items. The six individual survey questions that examined satisfaction with current position, organization, level in the organization, number of people managed, current compensation, and career progression since obtaining the MBA were combined to allow for a more complete measure of this intrinsic concept. This created a more encompassing measure that truly captures participants' level of career satisfaction rather than relying on more granular individual measures that are not independently capable of capturing the full concept being studied (Rickards, Magee, & Artino, 2012). The individual components of each scale are presented in Appendix F.

In order to ensure the items included in each scale were measuring the same construct, Cronbach's alpha was examined to assess the intercorrelation between the grouped items. With the exception of the "perceptions of business and equality scale," all newly-created scales resulted in a Cronbach's alpha of .70 or higher, an acceptable level of internal consistency (Vogt & Johnson, 2011). Because the "perceptions of business and equality" scale was only slightly under the .70 threshold, the decision was made to

continue with the full scale, rather than remove or separate the individual items that comprise the scale. The specific scales included in this study, the number of items that make up each scale, and the Cronbach's alpha scores of each scale are included in Table 4. When analyzed with descriptive and inferential statistics, these scales were treated as continuous variables, an effective method of analysis given the combination of the individual survey items into more robust and meaningful scales (Allen & Seaman, 2007).

Table 4

Scale Reliability for Competencies, Relationships/Networks, and Outcomes

Scale	Number of Items	Cronbach's Alpha
Key Business and Professional Competencies		
Communication	4	.752
Teamwork	4	.840
Leadership	5	.835
Management	4	.765
Analytics	4	.777
Relationships and Networks		
Faculty	5	.885
Staff	5	.915
Peers	5	.890
Assessment of Benefits of Networks	3	.787
Intrinsic Career Outcomes		
Full Intrinsic Scale	13	.897
Career Satisfaction	6	.875
Assessment of Success	3	.724
Self-Concept	4	.861
Perceptions of Business and Equality	4	.691

Throughout the analysis, there were missing data for questions some respondents

chose not to answer. To address missing responses for independent variables, means were substituted for missing continuous data and modes were substituted for missing categorical data. For all dependent variables, casewise deletion was employed in order to ensure accurate variance estimates for all inferential statistical techniques. Because missing responses for dependent variables were eliminated, this results in slight variations of the overall sample size *N* throughout the analysis.

Participant Demographics

Participants in this study included individuals who graduated from 41 MBA programs in the U.S. and Europe between 2005 and 2015. Categorical participant characteristics in the form of frequencies and percentages have been calculated for the entire sample and are presented in Table 5. These measures are the most appropriate means for summarizing this type of information (Ritchey, 2008). One of the most prominent categorical variables of this study is gender. The percentage of men versus women varied by research question, dependent upon the *N* for each question which differed upon adjustment of the sample for missing data. Because of these minor variations, gender percentages are presented in the analysis for each individual research question where gender was a variable. The other demographic characteristics presented in Table 5 are included to illustrate the diverse nature of the participant group for this study in terms of ethnicity, geography, and family status.

Over half of the sample (53.4%) identified as non-Hispanic white or Euro American. Over 88% of respondents currently reside in the United States, with another 11.5% residing in other countries. During their MBA program, 53.6% were either

married, engaged, or in a committed relationship or partnership while over 75% are currently married, engaged or in a committed relationship or partnership. Only 9% of participants had dependent children under the age of 18 while they were in the MBA program, while nearly 42% currently have children.

Table 5

Percentages and Frequencies, Participant Characteristics, All Respondents

Variable	Frequency	Percent
Race/Ethnicity		
Non-Hispanic White or Euro-American	434	53.4%
Black, Afro-Caribbean, or African American	50	6.2%
Latin or Hispanic American	84	10.3%
Asian American	39	4.8%
South Asian or Indian American	37	4.6%
Middle Eastern or Arab American	12	1.5%
Native American or Alaskan Native	5	0.6%
European	65	8.0%
Asian	64	7.9%
African	7	0.9%
Pacific Islander	4	0.5%
Other	12	1.5%
Geographic Location		
United States	678	88.7%
Other Countries	86	11.3%
Marital Status – While in MBA Program		
Married	209	27.5%
Engaged or in Committed Relationship	199	26.1%
Single	339	44.5%
Divorced, Separated or Widowed	14	1.8%

(continued)

Variable	Frequency	Percent
Marital Status – Current		
Married	468	61.4%
Engaged or in Committed Relationship	105	13.8%
Single	170	22.3%
Divorced, Separated or Widowed	19	2.5%
Dependent Children – While in MBA Program		
Children	69	9.1%
No Children	693	90.9%
Dependent Children – Current		
Children	318	41.7%
No Children	444	58.3%

Note. Gender was addressed separately within each research question given the impact of percentages as a result of accounting for missing data.

Overview of Focal Variables

The nine research questions in this study included numerous additional categorical and continuous variables. Some of the key categorical variables are inputs to the MBA such as career goal upon entering the MBA program. In order to ensure accuracy and avoid data discrepancies, the percentages and frequencies for categorical variables are discussed within the context of the individual research questions and their sub-components. As previously discussed, percentages may vary depending upon the number of complete responses to the associated survey questions.

In addition to the many categorical variables that comprise this study, there are several continuous variables that address some of the pre-MBA inputs, experiences during the MBA, and post-MBA career outcomes. Like the categorical variables, the descriptive statistics for these continuous variables (including scales) are discussed within

each research question. Each mean and standard deviation can be interpreted as a function of the measurement metric. For example, the average number of employees managed is in numbers, while total annual compensation is in dollars.

Research Question 1

RQ1. Which key business and professional competencies do graduates believe have been the most enhanced through the process of obtaining an MBA? And how do these differ between men and women?

Hypothesis 1. There will be a difference between men and women on which key business and professional competencies have been the most enhanced through the process of obtaining an MBA.

Analysis and results. This question was analyzed using descriptive statistics to provide an overall picture of which competencies are the most developed by the MBA and independent samples *t* tests to understand the differences between women and men. Descriptive statistics showed that, on average, MBA graduates believe that their analytic skills ($M = 4.38$) were the most developed through the process of obtaining an MBA. In contrast, communication skills ($M = 4.01$) were the least developed. Table 6 shows the overall descriptive statistics for all valid responses for each of the five scales that were investigated as part of this research question.

Table 6

Means and Standard Deviations, Professional Competency Scales

Variable	Mean	SD
Communication	4.01	0.63
Teamwork	4.04	0.66
Leadership	4.03	0.63
Management	4.15	0.62
Analytic skills	4.38	0.58

N = 772

Additional insights are revealed from further analysis of the mean scores within each of the five scales. For the communication competency, *N* = 772 with 44.8% male and 55.2% female respondents. Within this scale, mean scores for all respondents ranged from a low of 3.70 for written communication skills to a high of 4.26 for group oral communication and presentations (*range* = .567). The *N* for the teamwork scale is 772 with 44.6% male and 55.4% female. Within this competency (*range* = .135) participants perceive that the MBA has been the most impactful in enhancing their abilities to leverage differences across team members and lead inclusively (*M* = 4.08), but has been slightly less impactful in helping them resolve team conflict (*M* = 3.95). For the competency of leadership (*N* = 773), there were 44.6% male and 55.4% female responses. Overall, participants believe that the MBA has been most instrumental (*M* = 4.18) in helping them develop their ability to establish a vision and strategy and least instrumental in helping them develop their skills in motivating others (*M* = 3.95). The range of responses for this scale was .369. For the management competency, *N* = 772 with 44.6% male and 55.4% female respondents. Within this scale, mean scores for all

respondents ranged from a low of 3.85 for managing people to a high of 4.36 for managing career (*range* = .506). Finally, The *N* for the analytic skills scale is 767 with 44.9% male and 55.1% female. Within the analytic competency (*range* = .318), participants believe that the MBA has most enhanced their core business knowledge (*M* = 4.57) and least enhanced their qualitative analysis skills (*M* = 4.25).

In order to further investigate the research hypothesis to understand differences between women and men, a series of independent sample *t* tests were conducted to assess the group means for the binary independent variable of gender for the continuous dependent variables of the communication, teamwork, leadership, management, and analytic scales. Respondents included 47% men and 53% women. Levene's test for equality of variance shows that the data have equal variances for all competency scales except management ($F = 5.27$; $p < .05$).

The results in Table 7 show that when viewed by gender, analytic skills were perceived to have been the most enhanced through the process of obtaining an MBA for both men and women. When comparing men and women on all five professional competencies, leadership ($t = 2.23$, $p < .05$) and analytic skills ($t = 3.00$, $p < .01$) resulted in statistically significant differences between the two genders, with men perceiving greater development of these competencies through the process of obtaining the MBA.

Table 7

Independent Samples t Test, Professional Competencies

	Male		Female			
Variable	M	SD	M	SD	*t*	*p*
Communication	4.03	0.65	3.99	0.60	0.95	.343
Teamwork	4.08	0.64	4.01	0.67	1.49	.136
Leadership	4.08	0.63	3.98	0.64	2.23	.026*
Management	4.16	0.65	4.13	0.59	0.65	.519
Analytic skills	4.45	0.56	4.32	0.58	3.00	.003**

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 2

RQ2. Which networks and relationships acquired through the experience of obtaining an MBA provide the most value to graduates, and how does the perception of the value of these networks and relationships differ between men and women?

Hypothesis 2. There will be a difference between men and women on which networks and relationships acquired through the experience of obtaining a MBA are most valued.

Analysis and results. To address the hypothesis, descriptive statistics were used to first provide an overall picture of the perceived value of the relationships an MBA graduate builds with faculty, staff, and other students while in an MBA program. Independent samples *t* tests were then utilized to understand gender differences in the perceived value of these relationships as well as in the assessment of the benefits of the relationships and networks.

Descriptive statistics revealed that both men and women perceive the greatest

value in their relationships with peers (*M* = 3.37) over their relationships with faculty (*M* = 2.83) and staff (*M* = 2.74). Additional insights are uncovered from analyzing the mean scores of the five elements that comprise these scales (Table 8). Respondents were asked to assess the value of their relationships in terms of development of key business skills, access to valuable practical experiences, expansion of a professional network, development of career management skills, and growth of personal and social connections. For the faculty scale (*N* = 703), participants place the greatest value in the efforts of their faculty toward helping them develop business skills in preparation for their future careers (*M* = 3.15). They place the lowest value on expansion of a professional network as a result of their connections to their MBA faculty (*M* = 2.59). In terms of relationships with staff (*N* = 701), participants believe this group was the most instrumental in helping them expand their professional networks (*M* = 2.87). They perceive lower value in terms of the influence of staff in helping them acquire business skills (*M* = 2.62) and gain practical experiences in preparation for their future careers (*M* = 2.61). Finally, participants believe that relationships with their fellow MBA students (*N* = 741) provided the most value in terms of building personal and social connections (*M* = 3.67). Peers were less instrumental in helping them develop career management skills (*M* = 3.09).

Table 8

Means and Standard Deviations, Relationships and Networks Scales

Variable	Faculty		Staff		Peers	
	M	SD	M	SD	M	SD
Develop business skills	3.15	0.87	2.62	1.00	3.33	0.82
Gain practical experience	3.01	0.93	2.61	1.01	3.26	0.88
Expand professional network	2.59	1.09	2.87	1.03	3.52	0.77
Develop career management skills	2.72	1.00	2.86	1.02	3.09	0.92
Build personal and social connections	2.67	1.04	2.71	1.03	3.67	0.65

To gain deeper insight on the perceived benefits of the social capital built during an MBA program, participants were subsequently asked to assess the extent to which they agree or disagree that these relationships and connections increased their networks, and raised their level of respect and prestige in business. As seen in Table 9, participants most strongly agreed that they have a more extensive professional network because of the MBA (M = 4.56). They were less likely to agree that their alumni affiliation with their MBA program has increased their professional status (M = 4.07).

Table 9

Means and Standard Deviations, Benefits of Networks

Variable	Mean	SD
More extensive professional network	4.56	0.68
More respected by others in business	4.29	0.82
Increased status due to alumni affiliation	4.07	0.96

N = 771

In order to further investigate the research hypotheses in terms of differences between men and women, a series of independent sample *t* tests were conducted to examine any potential differences in group means of men versus women (binary independent variable of gender) for the continuous dependent variables of value of the relationships and networks built during an MBA program with three key groups – faculty, staff, and peers. The *t* test was also used to explore any differences between men and women on their perceptions of the benefits of the networks they built during the process of obtaining an MBA in terms of size of professional network, respect of others in business, and affiliation with the MBA program. Levene's test for equality of variance shows that the data have equal variances for all scales included in this question.

The results in Table 10 show that both men and women perceive more value from the relationships they formed with their fellow MBA students rather than with faculty and staff. On average, participants agree that their MBA program has resulted in a more extensive professional network and greater levels of respect and status. In terms of differences between men and women, the *t* tests revealed that none of the relationships acquired through the experience of obtaining a MBA produced statistically significant outcomes on the value graduates place on relationships with faculty, staff, and peers. In addition, there are no significant differences between men and women with regard to the benefits these networks provide in terms of growing a network, obtaining respect of other business professionals, and becoming affiliated with an MBA program or business school.

Table 10

Independent Samples t Test, Relationships and Networks

	Male		Female			
Variable	M	SD	M	SD	*t*	*p*
Faculty	2.86	0.82	2.80	0.82	0.98	.326
Staff	2.72	0.88	2.75	0.88	-0.39	.695
Peers	3.41	0.68	3.34	0.67	1.30	.195
Benefits of networks	4.33	0.70	4.29	0.68	0.71	.480

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 3

RQ3. How do years of pre-MBA work experience, academic credentials of GMAT score and undergraduate grade point average, and career goal upon entering an MBA program impact the first post-MBA and current total annual compensation of MBA graduates?

Hypothesis 3a. More years of pre-MBA work experience, higher GMAT score, higher undergraduate grade point average, and a goal to accelerate one's career with the MBA will be related to higher total annual compensation for the first-post MBA position.

Analysis and results 3a. Descriptive statistics, followed by a combination of Pearson correlations, independent samples *t* tests, and multiple regression analysis, were used to analyze this question. Descriptive statistics for the continuous independent variables, as shown in Table 11, depict that study participants averaged just over five years of work experience prior to beginning an MBA program and had strong academic profiles including an average GMAT score of 696 (just under the 90th percentile for all scores) and mean undergraduate grade point average of 3.48. Thirty percent of

respondents entered their MBA programs with a goal to accelerate their careers along the same industry or functional path, while the remaining percentage sought to change careers, start a business, or were uncertain of their career goals.

Table 11

Means and Standard Deviations, Work Experience, GMAT, Undergraduate GPA

Variable	Mean	SD
Years of pre-MBA work experience	5.10	2.17
GMAT score	696	47.97
Undergraduate GPA	3.48	0.31

N = 771

Pearson correlations are presented in Tables 12-14 for each of the continuous independent variables (work experience, GPA, and GMAT score) and the continuous dependent variable of total annual compensation for the first post-MBA position. In addition, the relationship between the binary independent variable career goal (career accelerator versus all other career goals) and the dependent variable was analyzed with an independent sample *t* test, the results of which are presented in Table 15.

The Pearson correlation between pre-MBA work experience and first post-MBA total annual compensation shown in Table 12 shows that there is not a statistically significant relationship between the two variables ($r = .01$).

Table 12

Pearson Correlation, Years of Pre-MBA Work Experience to First Post-MBA Compensation

Measure	1	2
1. Pre-MBA work experience	1.0	
2. First post-MBA compensation	0.01	1.0

N = 752

*p < .05, **p < .01, ***p < .001, two-tailed tests.

However, as shown in Table 13, there is a very weak positive statistically significant correlation between GMAT test score and first post-MBA total annual compensation (*r* = .12).

Table 13

Pearson Correlation, GMAT Score to First Post-MBA Compensation

Measure	1	2
1. GMAT score	1.0	
2. First post-MBA compensation	0.12**	1.0

N = 752

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Table 14 shows no statistically significant relationship between undergraduate grade point average and first post-MBA total annual compensation (*r* = -.06).

Table 14

Pearson Correlation, Undergraduate GPA to First Post-MBA Compensation

Measure	1	2
1. Undergraduate GPA	1.0	
2. First post-MBA compensation	0.06	1.0

N = 752

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Finally, as illustrated in Table 15, the independent samples *t* test for career accelerator versus all other career goals revealed that MBA graduates who had a career goal *other than* acceleration actually earned higher compensation for their first post-MBA position (*M* = $121,419.81) than their peers who had a career goal to accelerate along the same industry or functional career path (*M* = $114,198.27). However, this difference is not statistically significant.

Table 15

Independent Samples t Test, Career Goal

	Career Accelerator		All Other Career Goals			
Variable	M	SD	M	SD	*t*	*p*
First post-MBA compensation	114198.27	53436.34	121419.81	84709.29	1.18	.237

N = 752
*p < .05, **p < .01, ***p < .001, two-tailed tests.

A multiple regression was subsequently run for all independent variables on the predictor variable of first post-MBA compensation. Gender was added to the regression model to understand if being male or female predicts compensation in a significant way. The multiple regression model (Table 16) reveals that GMAT score ($p < .01$) and undergraduate GPA ($p < .05$) each have a positive and statistically significant relationship to first post-MBA compensation, supporting the hypothesis that higher GMAT scores and higher undergraduate grade point averages are associated to higher post-MBA compensation. In contrast, number of years of pre-MBA work experience and career goal upon entering the MBA program were not significant predictors of first post-MBA compensation. In fact, the regression model shows that instead of career accelerators

earning higher compensation, graduates who had career goals to change functions or industries, start a business, or anything other than accelerate along the same career path are actually predicted to earn higher compensation. The multiple regression model shows that gender identity does play a role in predicting compensation for the first-post MBA career, with females having a negative and statistically significant ($p < .001$) relationship to first post-MBA compensation. Finally, year of completion of the MBA program did not have a statistically significant relationship to first post-MBA compensation.

Table 16

Multiple Linear Regression of First Post-MBA Compensation on the Independent Predictors

Variable	*B*	*SE(B)*	β
Constant	-2446202.04	1781116.44	
Pre-MBA work experience	575.26	1294.63	0.02
GMAT score	163.77	58.66	0.10**
Undergraduate GPA	19451.66	9411.44	0.08*
Acceleration career goal	-4276.52	6036.51	-0.03
Gender (female)	-22448.60	5749.93	0.15***
Year completed MBA	1190.73	887.17	0.05
R^2	0.04		
F	5.11		
N	752		

*Note***.** B = unstandardized regression coefficient; SE_B = standard error of the coefficient; β = standardized coefficient

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Hypothesis 3b. More years of pre-MBA work experience, higher GMAT score, higher undergraduate grade point average, and a goal to accelerate one's career with the MBA will be related to higher current total annual compensation while taking into

account the year an individual completed the MBA program.

