Impact of MBA programs’ Business Analytics Breadth on Salary and Job Placement: The Role of University Ranking

Abstract

Although many business schools have started to offer business analytics programs and courses for their MBA students, there is a lack of understanding of how these efforts translate into job market gains for their graduates, and whether the playing field is level for all business schools. To bridge this gap, we use signaling theory to investigate the impacts of the business analytics breadth (BAB) level and university ranking of MBA programs on graduates’ future employment success in terms of salary and job placement. We collected and analyzed data on business analytics relevant courses offered by the top 89 business schools in the United States, as listed on bloomberg.com. Findings revealed the vital role of university ranking in determining the efficacy of BAB to produce job market gains for students; university ranking moderated the effect of business analytics offerings on post-graduation salary and job placement. These findings provide interesting insights for researchers and business schools interested in understanding the return on investment in business analytics programs.

Keywords: Business analytics breadth level, salary, job placement, university ranking, MBA, business analytics

1. Introduction

Analytics has become pervasive across industry sectors (Abbasi et al., 2016; Demirkan & Delen, 2013). Paralleling this trend, the demand for management workforce with expertise in analytics has been increasing and many business schools have added new programs and courses relevant to business analytics (Mitri & Palocsay, 2015). This was driven presumably by the assumption that to successfully utilize business analytics, managers need to be able to grasp analytical tools, know how to use them, and identify areas of business where these tools can add value (Lyytinen & Grover, 2017). Despite such large financial and time investments by business schools (Turel & Kapoor, 2016), the current literature lacks a deep understanding of the relationship between the breadth of business schools’ analytics offerings in MBA programs (operationalized in this study as the business analytics breadth (BAB) level) and graduates’ future employment. We seek to provide first strides toward bridging this gap in the current study.
Further delving into this research gap, we note that university rankings serve as a basis for perceptions of quality and prestige (Hazelkorn, 2015). We therefore also theorize on and examine the moderating role of university ranking on the relationship between BAB, job placement, and salary. To do so, we build on signaling theory (Spence, 1978), because this theory explains how employers evaluate job applicants based on signals their educational credentials transmit. We ultimately develop and test hypotheses to address the following research questions: (1) Does BAB impact job placement and salary? and (2) Does university ranking moderate the impact of BAB on job placement and salary?

We address these questions by collecting data from bloomberg.com and the ranked universities websites, developing BAB indices for top MBA programs in the United States (US), and analyzing the proposed model with Partial Least Square (PLS) techniques. The findings support our assertions; they help researchers to better understand the roles of BAB and university ranking in affecting student job market success in terms of salary and placement. In addition, the findings provide helpful guidelines for universities focusing on educating their MBA students in the area of business analytics.

2. Relevant literature

2.1. Business analytics breadth

Business analytics refers to the “extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions” (Davenport & Harris, 2007; p. 7). It is an umbrella term that explains the business intelligence capabilities and applications offered through information technologies (Cosic et al., 2012; Park et al., 2017). Recent studies have shown that only a small proportion of companies can take full advantage of the opportunities provided by the analytics world; the companies that are mature in their knowledge and use of analytics across their workforce can leverage the opportunities afforded by analytical tools and available data such that their performance is improved (Ghasemaghaei et al., 2017b). To achieve such maturity, companies attempt to hire not only
technical people who possess deep data science\(^1\) expertise at junior and mid-operation levels, but also managers who have sufficient knowledge in the different domains of business analytics (Ransbotham et al., 2015).

