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# STUDENTS' PRIOR DEGREE PERFORMANCE AS PREDICTOR OF THEIR PERFORMANCE AT MBA LEVEL

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This paper describes the performance of students at SSC, Intermediate, and degree levels as predictors of their performance in MBA. Sixty (60) students who graduated in 2009 from IoBM formed sample for the study. The data was collected personally by the researcher from the official records of the University. Regression Analysis and ANOVA were used for the analysis of data. SPSS was used to analyze the data. The study concluded that performance of students at Bachelor level was the strongest predictor of CGPA at MBA level. When performance at Bachelor level was analyzed, only the male performance was a significant predictor of the CGPA in MBA.. Significant differences were found between the contribution of the pre-admission performance of the BBA, B.com. and B.sc. groups as predictors of CGPA in MBA. The BBA performance of the male students was a strong predictor of CGPA at MBA level. The paper takes the position that there is a need for better collaboration and improvement in the curriculum at all the levels in general and at Bachelor level in particular. In view of the contribution of the students' performance at Bachelor level in predicting their performance in MBA, the paper suggests giving Bachelor level performance suitable weightage in the Admission Criteria for admission in MBA programmes.

**Key Words:** Prior degree Performance; Predictor; MBA level: SSC level ( Secondary School Certificate level ); Intermediate level; Degree level; CGPA ( Cumulative Grade Point Average).  
JEL Classification: Z0000

### **Introduction and Literature Review**

In the study I have investigated students' performance in pre-requisite examinations that included Bachelor, Intermediate, & SSC levels and their subsequent performance at MBA level. I also studied the male-female and subject group differences in performances as predictors of students' performance at MBA level. This study sought to provide evidence to guide decisions in relation to the utilization of students' performance data in the pre-requisite examinations for admission into MBA programmes, based on empirical evidence. In Pakistan, generally the marks obtained by students in pre-requisite examinations, admission test and interviews are used as a basis for students' admissions into different professional education programmes. In this study, the relationship between students' performance in the pre-requisite examinations as reflected in their marks (percentages) and their performance as reflected in their CGPA at MBA level has been studied. This study seeks to identify the predictive value of undergraduate performance for success in professional programmes of education. Thus it would also provide an empirical basis for devising better criteria for admission.. In previous research into the predictors of academic performance in different areas, researchers have considered the effect of age, ethnicity, gender, grade point average (GPA) and admission test scores on performance of students. (James and Chilvers, 2001; Wilkinsonwell and Bushnell, 2004).

Roth et al. (1996) examined the relationship between the objective pre-medical credentials and performance on Step 2 on the United States Medical Licensing Examination (USMLE) of 480 students at Virginia Commonwealth University, School of Medicine. The purpose of the study was to identify those selection criteria that might best predict performance on an examination designed to assess problem-solving skills, the essence of clinical medicine. Pre-medical data from classes of 1993 and 1994 were analyzed, and a regression equation was used to calculate theoretical USMLE Step 2 scores for the students in the class of 1995, who had not yet taken this examination. The pre-medical variables were scores on the verbal and math sections of the Scholastic Aptitude Test (SAT) scores on the six sections of the

pre-1991 Medical College Admission Test (MCAT) grade point average (GPA) in science courses required of pre-medical students and undergraduate major. Once the class of 1995 had taken the USMLE Step 2, the equation was cross validated, and the theoretical and actual scores of the class of 1995 were correlated. The correlation between the theoretical and actual scores was  $r=.443$ . In the analysis for the classes of 1993 and 1994, the single variables highly predictive of USMLE performance were scores on the verbal section of the SAT ( $r=.317$ ) and the Skills Analysis: reading section of the MCAT ( $r=.331$ ).

In the final regression analysis, the MCAT scores were excluded. The resulting regression equation using SAT verbal section and pre-medical GPA accounted for 21.2% of the variance in performance for the class of 1995.

Roth et al.(1996) concluded that students' performance on the verbal section of the SAT as a predictive factor was strongly related to pre-medical GPA score. They also suggested that high verbal aptitude serves well even when coping with complex scientific concepts.

In another study, Evans et al. (2007) investigated the extent to which Medical College Admission Test (MCAT) sub scores predict overall academic performance of osteopathic medical students. The researchers examined the value of MCAT sub-scores in predicting students' global academic performance in osteopathic medical school as defined by the grade point average in basic sciences (Basic GPA), clinical instruction (Clinical GPA), cumulative grade point average (Total GPA) and National Licensing Examination, (COMLEX-USA), Level 1 and Level 2.