Analysis and results 3b. A combination of Pearson correlations, independent samples *t* tests, and multiple regression analysis was used to analyze this question. Correlations are presented in Tables 17-19 for each of the continuous independent variables (work experience, GMAT score, and GPA) and the continuous dependent variable of total annual compensation for the current position. In addition, the relationship between the binary independent variable career goal (career accelerator versus all other career goals) and the dependent variable was analyzed with an independent samples *t* test, the results of which are presented in Table 20.

The results of the Pearson correlation analyses show that there is not a statistically significant relationship between the independent variables of pre-MBA work experience (r = .05), GMAT score (r = .07), and undergraduate GPA (r = .02) and current compensation.

Table 17

Pearson Correlation, Years of Pre-MBA Work Experience to Current Compensation

Measure	1	2
1. Pre-MBA work experience	1.0	
2. Current compensation	0.05	1.0

N = 705

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Table 18

Pearson Correlation, GMAT Score to Current Compensation

Measure	1	2
1. GMAT score	1.0	
2. Current compensation	0.07	1.0

N = 705

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Table 19

Pearson Correlation, Undergraduate GPA to Current Compensation

Measure	1	2
1. Undergraduate GPA	1.0	
2. Current compensation	0.02	1.0

N = 705

*p < .05, **p < .01, ***p < .001, two-tailed tests.

As illustrated in Table 20, the independent samples *t* test for career accelerator versus all other career goals revealed that, in contrast to the analysis for first post-MBA compensation, MBA graduates who had a career goal other than acceleration earned *lower* current compensation (M = $177,036.81) than their peers who had a career goal to accelerate along the same industry or functional career path (M = $195,545.07). However, this difference is not statistically significant.

Table 20

Independent Samples t Test, Career Goal

	Career Accelerator		All Other Career Goals			
Variable	M	SD	M	SD	*t*	*p*
Current compensation	195545.07	152057.97	177036.81	130178.02	-1.65	0.10

N = 705

**p < .05, **p < .01, ***p < .001, two-tailed tests.*

A multiple regression was subsequently run for all independent variables on the predictor variable of current compensation. Gender was also added to this regression model to understand if being a man or a woman predicts current compensation in a significant way. In addition, graduation year was included to control for year completion and understanding the impact that this has on current compensation. The multiple regression model (Table 21) revealed that, similar to first post-MBA compensation, GMAT score ($p < .01$) and undergraduate GPA ($p < .05$) each have a positive and statistically significant relationship to current compensation as well. This supports the hypothesis that higher GMAT scores and higher undergraduate grade point averages are associated to higher current compensation. In contrast, number of years of pre-MBA work experience and career goal upon entering the MBA program were not significant predictors of current compensation. The regression model shows that gender also has a significant relationship ($p < .001$) to current compensation with women predicted to earn less than men in their current positions. Finally, the year of MBA completion also had a significant relationship to current compensation. Those who graduated earlier earn higher current compensation than those who graduated more recently.

Table 21

Multiple Linear Regression of Current Compensation on the Independent Predictors

Variable	*B*	*SE(B)*	β
Constant	26954051.49	3118608.20	
Pre-MBA work experience	2250.07	2251.17	.036
GMAT score	253.64	103.15	.088**
Undergraduate GPA	32331.24	16430.97	.072*
Acceleration career goal	15208.12	10443.03	.051
Gender (female)	-54139.56	9946.03	-.197***
Year completed MBA	-13450.81	1553.70	-.306***
R^2	0.16		
F	21.40		
N	705		

*Note***.** B = unstandardized regression coefficient; SE_B = standard error of the coefficient; β = standardized coefficient.

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 4

RQ4. How do years of pre-MBA work experience, academic credentials of GMAT score and undergraduate GPA, and career goal upon entering an MBA program impact graduates' career satisfaction?

Hypothesis 4. More years of pre-MBA work experience, higher GMAT score, higher undergraduate grade point average, and a goal to accelerate one's career with the MBA will be related to higher career satisfaction.

Analysis and results. A combination of Pearson correlations, independent samples *t* tests, and multiple regression analysis were employed in the analysis of this research question. Pearson correlations were used to address all of the continuous in

nature independent and dependent variables. In addition, to explore the relationship between a career goal of accelerating one's career with the MBA and the dependent variable of career satisfaction, an independent samples *t* test was used because the independent variable is binary and the dependent variable is treated as continuous (Ritchey 2008).

The first correlation presented in Table 22 reveals a weak and negative statistically significant relationship between pre-MBA work experience and career satisfaction (r = -.09). This result suggests that there is an inverse relationship between these two variables. In other words, more years of pre-MBA work experience is associated with lower overall career satisfaction.

Table 22

Pearson Correlation, Years of Pre-MBA Work Experience to Career Satisfaction

Measure	1	2
1. Pre-MBA work experience	1.0	
2. Career satisfaction	-0.09*	1.0

N = 678

*p < .05, **p < .01, ***p < .001, two-tailed tests.

As presented in Tables 23 and 24, there is no statistically significant relationship between the independent variables of GMAT score (r = .07) and undergraduate GPA (r = .02) on the dependent variable of career satisfaction.

Table 23

Pearson Correlation, GMAT Score to Career Satisfaction

Measure	1	2
1. GMAT score	1.0	
2. Career satisfaction	0.07	1.0

N = 678

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Table 24

Pearson Correlation, Undergraduate GPA to Career Satisfaction

Measure	1	2
1. Undergraduate GPA	1.0	
2. Career satisfaction	0.02	1.0

N = 678

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Finally, as shown in the *t* test results presented in Table 25, those with a goal to accelerate their careers along the same functional or industry path are slightly more satisfied overall versus those with all other career goals; however, this difference is not statistically significant.

Table 25

Independent Samples t Test, Career Goal and Career Satisfaction

	Career Accelerator		All Other Career Goals			
Variable	M	SD	M	SD	*t*	*p*
Career satisfaction	3.91	0.84	3.78	0.87	-1.78	.075

N = 678

*p<.05, **p<.01, ***p<.001, two-tailed tests.

A multiple regression was run to analyze all of the independent variables on the predictor variable of career satisfaction. The results in Table 26 show that years of pre-MBA work experience has a negative statistically significant relationship to career satisfaction ($p < .05$) as does gender of female ($p < .05$). In other words, graduates with fewer years of work experience and those who are male are more satisfied with their careers. Having a career goal of acceleration had a negative relationship to career satisfaction which approached statistical significance ($p = .057$).

Table 26

Multiple Linear Regression of Career Satisfaction on the Independent Predictors

Variable	*B*	*SE(B)*	β
Constant	31.138	21.434	-.089
Pre-MBA work experience	-.035	.015	.062*
GMAT score	.001	.001	.027
Undergraduate GPA	.077	.113	.073
Acceleration career goal	.138	.072	-.092
Gender (female)	-.160	.069	-.050*
Year completed MBA	-.014	.011	-.089
R^2	0.03		
F	3.26		
N	678		

Note. B = unstandardized regression coefficient; SE_B = standard error of the coefficient; β = standardized coefficient.

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 5

RQ5. What is the relationship between extrinsic career outcomes and intrinsic career outcomes?

Hypothesis 5. Higher extrinsic career outcomes will be related to higher intrinsic career outcomes.

Analysis and results. In order to investigate this research hypothesis, Pearson correlations were employed to address all of the continuous independent (extrinsic) and dependent (intrinsic) variables, and multiple linear regression was run to understand if intrinsic career outcomes can be predicted by extrinsic outcomes. For all analyses for this research question, the full intrinsic career outcomes scale was used as the dependent variable. This scale includes 13 measures of career satisfaction, assessment of success, and self-concept.

The seven independent variables (extrinsic career outcomes) were compared individually to the combined intrinsic scale. Means and standard deviations for the independent variables are presented in Table 27.

Table 27

Means and Standard Deviations, Extrinsic Career Outcomes

Variable	Mean	SD
First post-MBA compensation	118745.32	78435.16
Current compensation	186641.32	138898.16
Number of promotions	1.90	1.46
Number of direct reports	2.96	3.64
Level in the organization	2.34	0.99
Number of job changes	0.86	1.12
Intent to seek a new position	3.22	1.34

N = 668

Additional insights are revealed when examining means and standard deviations for each of the components within the full intrinsic career outcomes scale (Table 28). Within career satisfaction, participants are the most satisfied with their current role (*M* = 4.02) and organization (*M* = 4.01) and the least satisfied with the number of people they manage (*M* = 3.68). When assessing their individual success, participants most strongly agreed that they had achieved academic success (*M* = 4.30). Finally, when reflecting on the individual components of self-concept, participants believe most strongly that the MBA has given them better job prospects for the future (*M* = 4.52). Although, on average, participants agreed or strongly agreed with each of the measures of self-concept, they were slightly less likely to agree (*M* = 4.11) that they have greater self-confidence as a result of obtaining the MBA.

Table 28

Means and Standard Deviations, Sub-Components of Full Intrinsic Scale

Variable	Mean	SD
Career satisfaction		
Satisfaction with current role	4.02	1.05
Satisfaction with current organization	4.01	1.09
Satisfaction with level of the organization	3.78	1.13
Satisfaction with number of direct reports	3.51	1.15
Satisfaction with current compensation	3.68	1.09
Satisfaction with career progression	3.91	1.11
Individual assessment of success		
Professional/career success	4.17	0.86
Academic success	4.30	0.75
Personal success	4.26	0.77
Self-concept		
Greater self-confidence	4.11	0.89
Better job prospects for the future	4.52	0.70
Belief in ability to achieve long-term career goals	4.28	0.79
Possess skills needed to grow a career	4.28	0.77

N = 668

The correlations for each of the continuous variables (the extrinsic career outcomes of first post-MBA compensation, current compensation, number of direct reports, number of promotions, current level in the organization, number of job changes, and intent to seek a new position) and the intrinsic career outcomes scale are presented in Tables 29-35.

The correlation between first post-MBA total annual compensation and the intrinsic career outcomes scale presented in Table 29 reveals a weak positive statistically significant relationship (r = .16).

Table 29

Pearson Correlation, Extrinsic (First Post-MBA Compensation) to Intrinsic Career Outcomes

Measure	1	2
1. First post-MBA compensation	1.0	
2. Intrinsic career outcomes	0.16***	1.0

N = 668

*p < .05, **p < .01, ***p < .001, two-tailed tests.

As shown in Table 30, there is a weak positive relationship between current compensation and intrinsic career outcomes (r = .25).

Table 30

Pearson Correlation, Extrinsic (Current Compensation) to Intrinsic Career Outcomes

Measure	1	2
1. Current compensation	1.0	
2. Intrinsic career outcomes	0.25***	1.0

N = 668

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Similarly, there is a weak positive relationship (Table 31) between number of promotions and intrinsic career outcomes (r = .23).

Table 31

Pearson Correlation, Extrinsic (Number of Promotions) to Intrinsic Career Outcomes

Measure	1	2
1. Number of promotions	1.0	
2. Intrinsic career outcomes	0.23***	1.0

N = 668

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Table 32 also shows there is a weak positive relationship between number of direct reports and intrinsic career outcomes (r = .24).

Table 32

Pearson Correlation, Extrinsic (Number of Direct Reports) to Intrinsic Career Outcomes

Measure	1	2
1. Number of direct reports	1.0	
2. Intrinsic career outcomes	0.24***	1.0

N = 668

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Table 33 shows there is a weak positive relationship between level in the organization and intrinsic career outcomes (r = .22).

Table 33

Pearson Correlation, Extrinsic (Level in the Organization) to Intrinsic Career Outcomes

Measure	1	2
1. Level in the organization	1.0	
2. Intrinsic career outcomes	0.22***	1.0

N = 668

*p < .05, **p < .01, ***p < .001, two-tailed tests.

In contrast, Table 34 shows there is a very weak negative relationship between number of job changes and intrinsic career outcomes (r = -.06). In other words, those who have changed jobs more frequently experience lower levels of career satisfaction, self-concept, and assessment of success.

Table 34

Pearson Correlation, Extrinsic (Number of Job Changes) to Intrinsic Career Outcomes

Measure	1	2
1. Number of job changes	1.0	
2. Intrinsic career outcomes	-0.06***	1.0

N = 668
*p < .05, **p < .01, ***p < .001, two-tailed tests.

Finally, as shown in Table 35, there is a moderate positive relationship between intent to seek a new position in the next year and intrinsic career outcomes (r = .51). In other words, those with an intent to find a new position within 12 months have achieved more favorable levels of career satisfaction, self-concept, and assessment of success.

Table 35

Pearson Correlation, Extrinsic (Intent to Seek a New Position) to Intrinsic Career Outcomes

Measure	1	2
1. Intent to seek new position	1.0	
2. Intrinsic career outcomes	0.51***	1.0

N = 668
*p < .05, **p < .01, ***p < .001, two-tailed tests.

Since the aforementioned bivariate relationships were statistically significant, these relationships were further examined through multiple regression which is presented in Table 36. The extrinsic independent variables of first post-MBA compensation (p <

.05), number of promotions ($p < .001$), number of direct reports ($p < .05$), and intent to seek a new position ($p < .001$) were shown to be statistically significant predictors of intrinsic career outcomes including career satisfaction, self-concept, and assessment of success. Number of job changes, was also statistically significant ($p < .001$); however, the regression coefficient is negative. This means that the more times someone has changed jobs, the lower their overall intrinsic outcomes of satisfaction, success, and self-concept. Current compensation ($p = .069$) and level in the organization ($p = .064$) were not related to higher intrinsic career outcomes.

Table 36

Multiple Linear Regression of Intrinsic Career Outcome on the Extrinsic Predictors

Variable	*B*	*SE(B)*	β
Constant	3.074	.069	
First post-MBA compensation	<.001[A]	.000	.074*
Current compensation	<.001[B]	.000	.069
Number of promotions	.058	.017	.137***
Number of direct reports	.013	.007	.075*
Level of the organization	.041	.024	.064
Number of job changes	-.093	.020	-.165***
Intent to seek a new position	.216	.015	.460***
R^2	0.34		
F	47.96		
N	668		

Note. B = unstandardized regression coefficient; SE_B = standard error of the coefficient; β = standardized coefficient.

[A]SPSS output number 5.907E-7

[B]SPSS output number 3.122E-7

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 6

RQ6. How do extrinsic and intrinsic career outcomes differ between men and women MBA graduates?

Research Hypotheses. There are 10 hypotheses in support of this research question which seek to understand differences between women and men with regard to various extrinsic career outcomes as well as the intrinsic career outcomes of career satisfaction, assessment of success, and self-concept. These hypotheses are as follows:

Hypothesis 6a. There will be a difference between men and women on total annual compensation for the first post- MBA position.

Hypothesis 6b. There will be a difference between men and women on current total annual compensation.

Hypothesis 6c. There will be a difference between men and women on number of promotions obtained since completing the MBA.

Hypothesis 6d. There will be a difference between men and women on number of direct reports.

Hypothesis 6e. There will be a difference between men and women on level in the organization.

Hypothesis 6f. There will be a difference between men and women number of job changes.

Hypothesis 6g. There will be a difference between men and women on intent to look for a new position in the next 12 months.

Hypothesis 6h. There will be a difference between men and women on the intrinsic outcome of career satisfaction.

Hypothesis 6i. There will be a difference between men and women on the intrinsic outcome of individual assessment of success.

Hypothesis 6j. There will be a difference between men and women on the intrinsic outcome of self-concept.

Analysis and results. In order to investigate this set of hypotheses, a series of independent sample *t* tests were used to understand group differences in the binary independent variable of gender and the continuous dependent variables of seven key extrinsic career outcomes and the intrinsic outcomes of career satisfaction, individual assessment of success, and self-concept. As presented in Table 37, all of the individual extrinsic career outcomes, with the exception of number of job changes, yield a statistically significant difference as a function of the independent variable of gender. These outcomes were more favorable to men. Similarly, the intrinsic outcomes of career satisfaction and individual assessment of success resulted in statistically significant differences also in favor of men. The intrinsic outcome of self-concept, however, is not statistically significant between men and women. Specific results for each individual hypothesis is as follows:

***Hypothesis 6a*.** For the independent variable of first post-MBA compensation (t = 3.39; df = 481; $p < .001$), Levene's test for equality of variance shows that the data have equal variances (F = 3.80; p = .052). The results of the t test reveal that men (M = \$130,077.84) have higher first post-MBA compensation than women (M = \$110,168.53).

***Hypothesis 6b*.** For the independent variable of current compensation (t = 5.83; df = 504; p <.001), Levene's test for equality of variance shows that the data have unequal variances (F = 34.44; p < .001). The results of the t test reveal that men (M = $215,871.72) have higher current compensation relative to women (M = $154,456.14).

***Hypothesis 6c*.** For the independent variable of number of promotions (t = 2.86; df = 744; p <.01), Levene's test for equality of variances indicates equal variances (F = 0.245; p = 0.621). The results of the t test reveal that men (M = 2.00) have received a higher number of promotions since completing the MBA relative to women (M = 1.68).

***Hypothesis 6d*.** For the independent variable of number of direct reports (t = 4.46; df = 650; p < .001), Levene's test for equality of variance shows that the data have unequal variances (F = 21.52; p < .001). The results of the t test reveal that men (M = 3.35) have a higher number of direct reports relative to women (M = 2.14).

***Hypothesis 6e*.** For the independent variable of level in the organization (t = 4.56; df = 670; p < .001), Levene's test for equality of variance shows that the data have unequal variances (F = 7.71; p = .006). The results of the t test reveal that men (M = 2.52) have obtained a higher level in their organizations relative to women (M = 2.17).

***Hypothesis 6f*.** For the independent variable of number of job changes (t = 1.87; df = 766; p = .062), Levene's test for equality of variance indicates equal variances (F = .076; p = .783). Although he results of the t test reveal that men (M = 0.93) have made more job changes since completion of the MBA relative to women (M = 0.78), these results are not statistically significant.

***Hypothesis 6g*.** For the independent variable of intent to look for a new position (t

= 2.13; *df* = 731; *p* < .05), Levene's test for equality of variance indicates equal variances (*F* = .079; *p* = .778). The results of the *t* test reveal that men (*M* = 3.37) have a higher intent to look for a new position outside of their current organization relative to women (*M* = 3.15).