It is vital that managers grasp business analytics tools and identify areas of business where these tools can add value, and communicate effectively with the data scientists who can apply the tools effectively. As a result, business schools are increasingly offering new courses related to business analytics to help their MBA students improve their skills in this area (Rienzo & Chen, 2018). To achieve higher BAB levels, these schools have started to offer courses that develop skills in areas such as information technology, data, management, and analytics tools and applications (Wixom et al., 2014). Enhancing the skills in all of these areas, rather just in select areas, will help MBA students to be more well-rounded, more employable, more familiar with the analytical tools and enable them to engage in a broad set of tasks: visualization, reporting, and analytics (Turel & Kapoor, 2016). It is reasonable to assume that having this broad set of skills will help students succeed in the job market. However, there is limited understanding of whether higher BAB levels, which often require time, effort and financial investments, would adequately help business students to find proper jobs with higher salaries. Therefore, in this study, we utilize signaling theory, which explains the impact of signals such as university rankings, on the translation of higher BAB levels into successful job placement and salary.

2.2. Signaling theory

Signaling theory (Connelly et al., 2011; Spence, 1978) posits that job applicants send signals about their skill level to employers by obtaining specific educational credentials and that the employers evaluate the job applicants based on the signals the educational credentials transmit. Therefore, education and institutions through which it was obtained serve as tools for

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\(^1\) While data science focuses on the use of qualitative and quantitative methods to extract insights about a particular issue (Asamoah et al., 2015), business analytics focuses on integrating these insights with business understanding and converting them into operational and strategic decisions (Gerrard et al., 2018).
job applicants to signal their skills and abilities to employers (Ryazanova et al., 2017). Signaling theory was first introduced in Spence's (1978) seminal work on labour economics. In this work, Spence (1978) focused on labour market problems to show the utility of the signaling theory in generating optimization solution for receivers and signalers alike. In particular, this theory primarily focuses on decreasing information asymmetry between the two parties (Dawson et al., 2016; Spence, 2002). Spence (1978) argues that high-quality job applicants can differentiate themselves from low-quality applicants by sending signals to the employers about the education credentials they have in a specific field that is relevant to the employer.

According to signaling theory, applicants’ education generally signals specific skills of the job seekers to employers, and this impacts the employers’ decision regarding the selection of the job seekers and wages allocated to them (Cai, 2013; Dinger et al., 2015). Mincer (1970) found a strong relationship between education and earnings of employees and concluded that wages paid to employees reflect their skills and abilities. Likewise, Arteaga (2018) suggests that education has a vital role in the determination of wages. Teichler (2009) argue that employers may have different views about job applicants with similar educational qualifications based on different political biases, traditions, and other factors. For example, Pericles et al. (2014) argue that the perceived quality of the institution where job seekers obtained their degree, and the courses studied provide signals to employers about the capabilities of the job applicants. Therefore, in this study, we adopted the signaling theory to investigate the impact of BAB levels on job placement and salary, and to examine whether these relations are influenced by university ranking.

3. Research model and hypotheses

Figure 1 depicts the proposed research model.
Education, in general, makes individuals more skilled and employable. Therefore, university graduates secure employment more than those who do not have education credentials, while also, on average, they earn more (Van der Merwe, 2010). Smith & Kruger (2005) argue that obtaining certain education benefits graduates from both monetary and non-monetary perspectives. For example, skilled graduates could obtain benefits such as financial security (e.g., life assurance, pensions), personal benefits (e.g., brand-name luxury goods), and financial assistance (e.g., company loans) (Van der Merwe, 2010). According to signaling theory, educational credentials are indicative of unobserved abilities of the job applicants. Therefore, there may be a premium paid for graduates with positive signals; consequently, there should be a positive association between educational level and earnings (Blaug, 1985; Van der Merwe, 2010). Wiles (1974) compared the income of employees with a specific education with those without such education and found a positive link between education and employee salary. Brown & Sessions (1999) also argue that since education signals the innate abilities of job applicants, it increases individuals' lifetime earnings.