The subjects for the Evans et al. (2007) study were 434 medical students of the Oklahoma State University, College of Osteopathic medicine in Tulsa who graduated or were expected to graduate between 1999 and 2003. Standard multivariate linear regression analyses were conducted for each of the five performance variables. The results of the study demonstrated that UGPA was the most important significant predictor ( $\beta=.13-.33$ )

in overall student academic performance for all five analyzed variables. Less predictive of overall academic performance ( $\beta = -.01$ -.21) were MCAT sub-scores.

However, Evans et al. (2007) results showed that the MCAT biological sciences sub-score was a significant predictor of basic GPA ( $\beta = .14$ ), the MCAT physical sciences sub-score significantly predicted COMLEX-USA Level 1 scores ( $\beta = .15$ ), and the MCAT verbal reasoning sub-score significantly predicted COMLEX-USA Level 2 scores ( $\beta = .21$ ). The sub-score for the MCAT writing sample was not a significant predictor of overall academic performance. Evans et al. (2007) concluded that total undergraduate GPA had the highest predictive value for academic performance as measured by basic GPA, clinical GPA, total GPA and COMLEX-USA Level 1 and Level 2 scores. The study found that MCAT sub-scores were of limited predictive value in determining global academic performance.

Julian (2005) reported that in his study he investigated the extent to which MCAT scores supplement the power of undergraduate grade point average (UGPA) to predict success in medical school, United States Medical Licensing Examination (USMLE) Step scores, and academic distinction or difficulty. Julian's study followed two cohorts from entrance to medical school through residency. Students from 14 medical colleges 1992 and 1993 entering classes provided data for predicting medical school grades and academic difficulty / distinction, while their peers from all the US medical colleges were included in the study to predict performance on USMLE Step 1, 2 and 3.

Regression analysis assessed the predictive power of the combination of MCAT scores and UGPAs, with MCAT scores providing a substantial increment over UGPAs scores alone. MCAT scores, according to the findings of the study, were strong predictors of scores for all three step examinations, particularly Step 1. Julian (2005) concluded that MCAT scores almost double the proportion of variance in medical school grades explained by UGPAs, and essentially replace the need for UGPAs in their impressive prediction of Step scores.

In another study Dixon (2004) investigated the relationship between pre-admission academic variables, osteopathic medical school performance in the first two years, and performance on the comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA) Levels 1 and 2. The study group comprised 174 students in the class of 2001 of New York College of Osteopathic Medicine.

Pre-admission academic variables were the Medical College Admission Test (MCAT) sub-scores and undergraduate grade point average (UGPA). Physical sciences (Physical MCAT) and biological sciences (Biological MCAT) sub-scores were significantly correlated with Level 2 performance. COMLEX USA Level 2 performance was correlated with the year 1 GPA (0.64) and the year 2 GPA (0.68).

Strong correlation existed between all year 1 and most year 2 course grades and COMLEX-USA Level 1 scores.

Silver and Hodgson (1997) examined the relationships among undergraduate student characteristics, standardized indicators of medical school academic performances and clinical performance at University of California, Riverside (UCR), School of Medicine, Los Angeles. The data were collected in 1993 for the 1990-93 classes of the Bio-medical science programme. All these students had completed their undergraduate studies at UCR. Data were collected with regard to the students' demographic characteristics, undergraduate grade-point average (UGPAs), Medical College Admission Test (MCAT) scores, National Board of Medical Examiners Part 1 (NBME 1) scores and clinical performance as measured by core clerkship grades. Regression analysis was used to evaluate the relationship between clinical performances and data available at admission on the same variables. Top and bottom 25% of each class were identified by UGPAs and compared by their NBME 1 scores and clinical performances to determine whether differences noted at admission continued to separate the students. Independent two tailed t-tests were used to study the differences. Of the 92 students

data were available for 88 (96%). 39% were female and 38% were foreign-born. The sample was fairly heterogeneous in terms of UGPAs, MCAT scores, clinical performance grades, and NBME 1 scores.

The results of the first regression analysis indicated that mean clinical performance was not related to any of the undergraduate predictors of performance, or the students' demographics. The second regression analysis indicated that MCAT scores and cumulative science UGPAs were related to their performance on the NBME 1, but not in their clinical performances.