***Hypothesis 6h*.** For the independent variable of career satisfaction (*t* = 2.15; *df* = 676; *p* <.05), Levene's test for equality of variance indicates equal variances (*F* = .001; *p* = .971). The results of the *t* test reveal that men (*M* = 3.89) have achieved higher levels of career satisfaction than women (*M* = 3.75).

***Hypotheses 6i*.** For the independent variable of assessment of success, (*t* = 2.14; *df* = 761; *p* < .05), Levene's test for equality of variance indicates equal variances (*F* = .159; *p* = .690). The results of the *t* test reveal that men (*M* = 4.20) have a more favorable assessment of their individual success than women (*M* = 3.75).

***Hypotheses 6j*.** For the independent variable of self-concept, (*t* = 0.87; *df* = 758; *p* = .383), Levene's test for equality of variance indicates equal variances (*F* = 1.98; *p* = .160); however, the results of the t test reveal no significant differences in self-concept by men (*M* = 4.30) and women (*M* = 4.26).

Table 37

Independent Samples t Test, Extrinsic and Intrinsic Career Outcomes, Women and Men

	Male		Female			
Variables	M	SD	M	SD	*t*	*p*
Extrinsic career outcomes						
First post-MBA compensation	130077.84	99050.80	110168.53	49224.73	3.39	<.001***
Current compensation	215871.72	166740.36	154456.14	97944.14	5.83	<.001***
Number of promotions	2.00	1.48	1.68	1.50	2.86	.004**
Number of direct reports	3.35	3.89	2.14	3.31	4.46	<.001***
Level in the organization	2.52	1.07	2.17	1.00	4.56	<.001***
Number of job changes	0.93	1.18	0.78	1.10	1.87	.062
Intent to seek new position	3.37	1.33	3.15	1.36	2.13	.034*
Intrinsic career outcomes						
Career satisfaction	3.89	0.87	3.75	0.86	2.15	.032*
Assessment of success	4.29	0.64	4.20	0.64	2.14	.033*
Self- concept	4.30	0.67	4.26	0.60	0.87	.383

Note. Sample size *N* for each question ranges from 678-768 according to the number of valid responses to the associated survey questions.

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 7

RQ7. How do perceptions of business and equality differ between men and women MBA graduates?

Hypothesis 7. There will be a difference between men and women on perceptions on business and equality.

Analysis and results. An independent samples *t* test was used to understand differences between men and women on four different elements of perceptions of the business and equality which were combined into a scale. The scale measures participants' beliefs about gender equality in the workplace, feeling disadvantaged in business because of gender, and optimism and expectations about business. Means and standard deviations for each component of the scale are presented in Table 38. Respondents for this research question included 45% men and 55% women. On average, the total group of participants is optimistic about the future of business (M = 3.96), yet they acknowledge that women and men have not achieved equality in business (M = 2.39, at or near "disagree" for belief that gender equality has been achieved). The group is relatively neutral in their opinions around feeling disadvantaged in the workplace (M = 3.27) and that their experience in business closely matches their expectations (M =3.37).

Table 38

Means and Standard Deviations, Sub-Components of Perceptions of Business and Equality Scale

Variable	Mean	SD
Women and men have achieved equality in the workplace	2.39	1.14
My experience in business closely matches what I thought it would be	3.37	0.96
I am optimistic about the future of business	3.96	0.79
I have never felt disadvantaged in the workplace because of my gender	3.27	1.35

N = 762

The results of the *t* test as shown in Table 39 reveal a statistically significant difference between men and women ($p < .001$). Overall, men ($M = 3.67$) have more positive and optimistic beliefs about business and equality than women ($M = 2.89$).

Table 39

Independent Samples t Test, Perceptions of Business and Equality

	Male		Female			
Variable	M	SD	M	SD	*t*	*p*
Perceptions of business and equality	3.67	0.62	2.89	0.70	16.14	<.001***

*p < .05, **p < .01, ***p < .001, two-tailed tests.

Research Question 8

RQ8. What is the impact of the MBA degree on total annual compensation for the first post-MBA position and current position when compared to pre-MBA total annual compensation, and what differences exist between men and women?

Hypothesis 8. Obtaining the MBA degree will have a significant impact on the total annual compensation for the first-post MBA position and current position when compared to the pre-MBA total annual compensation, and there will be a difference in the impact of the MBA on compensation between women and men.

Analysis and results. A two-way mixed analysis of variance (ANOVA) was used to determine the impact of the MBA on total annual compensation from the last pre-MBA position to first post-MBA position to current position for men and for women. The within-subjects factors for this analysis included total annual compensation at the three

points in time (pre, post, current). The between-subjects factor was gender (46% men and 54% women for this analysis). The descriptive statistics presented in Table 40 show the means and standard deviations for men and women at each of these three points.

Table 40

Means and Standard Deviations, Total Annual Compensation (Pre, Post, Current)

	Male		Female	
Variable	M	SD	M	SD
Pre-MBA compensation	69846.61	42036.94	52969.70	31808.44
First post-MBA compensation	126232.71	45696.03	110662.05	45520.90
Current compensation	215303.55	166927.19	154975.86	97742.83

N = 695

The ANOVA for this research question began with testing for similar covariances. Results revealed there was heterogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p < .001$). The decision was made to continue with the analysis. Although the samples for each population (men and women) were likely to come from populations with different means, it is also highly likely given the nature of compensation and other mediating or moderating factors (e.g., taking time out of the workforce), that the variances will differ as well.

The next step in the ANOVA procedure involved testing the assumption of sphericity to understand if the differences between the levels of the within-subjects factor of compensation at the three points in time have equal variances. The assumption was tested by running a Mauchly's test of sphericity. The test indicated that the assumption of sphericity had been violated, $\chi^2(2) = 641.25$, $p < .001$. Epsilon (ε) was 0.623, as

calculated according to Greenhouse and Geisser (1959), and was used to correct the ANOVA.

Following assumptions testing, the two-way interaction between the between- and within-subjects factors (time*gender) was tested. Results show there was a statistically significant interaction between gender and time on total annual compensation, $F (1.247, 864.02) = 18.81$, $p < .001$, partial $\eta 2 = .026$.

Simple main effects were then tested for differences in total annual compensation between men and women at the three points in time. There was a statistically significant difference in total annual compensation between men and women for the last pre-MBA position, with men earning higher compensation than women, $F (3, 754) = 14.01$, $p < .001$, partial $\eta 2 = .053$. Similarly, there was a statistically significant difference in total annual compensation between men and women for the first post-MBA position, with men earning higher compensation than women, $F (3, 747) = 4.33$, $p = .005$, partial $\eta 2 = .017$. Finally, there was a statistically significant difference in total annual compensation between men and women for the current position, with men earning higher compensation than women, $F (3, 700) = 11.68$, $p < .001$, partial $\eta 2 = .048$. These differences in compensation for men versus women at the three points in time are illustrated in Figure 2.

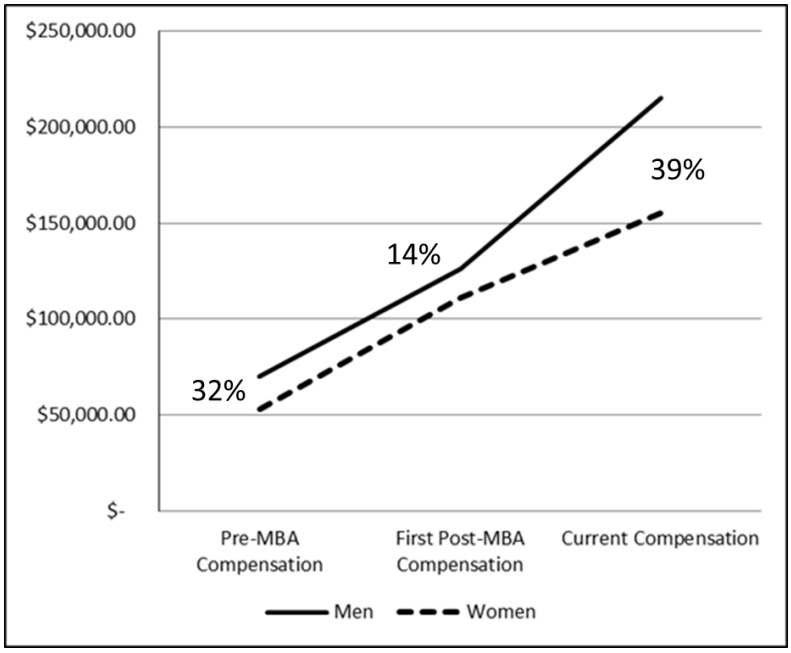


Figure 2. Growth in total compensation over time. This figure illustrates average compensation for men and women at three points in time – last pre-MBA, first post-MBA, and current.

Research Question 9

RQ9. Overall, how satisfied are MBA graduates with their decision to obtain an MBA, and what differences exist between men and women?

Hypothesis 9. MBA graduates will be satisfied with their investment in the MBA, would choose to pursue the MBA if they had to do it again, and would choose to attend the same school; and there will be differences in these factors between women and men.

Analysis and results. To investigate this hypothesis, descriptive statistics were computed which showed that, on average, the combined participant group was satisfied to very satisfied with their investment in the MBA (M = 4.39). They were even more likely

to very likely on average to choose to pursue their MBA education again (M = 4.64), and they were also likely to select the same MBA program (M = 4.29).

For the independent samples t test, the percentages of men and women were 45% and 55%, respectively. Levene's test for equality of variance shows that the data for each of the components of this question have equal variances. The results of the t test show that the only statistically significant difference between women and men was with regard to the decision whether to attend the same MBA program. Men were more likely than women (t = 2.53, p < .01*)* to select the same MBA program if they were to make the decision again.

Table 41

Independent Samples t Test, Overall Satisfaction with Decision to Pursue an MBA

	Male		Female			
Variable	M	SD	M	SD	*t*	*p*
Satisfaction with investment in MBA	4.44	0.96	4.35	.928	1.33	.183
Would pursue MBA again	4.66	0.72	4.63	0.66	0.62	.538
Would attend the same MBA program	4.39	0.95	4.21	1.02	2.53	.012**

*p<.05, **p<.01, ***p<.001, two-tailed tests.

Chapter 5: Discussion

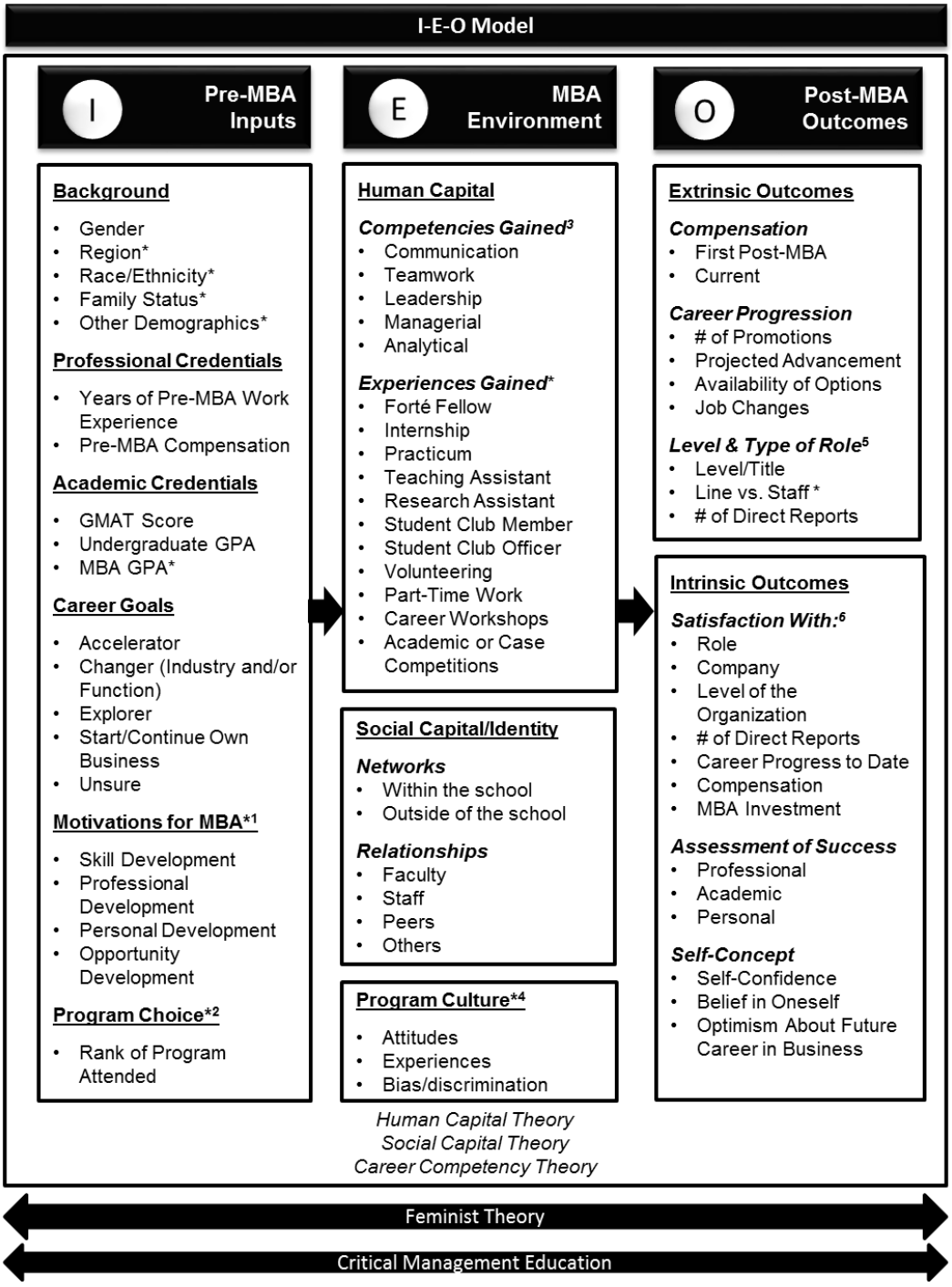
Overview

The nine research questions in this study revealed key insights on the experience, outcomes, and impact of the MBA. Some questions examined the overall MBA environment and how it provides insights on the outcomes and perceptions of graduates. Other questions sought to better understand the widely-accepted objective measures of post-MBA success such as compensation and career advancement and their potential link

to outcomes that are more intrinsic in nature such as satisfaction, self-concept, and assessment of success. These outcomes were also analyzed in terms of differences in the career achievements of women versus men. The final two research questions examined the impact of the MBA and the return on the investment in terms of compensation, satisfaction with the decision to pursue an MBA, and willingness to choose the same degree and program again.

The conceptual framework for this study first presented in Chapter 2, Figure 1 provides structure to the consideration of the statistical results and their implications. This framework is included on the following page for ease of referring to the framework through the discussion. As previously discussed, this framework is organized by pre-MBA inputs, the MBA environment, and post-MBA outcomes (Astin, 1993), closely following the structure and purpose of the research questions. The model also incorporates five other theories which were prevalent in the past literature on this topic. Reviewing the current study's findings as they relate to the conceptual framework provides further insights on the past findings and theoretical perspectives on the MBA.

To generate a comprehensive understanding of the data obtained by this study, this chapter examines each research question individually, or in combination with others, to understand the insights and implications. It begins with a discussion of the findings, followed by implications for both theory and practice. The chapter concludes with an exploration of study limitations and delimitations along with recommendations for future research.



Note. *Variables to be included in future research. [1]GMAC Application Trends (2015); [2]As ranked by U.S. News and World Report for year graduated; [3]GMAC Corporate Recruiters Survey (2014); [4]See Leeming & Baruch (1998) and Kelan & Jones (2010); [5]See Cox & Harquail (1991); [6]See Baruch (2009) and Zhao, et al. (2006)

Figure 1 (Reprised from Chapter 2). Conceptual framework. This figure illustrates a framework of the relationship of key theories to different stages of the MBA lifecycle.

Discussion of Findings

There are five groups of key findings that are described in more detail in this section. The insights obtained through the data analysis are discussed in the context of the conceptual framework and theoretical foundation guiding this study. The discussion begins with an examination of the human capital and social capital elements of the MBA environment. Then, linkages between key pre-MBA inputs and post-MBA outcomes are explored. Next, the discussion will take a deeper look at the relationship between extrinsic and intrinsic career outcomes. In other words, do traditional measures of business success such as compensation and level in the organization lead to greater intrinsic outcomes such as career satisfaction and self-concept? These outcomes will then be viewed in terms of differences between men and women. Finally, the impact of the MBA in terms of compensation growth will be assessed, along with a complementary discussion on satisfaction with the pursuit of and investment in the MBA.

Competencies and relationships acquired through attainment of the MBA. Research question one explored elements of human capital acquired through the process of obtaining an MBA. The variables examined by this question fall within the "environment" phase of the I-E-O model (Astin, 1993). Participants were asked to assess the impact of the MBA on their development of 21 key competencies grouped into five skill categories: communication, teamwork, leadership, managerial, and analytical. These categories were selected because they represent the skills most desired by employers who hire MBAs (Graduate Management Admissions Council, 2012). Overall, participants believe that the MBA has positively impacted their skills and knowledge across all of the

competencies, with analytical skills being the most enhanced by their MBA education. In accordance with the research on human capital theory conducted by Baruch (2009) and Gupta and Bennett (2013), the findings from this study support the assertion that the MBA provides human capital to the individual in the form of enhanced competencies which are needed to achieve success in a business career. This calls into question the earlier claim by Pfeffer and Fong (2002) that the knowledge gained in an MBA program does little to enhance graduates' careers. Although the acquisition of knowledge does not guarantee career success, the findings from this study clearly indicate that the MBA does indeed provide important business knowledge and professional development to graduates.

If employers do indeed rely on MBA programs to provide important competencies to their future employees (Baruch & Peiperl, 2000), and consider MBA graduates to be part of a pre-screened applicant pool (Pfeffer & Fong, 2002), the outcomes of this study support that as assessed by their graduates, MBA programs are developing and strengthening the skills and experiences that are most important and needed by graduates and organizations alike. This refutes the claims made by Pfeffer and Fong (2004) that business schools aren't delivering the knowledge needed by students, providing a disservice to those who hire them.