Many firms still lack skillful managers with sufficient knowledge of business analytics (Turel & Kapoor, 2016). In response, many business schools try to enhance their BAB level by offering courses that develop their MBA students' abilities and expertise in areas including information technology, data, management, and analytics expertise (Wixom et al., 2014). Thus, graduates who have taken courses in the area of business analytics send signals to employers.
about their capabilities in the area of analytics (Turel & Kapoor, 2016). Based on signaling theory, students who take a sufficient number of analytical courses and achieve high BAB level may have a better chance of obtaining higher salaries compared to others. In sum, signaling theory posits that earnings may rise because of the productivity and potential capability signals that having certain education provides (Chevalier et al., 2004). Given the often unmet demand for business analytics skills (Chen et al. 2012; Ghasemaghaei et al., 2018; Thibodeau, 2014), a broad set of analytics courses can signal to potential employers about the potential value of an applicant (Mitri and Palocsay, 2015; Schiller et al., 2015; Thibodeau, 2014). We hence hypothesize that:

**H1:** *BAB level of an MBA program increases the salary of its graduates.*

Extending this view, previous studies argue that university ranking drives perceptions of high-quality students and prestige (Hazelkorn, 2015). Pericles et al. (2014) suggest that the ranking of the institution where the job applicants obtained their degree provides a signal about the capabilities of the applicants. Given the summative properties of signals (Connelly et al., 2011), graduates who enhanced their analytical skills in high ranked universities will likely have a more positive signal compared to others, and consequently may have a better chance in obtaining higher salaries compared to graduates that obtained their analytical abilities by taking courses in lower-ranked universities. We hence hypothesize that:

**H2:** *University ranking moderates the effect of BAB level of an MBA program on salary of its graduates, such that the effect is stronger for higher-ranked universities.*

Based on the signaling theory, job seekers with better educational credentials are also at an advantage in terms of employment compared to job seekers with lower educational credentials (Van der Merwe, 2010). One of the main graduate employment problems relates to the mismatches between labour market needs and the skills one acquired in their graduate studies (Koen, 2006; Neumann & Fink, 2007). Graduates that do not have the required skills may not be able to find appropriate jobs easily and may have to stay unemployed for a while, compared to the graduates that have sufficient skills in a particular field (Van der Merwe, 2010). As such,
education related to market needs acts as a filter which separates more able applicants from the less competitive ones (Castagnetti et al., 2005). Thus, in the context of this study, MBA students who enhance their analytics level may have a higher chance to find appropriate jobs.

**H3: BAB level of an MBA program increases the job placement of its graduates.**

Pericles et al. (2014) argue that the capabilities that are obtained in high-ranked institutions are more associated with higher subject-specific skills than the capabilities that are achieved in lower ranked institutions. Volkwein & Sweitzer (2006) argue that universities with high rankings better deploy their resources in educating their students. Therefore, university ranking is perceptually indicative of graduating high-quality students (Ehrenberg, 2003). Indeed, there is a positive link between studying in prestigious universities and career benefits for graduates (Hazelkorn, 2015). Brewer & Zhao (2010) and Freid (2005) argue that the reputation and prestige of the university is a signal of having the most skillful graduates. Therefore, most universities are attempting to maximize their reputation (Hazelkorn, 2015). Van der Merwe (2010) argue that one of the main graduate employment problems is due to the biases such signals create that strengthen opportunities for high ranked schools and weaken them for low-ranked ones. Given that such signaling potential can enhance the perceived abilities of candidates from high ranked compared to others from low ranked schools, even though they may have had the same education, we hypothesize that:

**H4: University ranking moderates the effect of BAB level of an MBA program on job placement of its graduates, such that the effect is stronger for higher-ranked universities.**

4. Methodology

We collected and analyzed data on business analytics relevant courses offered by the top 89 business schools in the US using bloomberg.com². We specifically used this website to obtain

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² Bloomberg is a popular U.S website that delivers markets and business news, and data to the world. We did not have access to how Bloomberg.com tested and validated its scales. However, this website has been used in many previous studies focusing on business schools’ rankings (e.g., Brink & Costigan, 2015; Nisel, 2014) and has been considered as a valid and reliable source.
variables about the ranking, the average base salary of its MBA graduates, and the job placement for MBA graduates for all ranked business schools. We then extracted course information from the business schools’ websites by employing two independent coders.