Silver and Hodgson (1997) concluded that although UGPAs and MCAT scores are good indicators of NBME 1 performance, they are not useful in predicting clinical performance, even where students' data are taken from the same undergraduate institution.

Truell and Woosley (2008) investigated whether college of business admission criteria and other variables predicted undergraduate college of business student graduation. The specific variables examined included gender, race/ethnicity, math academic college aptitude score, verbal academic aptitude score, college of business accounting GPA, college of business computer proficiency GPA, college of business economics GPA, college of business statistics GPA, required English GPA, and required math GPA. The results of the study demonstrated that college of business (COB) statistics GPA was positively associated with high probability of graduation. 87% of the students meeting the COB admission criteria who began studies in Fall 2000, graduated by July 2005.

Many universities have selective admission tests. They use some type of criterion to determine which applicants will be accepted and which rejected. Ideally, the process should differentiate and admit those students who are likely to succeed. According to Hawkins & Clinedinst (2006), 'the main factors in

the admission process continued to be (in order): grades in college preparatory courses, standardized admission tests, and overall high school grade point average. Class rank and the application essay was placed fourth to fifth while teacher/counselor recommendations were sixth. A student's demonstrated interest in attending an institution also constitutes a key factor in admission'.

**Berry & Sackett (2009)** demonstrated in their study that the validity of SAT scores and high school grade point average (GPA) as predictors of academic performance has been underestimated because of previous studies' flawed performance indicators (i.e. college GPA) that are contaminated by the effects of individual differences in course choice. They controlled the contamination by predicting individual course grades, instead of GPAs, in a data set containing more than five million college grades for 176,816 students representing entry classes at 41 colleges in 1995 through 1997. The researchers calculated correlations of SAT scores and high school GPAs with ICGs (Individual course grades). The sample included grades from 145000+ courses without excluding negative correlations. They compared how well SAT scores and high school GPAs predicted ICGs with how well they predicted two common GPA criteria: College freshman GPA and cumulative GPA throughout the college career. They also assessed the validity of SAT scores and high school GPAs when used in conjunction to predict ICGs, as most colleges use same combination of the two in the admission process. The researchers concluded that percentage of variance accounted for by SAT scores and high school GPAs was 30 to 40% lower when the criteria were individual course grades .SAT scores and high school GPAs together accounted for between 44 and 62% of the variance in college grades.

**Naik and Ragothaman (2004)** evaluated the ability of three different models namely logistic regression, probit analysis, and neural networks, to predict MBA performance.

**Gayle and Jones (1973), and Baird (1975)** found a significant positive relationship between Graduate Record

Examination (GRE) scores and graduate grade point average (GPA) in graduate studies.

Ahmadi et.al. (1997) used bi-variate regression models to examine the relationship between graduate GPA and a number of factors and found that undergraduate GPA and GMAT were significant variables in predicting academic success. They reported a study done by Edwards (1990) who surveyed 657 accredited institutions to study the admission process for their MBA programmes. Out of 333 responses received, all but one of the responding schools used some sort of admission testing. The researcher found that John Hopkins does not require candidates to submit pre-admission test scores such as GMAT. Some other graduate programmes including Stanford, Boston College, and University of Indiana, at Bloomington require submission of GMAT score for consideration, but do not mandate a minimum acceptable score. The most popular decision method for most MBA programmes was an index system based on GMAT score and undergraduate GPAs. From the responding schools, 177 respondents used an index, 81 imposed a minimum test score in addition to applying an index, and the rest used a minimum test score without applying an index. Naik et. al. (2004) in their review of research reported that Paolillo (1982) employed step by step regression in his study and found that the applicant's junior and senior undergraduate grade point average was the first variable to enter into the equation; Schwan (1988) found GGPA to be significantly correlated with GMAT scores, undergraduate grade point average, and junior/senior grade point average among Murray State University MBA students. However, Wright and Palmer (1997) used analysis of variance to examine GMAT scores among groups of graduate students and concluded that the use of total GMAT scores in the admission process may be misleading and more attention should be paid to specific verbal and quantitative components.

Murray (1972) compared a group of MBA students who had graduated from the programme at Hofstra University in June, 1970 and February, 1971, with a group of 17 students who had withdrawn from the programme at earlier points. Five predictor

variables were identified: undergraduate GPA; undergraduate business concentration GPA; total, quantitative scores on the ATGSB ( Admission Test for Graduate Study in Business).; graduation versus withdrawal; and overall graduate GPA. The results of the study show that undergraduate GPA and undergraduate business concentration GPA are the most effective success predictors. ATGSB, however, proved to be the least effective predictor.