When comparing men and women on their perceptions of their knowledge and skill development provided by the MBA, leadership and analytic skills were the only two competencies that were significantly different between the two groups. On average, male participants have a stronger belief than female participants that the MBA developed their abilities to establish a vision and strategy, solve problems creatively, motivate others,

lead ethically and responsibly, and lead in a global business environment. In addition, men have a stronger belief that their quantitative and qualitative analysis skills, core business knowledge, and knowledge of their MBA concentration were strengthened by the MBA. This finding partially supports the assertions made by Simpson (2006) and Arbaugh et al. (2010) who argue that discipline-based course content that employs more analytical ways of learning does not build upon the strengths of women, but rather, favors men.

The second key element of the "environment" portion of the I-E-O model (Astin, 1993) that was included in this study was an exploration of the relationship benefits of the MBA including networks, reputation, and status (Cochchiara et al., 2009). Although there are many types of relationships an MBA student may build as they pursue the degree, research question two from the current study examined three broad groups of relationships with faculty, program staff, and peers. The scales created for each relationship group included variables that assess the value of the relationships in terms of their assistance in helping a student develop business skills, gain practical experience, facilitate connections for professional networking, build career management skills, and develop personal and social connections. On average, most participants found each relationship group to have provided value; however, the results show that participants place the highest perceived value on their relationships with peers. There were no significant differences between women and men with regard to their assessment of the value of these relationships.

Given the parameters of the survey questions on relationship value, particularly around skill-development and access to experiences and professional connections, it is somewhat surprising that the value of the student-to-faculty relationship was not higher. This could be due to a number of factors including the perception that business school faculty are detached from the field of management (Pfeffer & Fong, 2002). The elements of this question characterized value in terms of connections and networks that would inherently provide benefit outside of the academy. A possible explanation for this could lend support to the assertions made by Pfeffer and Fong (2002) and Bennis and O'Toole (2005) that students themselves must bridge the gap between what is provided by their faculty and what is demanded by the profession of management.

To further explore the relationships obtained during business school, a subsequent survey question explored the views of MBA graduates in terms of the benefits obtained by developing a more extensive network, earning the respect of others in business, and obtaining professional status through affiliation with a business school. On average, participants strongly agreed that the MBA does indeed provide these benefits, with men perceiving slightly greater benefit than women. As described by scholars who have studied the MBA through a social capital lens, the MBA provides a connection to a valuable professional and academic network that provides status, respect, and recognition (Baruch & Peiperl, 2000). The participants in the current study value their relationships with peers, faculty, and staff that were formed throughout their time in graduate school. They are also resolute about the benefits of these relationships in terms of helping them develop the aspects of social capital that are focused on the notions of affiliation,

acceptance, and respect. These findings lend support to the assertion that social capital is indeed one of the primary benefits that an MBA provides to an individual (Baruch & Peiperl, 2000;Cocchiara et al., 2009).

Relationship between pre-MBA inputs and post-MBA outcomes. One of the most essential elements of studying the impact of the MBA involves examining how the inputs a student brings into an MBA program lead to outcomes in the form of career achievements. Research questions three and four explored the relationship between four key MBA inputs (years of pre-MBA work experience, GMAT score, undergraduate GPA, and career goal upon entering the program) on the outputs of compensation (for both the first post-MBA position and the current position) and career satisfaction. This question is closely tied to Astin's (1993) I-E-O model in that it looks at what a new MBA student brings into the academic experience and the subsequent results obtained upon completion of the degree and beyond. This section of the study was grounded in the same assumptions made by past scholars - that the MBA does indeed have a positive impact on graduates' careers (Hay & Hodgkinson, 2006; Sturges et al., 2003; Zhao et al., 2006). This impact may be in the form of numerous types of extrinsic or intrinsic benefits; however, this portion of the current study focused on the commonly accepted measure of compensation as well as the more personal measure of overall career satisfaction.

When examining the impact of the four input variables on total annual compensation obtained for the first post-MBA position, the outcomes are mixed. GMAT score and undergraduate grade point average were shown to be weak predictors of first post-MBA compensation; however years of pre-MBA work experience and career goal

were not related post-MBA position. Even though the result was not statistically significant, it is interesting to note that those individuals who had a goal upon starting the MBA to accelerate their careers along the same or a similar functional or industry path actually earned *lower* average starting compensation than those who were changing careers, starting a business, or were unsure of their career goal. Lastly, being a woman was also a predictor of first post-MBA compensation, although negatively. Salaries were predicted to be lower simply by nature of being female versus male.

Regarding current total annual compensation, the findings were mixed, with the initial analysis revealing that none of the four MBA input variables were related to current compensation; however, the regression analysis showed that again, GMAT score and undergraduate GPA were predictive of current compensation. The gender of female was also found to predict lower compensation along with more recent graduation dates. The gender variable was consistent between first post-MBA and current compensation with females predicted to earn less than their male counterparts. It is logical that those with more recent MBA graduation dates would earn less total annual compensation as compared to those who graduated earlier and thus have more post-MBA years in the workforce. In contrast to first post-MBA compensation, individuals who were career accelerators were shown to earn higher current compensation. Although this result is not statistically significant, it is an interesting outcome that suggests that prior experience in the same function or industry might lead to greater financial reward once a post-MBA career is underway.

Some of these current findings are consistent with two past studies from Yeaple et

al. (2009) and Dreher and Ryan (2002) which examined the input variable of pre-MBA work experience. Both studies found that the number of years an individual works prior to starting an MBA program does not impact compensation beyond the first-post MBA position. Although compensation is only one element of career achievement, this finding does call into question MBA admissions standards and criteria that focus heavily on quantitative inputs such as past academic credentials and work experience. In other words, because these inputs have only limited predictive value on starting total annual compensation and no relationship to current compensation, are they the right measures?

Turning to a more intrinsically focused career outcome, this study examined the relationship between the same four MBA inputs on a comprehensive measure of career satisfaction. Past scholars have recognized that in addition to external success measures such as compensation, career outcomes can also be assessed by internal measures of success such as a person's own subjective judgment of their achievements (Hay & Hodgkinson, 2006). As such, numerous intrinsic outcomes, including career satisfaction, were incorporated into this study. Six different measures combined to form an overall picture of career satisfaction including satisfaction with current role, company, level in the organization, compensation, number of direct reports, and career progression to date. Of the four input variables, only years of pre-MBA work experience was shown to have a significant relationship to career satisfaction; however, this relationship between was negative. This suggests that those with fewer years of work experience are actually more satisfied with their careers than those with more experience. This finding is in direct support of Dreher and Ryan's (2002) study which also found an inverse relationship

between work experience and career satisfaction. As they surmised, this could perhaps be due to the fact that those with less prior work experience may be more grateful for the earlier start and career advancement afforded to them by obtaining an MBA, leading to overall higher levels of satisfaction. In addition, the analysis revealed that women were less satisfied with their careers than men, a finding that contradicts the study by Cox and Harquail (1991) that found that despite lower salary advancement, women and men reported similar levels of career satisfaction.

When examined together, the analyses for the extrinsic measure of compensation and the intrinsic measure of career satisfaction produced mostly similar results. Although GMAT score and GPA were shown to have slight influence on the outcomes of first post-MBA and current compensation for the entire group of participants, many other key inputs such as career goal and work experience were either unrelated to post-MBA outcomes or had a negative relationship. Despite some differences between men and women when looking at the connection between inputs and outputs, the results of this portion of the study revealed that traditional MBA admissions standards and requirements may not actually lead to better outcomes for graduates, calling into question business schools' continued emphasis on these qualifications.

The link between extrinsic and intrinsic career outcomes of MBAs. Research question five shifts the focus from the inputs portion of the I-E-O model (Astin, 1993) to the outcomes portion. Specifically, this question explores the link between extrinsic and intrinsic career outcomes. Scholars such as Hay and Hodgkinson (2006) have advocated for inclusion of intrinsic measures in studies of career outcomes of MBAs; however, none

have examined what, if any, relationship may exist between external measures of success and an individual's own internal beliefs about their career achievements. The current study sought to identify whether or not the more commonly discussed external success criteria were related in any way to an individual's own assessment of satisfaction, success, and self-concept.

Whereas extrinsic career outcomes such as compensation and number of job promotions are easy to quantify, it is a more difficult to measure intrinsic outcomes since they are more individual in nature and not necessarily visible to the outside world. To address this challenge, the current study included three broad types of intrinsic measures: career satisfaction, assessment of success, and self-concept. Together, these measures address multiple components of career satisfaction; individual assessment of personal, academic, and professional success; and the graduate's belief in oneself (self-esteem) and in one's abilities to achieve success (self-confidence).

The findings revealed that the extrinsic career outcomes of first post-MBA compensation, number of direct reports, and number of promotions received were all positively related to intrinsic outcomes. In other words, individuals who earn higher salaries for their first post-MBA positions, have a larger span of control within their companies, and have been promoted more often are more likely to be satisfied with their careers, consider themselves to be successful, and believe in their abilities and potential for future success. The links between current compensation and intrinsic career outcomes as well as between level of the organization and intrinsic outcomes were less clear, with a portion of the analysis revealing a weak positive correlation between the two factors but

further analysis showing no significant predictive relationship. Past and planned career changes were also added to the analysis to understand if job changes lead to more favorable intrinsic outcomes. Results showed that those with more past job changes had lower intrinsic career outcomes; however, those participants who planned to change positions in the next 12 months had more favorable intrinsic career outcomes. Although it's not clear why this might be the case, perhaps those who have changed jobs more frequently are overall less satisfied with their careers. It is also possible that past job changes may have been the result of lay-offs, staff reductions, or other unfavorable conditions. Those with planned job changes may have overall higher levels of satisfaction, success, and self-concept if they are willingly and proactively driving their career change. Overall, the findings affirm that the for this participant group, the objective extrinsic career outcomes were indeed strong indicators of MBA graduates' more subjective assessment of their professional accomplishments.

Comparison of career outcomes and perceptions of women and men.

Establishing the linkage between extrinsic and intrinsic career outcomes provides a solid foundation from which to explore differences in MBA outcomes between women and men. This portion of the analysis is also situated within the outcomes element of the I-E-O model (Astin, 1993). Research questions six and seven compared women and men on numerous outcomes of the MBA, both extrinsic and intrinsic. The topic of career outcomes of women versus men has been the subject of many past studies which have yielded inconsistent results; hence its inclusion as a focal topic for the current study.

In order to fully explore any potential differences, seven extrinsic career outcome variables and four intrinsic outcome scales were included in the analysis. Across all individual extrinsic variables, with the exception of number of past job changes, men achieved better outcomes than women. On average, men had experienced more job changes than women, but this result was not significant. Men also have a significantly stronger intent to seek a new position in the next year. In terms of intrinsic career outcomes, men had higher overall career satisfaction and a stronger assessment of their own success; however, there were no significant differences in self-concept between women and men.

Like other past research MBA outcomes of women versus men, these findings support the conclusions from some prior studies while refuting others. As perhaps the most commonly accepted measure of career success, compensation was explored first. Findings from the current study showed that on average, men earned 32% higher total annual compensation than women for their last pre-MBA position, a difference of $16,876. Although the percentage gap between men and women narrowed for the first post-MBA position (14% difference in favor of men), the dollar difference ($15,571) was only slightly less than the difference in pre-MBA compensation between the men and women. Interestingly, women increased their annual compensation pre- to post-MBA by about $58,000, whereas the increase for men was approximately $56,000. Despite the larger dollar increase for women at this juncture, the gap in compensation persisted. For the current position, the gap in total annual compensation nearly tripled from first post-MBA position to current position, with men earning on average 39% more than women.

Perhaps more illustrative, this 39% pay gap represents a substantial dollar amount of $60,327.

These compensation gaps at all three junctures – last pre-MBA position, first post-MBA position, and current position – support the findings from many previous studies. Cocchiara et al. (2010) argued that women do not receive the same benefit from the MBA degree as men, in part due to lower salary increases post-MBA. Simpson et al. (2005) also found that in comparison to women, men gained more from the MBA in terms of compensation, supporting a prior study by Cox and Harquail (1991) that points to an inherent disadvantage for women due to gender differences in starting salaries after obtaining an MBA. As Simpson (2000) discussed, women may perceive the need to obtain an MBA to overcome gender disadvantage in business. Based on compensation alone, the findings of the current study point to continued pay gaps that persist and eventually even increase after obtaining an MBA. This group of scholars has identified a consistent theme that calls into question the ability for women to achieve the same level of financial success as their male peers, given substantially lower compensation before and after earning an MBA.

The differences between extrinsic career outcomes achieved by women and men extend beyond compensation. The current study analyzed five other extrinsic measures, four of which yielded significant differences between genders in favor of men. Three of the common measures of career advancement - number of promotions, level in the organization, and number of direct reports - showed that men have received a higher number of promotions since completing the MBA, have obtained higher levels in the

organization, and manage a larger number of other employees. In terms of career advancement, Cocchiara et al. (2010) found that women had actually achieved higher levels in the organization than their male counterparts, countered by the outcomes of the current study. These findings do, however, strongly support the outcomes of two past studies that found that men fared better than women in terms of extrinsic benefits of the MBA such as pay and status (Cox & Harquail, 1991; Sturges, et al., 2003). When further examining the extrinsic outcome of number of promotions, the current study aligns, in part, with the findings of Cox and Harquail (1991) who found that although men and women had received comparable numbers of promotions, women had not received as many management promotions, likely contributing to their overall lower levels within the organization. As with the compensation gap between genders, the gaps in these two extrinsic measures could be due to women starting out at a lower level in the organization for the first post-MBA position (Cox & Harquail, 1991).

Along with possible lower starting levels, the Catalyst report on women and the MBA (2000) identified other possible causes for women achieving fewer promotions and lower levels in the organization. One potential source for these discrepancies may be the fact that women were less likely than men to work in line positions that are directly responsible for producing and delivering the firm's products and services. These positions are more prevalent at higher levels of the organization versus staff positions that encompass advisory or support functions. Another potential reason is that when compared to men, women often lack mentors and champions with the organization. Finally, the Catalyst research (2000) found that women are much more likely to take time

out of the workforce than men. This career interruption (Hemphill, 2013) is likely to impact not only extrinsic career outcomes, but also intrinsic assessments of success and satisfaction.

The final two extrinsic career outcomes examined in this portion of the study examined career mobility in terms of number of past job changes as well as intent to seek a new position outside of one's current organization in the next 12 months. The findings showed that, on average, men have made slightly more job changes than women, although the results were not statistically significant. Men also reported a higher intent to seek a new position in the next year, a result which was significant. These findings suggest that perhaps men, more than women, have embraced the concept of the "boundaryless career" in which an individual's career will likely span multiple organizations (Sturges et al., 2003). A key premise of the boundaryless career is that individuals must be proactive about their career growth and development. It could follow from the findings of the current study that men may be more deliberate about elevating their careers within the boundaryless environment by moving to new organizations and new positions.

Despite a greater likelihood of seeking a new position in the next year, overall, male participants were more satisfied with their careers and had a more positive assessment of their professional, academic, and personal success. However, there were no significant differences between women and men on self-concept, a measure which includes elements of confidence and optimism about future opportunities. In terms of career satisfaction, the findings from the current study partially refute the outcomes of

past studies. The Catalyst report (2000) showed that despite indicators that men had advanced further in their careers than women, both genders have attained consistent levels of career satisfaction. Cox and Harquail (1991) also reported similar levels of career satisfaction between women and men. Cocchiara et al. (2010) found that women had obtained higher levels of job satisfaction than men, the inverse of what was found in the current study. Similarly, Hay and Hodgkinson (2006) and Simpson, et al. (2005) found that women often held an advantage over men with intrinsic measures such as satisfaction and self-concept. The different career satisfaction outcomes from the current study versus the past studies may be due to differences in variables included in the definitions of career satisfaction, or these differences may reflect changing attitudes and perceptions of the more recent graduates that were included in this study versus the aforementioned studies.

The similarity between genders with regard to the self-concept scale employed in the current study supports the findings of past research. Sturges et al. (2003) found that for the participants in their study, the MBA was shown to foster greater confidence and clarity, measures inherent to the definition of self-concept employed in this study. In addition, the qualitative exploration of career success conducted by Hay and Hodgkinson (2006) revealed that most MBA graduates defined career success according to typical measures of self-concept such as increased confidence and choice. Their study found that both women and men experienced the benefit of increased self-concept, but men attributed this to improved skills while women attributed it to increased self-worth. Although individual definitions of self-concept are personal and may vary, the findings

from this study, like those that came before, point to an enhanced self-concept for both genders as a result of the MBA.

A final component of this portion of the study examined participants' views on gender equality and the current and future states of business. The elements explored in this analysis include perceptions of whether or not equality has been achieved in the workplace and the related concept of feeling disadvantaged in business due to gender. In addition, optimism about the future of business as well as the extent to which the reality of the post-MBA business world matches expectations were assessed. These constructs were included in the current study because they allowed for a deeper examination of past research on the MBA degree as a means to reduce career barriers and facilitate success (Leeming & Baruch, 1998; Simpson et al., 2004). Like past findings, the outcomes of this study revealed that gender disadvantage still exists in the workplace. Although obtaining an MBA can be an avenue for potentially reducing disadvantage and discrimination, the findings from the current study support the assertion made by Leeming and Baruch (1998) that gender discrimination is stronger in graduates' working lives than while they are in an MBA program. The differences in perceived gender inequality in business may also be tied to male participants believing that there is closer alignment between their expectations and reality along with their sense of optimism about the future of business. This optimistic outlook could partially explain why women perceive lower levels of equality and higher levels of gender discrimination. This supports Leeming and Baruch's (1998) study which found that those who have experienced gender discrimination felt they had fewer professional opportunities for the future.

The return on the investment in the MBA. In an effort to better understand past research that questions the return on the investment of the MBA, the final portion of this study explored the financial return of the MBA along with the more intrinsic measures of satisfaction with this investment. This section of the study is situated within the outcomes element of Astin's (1993) I-E-O model. The question over the ROI of the MBA is one that has been addressed by scholars and practioners alike. Pfeffer and Fong (2002) were among the first scholars to explore the topic, concluding that there was little evidence that the MBA enhanced graduates' careers. Further questioning the impact of the MBA, Schramm (2006) claimed that it was unclear if the MBA led to a positive return on tuition, time, and opportunity cost of lost salaries. In contrast, the results of the current study show that graduates have benefitted from increased compensation as well as personal assessment of the value of the MBA.

Compensation is perhaps the most tangible and measurable outcome of obtaining an MBA. The current study explored total annual compensation (salary, guaranteed bonuses, and commissions) for women and men at three key points: last pre-MBA position, first post-MBA position, and current position. On average, prior to starting an MBA program, male participants received total annual compensation of $69,846.61. Upon completion of the MBA, men reported average starting salaries of $126,232.71, an increase of over $56,000. Women earned an average of $52,969.70 for the last pre-MBA position, an amount which grew to $110,662.05 for the first post-MBA position, an increase of nearly $58,000.