A typical MBA program in the US requires students to take some core (required) courses that all students need to take and pick some concentration courses or a few courses from a general list of electives. The analytics-rich MBA programs typically have one or more foundational (general overview) business analytics courses in the core, and several more advanced (directly business analytics) courses as part of the electives, or part of some of their concentrations.

We used Turel & Kapoor’s (2016) framework to create BAB index for MBA programs based on the number of courses offered in the four categories of foundational business analytics (BA) core courses, foundational BA elective courses, directly BA core courses, and directly BA elective courses. The directly business analytics courses focus on the main elements of analytics, while the foundation business analytics courses focus on enhancing student knowledge in the areas of quantitative and data management skills required for more advanced business analytics specific courses (Turel & Kapoor, 2016). For example, “data mining” course has been considered as a direct business analytics course as it focuses primarily on directly enhancing business analytics skills (Watson, 2014). In contrast, introduction to information systems is considered as a foundation business analytics course as it does not solely focus on business analytics but likely touches upon general concepts of analytics (Turel & Kapoor, 2016). The categorization of directly and foundational business analytics courses provides insight into the extent of effort and emphasis that different schools put in educating students in the area of business analytics. The lists of foundational business analytics courses and directly business analytics courses are given in Table 1.

<table>
<thead>
<tr>
<th>Foundational business analytics courses</th>
<th>Directly business analytics courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>Business analytics</td>
</tr>
<tr>
<td>Decision models</td>
<td>Data analytics</td>
</tr>
</tbody>
</table>
We asked two coders to each independently obtain information about the business analytics courses available in the full-time MBA programs for the top-ranked 89 universities listed on Bloomberg.com. From Bloomberg.com, they collected information on the name of the business school, rank, the average post-MBA base salary of its graduates, and post-MBA job placement of its graduates. We asked them to extract and classify business analytics (BA) courses offered in the Full-time MBA programs, as reflected on the examined business schools websites. They counted the number of analytics courses offered in their programs for each of the four categories – foundational BA courses in core, foundational BA courses offered as electives or concentration course, directly BA courses in core, directly BA courses offered as electives or concentration course. To categorize course as foundational versus directly BA courses, each coder had to look at not only the course description, but also the course outline and the available assignments and materials. We found high consistency, as reflected in almost perfect match, of the course categorization between the coders. Only a few courses did not reach immediate agreement, but after a second review, full agreement was obtained.
Both coders were graduate research assistants who majored in business analytics, have taken business analytics courses and who have knowledge of foundational and directly BA courses offerings. Before they began researching the business school websites, we trained them to distinguish between the foundational and directly BA courses. We gave them several examples and sample lists of the two types of analytics courses. After they finished coding, the authors reviewed the results and allowed the reconciliation of disagreements among the raters. There were only minor differences between the coders that were easily reconciled. Based on the number of courses offered in the 4 categories, the authors computed the Business Analytics Breadth (BAB) index for each business school.

Table 2 portrays the framework that was used for the BAB index score calculation for each business school. The BAB score ranges from 1 (low breadth, no BA courses at all) and 8 (high breadth; over 2 directly BA courses+ at least 1 Directly BA elective, with any combination of foundation BA courses). The BAB level of the program reflects the breadth of its coverage of business analytics (Turel & Kapoor, 2016).

<table>
<thead>
<tr>
<th>BABI</th>
<th>foundational BA in Core</th>
<th>foundational BA in Elective</th>
<th>Directly BA in Core</th>
<th>Directly BA in Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>2</td>
<td>1 or more (yes)</td>
<td>1 or more</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>3</td>
<td>1 or more</td>
<td>NO</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1 or more</td>
<td>NO</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1 or more</td>
<td>NO</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1 or more</td>
<td>NO</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1 or more</td>
<td>2 or more</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1 or more</td>
<td>2 or more</td>
<td>any number</td>
<td></td>
</tr>
</tbody>
</table>

BA: business analytics

5. Results

Descriptive statistics of the BAB indices, job placement, and salary in the examined business schools, as well as inter-variable correlations are given in Table 3.

