Recent Trends and Performance Metrics Evaluation of MBA Students in Reputed Business Schools in India

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Abstract: Most Business Schools in India has been struggling to find out the answers to a few questions pertaining to their students in their MBA/PGDM program. They would like to know the characteristics of an ideal MBA student which would maximize their academic performance as well as secure high paying jobs from the industry. They would also like to know the industry characteristics and requirements of the industry so that they can prepare their students accordingly. Analyzing the trends within the school as well as that of the industry, including trends related to performance of students, will help the schools draw up strategies pertaining to admissions, placements, as well as curriculum and delivery. This study tries to answer some of these questions utilizing data from a reputed business school in Bangalore, India.

I. Introduction:

MBA or management courses have been a subject of discussion for quite some time now – both, in the academia as well as in corporate circles. The issues are varied, ranging from the admission criteria applied by leading business schools to the utility or usefulness of MBA graduates to the corporate sector in general. Corporates in India, more in recent times, have been known for raising the issue of employability of management graduates – euphemistically called as “industry ready”. Administrators and faculty in business schools have been pondering over the idea of industry readiness and what exactly it entails for the various facets of functioning of the business school – for example, admissions criteria, curriculum, and academic delivery. One issue that has been festering for a long time is whether academic performance of students has any bearing on their future performance in their actual job life in the industry. It is obvious that different students perform differently – both, in terms of their academic performance as well as the salary obtained by them during their ‘placements’ in the industry. It needs to be seen whether there is a correlation between salary obtained by students and their academic performance. Faculty of business schools often opine that academic performance of students are dependent on various factors which are not in the control of the business school. It seems that students with a particular background and characteristics or even personality types perform better than students who do not possess the same attributes. So, effort is on to identify the profile of an ideal MBA student. However, it is to be kept in mind that academic performance may or may not necessarily lead to successful industry performance. Again, performance during the placements season – which determines the salary obtained – will vary according to various factors including the industry sector that the student wants to join. So, management programs are increasingly under the scanner in India, with dwindling number of applicants and aspirants on the one hand, and increasing competition from various other programs along with proliferation of business schools in the country. There seems to be a need for the leading business schools to clearly outline their position as well as their core competencies in this competitive market place, and simultaneously prepare their students in a way that adds value to the jobs they perform in the industry. It is entirely possible that business schools in the near future may have to develop sharper profiles of the type of students they are going to admit – as well as specializing in particular industry sectors where they would be able to ‘place’ their students.

II. Literature Review:

It has been the trend for quite some time now that a MBA education from a reputed business school helps students to secure high paying jobs. Most of these business schools are dominated by engineering students as they realize that only technical education is not sufficient to reach the top echelons of the corporate world. Managerial skills have become essential for technical students as well and hold promise for a better job with higher remuneration. It has been observed that Techno-MBA graduates not only have excellent technology skills but also understand the strategic business application of technology (Yang et al, 2001). Most business schools use some type of formula score that combines undergraduate grade point average (GPA), Common Admission Test (CAT) scores, marks obtained in class 10 exams and class 12 exams, and other quantifiable factors for admission (Carver & King, 1994). After the shortlisting of potential candidates for admission based on these scores, group discussions and personal interviews are held for finalizing the list of students admitted. Underlying such common practice is the assumption that MBA students’ academic performance can be well explained by the precedent variables such as undergraduate academic performance and standardized test scores (e.g., CAT and MAT). Consequently, there has always been a concern whether such a practice is theoretically
justifiable and empirically valid (Carver & King, 1994; Schwan, 1988). A literature review suggests that many studies have investigated the relationship between MBA students’ academic performance (usually defined and measured by GPA) and certain precedent variables. Christensen et al (2012) says that the Master of Business Administration (MBA) degree has become a major component of the general credentials business professionals must have to achieve success. DeSimone and Harris (1998) described the program of study leading to the MBA degree as one of the most important avenues to management education. Zhao, Truell, Alexander, and Hill (2006) found that MBA education has a positive impact on graduates’ future employment, income, and promotion prospects in the short and long term. The demand for MBA education has increased considerably (Greco, 2001) with the growing popularity and perceived value of an MBA education and with higher average salaries paid to MBA graduates. Consequently, MBA admissions officers face increased challenges to select students who are appropriately qualified to enter MBA programs to better ensure student success and meet various accreditation requirements. McClure, Wells, and Bowerman (1986) found that the number of years of work experience correlated positively with graduate GPA. Dreher and Ryan (2000) found duration of work experience to be an important predictor of graduate GPA. These results may reflect that students with greater work experience are able to see the broader view of business functions and the relevance and potential applications of MBA material. Adams and Hancock (2000) also found the number of years of work experience between the undergraduate degree and MBA functioned as a good predictor of MBA success. Some researchers explored age as an explanatory factor in graduate GPA performance. Peiperl and Trevelyan (1997) found age to have predictive value. They discovered a negative correlation between age and MBA performance with younger students performing better than older students. One explanation for this result may be the fact that younger students have more recent experience with academic environments and thereby are better primed for graduate study. However, Graham (1991) and Paolillo (1982) found age not to be significantly correlated with MBA performance. Finally, Braunstein (2006) compared business and nonbusiness undergraduates and found age and work experience to be more significant than GMAT for nonbusiness degree MBA applicants. Gender also has been studied as a possible explanatory factor in MBA performance. Ekpenyong (2000), Hancock (1999), and Peiperl and Trevelyan (1997) found no correlation with MBA performance and gender. However, Hancock found that men tended to score higher on the GMAT. Deckro and Woudenberg (1997) found that women performed better academically during the MBA program than men. Their results were consistent with a more recent study by Cheung and Kan (2002). Laumius (1997) explained this difference by proposing that women seem to put more time and effort into studies than men.