Scholars such as Pfeffer & Fong (2002) have found no discernable impact on

current compensation as a result of obtaining an MBA; however, the findings from the current study strongly support that the MBA does have a significant positive effect on starting compensation. The impact of the degree is felt immediately, with men achieving an 80% compensation increase versus their pre-MBA positions and women more than doubling their pre-MBA compensation with an increase of 208%. In addition, the outcomes of this study revealed substantial compensation growth from pre-MBA to current. Men reported average current compensation of $215,303.55, while women reported average current compensation of $154,975.86. Both women and men have achieved current compensation that is around three times greater than what they were earning before the MBA program. Despite the fact that one year of tuition at a selective MBA program averages $60,000 (Zlomek, 2014), the average compensation growth from the last pre-MBA to the first post-MBA position clearly offsets the actual and opportunity costs, with further return achieved in subsequent years.

Given that one of the primary reasons for pursing the MBA is compensation growth (Baruch & Peiperl, 2000), the results of this study support that the MBA provides a strong financial return on the investment. However, as has been consistently noted throughout this study, extrinsic financial outcomes alone do not provide a complete measure of career achievement. To provide a broader view of the return of the MBA, participants assessed their level of satisfaction with the investment in the MBA and stated whether or not they would pursue an MBA if they had to do it all over again. They were also asked if they would choose to attend the same MBA program. Overall, participants were satisfied to very satisfied with the investment, and were likely to very likely to have

pursued the MBA if they had to do it again. Men were more likely than women to state that they would choose the same program, but overall the compensation growth, combined with personal assessment of the value of the MBA, point to a positive impact of the MBA on the lives and careers of its graduates.

Theoretical Implications

The findings from this study contribute new insights to each of the theories that formed the foundation for this research. In some cases, the outcomes of the current study provide direct evidence of a theory and how it is expressed throughout the career achievements and perspectives of MBA graduates. In other cases, the findings contradict elements of a theory. Regardless of whether a key finding supports or refutes a theory, the current study adds much to the discussion of these theories and their connection to MBA education and outcomes.

Critical Management Education. As perhaps the most inextricably linked theory to the topic of the MBA and management education in general, Critical Management Education (CME), is fundamental to the current study. CME questions long-standing approaches to management education while also exploring the role of management in fostering inequality in business (Grey, 2008). CME, along with the related concept of Critical Management Studies (CMS), advocates for change within the practice of management (Simpson, 2006). Several scholars have criticized both the pedagogy and content of MBA education (Grey, 2004; Simpson, 2006), while others (Pfeffer & Fong, 2002 and 2004) have questioned the outcomes achieved by obtaining the degree. The current study did not explore the MBA curriculum in detail, but it did reveal that

graduates do believe the competencies that are desired by employers have been developed and enhanced by the MBA. In addition, this study sought to better understand outcomes and perceptions of graduates. The compensation growth and career advancement achieved by participants in this study would refute the beliefs inherent within the concept of CME that management education is not meeting the needs of students and managers (French & Grey, 1996).

Lending support to critical management education, however, are findings from the current study that illustrate the persistence of inequality and oppression within business (Grey, 2008). Women were more likely than men to have felt disadvantaged in the workplace because of gender and less likely to believe that equality has been achieved within the profession of business. Findings such as those produced by this study not only lend support to this element of critical management education theory, but hopefully will incite further research on MBA programs and their ability to prepare managers for the complexities and diversity within the business environment.

Feminist Theory. The many insights gathered from the current study on the outcomes and perceptions of women MBA graduates illuminate the continued need for acknowledgement of the perspectives and experiences of women as they pursue their MBA degree and advance their careers. Feminist theory's emphasis on empowerment and change is evident in the outcomes and perceptions of the women who participated in the current study. Women lagged behind men in every extrinsic and intrinsic career outcome, with the exception of self-concept and number of past job changes. Women earn lower compensation (with the gap widening as they move beyond the first post-MBA position),

have experienced slower career progression, manage fewer employees, and are generally less satisfied with their careers than their male peers.

In addition, women are significantly more likely than men to acknowledge that they have felt disadvantaged because of their gender, and that on the whole, they have not achieved equality in business. Women are less certain that they would pursue the same MBA program again, and there is a greater gap between their expectations of business and reality. These outcomes tie directly to the elements of feminist theory. If it is true that women may choose to pursue an MBA in order to compete equally with men and overcome barriers in business (Simpson, 2000), the results of the current study show that inequality and barriers still exist. Compounding the issues are the fact that the longer-term return on the investment of the MBA for women may not be as prolific as it is for men due to a greater likelihood of women to take time out of the workforce to raise children (Sinclair, 1995). All of these findings on the impact of the MBA for women suggest that feminist theory must remain at the forefront of innovation and change within MBA education and the profession of business.

Human Capital and Social Capital Theories. Both human capital and social capital theories are essential to the study of the impact of the MBA, as evidenced by the findings of the current study. Human capital, as the concept relates to the MBA, includes the knowledge and skills obtained through education, but also to the outcomes achieved by graduates in the form of increased productivity and earnings (Tan, 2014). The participants in this study believe the MBA has increased their key business competencies and skills, and the extrinsic outcomes show that the investment is paying off in the form

of increased compensation and career advancement. Despite the disparities that exist between men and women, participants acknowledged the positive return on the investment, and most claimed they would choose to pursue the MBA again if they had to do it over again. In this regard, the findings lend credibility to the core tenants of HCT, including that assertion that an individual pursues an advanced degree to acquire human capital in the form of knowledge, skills, and experiences. This human capital then increases their career options, and enhances their productivity and earnings (Tan, 2014).

The findings from the current study also demonstrate that social capital, in the form of enhanced relationships, status, and networks (Cocchiara et al., 2009), is indeed enhanced by the MBA. Although participants asserted that their relationships with their MBA peers provided the most overall value to them, they also recognized the value provided by faculty and program staff. Within the environment of the MBA, social capital acknowledges that the MBA provides an entry into valuable social and professional networks (Baruch & Peiperl, 2000). The findings from this study showed that these benefits of acquired social capital are apparent to MBA graduates. Participants agreed that the MBA has enhanced their networks, has led to greater respect from others in business, and has increased their professional status through affiliation with a prestigious business school. As such, the relationships and networks acquired in business school with the three primary groups included in this study (faculty, staff, and peers) do appear to provide social capital, making this an essential theory for continued study of the relationship benefits of the MBA,

Career Competency Theory. Related to both human capital and social capital

theories, career competency theory is also an essential foundation of the current study. Career competency theory highlights the need for "knowing-whom" (social capital), "knowing-how" (human capital), and "knowing-why" (individual values and interests) competencies. Together, these help an individual navigate the establishment and growth of their careers. Regardless of actual outcomes achieved, the pursuit of an MBA is inherent to the definition of career competency theory and its premise that individuals must take responsibility for their own career development (Sturges et al., 2003). The decision to acquire the skills, experience, and training that accompanies an MBA shows the initiative and drive needed to proactively develop one's career. The outcomes of this study support the mindset of career competency theory. In particular, graduates' own assessments of their satisfaction with the investment in the MBA and their recognition that they would make the same decision to pursue the degree if they had to do it again are in direct alignment with this theoretical foundation.

Inputs-Environment-Outcomes Framework. Lastly, the process of designing, executing, and analyzing the current study revealed that Astin's (1993) I-E-O framework is a relevant and valuable model for understanding the impact of the MBA. The framework's focus on inputs, the educational environment, and outcomes achieved provided the ideal context for the analysis and discussion of the findings. Despite the model's primary focus on the impact and value of undergraduate education, it provided the necessary structure and organization to the broad topic of the MBA, including the link between inputs and outcomes, the value of the educational experience, and the achievements that result from earning the MBA credential.

Practical Implications

In addition to the contributions to the theories related to the topic of the impact of the MBA, another objective of this study was to provide insights on the MBA that may lead to action, change, and new ideas. The practical implications of this research that resonate most clearly with an individual may depend on his or her role within the overall MBA landscape. As such, it is helpful to examine the implications of these findings for primary internal business school stakeholders such as faculty and administrators, as well as for external stakeholders such as employers and prospective students.

Internal to the academy. The findings of this study reveal suggestions and ideas for faculty, staff, and senior administrators. As those with the greatest direct influence on the human capital that students acquire through pursuit of the MBA, faculty can benefit from consideration of the findings from this study. The research shows that the MBA curriculum is still dominated by a masculine approach to learning where the emphasis is on facts and analytics rather than softer skills such as communication and negotiation which are more aligned with female learning styles (Simpson, 2006; Sinclair, 1995). Placing gender at the forefront (Ropers-Huilman & Winters, 2011) by incorporating more inclusive methods of learning and assessment would help faculty directly impact the pervasive sense of gender inequality and disadvantage felt among women. These benefits extend beyond the business school. Integrating more of the "feminine" management skills into the curriculum would better align MBA education to the needs of industry (Kelan & Jones, 2010), naturally increasing the relevance of the curriculum to the skills employers seek in MBA graduates. Making change in the academy will directly influence the

practices of the management profession as MBA graduates launch their careers with a broader sense of gender equality and inclusivity.

MBA faculty also have an opportunity to focus on building stronger connections with their students and with industry. Despite survey questions that focused on skill development and professional connections which should be directly facilitated by MBA faculty, the participants in this study believe that their peers provided more value to them in these areas. Although this could be due to a number of factors, it should call into question why faculty aren't more connected to and appreciated by their students. As discussed previously, this could be due to a real or perceived disconnect between faculty and the profession of business. Business schools have a long-standing focus on teaching functional theory and frameworks, but the findings of this study lend support to consideration of more practical components of business education. Bridging the theory-practice gap would provide the additional benefit of stronger relationships and connections between faculty, students, and those who work in business.

Turning to MBA program staff, this study revealed practical insights for those that work closely with MBA students, particularly in admissions and career services. Individuals who screen and admit candidates into MBA programs are tasked with reviewing candidates' pre-MBA "inputs" in order to make a decision on whether or not they would be successful in the program. Decision criteria focus heavily on academic credentials and work experience; however, the findings from this study revealed that these criteria may not actually lead to higher levels of post-MBA achievement. As previously discussed, GMAT scores and undergraduate grade point average have a mild

influence on compensation for the first post-MBA position, and only a slight predictive relationship to current compensation. Furthermore, years of pre-MBA work experience has an inverse relationship whereby those with less experience have achieved more favorable career outcomes. Insights such as these should cause admissions directors to question whether or not these inputs should be weighted so heavily in admissions decisions. Perhaps de-emphasizing the work experience requirements and academic standards would increase the number of applications to MBA programs, particularly from women, without impacting the outcomes they achieve at graduation and later in their careers.

These decisions at the front end of the MBA lifecycle have implications for the career services function at the back end. With the responsibility of helping students achieve their career goals, career center directors and staff should work closely with their admissions counterparts to establish criteria that are more predictive of career success and satisfaction. The mixed results from this study regarding the link between career goal and outcomes shows that it is important for career services professionals to recognize that the career goal an individual sets at the start of their program may not be indicative of their eventual compensation and satisfaction.

Finally, as the visible and influential leaders within MBA programs and universities, business school deans and other senior administrators should take note of the outcomes of this and other studies on the experience and impact of the MBA. The direct influence these individuals have over admissions criteria can foster innovation and improvement within recruiting and admissions practices. This should begin with the

recognition that the long-held admissions standards do not necessarily lead to better compensated and more satisfied alumni. Admissions policies and measures are heavily influenced by rankings entities, making change a daunting and time consuming process. As such, evaluating the impact of inputs on outcomes should be studied in much greater depth across the MBA industry with the intent of expanding access to the degree and achieving consistent or enhanced outcomes than those achieved under the current state of MBA admissions.

In addition to influencing admissions standards, deans and other senior administrators must be a visible agent of change throughout the academy. It is these high-ranking leaders that must set the tone for gender equality by focusing on hiring more female faculty, encouraging a more gender-neutral curriculum, and supporting the faculty, staff, and students who commit to an inclusive MBA educational process and culture.

External to the academy. The study also revealed numerous practical implications for stakeholders who are external to the academy but who are invested in the processes and outcomes of MBA programs. Employers are perhaps the most obvious external stakeholder in that they hire the talent produced by business schools. With deep interest in how MBA programs are preparing students for the realities of the workplace, employers must be closely connected to faculty, staff, and students in order to exert their influence on the curriculum while building awareness of career paths within their organizations. The findings of this study showed that although the MBA is indeed developing important competencies in its graduates, there may be incongruities between

the competencies that are most valued by employers (e.g., communication skills) and those that MBA graduates believe are the most developed by the MBA (e.g., analytic skills). Along with business school faculty, employers play a vital role in bridging the theory-practice gap. They should proactively engage with MBA program faculty to influence curriculum and skill development where appropriate.

In addition, employers have a high level of influence over many of the outcomes presented in this study. Recruiters, hiring managers, and executives are responsible for hiring new MBA graduates into their organizations, developing them, and advancing them in their careers. The results of the current study point to many disparities in compensation and other extrinsic career outcomes between women and men. Although MBA hiring managers can't correct the discrepancies in *pre-MBA* compensation between genders, they can fairly and equally compensate men and women for their first *post-MBA* position and *subsequent* positions. Although the outcomes of this study could be influenced by a number of mediating factors such as industry, job function, or geographic location of respondents, the aggregate findings show that women receive lower levels of initial compensation than their male peers, with the gap widening as they advance beyond their first position after completing the MBA. The gender gap in business becomes increasingly difficult to close or even minimize if women are lagging behind men in compensation, level of the organization, or other factors from the very beginning.

Prospective MBA students are another key external audience that will be interested in the findings of this study. For an individual who is considering pursuing an MBA, the return from the investment in tuition and time is of paramount importance. The

findings from this study that illustrate average compensation growth, development of relationships and competencies, and numerous extrinsic and intrinsic career benefits should provide a level of assurance that the MBA does indeed provide value to one's career. The findings also reveal insights and questions prospective students may wish to explore as they research different MBA programs.

Similarly, the professional organizations and consortia that encourage the pursuit of the MBA, particularly for women, will benefit from the practical insights gleaned by this study. At a broad level, the findings highlight that there is still work to be done. For example, significant disparities still exist in the career achievements of women versus men. The more intrinsic perceptions and outcomes of the MBA also highlight the fact that women perceive the existence of inequality and disadvantage more than their male colleagues. Organizations such as the Forté Foundation (http://www.fortefoundation .org/) have made it their mission to reduce these disparities and inspire more women to pursue MBA degrees and careers in business. Forté, and other diversity- and equality-focused organizations, must incorporate the insights from this study and other research to inform their practice of encouraging the pursuit of the MBA.

Finally, it is essential for a discussion on the practical implications of this research to include the external entities that assess and rank MBA programs across the globe. The most prevalent rankings are produced by Bloomberg BusinessWeek, U.S. News, The Economist, Forbes, and Financial Times (http://poetsandquants.com/category/mba-rankings/). Although their individual methodologies differ, all of these publications focus on quantifiable measures such as GMAT scores and grade point averages. The findings

from the current study illustrate that these academic credentials do not necessarily lead to post-MBA success. Like admissions standards which also emphasize these qualifications, the findings from this study suggest that the MBA rankings entities might consider different or additional measures of a student's potential for success.

Study Limitations and Delimitations

As with all academic research there are potential limits to the study and its generalizability and transferability. The two primary limitations of this study include conditions that are beyond the control of the researcher. First, the data collected for this study was primarily self-reported, a common method used in social and behavioral science. Some of this self-reported information, such as compensation, was also sensitive in nature. Second, participants were tasked with recalling information from the past (e.g., career goals at the time they entered an MBA program). As with any study, the self-reporting of past or current information required of participants in this study relies on an individual's honesty, introspection, and memory to accurately answer questions.

Because of various intentional conditions and parameters placed on this study by the researcher, there are also some delimitations. The 41 responding MBA programs that are part of this study are among the most highly-ranked and well-known programs in the world. Although the breadth and diversity of these programs does increase the likelihood of generalizability to the overall MBA population, some may question whether or not the findings generalize only to the population of graduates from these 41 programs or to all MBA programs regardless of size, rank, location, or program format. Study participants were also graduates of full-time MBA programs, which could limit the applicability to

the broader population of graduates from other program formats such as part-time, executive, or fully online.

An additional factor impacting generalizability is that by their connection to the Forté Foundation, these business schools have made a commitment to encouraging more women to pursue MBA degrees and achieve successful careers in business. Other MBA programs who have not made a similar commitment to women may observe different outcomes for their women and men graduates.

Finally, the scope of this study included additional participant criteria which may limit the applicability of the findings. The timeframe for this study focused on graduates between 2005 and 2015 which doesn't account for alumni who are more senior in their careers (greater than 11 years post-MBA). In addition, managing the scope of this study required not examining the career outcomes of people working in the management profession who have *not* obtained an MBA. A future comparison of MBA graduates to their peers without the degree could yield further insights on the longer-term impact of the MBA.

Recommendations for Further Research

This study has revealed many recommendations for further study which have been organized into three research paths that explore different variables, research methods, and study participants. The first research path would involve a more granular examination of additional quantitative variables. These variables could include demographics such as geographic location or focal variables that represent key inputs, experiences, or outcomes of the participant group for this study or a future sample. The

second path would incorporate qualitative research in the form of focus groups or interviews to further explore the thoughts and perceptions of graduates on the topic of the impact of the MBA. The third path would integrate different groups of participants including graduates of MBA program formats other than full-time, graduates of specialized MS degrees in business, and non-MBA graduates.

Research path 1: further quantitative analysis. The findings from the current study have opened the door to further analysis that explores MBA inputs, experiences, and outcomes at a more granular level. This research path could incorporate additional variables such as industry, job function, and career path (line versus staff) to understand their impact on the outcomes achieved by MBA graduates. Rank of MBA program attended could also be included in future quantitative analysis to explore what, if any, impact program ranking has on eventual success. Deeper analysis of the experience section of the I-E-O model (Astin, 1993) could also lend useful insights to scholars and practioners alike. For example, studying different experiences a student has during his or her program could yield insights into those activities and opportunities that most contribute to positive career outcomes. Finally, exploring the impact of taking time out of the workforce to raise children or tend to other needs, could contribute much to the discussion, particularly when investigating the impact that a career pause has on the career progression and possibilities for women versus men.