Table 3. Correlation matrix†
<table>
<thead>
<tr>
<th>BAB</th>
<th>Mean (SD)</th>
<th>BAB</th>
<th>Job placement</th>
<th>Salary</th>
<th>University ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAB</td>
<td>4.69 (1.46)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job placement</td>
<td>0.86 (0.10)</td>
<td>0.284**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salary</td>
<td>$89,935 ($24,075)</td>
<td>0.396**</td>
<td>0.477**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>University ranking</td>
<td>45 (25.69)</td>
<td>-0.347**</td>
<td>-0.625**</td>
<td>-0.852**</td>
<td>1</td>
</tr>
</tbody>
</table>

†High ranked universities are represented by low ranking numbers, and hence there are negative correlations between university ranking and other factors.

** p<0.01

We used partial least squares (PLS) to assess the developed hypotheses for this study in a hierarchical fashion. We first tested the direct effects model. Both relationships between BAB and salary (β = 0.396; p < 0.01) and BAB and job placement (β = 0.286; p < 0.01) were significant. Hence H1 and H3 were supported. We next tested the moderating role$^3$ of university ranking on the relationship between BAB, job placement and salary (see Figure 2). The findings show that while BAB does not significantly impact salary (β = 0.093; p > 0.05) or job placement (β = 0.100; p > 0.05) at average levels of university ranking, the moderation effects were significant, which suggested that the effect of BAB on student success in the job market depends on university rankings. Specifically, the findings indicate that university ranking significantly moderates the impact of BAB on salary (β = -0.176; p < 0.05) and BAB on job placement (β = 0.194; p < 0.05), providing support to H2 and H4, respectively. Overall, these findings indicate that the effect of BAB on job placement and post-graduation salary is in part a function of the university’s rankings.

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$^3$ Moderation was operationalized with the inclusion of an interaction term.
Figure 2. Research model results

5.1. Interaction plot for the impact of university ranking on BAB-salary and BAB-job placement relationships

The significance of the moderating impact of university ranking on the relationship between BAB and employee salary and BAB and job placement implies that university ranking plays a critical role in enhancing the salary of job seekers and their success in finding jobs. To shed more light on these effects, we used the Interaction software package\(^4\). The resulting plots are given in figure 3 where the t-values and the levels of significance are shown near each regression line. The plots illustrate interesting and novel insights. For example, figure 3a shows that the salary of graduates is highly impacted by BAB level when students graduate from top-ranked business schools and these schools have the highest BAB level. However, at mean rankings, and 1 or 2 standard deviation from the mean of university rankings, there is no significant influence of BAB on salary. Furthermore, figure 3a shows that graduates of universities with the lowest rankings have the lowest salary premiums due to BAB, even when the BAB level is high. Figure 3b shows that, interestingly, university rankings at the top (mean and above) do not significantly modulate the effect of BAB on job placement. The impact of BAB level on job placement is significant only for universities with rankings lower than the mean level. This means that graduates from top-ranked universities have better job placement even in the absence of

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\(^4\) See www.danielsoper.com
business analytics exposure. However, graduates from lower-ranked universities can benefit from increasing BAB at their schools; it is easier for them to find jobs when their schools have broader analytics offerings, as reflected in their BAB levels.