Many researchers have found support for the notion that student’s undergraduate major play a role in subsequent MBA performance (e.g., Anderson, Benjamin, & Fuss, 1994; Borde, 1998; Cheung & Kan, 2002; Durden & Ellis, 1995; Ekpenyong, 2000). In particular, Ely and Hittle (1990) showed completed accounting courses were significantly correlated with performance in graduate business studies. Additionally, Anderson and colleagues as well as Didia and Hasnat (1998) found students who had taken calculus and other mathematics courses performed better in economics and finance courses than students without such background. However, Braunstein (2002), Adams and Hancock (2000), and Gump (2003) found students who have undergraduate degrees in business perform worse in MBA programs than students who do not have undergraduate business degrees. Gump suggested students without an academic background in business may work harder to compensate for their lack of undergraduate preparation.

In a study (Kass et al. 2012), the authors observe that The Graduate Management Admission Test (GMAT) is a standardized test used internationally by over 4,500 graduate management programs at 1,900 schools to make admission decisions (Graduate Management Admissions Council, 2010). There has been considerable support for the validity of the GMAT to predict the academic performance of students in master of business administration (MBA) programs (e.g., Kuncel, Crede, & Thomas, 2007; Oh, Schmidt, Shaffer, &Le, 2008). The GMAT’s high level of validity led some authors to conclude that the GMAT is a good indicator of future job performance (e.g., Kuncel et al., 2007; Oh et al., 2008) because research has shown a modest relationship between academic success and job performance (Roth, BeVier, Switzer, &Schippmann, 1996). Kuncel et al. offered that the abilities required for success in school are very similar to those required for success at work, and that the academic work of MBA programs and the work of managers are very similar in content (Kuncel et al.). Given this overlap, Kuncel et al. argued, “If the GMAT predicts student success it should also have a relationship with subsequent job success” (p. 55).The Association to Advance CollegiateSchools of Business (AACSBI 2010) concurred, emphasizing that knowledge should not be the only goal of an MBA program. Instead, students must develop the capacities to lead, solve problems, and innovate. The GMAT was designed to predict graduate academic success, and it does so with strong accuracy, but it is questionable that it predicts the competencies that are necessary in a managerial position. An alarming finding of the study was that MBA GPA did not predict any of the managerial competencies required to succeed in a managerial position in modern organizations. The authors hypothesized that success in the MBA program would lead to the development of effective management skills; however, results indicate otherwise. This finding...
supports the criticisms regarding the relevance of MBA curriculum to the actual practice of management (e.g., Navarro, 2008; Pfeffer & Fong, 2002, 2003; Rubin & Dierdorff, 2009, 2011). The authors also claim that the results of the study lend quantitative support to Mintzberg’s (2004) critique that MBA students “become knowledgeable about business, but remain untutored in the art and craft of management” (p. 79). These results are consistent with a growing body of literature that questions the ability of MBA programs to adequately prepare their students with the skills needed to succeed as managers in modern organizations (e.g., Mintzberg, 2004; Pfeffer & Fong, 2002; Rubin & Dierdorff, 2011). Specifically, the competencies reported as most critical for leadership effectiveness received the least amount of required coverage in MBA programs (Rubin & Dierdorff, 2009) and the coverage of interpersonal, leadership, and communication skills were the “least effective components of business curricula” (Management Education Task Force, 2002, p. 19). Rynes, Trank, Lawson, and Ilies (2003) referred to this problem as management education’s “legitimacy crisis” (p. 1).