Malik (2010) studied the scores (percentage marks) of students at SSC, Intermediate, and degree levels as predictors of their performance in MBA. Sixty (60) students who graduated in 2009 from IoBM Karachi, formed sample for the study. The data was collected personally by the researcher from the official records of the University. Regression Analysis and ANOVA were used for the analysis of data. SPSS was used to analyze the data. The study concluded that performance of students at Bachelor level was the strongest predictor of CGPA at MBA level. When performance at Bachelor level was analyzed, only the male performance was a significant predictor of the CGPA in MBA.. Significant differences were found between the contribution of the pre-degree performance of the BBA, B.com. and B.sc. groups as predictors of CGPA in MBA. The BBA performance of the male students was a strong predictor of CGPA at MBA level.

Summary of the predictors of the students' performance in medicine and business administration (MBA) based on the review of research is presented in Summary table 9.

## **II. Methodology**

This paper aims at studying the students' performance in the pre-admission variables (Percentage in SSC, Intermediate, and Bachelor degree) as predictors of their performance at MBA level. The study tested the following null hypotheses:

1. Students' scores at SSC, Intermediate, and Bachelor levels are not significant predictors of CGPA at MBA level.

2. Subjects' scores at SSC, Intermediate, and Bachelor levels are not significantly different predictors of CGPA in MBA.
3. Scores of male and female subjects at SSC, Intermediate and Bachelor levels are not significant predictors of CGPA in MBA.
4. Scores of male and female subjects at SSC, Intermediate, and Bachelor levels are not significantly different predictors of CGPA at MBA level.
5. SSC, Intermediate, and Bachelor level scores of the BBA, B.com, and B.sc. groups are not significant predictors of CGPA at MBA level.
6. SSC, Intermediate, and Bachelor level scores of the BBA and B.com. groups are not significantly different predictors of CGPA in MBA.
7. SSC, Intermediate, and Bachelor level scores of the B.com. and B.sc. groups are not significantly different predictors of CGPA at MBA level.
8. SSC, Intermediate, and Bachelor level scores of the BBA, B.com. and B.sc. groups are not significantly different predictors of the CGPA at MBA level.

The following procedure was used to test the research hypotheses of the study:

#### **Selection of Subjects**

A group of sixty (60) MBA students (30 male and 30 female) were randomly selected from the IoBM graduating students' list, 2009. Systematic random sampling was used for the selection of the sample.

#### **Collection of data**

The official records of the MBA students was procured from the University, and the relevant data was personally recorded. The data included the students' percentage marks obtained at Bachelor, Intermediate, and SSC levels, students' gender and their subject groups at Bachelor level namely BBA, B.com., and B.sc. groups.

**Analysis of data**

Regression analysis and Analysis of Variance were used for the analysis of data. The SPSS was used for Regression analysis and ANOVA..

**Findings, Results and Conclusions**

The findings, results ,and conclusions that emerged from the study were summarized and presented in the final section of this paper.

**III. Results**

Null hypothesis 1: Subjects' scores at SSC, Intermediate, and Bachelor levels are not significant predictors of CGPA at MBA level.

**Table 1 : Analysis of variance: Subjects' performance in SSC, Intermediate, and Bachelor (Percentages) as Predictor of CGPA in MBA**

Variable	SS squares	Df	Mean squares	F	Sig.
Model-1					
Regression	.425	3	.142	4.439*	.05
				.076	
Residual	1.789	56	.032		
Total	2.215	59			

\*p<.05

- a. Predictors: (constant), Percentage in Bachelor degree, Percentage in Intermediate, Percentage in SSC.
- b. Dependent variable: CGPA in MBA.

Table 1 shows that the F-value ( $F=4.439 ; 3,56$ ) is significant at .05 level of significance. The null hypothesis is rejected. There is significant contribution of the subjects' performance at Bachelor, Intermediate, and SSC levels in the resulting variance in the subjects' CGPAs in MBA. The subjects' scores in the pre-admission variables are significant predictors of their CGPA at MBA level.

Null hypothesis 2: Subjects' scores at SSC, Intermediate, and Bachelor levels are not significantly different predictors of CGPA in MBA.

Table 2 : Regression Analysis: Predicting CGPA in MBA on the subjects' performance at Bachelor, Intermediate, and SSC levels.