Research path 2: subsequent qualitative study. A second phase of future research could involve qualitative inquiry in the form of focus groups or interviews. The survey instrument utilized in the current study resulted in data on hundreds of variables

for nearly 800 participants that can be statistically analyzed in numerous ways; however, the benefit of qualitative insights would add depth to the findings from the current study. Qualitative research would provide an opportunity to expand on the quantitative research to uncover new insights and details to contribute to the base of knowledge on the impact of the MBA.

Research path 3: inclusion and expansion of participant groups. A final path for future research would involve deploying the survey instrument used in the current study with different groups of participants. The focus of this study was on graduates of highly-ranked full-time MBA programs. Including graduates of part-time or executive MBA programs could provide a useful contrast. Similarly, expanding the participants to include graduates of specialized MS degrees in business could also yield interesting insights on the outcomes of those who choose to pursue a graduate degree in business other than the MBA. Finally, conducting a future study that compares MBA graduates working in business to non-graduates working in business could provide a useful platform for thoroughly comparing career achievements of those who have earned the MBA credential versus those who have not.

Conclusion

The goal of this study was to better understand the impact of the MBA in both objective and subjective terms, with specific emphasis on identifying differences between men and women MBA graduates in their educational experiences and career outcomes achieved. The comprehensive set of research questions assured that this goal was accomplished. The key findings and their implications for both theory and practice

highlight the influence this study will have on the way various stakeholders view the impact and value provided by the MBA at graduation and beyond. In addition to the theoretical and practical implications of this research discussed throughout this chapter, it is valuable to review the design of the study and its findings as they relate to the four objectives within the statement of purpose presented in the introduction to this research.

Broad set of MBA outcomes. The first goal of the study was to better understand the true impact of the MBA by expanding the set of measures to include intrinsic outcomes as well as a set of more widely-accepted extrinsic outcomes. This research explored both types of measures at various points in the MBA lifecycle. Extrinsic measures examined compensation at three points in time, academic credentials such as the GMAT test score and GPA, and key measures of career advancement such as number of promotions received. Intrinsic measures were incorporated into the study to give voice to individual perceptions of satisfaction, success, and self-concept. The combination of these two types of variables provided a more complete picture of how common extrinsic measures of success relate to more personal measures, while also allowing for a more in-depth look at the actual experience and outcomes of obtaining an MBA.

The influence of inputs on outcomes. The portion of this study which examined potential links between key MBA inputs such as pre-MBA work experience, academic credentials, and career goals yielded results which call into question long-standing MBA admissions criteria which heavily emphasize these qualifications. In particular, the results of this study show that pre-MBA work experience has no bearing on compensation (first post-MBA or current) and an inverse relationship to career satisfaction. This finding

supports the conclusions of previous studies (Dreher & Ryan, 2003; Yeaple et al., 2009) which also questioned the validity of work experience as a key criterion of application decisions. One possible outcome to this piece of the study may be a mandate to examine the feasibility of lowering work experience requirements for MBA applicants. If this one factor was de-emphasized, it could lead to increased applications from women who have previously foregone the MBA due to its timing not aligning with personal or family goals. In addition, revisiting GMAT and undergraduate GPA thresholds may allow for a broader and more diverse applicant pool without sacrificing the employability and career achievements of graduates.

Differences between women and men. As revealed throughout the findings from this study, male participants fared better than their female peers in nearly every measure of career achievement. Men were also shown to have a more positive perception of equality in business than women. Both genders recognize that equality has not been achieved in business; however, women felt a greater sense of disadvantage because of gender and were less optimistic about the future of business.

As highlighted in the introduction to this study, as well as in the practical implications of the findings, reducing gender inequality requires the effort of a variety of stakeholders both within and external to the academy. Hiring more female faculty, including more women as protagonists in case studies, and rethinking the way student teams are structured are just a few actions that faculty and administrators can take to create a more gender-neutral educational experience for MBAs. External to the academy, employers, rankings entities, and other organizations must strive for equality in the way

they hire and promote MBA graduates and evaluate the business schools that educate them. As a foundation, feminist theory can guide future studies that examine these differences in greater detail either from either a quantitative or qualitative perspective with the overall goal of fostering change in business school and the business profession.

Impact and return on the investment in an MBA. Finally, the outcomes of this study reveal a strong financial return on the investment in the MBA. From the last pre-MBA to first post-MBA position, graduates increased their compensation by over $55,000. Furthermore, women and men were shown to earn current compensation that is roughly three times what it was prior to pursuing the MBA. These findings should quiet criticism that the financial benefit of the MBA is unclear. The outcomes of this study also show that the benefits of the MBA extend beyond compensation. Overall, participants have a positive perception of the competencies which they developed as well as the relationships and networks they acquired in the MBA program. Further research that compares these outcomes to the perceptions of business professionals who do not possess the MBA credential would contribute to the overall assessment of the return on the investment in an MBA.

Final thoughts. The key takeaway from this study is that the MBA has a clear return on investment in terms of compensation, competency growth, and relationship development. However, despite these positive outcomes, the results show that men have achieved greater benefit from the MBA than women in virtually every aspect examined by this study. This continued gender disparity raises questions and reveals opportunities to reexamine MBA admissions standards, curriculum, pedagogy, rankings measures, and

MBA recruiting and hiring practices. These questions lead directly to the future research paths which should provide greater perspective on the findings from the current study. Further research and communication of the experience and outcomes of the MBA will foster greater inclusivity, ensure the longevity of the degree, and provide continued value to graduates and the profession of management.

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Appendix A

Purposive Sampling: Forté Foundation Member Schools

United States MBA Programs	
Midwest	
Indiana University - Bloomington (Kelley School of Business)	Bloomington, IN
Michigan State University (Broad College of Business)	East Lansing, MI
Northwestern (Kellogg School of Management)	Evanston, IL
Ohio State University (Fisher College of Business)	Columbus, OH
University of Chicago (Booth School of Business)	Chicago, IL
University of Illinois Urbana-Champaign (College of Business)	Urbana-Champaign, IL
University of Michigan (Ross School of Business)	Ann Arbor, MI
University of Minnesota - Twin Cities (Carlson School of Management)	Minneapolis, MN
University of Notre Dame (Mendoza College of Business)	South Bend, IN
Washington University in St. Louis (Olin Business School)	St. Louis, MO
Northeast	
Babson College (F.W. Olin Graduate School of Business)	Wellesley, MA
Carnegie Mellon University (Tepper School of Business)	Pittsburgh, PA
Columbia Business School	New York, NY
Cornell University (Samuel Curtis Johnson Graduate School of Management)	Ithaca, NY
Dartmouth College (Tuck School of Business)	Hanover, NH
George Washington University (School of Business)	Washington, DC
Georgetown University (McDonough School of Business)	Washington, DC
Harvard Business School	Cambridge, MA
Massachusetts Institute of Technology (Sloan)	Cambridge, MA
New York University (Stern School of Business)	New York, NY
University of Maryland (Smith School of Business)	College Park, MD
University of Pennsylvania (The Wharton School)	Philadelphia, PA
University of Rochester (Simon Business School)	Rochester, NY
Yale School of Management	New Haven, CT

United States MBA Programs (continued)	
Southeast	
Duke University (The Fuqua School of Business)	Durham, NC
Emory University (Goizueta Business School)	Atlanta, GA
University of North Carolina (Kenan-Flagler Business School)	Chapel Hill, NC
University of Virginia (Darden School of Business)	Charlottesville, VA
Vanderbilt University (Owen Graduate School of Management)	Nashville, TN
Southwest	
Arizona State University (W.P. Carey School of Business)	Tempe, AZ
Rice University (Jesse H. Jones Graduate School of Business)	Houston, TX
Southern Methodist University (Cox School of Business)	Dallas, TX
University of Texas at Austin (McCombs School of Business)	Austin, TX
West	
Mills College (Lorry I. Lokey Graduate School of Business)	Oakland, CA
University of California - Berkeley (Haas School of Business)	Berkeley, CA
University of California - Los Angeles (Anderson School of Management)	Los Angeles, CA
University of Southern California (Marshall School of Business)	Los Angeles, CA
International MBA Programs	
HEC-Paris	Paris, France
IE Business School	Madrid, Spain
IESE Business School	Barcelona, Spain
INSEAD	France; Singapore; Abu Dhabi
London Business School	London, United Kingdom
Queen's School of Business	Kingston, Ontario, Canada
University of Oxford (Saïd Business School)	Oxford, United Kingdom
University of Toronto (Rotman School of Management)	Toronto, Ontario, Canada
York University (Schulich School of Business)	Toronto, Ontario, Canada

Appendix B

MBA Program Enrollment, Participating Business Schools

U.S. MBA Programs	Bloomberg Ranking: FT MBA U.S.	Estimated Enrollment 2005-2015 *	One or More Study Participants
Arizona State (W.P. Carey)	49	825	No
Babson College (F.W. Olin)	N/R	1914	Yes
Carnegie Mellon (Tepper)	18	2294	Yes
Chicago (Booth)	2	6490	Yes
Columbia	6	7079	Yes
Cornell (Johnson)	16	2943	Yes
Dartmouth (Tuck)	14	3097	Yes
Duke (Fuqua)	8	4917	Yes
Emory (Goizueta)	15	1898	Yes
George Washington	40	990	Yes
Georgetown (McDonough)	26	2855	Yes
Harvard	1	10296	Yes
Illinois	57	880	Yes
Indiana (Kelley)	28	2046	Yes
Maryland (Smith)	33	1045	Yes
Michigan (Ross)	10	4598	Yes
Michigan State (Broad)	30	847	Yes
Mills College (Lokey)	N/R	358	Yes
Minnesota (Carlson)	45	1073	Yes
MIT (Sloan)	4	4433	Yes
North Carolina (Kenan-Flagler)	17	3069	Yes
Northwestern (Kellogg)	3	6996	Yes
Notre Dame (Mendoza)	31	1661	Yes
NYU (Stern)	24	4395	Yes
Ohio State (Fisher)	39	1210	No
Pennsylvania (Wharton)	5	9433	Yes
Rice (Jones)	19	1238	Yes
Rochester (Simon)	36	1150	Yes
Southern Methodist (Cox)	32	1133	Yes
Texas at Austin (McCombs)	21	2987	Yes
UC Berkeley (Haas)	9	2761	Yes
UCLA (Anderson)	13	3988	Yes
USC (Marshall)	25	2409	Yes
Vanderbilt (Owen)	34	1903	Yes
Virginia (Darden)	12	3608	Yes
Washington in St. Louis (Olin)	35	1540	Yes
Yale	11	3674	Yes
Total Estimated U.S. Enrollment, Participating Schools = 114,026			
European MBA Programs	**Bloomberg Ranking: FT MBA International**	**Estimated Enrollment 2005-2015 ** **	
HEC-Paris	10	2481	Yes
IE Business School	4	2420	No
INSEAD	3	5599	Yes
London Business School	2	4411	Yes
IESE Business School	7	935	Yes
Queens School of Business	9	2420	Yes
University of Toronto	18	3861	No
Oxford University	6	1320	No
York University	N/R	1496	No
Total Estimated European Enrollment, Participating Schools = 24,943			
Total Estimated Population of Sample Schools = 138,969			

Note: N/R = Not Ranked

* Enrollment numbers provided by U.S. News and World Report (http://grad-schools.usnews.rankingsandreviews.com)

** Enrollment numbers provided by Poets and Quants (http://poetsandquants.com/)

Appendix C

Survey Instrument

MBA Experience and Outcomes

Q1 The Experience and Outcomes of MBAs
Thank you for your participation in this research study examining the experience and outcomes achieved by MBA students. You were selected as a possible participant because you are either a Forté Fellow alumna, an alumnus of one of the Forté Foundation's partner MBA programs, or an alumnus of a program that is part of another MBA consortium or organization. Please review this form and ask any questions you may have before proceeding with this survey. In cooperation with the Forté Foundation, this study is being conducted by Michelle Wieser, Ph.D. candidate in Higher Education at the University of Minnesota and former board member of the Forté Foundation. To participate in this study, click on the "start survey" button below. The survey is designed to guide you to the questions that are most pertinent to you. The survey will take 20-25 minutes to complete. You will know how far you have progressed by the status bar at the top of your screen. If you cannot complete the survey at one time, you can return to this same hyperlink on or before May 22nd to complete it. Participation in this study is voluntary. Your decision on whether or not to participate will not affect your current or future relations with your MBA program, the Forté Foundation, or the primary researcher. If you decide to participate, you are free to not answer any question or withdraw from participation at any time. The records of this study will be kept private. Any report that is published after the study will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. If you have any questions about this study, please contact the primary researcher, Michelle Wieser, at mchevali@umn.edu or 651-690-6355. If you have questions or concerns and would like to speak with someone other than the researcher, you may contact the Research Subjects' Advocate Line at 612-625-1650.

Q2 Thank you for your support! By continuing on with the survey, you are indicating consent to participate. Click on "start survey" on the bottom of this screen to get started.

Q3 Section 1

Q4 From which MBA program did you graduate?

- ❍ Arizona State University (W.P. Carey School of Business) (1)
- ❍ Babson College (F.W. Olin Graduate School of Business) (2)
- ❍ Carnegie Mellon University (Tepper School of Business) (3)
- ❍ Columbia Business School (4)
- ❍ Cornell University (Samuel Curtis Johnson Graduate School of Management) (5)
- ❍ Dartmouth College (Tuck School of Business) (6)
- ❍ Duke University (The Fuqua School of Business) (7)
- ❍ Emory University (Goizueta Business School) (8)
- ❍ George Washington University (School of Business) (9)
- ❍ Georgetown University (McDonough School of Business) (10)
- ❍ Harvard Business School (11)
- ❍ HEC-Paris (12)
- ❍ IE Business School (13)
- ❍ IESE Business School (14)
- ❍ Indiana University - Bloomington (Kelley School of Business) (15)
- ❍ INSEAD (16)
- ❍ London Business School (17)
- ❍ Massachusetts Institute of Technology (Sloan) (18)
- ❍ Michigan State University (Broad College of Business) (19)
- ❍ Mills College (Lorry I. Lokey Graduate School of Business) (20)
- ❍ New York University (Stern School of Business) (21)
- ❍ Northwestern (Kellogg School of Management) (22)
- ❍ Ohio State University (Fisher College of Business) (23)
- ❍ Queen's School of Business (24)
- ❍ Rice University (Jesse H. Jones Graduate School of Business) (25)
- ❍ Southern Methodist University (Cox School of Business) (26)
- ❍ University of California - Berkeley (Haas School of Business) (27)
- ❍ University of California - Los Angeles (Anderson School of Management) (28)
- ❍ University of Chicago (Booth School of Business) (29)
- ❍ University of Illinois Urbana-Champaign (College of Business) (30)
- ❍ University of Maryland (Smith School of Business) (31)
- ❍ University of Michigan (Ross School of Business) (32)
- ❍ University of Minnesota - Twin Cities (Carlson School of Management) (33)
- ❍ University of North Carolina (Kenan-Flagler Business School) (34)
- ❍ University of Notre Dame (Mendoza College of Business) (35)
- ❍ University of Oxford (Saïd Business School) (36)
- ❍ University of Pennsylvania (The Wharton School) (37)
- ❍ University of Rochester (Simon Business School) (38)
- ❍ University of Southern California (Marshall School of Business) (39)

- ❍ University of Texas at Austin (McCombs School of Business) (40)
- ❍ University of Toronto (Rotman School of Management) (41)
- ❍ University of Virginia (Darden School of Business) (42)
- ❍ Vanderbilt University (Owen Graduate School of Management) (43)
- ❍ Washington University in St. Louis (Olin Business School) (44)
- ❍ Yale School of Management (45)
- ❍ York University (Schulich School of Business) (46)
- ❍ Other (47)

Q5 Did you attend a full-time MBA program?
- ❍ Yes (1)
- ❍ No (2)

Answer If Did you attend a full-time MBA program? No Is Selected

Q6 What was the format of your MBA program?
- ❍ Executive (1)
- ❍ Part-Time (Non-Cohort) (2)
- ❍ Part-Time/Professional (Cohort) (3)
- ❍ Other (please specify) (4) _____

Q7 Which year did you complete your MBA?
- ❍ Before 2000 (1)
- ❍ 2000 (2)
- ❍ 2001 (3)
- ❍ 2002 (4)
- ❍ 2003 (5)
- ❍ 2004 (6)
- ❍ 2005 (7)
- ❍ 2006 (8)
- ❍ 2007 (9)
- ❍ 2008 (10)
- ❍ 2009 (11)
- ❍ 2010 (12)
- ❍ 2011 (13)
- ❍ 2012 (14)
- ❍ 2013 (15)
- ❍ 2014 (16)
- ❍ 2015 (17)
- ❍ I have not yet graduated (18)

Q8 What was your age at the time of completing your MBA?

- ❍ 21 or younger (1)
- ❍ 22 (2)
- ❍ 23 (3)
- ❍ 24 (4)
- ❍ 25 (5)
- ❍ 26 (6)
- ❍ 27 (7)
- ❍ 28 (8)
- ❍ 29 (9)
- ❍ 30 (10)
- ❍ 31 (11)
- ❍ 32 (12)
- ❍ 33 (13)
- ❍ 34 (14)
- ❍ 35 (15)
- ❍ 36 (16)
- ❍ 37 (17)
- ❍ 38 (18)
- ❍ 39 (19)
- ❍ 40 (20)
- ❍ 41 (21)
- ❍ 42 (22)
- ❍ 43 (23)
- ❍ 44 (24)
- ❍ 45 (25)
- ❍ 46 (26)
- ❍ 47 (27)
- ❍ 48 (28)
- ❍ 49 (29)
- ❍ 50 or older (30)

Q9 How many years of work experience did you have at the time you started your MBA program?

- ❍ 0 (1)
- ❍ 1 (2)
- ❍ 2 (3)
- ❍ 3 (4)
- ❍ 4 (5)
- ❍ 5 (6)
- ❍ 6 (7)
- ❍ 7 (8)

- ❍ 8 (9)
- ❍ 9 (10)
- ❍ 10 (11)
- ❍ More than 10 (12)

Q10 What was your total annual compensation (including base salary, guaranteed bonuses, and commissions) in U.S. dollars for your last full-time position prior to entering your MBA program? Please do not enter dollar sign ($).