Based on an empirical research, Frey and Detterman (2004) have reported that SAT is an adequate measure of general intelligence. Further, they even tried to show that SAT scores can be converted into estimates of IQ using regression equations. However, in a study to assess how well high school Grade Point Average (GPA) and high school SAT scores predict college-level success and performance, Abdel-Salam et al. (2005) found that there is a very weak relationship between SAT scores and college performance. However, the authors reported high school GPA as a more reliable predictor of college-level success and performance.

In a study on MAT scores, the author (Kumar, Rituraj, 2011) observes that it is indeed a good screening device as far as assessing the overall aptitude of the candidates is concerned and it does provide valuable inputs that help a management institution in assessing the suitability of a candidate for admission. With a little modification, however, its utility could be increased manifold.

III. Research Methodology:

This study has been carried out on students of the MBA program of a reputed business school in Bangalore, India. The objective of the study is to understand the performance parameters of the MBA program, which is measured by cumulative grade point average (CGPA), as well as the final placements in corporates/industry which is measured by the salary obtained by students. The objective also is to evaluate the efficiency with which the admission, academic performance, and final placements are linked – whether they are correlated and whether the criteria used for admissions to the program is sufficient to predict the students success in the MBA program – as measured by CGPA and salary secured in the final placements.

Keeping these broad objectives in mind, data for the last three academic years were considered. The last three years are 2012-14, 2013-15, and 2014-16. The data collated in the form of ‘batch matrix’, admission test scores, and placement data were cleaned, coded and aggregated in the same format. Consolidated test scores were not available for 2012-14, while placements data for 2014-16 are not available as the students are yet to go through the placement process.

The variables considered from the admissions point of view are gender, age, work experience, field of graduation, and qualifying test scores. The variable of age was categorized into four components: 21-23, 24-25, 26-27, and 28-29. Work experience was categorized into less than one year, one to three years, and more than three years. The fields of graduation were categorized into arts, commerce, science (including computer science), engineering, and management (including hospitality). The qualifying test scores were categorized into five categories with MAT scores given a handicap of twenty percent compared to CAT/XAT scores. For example, in order to qualify for the topmost category, the student must have secured above 90% in MAT or scored at least 70% in CAT. For academic performance, CGPA is considered as the metric. This has also been divided into the following five categories: below 5, 5 – 6, 6 – 7, 7 – 8, and above 8. The total salary offered by the firm to the student during the final placement is considered here as corporate performance. The industries the students are placed in are categorized according to the sectors they belong to. They are: BFSI and Financial Consulting & Services, BPO and IT & IT Services, Marketing Research and Analytics & Research, E – Commerce and Media planning and Retail, FMCG, Services, Manufacturing, and Real Estate.

Analysis was done based on the mean values and standard deviations of each category pertaining to the respective variables. Descriptive statistics were used for CGPA as well as salary obtained in final placements, for each of the categories of the variables discussed earlier. Regression analysis was done to ascertain whether there is any correlation between the factors considered (independent variables) and CGPA as well as salary obtained during final placements (dependent variables). Similarly, ANOVA (including post hoc) was used to investigate whether there are differences in the mean values of the dependent variables depending on the categories of each of the independent variables. Interaction effect of the various independent variables on the dependent variables was also investigated.
IV. Analysis and Findings:

It is observed, from descriptive statistics, that female students are consistently performing better, in terms of CGPA, compared to male students. However, male students secure higher salary, on an average, than female students. Students in the age bracket of 26-27 gets the highest CGPA as well as the highest salary (in 2013-15). In 2012-14, students with work experience of more than one year scored higher CGPA and also received higher salaries – compared to students with less than one year of experience (including ‘freshers’). In 2013-15 batch, this difference has become much wider and statistically quite significant. In the current batch as well, the difference in CGPA scores are quite significant. In 2014-16, students with 1-3 years of experience are scoring the highest CGPA. In terms of CGPA, engineering students and management (BBA/M) students score the highest. In terms of salary secured, there is a bit of an anomaly. In 2012-14, science and management students received the highest salaries, while engineering students received the lowest. In 2013-15, engineers received the highest salaries, while management students received the lowest salaries. Over the years, marketing has attracted students with the lowest CGPA. Students with higher CGPA have mostly chosen HR, with Finance hovering somewhere in between. In terms of salary, however, marketing students received the highest in 2012-14, followed by HR and IB. In 2013-15, Finance students received the highest salaries, on an average, followed by marketing and HR. The differences were substantial. Also, highest salaries were paid by services and real estate sectors of the industry. CGPA scored by these students were also the highest. The next best salaries were paid by financial services and FMCG companies. Students with very high scores in CGPA also went to BPO, IT/Services and market research companies, but their salaries were on the lower side. E-commerce, media planning, and retail employed students with average CGPA, but paid the lowest salaries. Manufacturing industry employed students with lowest CGPA scores and also paid one of the lowest salaries among the various industry sectors. In case of qualifying test scores, students were divided into five categories depending on their performance/scores in the qualifying test (CAT/MAT etc.). In 2013-15, the best salaries were obtained by the middle rung of the students. The top as well as the bottom categories received low salaries. In terms of CGPA, however, the top rungs scored the highest. In 2014-16, the top and the middle categories are scoring the highest CGPA so far.