Figure 3. Interaction plots

5.2. BAB level and university ranking combinations analysis

We followed Ghasemaghaei et al.’s (2017a) procedure to further examine the role of BAB and university ranking on salary and job placement. We used median split to classify universities in our sample based on their BAB level and their ranking level. The emergent four groups and their mean salaries and job placements are described in Table 4. As shown in this table, out of the 89 sampled business schools, only 16 had high levels of BAB and were also highly ranked (i.e., group 4: top ranking, high BAB). Graduates in this group had the highest salary, while graduates in universities categorized in groups 2, and 4 had the highest job placement. In addition, as we can see in the table, out of 40 low ranked universities, six had high BAB levels; and out of the 49 high ranked universities, 16 had high BAB level. Interestingly, the majority of the universities (67) had low BAB level. Having low BAB level among the top schools could be due to the fact that it may be easy for graduates from these schools to find good jobs, regardless of the education provided, compared to lower-ranked and even non-ranked schools.

Table 4. Means and standard deviations (SD) of salary and job placement for universities with different levels of BAB and ranking
We examined the significance of between-group differences in salary and job placement with ANOVA models. The findings, with job placement (%) and salaries (indexed to $100k) are illustrated in figure 4. The results indicate that graduates from universities in groups 2 and 4 have the highest salary. Most importantly, as shown in figure 4, there is no considerable difference in the average salary between employees who graduated from top-ranked universities and have high levels of BAB, and those who also graduated from top-ranked universities but had low levels of BAB. The also findings show that universities in groups 2, 3, and 4 have the highest means for job placement. This means that graduates of top-ranked universities have high job placement. In addition, graduates from lower-ranked universities with high levels of BAB also have good job placement prospects. This illustrates the added value of BAB for lower-ranked universities.

![Figure 4](image-url)  
**Figure 4.** Group comparisons in terms of salary and job placement

6. Discussion

There is an observable shortage of managers who have strong business analytics background and skills (Turel & Kapoor, 2016). Many business schools understand the potential
of this shortfall for their students, and in response, have developed courses that can help their students meet these market demands (LaValle et al., 2011; Mitri and Palocsay, 2015; Schiller et al., 2015; Thibodeau, 2014; Watson, 2014; Wixom et al., 2014). The value of such efforts, though, has not been examined and quantified. It is also not clear if all schools are created equal and can uniformly benefit from the same business analytics education efforts. We sought to address these gaps in this study. We built on signaling theory to theorize on how the business analytics breadth levels of MBA programs and school ranking contribute to student success in terms of earnings and job placement. Our findings reveal that school ranking, as a manifestation of its reputation, greatly influence the translation of the breadth of a school’s business analytics offerings into increased earnings and job placement success for its graduates. Several implications are noteworthy.

Specifically, the findings provided novel and unique insights regarding the impact of BAB levels on salary and job placement. The results indicated that the direct impact of BAB on both salary and job placement is significant. That is, on average, BAB does influence salary and job placement improvements. However, university ranking moderated both of these relationships. This means that low-ranked and high-ranked schools benefit differently from developing business analytics programs. It also means that offering more analytical courses would not necessarily help MBA students to find jobs and/or help them land jobs with higher salaries; these effects depend on the school rankings. The success of such endeavours depends on the ranking of the university, presumably through the signals such rankings provide.

One of the unique contributions of this research is in developing deeper insights into the moderation effect of university ranking on the relationship between BAB and salary as well as BAB and job placement. Notably, the findings of the interaction plots indicated that BAB significantly impacts the salary of graduates of top-ranked universities, but does not enhance the salary of graduates from lower-ranked universities. Moreover, the findings of the interaction plots showed that BAB does not significantly enhance job placement for students who graduated from...
top-ranked universities; but it did increase job placement for graduates from lower-ranked universities.