Q11 What was your total (verbal and quantitative) GMAT score?
- ❍ 800 (1)
- ❍ 790 (2)
- ❍ 780 (3)
- ❍ 770 (4)
- ❍ 760 (5)
- ❍ 750 (6)
- ❍ 740 (7)
- ❍ 730 (8)
- ❍ 720 (9)
- ❍ 710 (10)
- ❍ 700 (11)
- ❍ 690 (12)
- ❍ 680 (13)
- ❍ 670 (14)
- ❍ 660 (15)
- ❍ 650 (16)
- ❍ 640 (17)
- ❍ 630 (18)
- ❍ 620 (19)
- ❍ 610 (20)
- ❍ 600 (21)
- ❍ 590 (22)
- ❍ 580 (23)
- ❍ 570 (24)
- ❍ 560 (25)
- ❍ 550 (26)
- ❍ 540 or lower (27)

Q12 What was your cumulative undergraduate grade point average (GPA) on a 4.0 point scale? Round to the nearest tenth.
- ❍ 4.0 or higher (1)
- ❍ 3.9 (2)

- 3.8 (3)
- 3.7 (4)
- 3.6 (5)
- 3.5 (6)
- 3.4 (7)
- 3.3 (8)
- 3.2 (9)
- 3.1 (10)
- 3.0 (11)
- 2.9 (12)
- 2.8 (13)
- 2.7 (14)
- 2.6 (15)
- 2.5 or below (16)
- I don't recall (17)
- My program did not report grade point averages (18)

Q13 What was your cumulative MBA grade point average (GPA) on a 4.0 point scale? Round to the nearest tenth.

- 4.0 or higher (1)
- 3.9 (2)
- 3.8 (3)
- 3.7 (4)
- 3.6 (5)
- 3.5 (6)
- 3.4 (7)
- 3.3 (8)
- 3.2 (9)
- 3.1 (10)
- 3.0 (11)
- 2.9 (12)
- 2.8 (13)
- 2.7 (14)
- 2.6 (15)
- 2.5 or below (16)
- I don't recall (17)
- My program did not report grade point averages (18)

Q14 What was your primary career goal upon entering the MBA program?

- Undecided at the time of entering the MBA program (1)
- To accelerate your career along the same or similar career function and/or industry as your pre-MBA career (2)

- ❍ To change careers into a different function and/or industry (3)
- ❍ To start your own business (4)
- ❍ Do not recall (5)

Q15 What were your primary motivations for pursuing the MBA? Select up to 6.

- ❑ Increase job opportunities (1)
- ❑ Increase my salary and earning potential (2)
- ❑ Remain or become marketable for the long term (3)
- ❑ Obtain a job at a more senior level of the organization (4)
- ❑ Pursue an entrepreneurial opportunity (5)
- ❑ Develop key business competencies (6)
- ❑ Develop leadership skills (7)
- ❑ Develop management skills (8)
- ❑ Be more effective in my future job (9)
- ❑ Broaden my global business knowledge (10)
- ❑ Earn the respect of others in business (11)
- ❑ Gain new experiences through internships and/or practicums (12)
- ❑ Achieve a personal goal of mine (13)
- ❑ Please my family and friends (14)
- ❑ Build a broader network (15)
- ❑ Have a greater impact on the community (16)
- ❑ Become affiliated with a prestigious school (17)
- ❑ Other (please specify) (18) _____

Q16 Section 2

Q17 In which of the following experiences or activities did you participate while in your MBA program? Select all that apply.

- ❑ Internship (1)
- ❑ Practicum (2)
- ❑ Teaching assistant (3)
- ❑ Research assistant (4)
- ❑ Forté Fellow (5)
- ❑ Consortium Fellow (6)
- ❑ MLT Fellow (16)
- ❑ Toigo Fellow (17)
- ❑ Athletics (7)
- ❑ Student club member (8)
- ❑ Student club officer (9)
- ❑ Study abroad (10)
- ❑ Academic or case competition (11)
- ❑ Volunteer (12)

- ❑ Part-time work outside of school (13)
- ❑ Joint degree study (15)
- ❑ Military or reserve service (14)

Answer If In which of the following experiences or activities did you participate while in your MBA program... Forté Fellow Is Selected

Q18 How valuable was your experience as a Forté Fellow to your professional networking and post-MBA career advancement?

- ❍ Not Valuable (1)
- ❍ Somewhat Valuable (2)
- ❍ Valuable (3)
- ❍ Highly Valuable (4)

Answer If In which of the following experiences or activities did you participate while in your MBA program... Consortium Fellow Is Selected

Q19 How valuable was your experience as a Consortium Fellow to your professional networking and post-MBA career advancement?

- ❍ Not Valuable (1)
- ❍ Somewhat Valuable (2)
- ❍ Valuable (3)
- ❍ Highly Valuable (4)

Answer If In which of the following experiences or activities did you participate while in your MBA program... MLT Fellow Is Selected

Q20 How valuable was your experience as an MLT Fellow to your professional networking and post-MBA career advancement?

- ❍ Not Valuable (1)
- ❍ Somewhat Valuable (2)
- ❍ Valuable (3)
- ❍ Highly Valuable (4)

Answer If In which of the following experiences or activities did you participate while in your MBA program... Toigo Fellow Is Selected

Q21 How valuable was your experience as a Toigo Fellow to your professional networking and post-MBA career advancement?

- ❍ Not Valuable (1)
- ❍ Somewhat Valuable (2)
- ❍ Valuable (3)
- ❍ Highly Valuable (4)

Q22 What was your primary MBA concentration or specialization? Select up to two.

- ❑ Accounting (1)

- ❑ Entrepreneurship (2)
- ❑ Finance (3)
- ❑ General Management (4)
- ❑ Global Business (5)
- ❑ Healthcare Management (6)
- ❑ Human Resources (7)
- ❑ Information Technology (8)
- ❑ Marketing (9)
- ❑ Non-Profit Management (10)
- ❑ Operations/Supply Chain (11)
- ❑ Strategy (12)
- ❑ Other (please specify) (13) _____

Q23 The following questions explore the impact of your MBA experience on your development across five key groups of competencies: communication, leadership, management, teamwork, and technical. Please indicate the extent to which you agree or disagree with the statements below:

Q24 Because of the MBA, I have stronger skills in:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
1-on-1 oral communication (1)	❍	❍	❍	❍	❍
Group oral communication and presentations (2)	❍	❍	❍	❍	❍
Written communication (3)	❍	❍	❍	❍	❍
Negotiation (4)	❍	❍	❍	❍	❍

Q25 The MBA enhanced my ability to:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Lead a cross-functional team (1)	❍	❍	❍	❍	❍
Leverage differences across team members and lead inclusively (2)	❍	❍	❍	❍	❍
Demonstrate cultural awareness and sensitivity (3)	❍	❍	❍	❍	❍
Resolve team conflict (4)	❍	❍	❍	❍	❍

Q26 The MBA developed my leadership skills in the following areas:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Establishing a vision and strategy (1)	❍	❍	❍	❍	❍
Using creativity and innovation to solve problems (2)	❍	❍	❍	❍	❍
Motivating others (3)	❍	❍	❍	❍	❍
Leading ethically and responsibly (4)	❍	❍	❍	❍	❍
Leading in a global business environment (5)	❍	❍	❍	❍	❍

Q27 The MBA enhanced my skills in:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Managing people (1)	❍	❍	❍	❍	❍
Managing projects (2)	❍	❍	❍	❍	❍
Making decisions (3)	❍	❍	❍	❍	❍
Managing my career (4)	❍	❍	❍	❍	❍

Q28 Because of the MBA, I have stronger:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Quantitative analysis skills (1)	❍	❍	❍	❍	❍
Qualitative analysis skills (2)	❍	❍	❍	❍	❍
Core business knowledge (3)	❍	❍	❍	❍	❍
Knowledge of my MBA concentration or specialization (4)	❍	❍	❍	❍	❍

Q29 The following three questions explore the value of the relationships and connections you built while in your MBA program:

Q30 How valuable were your relationships and connections with MBA faculty in helping you:

	Not Valuable (1)	Somewhat Valuable (2)	Valuable (3)	Highly Valuable (4)	N/A (5)
Develop business skills that prepared you for your post-MBA career (1)	❍	❍	❍	❍	❍
Gain practical experience that prepared you for your post-MBA career (2)	❍	❍	❍	❍	❍
Facilitate connections that helped you expand your professional network (3)	❍	❍	❍	❍	❍
Develop your career management skills (4)	❍	❍	❍	❍	❍
Build personal and social connections (5)	❍	❍	❍	❍	❍

Q31 How valuable were your relationships and connections with MBA program staff in helping you:

	Not Valuable (1)	Somewhat Valuable (2)	Valuable (3)	Highly Valuable (4)	N/A (5)
Develop business skills that prepared you for your post-MBA career (1)	❍	❍	❍	❍	❍
Gain practical experience that prepared you for your post-MBA career (2)	❍	❍	❍	❍	❍
Facilitate connections that helped you expand your professional network (3)	❍	❍	❍	❍	❍
Develop your career management skills (4)	❍	❍	❍	❍	❍
Build personal and social connections (5)	❍	❍	❍	❍	❍

Q32 How valuable were your relationships and connections with peers in your MBA program in helping you:

	Not Valuable (1)	Somewhat Valuable (2)	Valuable (3)	Highly Valuable (4)	N/A (5)
Develop business skills that prepared you for your post-MBA career (1)	❍	❍	❍	❍	❍
Gain practical experience that prepared you for your post-MBA career (2)	❍	❍	❍	❍	❍
Facilitate connections that helped you expand your professional network (3)	❍	❍	❍	❍	❍
Develop your career management skills (4)	❍	❍	❍	❍	❍
Build personal and social connections (5)	❍	❍	❍	❍	❍

Q33 Indicate the degree to which you agree or disagree with each of the statements below:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I have a more extensive professional network as result of obtaining my MBA (1)	❍	❍	❍	❍	❍
I am more respected by others in business (2)	❍	❍	❍	❍	❍
My alumni affiliation with my MBA program has increased my professional status (3)	❍	❍	❍	❍	❍
I am more aware of diversity and inclusivity in business (4)	❍	❍	❍	❍	❍
I have a greater ability to work with people from different cultures (5)	❍	❍	❍	❍	❍

Q34 Please share any further insights or comments about the relationships and networks you built during your MBA program.

Q35 At what point during or after your MBA program did you accept a full-time job offer?
- ❍ Greater than 12 months before graduation (1)
- ❍ 6 to 12 months before graduation (2)
- ❍ 3 to 5 months before graduation (3)
- ❍ 1 to 2 months before graduation (4)
- ❍ Within one week of graduation (5)
- ❍ 1 to 2 months after graduation (6)
- ❍ 3 to 5 months after graduation (7)
- ❍ Greater than 6 months after graduation (8)

Q36 What was your total annual compensation (including base salary, guaranteed bonuses, and commissions) in U.S. dollars for your first full-time post-MBA position? Please do not enter dollar sign ($).

Q37 Did your first post-MBA job represent a professional function or industry change from your most recent pre-MBA job?
- ❍ Job function change (1)
- ❍ Industry change (2)
- ❍ Both a job function and an industry change (3)
- ❍ Neither (4)

Q38 Did you feel supported by your program throughout your career search?
- ❍ No (1)
- ❍ Somewhat (2)
- ❍ Yes (3)

Answer If Did you feel supported by your program throughout your career search? Somewhat Is Selected Or Did you feel supported by your program throughout your career search? Somewhat Is Selected

Q39 What tools, resources, or other forms of support would have helped you feel more supported in your career search?

Q40 What is your current employment status?
- ❍ Employed full-time (40 hours per week or more) for an organization (1)
- ❍ Employed part-time (less than 40 hours per week) for an organization (2)
- ❍ Self-employed (3)
- ❍ Unemployed - seeking a new position (4)
- ❍ Unemployed - not seeking a new position (5)

- ❍ Student (6)
- ❍ Homemaker (7)
- ❍ Military (8)
- ❍ Retired (9)
- ❍ Other (10)

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q41 Which of the following position titles most closely match your current level within your organization?

- ❍ Intern (1)
- ❍ Entry Level (2)
- ❍ Analyst (3)
- ❍ Associate (4)
- ❍ Manager (5)
- ❍ Senior Manager (6)
- ❍ Director (7)
- ❍ Vice President (8)
- ❍ Senior Vice President (9)
- ❍ Partner (10)
- ❍ Chief Financial Officer (CFO) (11)
- ❍ Chief Information Officer (CIO) (12)
- ❍ Chief Marketing Officer (CMO) (13)
- ❍ Chief Operating Officer (COO) (14)
- ❍ Chief Technology Officer (CTO) (15)
- ❍ Other C-Level Executive (16)
- ❍ President or CEO (17)
- ❍ Owner (18)
- ❍ Other (19)

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q42 What is your current annual total compensation (including base salary, guaranteed bonuses, and commissions) in U.S. dollars? Please do not enter dollar sign ($).

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment

status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q43 How many other employees do you directly manage?

- I do not manage other employees (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 (8)
- 8 (9)
- 9 (10)
- 10 (11)
- More than 10 (12)

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q44 Would you describe your current role within your organization as a line role or a staff role?

- Line role (directly responsible for producing and delivering the firm's products and services) (1)
- Staff role (assist line functions in achieving organizational goals through advisory or support functions) (2)
- I'm not sure (3)

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q45 In which professional function do you currently work?

- Accounting (1)
- Consulting (2)
- Finance (3)
- General Management (4)
- Human Resources (5)
- Information Technology (6)
- Marketing (7)
- Operations/Supply Chain (8)

- ❍ Sales (9)
- ❍ Other (please specify) (10) _____

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q46 In which industry do you currently work?

- ❍ Consulting (1)
- ❍ Consumer Packaged Goods (2)
- ❍ Energy (3)
- ❍ Financial Services (4)
- ❍ Government (5)
- ❍ Healthcare (products and services) (6)
- ❍ Hospitality (7)
- ❍ Manufacturing (8)
- ❍ Media/Entertainment/Sports (9)
- ❍ Non-Profit (10)
- ❍ Real-Estate (11)
- ❍ Retail (12)
- ❍ Technology (13)
- ❍ Transportation and Logistics (14)
- ❍ Other (please specify) (15) _____

Q47 How many times have you changed companies since your first post-MBA company?

- ❍ I have not changed companies (1)
- ❍ 1 (2)
- ❍ 2 (3)
- ❍ 3 (4)
- ❍ 4 (5)
- ❍ 5 (6)
- ❍ 6 or more (7)
- ❍ Not applicable - I own my own business (8)
- ❍ Not applicable - other (9) _____

Answer If What is your current employment status? Employed full-time (40 hours per week or more) for an organization Is Selected Or What is your current employment status? Employed part-time (less than 40 hours per week) for an organization Is Selected Or What is your current employment status? Self-employed Is Selected

Q48 Do you plan to look for a new job (outside of your current employer) in the next 12 months?
- ❍ Definitely yes (1)
- ❍ Probably yes (2)
- ❍ I'm not sure (3)
- ❍ Probably not (4)
- ❍ Definitely not (5)

Q49 How many promotions have you received since your first post-MBA job (either within the same company or by moving to a new company)?
- ❍ I have not received a promotion (1)
- ❍ 1 (2)
- ❍ 2 (3)
- ❍ 3 (4)
- ❍ 4 (5)
- ❍ 5 (6)
- ❍ More than 5 (7)
- ❍ Not applicable - I own my own business (8)
- ❍ Not applicable - other (9)

Q50 Looking ahead five years from now, what is your ideal job title?
- ❍ Analyst (1)
- ❍ Associate (2)
- ❍ Manager (3)
- ❍ Senior Manager (4)
- ❍ Director (5)
- ❍ Vice President (6)
- ❍ Senior Vice President (7)
- ❍ Partner (8)
- ❍ Chief Financial Officer (CFO) (9)
- ❍ Chief Information Officer (CIO) (10)
- ❍ Chief Marketing Officer (CMO) (11)
- ❍ Chief Operating Officer (COO) (12)
- ❍ Chief Technology Officer (CTO) (13)
- ❍ Other C-Level Executive (14)
- ❍ President or CEO (15)
- ❍ Owner (16)
- ❍ Other (17)

Q51 Have you taken time out of the work force since completing your MBA?
- ❍ Yes (1)
- ❍ No (2)

Answer If Have you taken time out of the work force since completing your MBA? Yes Is Selected

Q52 What were the reasons? Select all that apply.

- ❍ Parental leave (1)
- ❍ Caring for an ill family member (2)
- ❍ Stayed at home with children (3)
- ❍ Military deployment (4)
- ❍ Transitioning jobs (5)
- ❍ Other (please specify) (6) _____

Answer If Have you taken time out of the work force since completing your MBA? Yes Is Selected

Q53 What is the total amount of time you've taken out of the work force since completing your MBA?

- ❍ Less than 3 months (1)
- ❍ 4 to 6 months (2)
- ❍ 7 to 12 months (3)
- ❍ 13 to 24 months (4)
- ❍ 25 to 36 months (5)
- ❍ More than 36 months (6)

Q54 Overall, how satisfied are you with each of the following aspects of your career?

	Very Dissatisfied (1)	Dissatisfied (2)	Neither Satisfied nor Dissatisfied (3)	Satisfied (4)	Very Satisfied (5)	N/A (6)
Your current role (1)	❍	❍	❍	❍	❍	❍
Your current organization (2)	❍	❍	❍	❍	❍	❍
Your current level within the organization (3)	❍	❍	❍	❍	❍	❍

The number of people you directly manage (4)	❍	❍	❍	❍	❍	❍
Your current salary (5)	❍	❍	❍	❍	❍	❍
Your career progression since obtaining your MBA (6)	❍	❍	❍	❍	❍	❍
The investment in your MBA education (7)	❍	❍	❍	❍	❍	❍

Q55 The following three questions explore the impact of your MBA experience on your personal development, confidence, and belief in yourself. Please indicate the extent to which you agree or disagree with each of the statements below.