Variable Model-1	B (un-standardized Coefficients)	St. error	Beta (standardized Coefficients)	t	Sig..
(constant)	2.672	.300		8.912	.05
Percentage in SSC	.000	.004	-.037	-.258	.797
Percentage in Intermediate	.004	.003	.162	1.140	.259
Percentage in Bachelor	.006	.002	.406	3.298*	.05

\* $p > .05$

a. Predictors: (constant), Percentage in Bachelor degree, Percentage in Intermediate, Percentage in SSC.

b. Dependent Variable: CGPA in MBA.

Table 2 shows that regression B coefficient for subjects' performance at Bachelor level was significant at .05 level of significance. (B =.406; t=3.298). The B coefficient for subjects' performance at Intermediate and SSC levels was not significant at .05 level of significance. The null hypothesis was therefore partially accepted . The performance at Bachelor level was a strong predictor of the CGPA at MBA level. The performance at Intermediate level was a modest predictor of CGPA in MBA (B=.162; t=1.140).The performance at SSC level was the weakest predictor of the three pre-admission variables included in the study.

Null hypothesis3: Scores of male and female subjects at SSC, Intermediate, and Bachelor levels are not significant predictors of CGPA at MBA level.

Table 3 : R<sup>2</sup> value for male-female comparison of the subjects' performance accounted for the variance in CGPA at MBA level.

Variable	R	R square	Adjusted R Square	St. error of the estimates
Model -1				
Male	.758	.575	.526*	.13025
Female	.306	.093	-.011	.20235

- a. Predictors: (constant),Percentage in Bachelor degree, Percentage in SSC, Percentage in Intermediate.
- b. Predictors(constant). Percentage in Bachelor degree, Percentage in Intermediate, Percentage in SSC.
- c. Dependent variable:: GPA in MBA

Table 3 shows that in the male group, their performance (percentage) in pre admission variables accounted for 52% of the variance in CGPA at MBA level . In the female group, their contribution accounted for in the variance in CGPA at MBA level is not significant. The performance of the male group at SSC, Intermediate, and Bachelor levels is a significant predictor of CGPA in MBA.

(Male  $R^2=.526$ ; Female  $R^2=-.011$ )

Null hypothesis 4: Scores of male and female subjects at SSC, Intermediate, and Bachelor levels are not significantly different predictors of CGPA at MBA level.

Table 4 (a) Analysis of variance : Predicting CGPA in MBA on subjects' performance at Bachelor, Intermediate, and SSC levels: male-female comparisons.

Variable	SS	df	MS	F	Sig.
Model-1					
Male					
Regression	.596	3	.199	11.712*	.05
Residual	.441	26	.017		
Total	1.037	29			
Female					
Regression	.110	3	0.37	.892	.458
Residual	1.065	26	0.41		
Total	1.174				

\* $p<05$

- Predictors: (constant). Percentage in Bachelor degree, percentage in SSC, percentage in Intermediate.
- Predictors: (constant). Percentage in Bachelor, percentage in Intermediate, percentage in SSC.

Table 4(a) shows that the two groups (male and female) were significantly different at .05 level of significance. The F value for the male group was significant  $F(3,26)=11.712$  but it was not significant for the female group. The results suggest that the male group performance at Bachelor, Intermediate, and SSC levels significantly affected their performance at MBA level and it was a strong predictor of CGPA in MBA. However, the performance of the female group in the pre-admission variables showed no significant effect on their performance at MBA level and it was a weak predictor of CGPA in MBA.

Table 4(b): Regression Analysis: Predicting CGPA in MBA on the subjects' performance at Bachelor, Intermediate, and SSC levels—Male-female comparisons.

Variable	B	St. error	Beta	T	Sig..
Model-1	(un-standardized Coefficients)		(standardized Coefficients)		
Male					
(constant)	2.488	.339		7.342	.05
Percentage in SSC	-.004	.005	-.151	.815	.422
Percentage in Intermediate	.001	.004	.065	.347	.732
Percentage in Bachelor	.14	.003	.714	5.016*	.05
Female(constant)	2.606	.491	5.305		.05
Percentage in SSC	.003	.005	.107	.524	.604
Percentage in Intermediate	.003	.005	.139	.686	.499
Percentage in Bachelor	.003	.003	.265	1.393	1.76

\* $p > .05$

Dependent variable: CGPA in MBA

Table 4(b) shows that standardized Beta coefficient for male subjects' performance at Bachelor level was significant at .05 level of significance. ( $B = .714$ ;  $t = 5.016^*$ ). The Beta coefficient for female subjects' performance in all the pre-admission variables was not significant at .05 level of significance. The null hypothesis was therefore partially accepted. Only the male performance at Bachelor level was a significant predictor of the CGPA at MBA level.