Ultimately, these findings extend the application of signaling theory to a new context and develop a model that explains unique, yet important variables, in the area of IS education. They, therefore, pave the way for further studies on IS education factors and their translation into student success in the job market. Note that the value of investment in and development of business analytics programs is something that business educators do not typically question. However, we show here that more research is needed for setting the boundary conditions for the success of developing business analytics programs. We used signaling theory to explain this, but future research can extend our model and/or use additional theories for explaining why and when some business analytics programs work better than others in terms of helping students getting jobs faster and better paying jobs. For example, future research can extend our model to include also factors known to influence student employment success (e.g., family education, family social economic status, job market conditions, economic conditions, geography, and career aspirations) and/or measure directly the signaling power of university rankings and BA programs (as opposed to using proxies for signaling power). We ultimately believe that the results of this study provide a useful basis for researchers who are interested in understanding the role of BAB levels and university ranking in influencing graduates' salaries and job placements.

From a practical perspective, the findings of this study provide helpful guidelines for business schools. Notably, the findings show that the ranking of the university enhances the salary and job placement of MBA graduates and that on average, BAB level significantly influences student success in the job market. Business schools, therefore, need to know that BAB level typically enhances the salary of graduates if the school is top-ranked. In fact, lower-ranked universities should consider the fact that BAB level does not considerably enhance the salary of their graduates. This finding suggests that top-ranked universities could spend many resources to add additional courses or programs in the area of data analytics if they aim at increasing the
average salary of their graduates. However, top-ranked universities should notice that BAB level does not significantly impact the job placement prospect of their graduates. These graduates can easily find jobs without taking many courses in the area of data analytics. In contrast, if lower-ranked universities are planning to enhance the job placement of their graduates, one way to do it is by increasing their BAB level.

6.1. Limitations and future research

Several limitations that pave the way for future research are noteworthy. First, we only focused on business schools from the US and examined possible short term impacts of BAB. Future studies could replicate and extend this study in other countries, consider long term effects of BAB, and consider BA courses and programs offered by other schools. Second, our findings show that graduates from top-ranked universities are more successful compared to those of lower-ranked universities. This could be due to the impact of various factors such as the quality of the alumni network, differences in prior business analytics experience, the qualifications of students who get an offer from the top-ranked universities, and the quality of the courses offered in these universities (Tracy & Waldfogel, 1994). To some extent, we controlled for such factors in our model by including the direct effect of ranking on the employment outcomes. Nevertheless, future studies could more nuancedly investigate the impact of these factors on the success of MBA graduates. Third, most top schools in the U.S admit MBA students with some managerial experience (typically at least 3 years). Nevertheless, not all managers receive business analytics education via MBA programs. Therefore, future studies could investigate how firms should educate their current managers, outside of MBA programs, to effectively leverage business analytics in their organizations.

Fourth, offering elective courses in analytics does not necessarily mean that the students will take them. In fact, students take courses because of the variety of reasons such as teaching quality, social influence (i.e., what friends take), course schedule, and course suitability (Soutar & Turner, 2002). Therefore, further studies are needed to investigate the key factors that influence
students to take courses offered by their school. Moreover, our business analytics index reflects only whether courses exist on the roster and does not include measures of quality of courses and instruction; we assumed that they average out across the examined schools. Hence, future research can further examine how such quality variables can fine-tune our findings. Fifth, in this study, we collected and analyzed data on business analytics relevant courses offered by the top 89 business schools in the United States. The other schools that we did not consider in this study might not behave like the 89 top business schools we considered in this study. Further studies are needed to investigate whether the results of this study could be generalized to other business schools.

Sixth, in this study, we focused specifically on the BA breadth level in the MBA program and we did not consider whether having a center for analytics would serve as another important signal about graduates’ competency to employers; exploring this relationship is something future research can examine. Last, we obtained information about the business analytics courses available in the full-time MBA programs for each school. Future studies could also collect data on which courses students actually took to better understand the impact of BAB level on post-graduation salary and job placement.

7. Conclusion

We addressed a vital gap regarding the impacts of investment in the development of business analytics courses and university ranking on salary and job placement of MBA graduates. We show that it is not just about the breadth of business analytics programs; the ranking of universities provide important signals that influence the translation of business analytics breadth levels into job-place success factors for MBA graduates. We call for more research on these important yet overlooked student success factors.

References