Q56 Based upon my personal definition of success, I believe I have achieved success in the following areas:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Professional/Career (1)	❍	❍	❍	❍	❍
Academic (2)	❍	❍	❍	❍	❍
Personal (3)	❍	❍	❍	❍	❍

Q57 Because of the MBA:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I have greater self-confidence (1)	❍	❍	❍	❍	❍
I have better job prospects for the future (2)	❍	❍	❍	❍	❍
I believe that I will achieve my long-term professional goals (3)	❍	❍	❍	❍	❍
I have the business skills needed to continue to grow my career (4)	❍	❍	❍	❍	❍
I have greater appreciation for the global nature of business (5)	❍	❍	❍	❍	❍

Q58 If I had to do it all over again:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I would choose to pursue the MBA (1)	❍	❍	❍	❍	❍
I would choose to attend the same MBA program (2)	❍	❍	❍	❍	❍

Q59 This question explores your views on business and equality in the workplace. Indicate the extent to which you agree or disagree with each of the statements below:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Women and men have achieved equality in the workplace (1)	❍	❍	❍	❍	❍
My experience in business closely matches what I thought it would be (2)	❍	❍	❍	❍	❍
I am optimistic about the future of business (3)	❍	❍	❍	❍	❍
I have never felt disadvantaged in the	❍	❍	❍	❍	❍

workplace because of my gender (4)					

Q60 Section 3

Q61 What is your gender identity?
- ❍ Male (1)
- ❍ Female (2)
- ❍ Transgender (3)
- ❍ Other (4) _____

Q62 Which of the following best represents your racial or ethnic heritage. Choose all that apply.
- ❑ Non-Hispanic White or Euro-American (1)
- ❑ Black, Afro-Caribbean, or African American (2)
- ❑ Latin or Hispanic American (3)
- ❑ Asian American (4)
- ❑ South Asian or Indian American (5)
- ❑ Middle Eastern or Arab American (6)
- ❑ Native American or Alaskan Native (7)
- ❑ European (8)
- ❑ Asian (9)
- ❑ African (10)
- ❑ Pacific Islander (11)
- ❑ Other (please specify) (12) _____

Q63 What is your current marital status?
- ❍ Single - never married (1)
- ❍ Committed relationship (2)
- ❍ Engaged (3)
- ❍ Married (4)
- ❍ Domestic partnership (5)
- ❍ Divorced or separated (6)
- ❍ Widowed (7)

Q64 What was your marital status for the majority of time you were in your MBA program?
- ❍ Single - never married (1)
- ❍ Committed relationship (2)
- ❍ Engaged (3)
- ❍ Married (4)

- ❍ Domestic partnership (5)
- ❍ Divorced or separated (6)
- ❍ Widowed (7)

Q65 Do you currently have any dependent children age 18 or younger?
- ❍ Yes (1)
- ❍ No (2)

Answer If Do you currently have any children? Yes Is Selected

Q66 How many children do you have?
- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ More than 5 (6)

Answer If Do you currently have any dependent children age 18 or younger? Yes Is Selected

Q67 Who primarily cares for your child/children during work hours?
- ❍ I am a stay-at-home parent (1)
- ❍ My spouse or significant other (2)
- ❍ Another family member (3)
- ❍ A daycare center or pre-school (4)
- ❍ An in-home childcare provider (5)
- ❍ A nanny (6)
- ❍ Childcare is provided at my employer (7)
- ❍ My children are in school (with or without before/after care) (8)
- ❍ My children are old enough to care for themselves (9)
- ❍ Other (please specify) (10) _____

Q68 Did you have any dependent children age 18 or younger while you were in your MBA program?
- ❍ Yes (1)
- ❍ No (2)

Answer If Did you have any dependent children age 18 or younger while you were in your MBA program? Yes Is Selected

Q69 How many children did you have while you were in your MBA program?
- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)

- 4 (4)
- 5 (5)
- More than 5 (6)

Q70 Do you currently live in the United States?

- Yes (1)
- No (2)

Answer If Do you currently live in the United States? Yes Is Selected

Q71 In which U.S. state do you live?

- Alabama (1)
- Alaska (2)
- Arizona (3)
- Arkansas (4)
- California (5)
- Colorado (6)
- Connecticut (7)
- Delaware (8)
- District of Columbia (9)
- Florida (10)
- Georgia (11)
- Hawaii (12)
- Idaho (13)
- Illinois (14)
- Indiana (15)
- Iowa (16)
- Kansas (17)
- Kentucky (18)
- Louisiana (19)
- Maine (20)
- Maryland (21)
- Massachusetts (22)
- Michigan (23)
- Minnesota (24)
- Mississippi (25)
- Missouri (26)
- Montana (27)
- Nebraska (28)
- Nevada (29)
- New Hampshire (30)
- New Jersey (31)
- New Mexico (32)

- New York (33)
- North Carolina (34)
- North Dakota (35)
- Ohio (36)
- Oklahoma (37)
- Oregon (38)
- Pennsylvania (39)
- Rhode Island (40)
- South Carolina (41)
- South Dakota (42)
- Tennessee (43)
- Texas (44)
- Utah (45)
- Vermont (46)
- Virginia (47)
- Washington (48)
- West Virginia (49)
- Wisconsin (50)
- Wyoming (51)

Answer If Do you currently live in the United States? No Is Selected

Q72 In which country do you currently live?

Q73 Thank you for your time and insights!

Appendix D

Survey Subject Matter Review and Pilot Test

Subject Matter Expert Review

Email Invitation to Participate:

Hello [NAME],

It is with great enthusiasm that I'd like to invite you to provide input on my dissertation research through the University of Minnesota. I am collaborating with the Forté Foundation to conduct a large-scale study on the experience and outcomes of MBA students. I will be gathering input from Forté Fellows who completed their MBA studies between 2005 and 2015. I will also be surveying men and women from the same Forté Member schools (46 in total).

The goal of this research is to better understand the widely-accepted objective measures of success for MBA graduates, including pay and level in the organization; to investigate if key MBA input factors, such as work experience, academic credentials, and career goals, lead to post-MBA success; to describe any differences in outcomes that exist between men and women; and finally, to better understand the overall MBA environment and how it provides insight on outcomes achieved at graduation and beyond. Guiding this study are eight over-arching research questions.

Where I'd Love Your Input

This survey has been thoroughly reviewed by my dissertation committee and approved by the Institutional Research Board at the University of Minnesota. The next step is to conduct a brief pilot test to gather input from subject matter specialists (like you!) who work (or have worked) in the areas of MBA admissions, student affairs, and career services. I'd welcome your feedback. There are two options for review:

1. You can click through the actual survey via this link: SURVEY LINK. Feel free to move through it as though you are one of the actual participants. Don't worry - your responses will not be included once the real survey goes live.
2. Alternately, you can glance over the attached pdf version of the online survey that is attached to this email.

Either way, I've created a brief form for collecting any input, suggestions, or changes that you may have. Simply click on this link and let me know what you think:

http://goo.gl/forms/aucSnWZWbk

Your name and contact information are requested so that I know who has provided input and can thank you in my final dissertation. Thank you in advance for your participation and insights!

Michelle Wieser

Introduction to the Subject Matter Expert Survey Portal (Qualtrics)

Thank you for reviewing this survey as part of a pilot study. Your feedback and suggestions are important to this process.

If you choose to take the survey in the online format, it may be helpful for you to have a paper and pen handy to note any of your comments or suggestions as you're moving through the survey. To provide feedback, please click on this very brief form:

http://goo.gl/forms/aucSnWZWbk

Your comments will not be visible to anyone other than the primary researcher. Please include your name and other requested information so that I can properly thank you.

To review the survey online, click on the "start survey" button below. Do not worry about actually answering the questions, but if you'd like, you may take it from the perspective of one of the eventual participants. Your answers will not be recorded in the data, and will not be identifiable.

If you have any questions about this study, please contact the primary researcher, Michelle Wieser, at mchevali@umn.edu or 651-690-6355.

Feedback Form (Google Forms)

Subject Matter Expert Feedback: The Experience and Outcomes of MBAs

The purpose of this form is to capture feedback as part of a research pilot study from subject matter experts who work with MBA students (Admissions, Student Affairs, Career Services, and others). The entire survey can be accessed via this link:

http://stkate.az1.qualtrics.com/SE/?SID=SV_8IaAeagQXTkShYF

The questions most pertinent those who work with MBA students are Q13, Q14, Q15, Q16 Q41, Q42, but I welcome your feedback on any question in the survey. Thank you!

1. Please note any questions in the survey that were unclear or confusing:
2. For multiple choice questions, are there any options that should be added to (or eliminated from) the choices (please specify)?
3. Are there any questions you would suggest adding? If so, please note here:
4. Any other comments or suggestions?

Name
University or Organization
Title
Email Address
How many years have you worked with MBA students and at which institution(s)?

MBA Alumni Review

Email Invitation to Participate:

Hello [NAME],

It is with great enthusiasm that I'd like to invite you to provide input on my dissertation research through the University of Minnesota. I am collaborating with the Forté Foundation to conduct a large-scale study on the experience and outcomes of MBA students. I will be gathering input from Forté Fellows who completed their MBA studies between 2005 and 2015. I will also be surveying men and women from the same Forté Member schools (46 in total). This survey has been thoroughly reviewed by my dissertation committee and approved by the Institutional Research Board at the University of Minnesota. The next step is to review the survey with people who have been through MBA programs (like you!). Please click through the survey linked below and provide any feedback via the Google Form also linked below.

If you include your name and contact information on the feedback form, I will thank you in my final dissertation.

Survey Link: http://stkate.az1.qualtrics.com/SE/?SID=SV_9FiSQafOLpMzym1
Feedback Link: http://goo.gl/forms/mOjxaepaEX

Introduction to the MBA Alumni Survey Portal in Qualtrics

Thank you for reviewing this survey as part of a pilot study. Your feedback and suggestions are important to this process. I will gladly recognize your contribution in the acknowledgements section of my dissertation, and if you provide your name on the feedback form.

If you choose to take the survey in the online format, it may be helpful for you to have a paper and pen handy to note any of your comments or suggestions as you're moving through the survey. To provide feedback, please click on this very brief form:

http://goo.gl/forms/HSq2PYkM9A

Your comments will not be visible to anyone other than the primary researcher. Please include your name and other requested information so that I can properly thank you.

To review the survey online, click on the "start survey" button below. Do not worry about actually answering the questions, but if you'd like, you may take the full survey. Your answers will not be recorded in the data, and will not be identifiable.

If you have any questions about this study, please contact the primary researcher, Michelle Wieser, at mchevali@umn.edu or 651-690-6355.

Feedback Form (Google Forms)

MBA Alumni Feedback: The Experience and Outcomes of MBAs
The purpose of this form is to capture feedback as part of a research pilot study from individuals who are MBA graduates. The entire survey can be accessed via this link:

http://stkate.az1.qualtrics.com/SE/?SID=SV_9FiSQafOLpMzym1.

1. Please note any questions in the survey that were unclear or confusing:
2. For multiple choice questions, are there any options that should be added to (or eliminated from) the choices (please specify)?
3. Are there any questions you would suggest adding? If so, please note here:
4. Any other comments or suggestions?

Name
University or Organization
Title
Email Address
Which year did you complete your MBA?

Appendix E

Email Invitations to Survey Participants

Participant Email Outreach #1: Forté Foundation Fellow Alumnae

Email Title: We Invite You to Share Your Input on MBA Outcomes and Experiences

Dear [Name of Forté Fellow Alumna]

I am writing to day to ask for your participation in an exciting research initiative. We invite you to participate in a survey to better understand the experience and outcomes of MBA graduates. The survey has been designed by one of the Forté Foundation's former board members, Michelle Wieser, a doctoral candidate from the University of Minnesota, with the input and support of the Forté Foundation. As a Forté Fellow alumna, your input will be extremely valuable in gaining a comprehensive understanding of the outcomes that MBA graduates have achieved as a result of obtaining an MBA. We will share results in aggregate to our alumnae and the MBA community of schools and corporate partners.

The survey should take approximately 20-25 minutes to complete. To take the survey, simply click on this link and begin: SURVEY LINK The survey will remain open until April 30th. If you have difficulty accessing this link, please type the following link directly into your browser: http://stkate.az1.qualtrics.com/SE/?SID=SV_afRYn5eTehzVXBX

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personally identifiable information will be associated with your responses, and reports of findings will only be shared in aggregate. The Institutional Review Board at the University of Minnesota has reviewed and approved this survey. Should you have any questions or comments about this research, please feel free to contact me at elissa@fortéfoundation.org or 713-301-9039 or Michelle Wieser at mchevali@umn.edu or 314-308-1285.

Thank you in advance for your time and valuable contributions to this relevant and exciting research!

Participant Email Outreach #2: MBA Program Directors

Email Title: Your Participation Requested: Understanding MBA Outcomes and Experiences

Dear [Name of Program Director]

I am writing to ask for your participation in an exciting initiative. We would like to invite alumni who have graduated from [name of school/program] between 2005 and 2015 to participate in a survey to better understand the experience and outcomes of MBA graduates. The survey has been designed by one of the Forté Foundation's former board members, Michelle Wieser, a doctoral candidate in higher education from the University of Minnesota with the input and support of myself and the Forté Foundation. We are seeking to understand the experience and outcomes of MBA students, with a particular focus on differences and similarities in outcomes achieved by women and men. We have sent this survey to our own database of Forté fellow alumni, but would like to include the voice and perspective of a wider audience of alumni from our partner schools.

I have included a suggested email template below which includes the link to the survey. I have also attached the survey in pdf form if you'd like to see the questions. I am inviting you to distribute the email and survey link to the population of students who graduated from your full-time MBA program between 2005 and 2015. If 25 or more students from your program respond to the survey, we will provide you with a free benchmarking report of your school's outcomes as compared to the entire research study.

Should you have any questions or comments about this research, please feel free to contact me at Michelle Wieser at mchevali@umn.edu or 314-308-1285.

Email Template for Distribution to Alumni

Email Title: Your Participation is Requested: Understanding MBA Outcomes and Experiences

Dear [Name of Alumnus],

The Forté Foundation (http://www.fortefoundation.org) has requested your input via survey on your MBA experience and outcomes of MBA graduates. The survey has been designed by one of the Forté Foundation's former board members, Michelle Wieser, a doctoral candidate in higher education from the University of Minnesota, with the input and support of the Forté Foundation. We are seeking to understand the experience and impact of MBA students, with a particular focus on differences and similarities in outcomes achieved by women and men.

Your input will be extremely valuable in gaining a comprehensive understanding of the outcomes that MBA graduates have achieved as result of obtaining an MBA. Aggregate findings will be shared with the Forté Foundation's community of MBA programs and corporate partners.

The survey should take approximately 20-25 minutes to complete. To take the survey, simply click on this link and begin: SURVEY LINK The survey will remain open until April 30th. If you have difficulty accessing this link, please type the following link

directly into your browser:
http://stkate.az1.qualtrics.com/SE/?SID=SV_afRYn5eTehzVXBX

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personally identifiable information will be associated with your responses, and reports of findings will be shared only in aggregate. The Institutional Review Board at the University of Minnesota has reviewed and approved this survey. Should you have any questions or comments about this research, please feel free to contact Laurie Stewart at laurie@fortéfoundation.org or 412-559-9350 or Michelle Wieser at mchevali@umn.edu or 314-308-1285.

Thank you in advance for your time and valuable contributions to this relevant and exciting research!

Appendix F

Sub-Components of Scales

Sub-Components of Scales, Key Business and Professional Competencies

Sub-Component	Survey Question
Communication	Q24
1-on-1 oral communication	Q24(1)
Group oral communication and presentations	Q24(2)
Written communication	Q24(3)
Negotiation	Q24(4)
Teamwork	Q25
Lead a cross-functional team	Q25(1)
Leverage differences across team members	Q25(2)
Demonstrate cultural awareness and sensitivity	Q25(3)
Resolve team conflict	Q25(4)
Leadership	Q26
Establishing a vision and strategy	Q26(1)
Using creativity and innovation to solve problems	Q26(2)
Motivating others	Q26(3)
Leading ethically and responsibly	Q26(4)
Leading in a global business environment	Q26(5)
Management	Q27
Managing people	Q27(1)
Managing projects	Q27(2)
Making decisions	Q27(3)
Managing a career	Q27(4)
Analytics	Q28
Quantitative analysis skills	Q28(1)
Qualitative analysis skills	Q28(2)
Core business knowledge	Q28(3)
Knowledge of my MBA concentration	Q28 (4)

Sub-Components of Scales, Relationships and Networks

Sub-Component	Survey Question
Faculty	Q30
Develop business skills that prepared you for your post-MBA career	Q30(1)
Gain practical experience that prepared you for your post-MBA career	Q30(2)
Facilitate connections that helped expand your professional network	Q30(3)
Develop your career management skills	Q30(4)
Build personal and social connections	Q30(5)
Staff	Q31
Develop business skills that prepared you for your post-MBA career	Q31(1)
Gain practical experience that prepared you for your post-MBA career	Q31(2)
Facilitate connections that helped expand your professional network	Q31(3)
Develop your career management skills	Q31(4)
Build personal and social connections	Q31(5)
Peers	Q32
Develop business skills that prepared you for your post-MBA career	Q32(1)
Gain practical experience that prepared you for your post-MBA career	Q32(2)
Facilitate connections that helped expand your professional network	Q32(3)
Develop your career management skills	Q32(4)
Build personal and social connections	Q32(5)

Sub-Components of Scales, Benefits of Relationships and Networks

Sub-Component	Survey Question
I have a more extensive professional network as a result of obtaining my MBA	Q33(1)
I am more respected by others in business	Q33(2)
My alumni affiliation with my MBA program has increased my professional status	Q33(3)

Sub-Components of Scales, Full Intrinsic Scale and Associated Sub-Scales

Sub-Component	Survey Question(s)
Full Intrinsic Scale [A]	Q54, Q56, Q57
Career Satisfaction [B]	Q54
Satisfaction with current role	Q54(1)
Satisfaction with current organization	Q54(2)
Satisfaction with current level of the organization	Q54(3)
Satisfaction with the number of people managed	Q54(4)
Satisfaction with current compensation	Q54(5)
Satisfaction with career progression	Q54(6)
Assessment of Success	Q56
I believe I have achieved professional/career success	Q56(1)
I believe I have achieved academic success	Q56(2)
I believe I have achieved personal success	Q56(3)
Self-Concept	Q57
I have greater self-confidence	Q57(1)
I have better job prospects for the future	Q57(2)
I believe that I will achieve my long-term professional goals	Q57(3)
I have the business skills needed to continue to grow my career	Q57(4)

Note: [A] The full intrinsic scale includes all elements presented in this table. [B] Item Q54(7) satisfaction with the investment in the MBA was not included in the scale and was analyzed separately.

Sub-Components of Scales, Perceptions of Business and Equality

Sub-Component	Survey Question
Women and men have achieved equality in the workplace	Q59 (1)
My experience in business closely matches what I thought it would be	Q59(2)
I am optimistic about the future of business	Q59(3)
I have never felt disadvantaged in the workplace because of my gender	Q59(4)