In case of the relation between CGPA and Salary, it is observed that in 2012-14, the best salaries were obtained by students in the middle category – CGPA from 5 to 7. Analyzing further, it is seen that students with CGPA in and around 6 were getting the best salaries. However, in 2013-15, students with higher CGPA secured jobs with higher remuneration. Moreover, the average total salary and the average total CGPA remained almost the same for 2012-14 and 2013-15.

In 2012-14, regression analysis between salary obtained and CGPA returned a R-Square value of 0.009 with a significance level of 0.344. Then regression analysis was performed between salary (dependent variable) and marks obtained in class 10, class 12, undergraduate, and post-graduate programs. No correlation was observed with any of the independent variables. When the same analysis was performed with CGPA as the dependent variable, it was found that marks obtained in class 10 and gender were the only independent variables which had a statistically significant correlation with CGPA. Class 10 marks have the Beta value of 0.516 (T-value of 3.309 with 0.002 significance level) and gender has the Beta-value of 0.258 (T-value of 2.149 with 0.036 significance level). ANOVA between salary and the same independent variables showed no significance and no interaction effect either. The same results were obtained for CGPA, with the exception of gender and class 10 marks. Post-hoc tests for CGPA and graduation field showed that there were differences in performance between engineering and management students (0.013 significance), and between commerce and management students (0.009 significance).

Similar analysis was carried out for the 2013-15 batch of students. Regression analysis shows that in 2013-15, salary obtained by students were a function of CGPA (high t-value and highest significance). Regression analysis between salary obtained (dependent variable) and mark obtained in class 10, class 12, undergraduate and postgraduate programs (as independent variables) showed that only class 10 marks with Beta-value of -0.373 (T-value of -1.945 and 0.054 significance level) and postgraduate CGPA with Beta-value of 0.331 (T-value of 3.785 and 0.000 significance level) has statistically significant relationship. In the ‘backward’ method of regression analysis, only postgraduate CGPA has statistically significant relationship with salary (Beta-value of 0.373, T-value of 4.385, and 0.000 significance level). No relationship was observed between salary and prior work experience, in this batch of students. In case of regression between CGPA (in the MBA program) and marks obtained in class 10, class 12, and undergraduate programs – only class 10 marks have a weak relationship with the dependent variable, CGPA (Beta-value of -0.238, T-value -2.673, and 0.009 significance level). When the numbers of independent variables are expanded to include gender, work experience, and field of graduate studies – it is observed that only work experience has statistically significant relationship with academic performance in the MBA program (Beta-value of 1.289, T-value of 2.411, and significance of 0.019). The same analysis was carried out with salary obtained as the dependent variable. It was observed that only gender (Beta-value of -0.239, T-value of -2.103, and significance level of 0.039) and
academic performance in the MBA program measured by CGPA (Beta-value of 0.393, T-value of 3.467, and significance level of 0.001) has relationship with the dependent variable of salary.

In test of ANOVA, including post-hoc, between categories of CGPA and salary obtained – it was observed that there are no differences in salary obtained by students who had CGPA below 5 and those who had CGPA between 5 and 6. Similarly, there are no differences between categories 6 to 7 and 7 to 8. There are also no differences between categories of 7 to 8 and above 8. However, there are differences in salary obtained between all other categories of CGPA. It was also observed that there is no interaction effect of CGPA and gender on salary obtained. However, the R-Squared value is as high as 0.946. Gender does not have any effect on salary (significance level of 0.339), but has considerable relationship with CGPA (significance level of 0.007). Post-hoc tests also show that in terms of academic performance in the MBA program, as measured by CGPA, students with engineering background outshine those who had commerce in their field of graduation (significance of 0.028). Also, students with commerce background do not perform as well as their counterparts with management background. In terms of salary earned, however, there are hardly any statistically significant differences between various categories of graduate field of studies. Only slight difference was noticed between students with arts background and students with management background (significance of 0.071).