Null hypothesis 5: Scores at SSC, Intermediate, and Bachelor levels for the BBA, B.com., and B.sc. groups are not significant predictors of CGPA at MBA level.

Table 5:  $R^2$  value of pre-admission performance of BBA, B.Com. and B.sc. groups in predicting CGPA at MBA level.

Variable	Model	R	R square	Adjusted R square	Standard error of the estimate
Group-1					
BBA	1	.723 a	.523	.479*	.1347
Group-2					
B.Com.	1.	.702 b	.492	.323 *	.1478
Group-3					
B.sc.	1	.433 b	.188	-.218	.2034

\* $p > .05$

a. Predictors: (constant). Percentage in Bachelor degree, Percentage in SSC, Percentage in Intermediate.

b. Predictors: (constant). Percentage in Bachelor degree, Percentage in Intermediate, Percentage in SSC.

Table 5 shows that in BBA group, the students' performance at Bachelor, Intermediate and SSC levels accounted for 47.9% of the variance in the CGPA at MBA level. In the B.Com. group, students' performance at Bachelor, Intermediate and SSC levels accounted for 32.3%. The performance of the B.sc. group in the pre-admission variables accounted for -21.8%. Hence, the null hypothesis was rejected. There was a significant difference in the contribution of pre-admission performance in the variance in the subjects' CGPA at MBA level.

( BBA  $R^2 = .479$ ; B.Com.  $R^2 = .323$ ; B.sc.  $R^2 = -.218$ )

Null hypothesis 6: SSC, Intermediate, and Bachelor level scores of the BBA and B.com. groups are not significantly different predictors of CGPA at MBA level.

Table 6: Analysis of variance : Predicting CGPA in MBA on subjects' performance at Bachelor, Intermediate, and SSC levels: — BBA and B.Com. comparisons.

Variable	SS	Df	MS	F	Sig.
Model-1					
BBA					
Regression	.656	3	.219	12.048*	a .05
Residual	.599	33	.018	2.907	b .094
Total	1.255	36			
B.Com.					
Regression	.190	3	.063	.	
Residual	.197	9	.022		
Total	1.174				

\* $p < .05$

a. Predictors: (constant). Percentage in Bachelor degree, percentage in SSC, percentage in Intermediate.

b. Predictors: (constant). Percentage in Bachelor degree, percentage in Intermediate, percentage in SSC.

d. Dependent variable: CGPA in MBA

Table 6 shows the two groups (BBA and B.Com.) were significantly different at .05 level of significance. The F value for the BBA group was significant  $F(3,33)=12.048$ ) but it was not significant for the B.com. group. The results suggest that the BBA group performance at Bachelor, Intermediate, and SSC levels significantly affected their performance at MBA level and was a strong predictor of CGPA in MBA.. However, the performance of the B.com. group in the pre-admission variables showed no significant effect on their performance at MBA level and was a weak predictor of CGPA in MBA.

Null hypothesis7: SSC, Intermediate, and Bachelor level scores of the B.com. and B.sc. groups are not significantly different predictors of CGPA at MBA level.

Table 7: Analysis of variance : Predicting CGPA in MBA on subjects' performance at Bachelor, Intermediate, and SSC levels—

Variable	SS	Df	MS	F	Sig.
Model-1					
B.Com. Total	.387	12			
B.sc Regression	.057	3	.019	.462	b .719
Residual	.248	6	.041		
Total	.306	9			

\* $p>.05$

bPredictors: (constant). Percentage in Bachelor degree, percentage in Intermediate, percentage in SSC

c.Dependent variable: CGPA in MBA

Table 7 shows that the B.Com. and B.sc. groups were not significantly different. The F value for the B.Com. and B.sc groups was not significant at .05 level of significance. The results suggest that the performance of the two groups at Bachelor, Intermediate, and SSC levels had no significant effect on their performance at MBA level and was a weak predictor of their CGPA in MBA.

Null hypothesis 8: SSC, Intermediate, and Bachelor level scores of the BBA, B.com., and B.sc. groups are not significantly different predictors of CGPA at MBA level.