In the 2014-16 batch of students, regression analysis shows that academic performance in the first two terms (measured by CGPA) is related to the marks obtained by the students in class 10 as well as marks obtained in graduation. Class 10 marks have a Beta-value of 0.316, T-value of 3.306, and significance of 0.001. Marks obtained in graduation have a Beta-value of 0.200, T-value of 2.093, and significance of 0.039. When the independent variables are increased to include factors like gender, age, area of specialization, work experience, qualifying test scores, and graduation field – the variables which are related to the dependent variable of CGPA in the MBA program are depicted in the following table:

<table>
<thead>
<tr>
<th></th>
<th>Beta - value</th>
<th>T-value</th>
<th>Significance</th>
</tr>
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<tbody>
<tr>
<td>Class 10 Marks</td>
<td>0.315</td>
<td>2.975</td>
<td>0.004</td>
</tr>
<tr>
<td>Graduation Marks</td>
<td>0.344</td>
<td>3.245</td>
<td>0.002</td>
</tr>
<tr>
<td>Gender</td>
<td>0.226</td>
<td>2.342</td>
<td>0.022</td>
</tr>
<tr>
<td>Work experience</td>
<td>0.221</td>
<td>2.284</td>
<td>0.025</td>
</tr>
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</table>

ANOVA shows that there are within groups’ differences for CGPA in 2014-16 – on the parameters of gender, age, and graduation field. When ANOVA of CGPA is done with gender, it is found to be non-significant (0.182), while with age, it is found to be significant (0.007). It is observed that academic performance of students in the 26-27 age group is quite different from all other age groups. There is also a difference between the age groups of 24-25 and 28-29. In terms of area of specialization, there is a statistically significant difference between academic performance of students of marketing and that of HR. In case of work experience, there is a slight difference between students who have one to three years of working experience and the students with below one year of experience (including students with no experience at all). It is also observed that there is significant difference in academic performance between students whose qualifying test scores are average (70-80 in MAT and/or 50-60 in CAT) compared to students whose qualifying test scores are the lowest (below 50 in MAT and below 30 in CAT). As has been seen earlier, there is difference in performance between students who graduated in arts and students who graduated in engineering and management. There is also difference in academic performance of students who graduated in commerce and those who graduated in engineering and management.

V. Conclusion:

This research has been carried out based on a single reputed business school in Bangalore, India. The objective was to investigate whether academic performance in the MBA program, measured by CGPA, as well as performance in the final placements, measured by salary obtained, is correlated with prior academic performance and/or other demographic variables as well as certain academic characteristics and prior work experience. The study confirms certain attributes which influence performance – both, academic as well as salary provided by the industry in the short run. The findings of this study are mostly in agreement with information and knowledge available in the literature. The findings also corroborate some of the long held beliefs pertaining to MBA education. For example, it is observed that marks obtained in class 10 are virtually the most reliable predictor of academic performance in the MBA program. Similarly, factors like age, gender, field of graduation, and work experience also determine academic performance. Again, marks obtained in class 10 are a strong predictor of salary obtained during final placements. Similarly, salary is also determined by work experience and, sometimes, by the CGPA scored in the MBA program. Field of graduate study is sometimes an important performance indicator as far as salary is concerned. For example, engineers and management graduates often tend to receive higher salary offers than arts or commerce students. However, it is interesting to note that CGPA in the MBA program is not highly correlated to the salary obtained. It is observed that students in the middle
range of the CGPA ladder seem to be getting the highest salary jobs. Similar is the situation with qualifying test scores. The students in the middle of the score range are performing better – both, academically as well as in remuneration. Also, female students score higher CGPA but receive lower paying jobs. The industry sectors paying the highest salaries are Services, FMCG, BFSI, and Real Estate, while the lowest paid jobs are in Manufacturing and Retail.

It is observed that trends, as discussed earlier, shifts from year to year and is dependent on the larger macro-economic factors. However, some of the observations and findings holds true even in the long run. It may be claimed that these broad trends are valid for similar business schools in the country – though this needs to be corroborated with data from similar other business schools in India. Predictive analysis has not been done in this study primarily because the relevant data is not available, and it may not be appropriate to predict outcomes based on insufficient data. It may, however, be reiterated that the broad trends are good enough to draw up strategies for the business school – which will be valid at least for the medium term.

Bibliography:


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