Table 8: Regression Analysis: Predicting CGPA in MBA on subjects' performance at Bachelor, Intermediate, and SSC levels:  
—— BBA, B.Com. and Bsc. groups comparison

The three pre-admission variables were used in a regression model to predict MBA CGPA. Table 8 shows that the Bachelor level performance score was significant predictor variable for MBA performance in the BBA group at .05 level of significance.

( $B=.671$ ;  $t=5.438$ ). SSC level performance was significant predictor for MBA performance in the B.com. group. ( $B=.731$ ;  $t=2.347$ ). The performance in the pre-admission variables was not significant predictor for MBA performance in the B.sc. group.

Variable	Un-standardized coefficients B	St. error	Standardized coefficients Beta	T	Sig.
Model-1					
BBA (constant).	2.533	.302			
Percentage in SSC	-.005	.003	-.207	-1.505	.142
Percentage in Intermediate	.002	.003	.110	.787	.437
Percentage in Bachelor degree	.014	.003	.671	5.438*	.05
B.Com – Model -1 (constant)	1.821	.624		2.919	.17
Percentage in SSC	.017	.007	.731	2.347*	.05
Percentage in Intermediate	8.741	.007	.004	.013	.990
Percentage in Bachelor degree	.001	.003	.069	.253	.806
B.sc. – Model-1 (constant)	3.202	1.509	-	2.122	.078
Percentage in SSC	-.009	.019	-.384	-.471	.654
Percentage in Intermediate	.004	.016	.175	.230	.825
Percentage in Bachelor degree	.006	.014	.225	.456	.665

\*p>.05

b. Predictors: (constant). Percentage in Bachelor degree, percentage in Intermediate, percentage in SSC

c. Dependent variable: CGPA in MBA

**Summary Table 9**  
**Predictive Variables for Performance**  
**in Professional subjects(Medical & MBA)**

<b>Predictive Variables (Independent Variables)</b>	<b>Dependent Variables</b>
1. (a) SAT (verbal portion) scores	USMLE (US Medical Licensing Examination)
(b) MCAT : Reading---Skills analysis (Medical College Admission Test) (Roth et.al.. (1996)	
2. Undergraduate GPA	Medical School GPA
	a) Basic GPA
	b) Clinical GPA
	c) Total GPA
	d)COMLEX-USA
	Level 1 & 2 Scores
( Evanset et. al. (2007)	
3. MCAT	GPA/grades
	(Medical School)
(Julian, (2005)	
4. UGPAs	NBME-1
MCAT	
(Silver & Hodgson, (1997)	
5 SAT score	
High School GPA	CGPA in MBA
(Berry & Sacket, (2009)	
6. UGPA	
Undergraduate Business	
Concentration GPA	CGPA in MBA
(Murray,(1972)	

Table continued nex page.

7.	College of Business Statistics GPA	High probability of graduation from Undergraduate College of Business
8.	GRE score	CGPA in Graduate School  (Gayle and Jones, (1973)
9.	UGPA GMAT	Academic Success in Business School  (Ahmadi et. al. (1997)
10	UGPA	Academic Success in Business School  (Paolillo, (1982)
11.	Amount of work experience	Success in Business School  (Adams and Hancock, (2000)
	GPA and GMAT	Undergraduate performance in Business School  (Brauntein, (2002)

Table continued nex page.

12	Bachelor level performance	CGPA in MBA
	Performance at Bachelor, Intermediate and SSC levels	CGPA in MBA for the male
	Male performance at Bachelor level	CGPA in MBA
	Male and female performance significantly different	CGPA in MBA
	Performance of BBA, B.com., and B.sc. significantly different	CGPA in MBA
	BBA group performance	CGPA in MBA (strong predictor) (accounted for 47.9% of the variance in CGPA in MBA)
	B.com. Group performance	(Accounted for 32.3% of the Variance in CGPA in MBA)
	SSC level performance in The B.com. group	CGPA in MBA

Malik, (2010)

#### 1V. Conclusions

The conclusions of the study are summarized below:

1. Performance of students at Bachelor level was the strongest predictor of CGPA at MBA level. There was however, a significant difference between at Bachelor, Intermediate, and SSC level performance as predictors of CGPA at MBA level on gender basis. When performance at Bachelor level as predictor of CGPA in MBA was analyzed, only the male performance at Bachelor level was a significant predictor and accounted for 52% of the variance in CGPA at MBA level. On the other hand the the female contribution as predictor was not significant at Bachelor level. Overall, the subjects' performance at Bachelor, Intermediate, and SSC levels was stronger predictor of CGPA in MBA for the male rather than the female group.
2. There was a significant difference between the contribution of the pre-admission performance of the BBA, B.com., and B.sc.groups as predictors of CGPA in MBA. There was a statistically significant difference between the BBA and B.com. groups. The BBA performance was the stronger predictor of the performance at MBA level. However for the B.com. group, SSC performance was a strong predictor of CGPA in MBA. There was no significant difference between the B.com. and B.sc. groups as predictors of CGPA at MBA level.
3. In the BBA group, subjects' performance in the pre-admission variables accounted for 47.9% of the variance in CGPA at MBA level. In the B.com. group,

subjects' performance in the pre-admission variables accounted for 32.3% of the variance in CGPA at MBA level. The BBA group performance in the pre-admission variables was stronger predictor of CGPA in MBA than the B.com. group performance.

4. Bachelor level performance emerged as a strong predictor of performance in MBA. This needs to be reflected in the admission criteria for MBA programmes. The significant contribution of the BBA group performance as predictor of CGPA in MBA could be explained by the positive role of the related subjects studied at BBA level and the students' familiarity with the system of study and evaluation. .
5. The present study demonstrates the need for updating the curriculum at all levels in general and at Bachelor level in particular. The curriculum at BBA and B.com. levels need to be coordinated and improved to make it more useful, current and effective for the prospective MBA students.

### **Bibliography**

Ahmadi M.; Raiszadeh F.; Helms M. (1997). An examination of the admission criteria for the MBA programmes: A case study. In *Questia: Journal article. Education*, Vol. 117, 1997.

Ashikawa H.; Hojat M.; Zeleznik C.; Gonnella J.S. (1991). Reexamination of relationship between students' undergraduate majors, medical school performance and career plans at Jefferson Medical College. In *Acad. Med.* 1991 August; 66 (8): 458-64

Barrick M.R. , and Mount M.K.(1991). The Big Five Personality Dimensions and job performance: A Meta -Analysis , *Personnel Psychology*, 1991, 44, 1-26.

Baty, P. (2006). Class is allowed to set exam. *Times Higher Education Supplement*—June 30

Berry M. C; Sackett P.R. (2009). Individual differences in course choice result in under-estimation of the validity of college admission systems. In *Psychological Science* , Vol. 20 Issue 7 , 822-30.

Bial D. and Rodriguez A. (2007). Identifying a diverse student body: selective college admissions and alternative approaches. *Wiley Inter Science. New Directions for student Services*. No. 118 summer 2007. ([www.interscience.wiley.com](http://www.interscience.wiley.com))

Bial D. (2004). Alternative Measures for College Admissions—A Relational Study of a new predictor for success: THE PROMISE OF THE Bial Dale College Adaptability Index and the success of the Posse Programme. Ed.D dissertation, Harvard University Graduate School of Education. 2004.

Biggs, J. B. (2003). *Teaching for quality learning at university*. 2<sup>nd</sup> ed., Society for Research into Higher Education and Open University Press , Buckingha

Boud, D. and Falchikov , (2006). Aligning assessment with long-term learning. *Assessment and Evaluation in Higher Education* 31 , pp. 399-413 (informaworld).

Brown, S. (2003). Assessment that works at work. *The Newsletter for the Institute of Learning and Teaching in Higher Education* 11 , pp. 6-7.

Case, S. (2007). Reconfiguring and realigning assessment feedback processes for an undergraduate criminology degree. *Assessment and Evaluation in Higher Education* 32 , pp. 285-299. (informaworld).

Craig P.L.; Gordon J.J.; Clarke R.M.; and Langendyk V. (2004). Prior academic background and student performance in assessment in a graduate entry programme. *Medical Education* 38, pp. 1164-1168

Craig, P. ;Gordon, J. ; Clarke, R. ;Oldmeadow, W. .(2009). Prior degree and student assessment performance: how can evidence guide decisions on assessment policy?. In *Assessment & Evaluation in Higher Education*. Vol. 34, No. 50, October, 2009. 537-551.

Dirk, Mathew. (1997). *Developing an appropriate assessment strategy: research and guidance for practice*. USA. Florida State University. <http://star.ucc.nau.edu/~nauweb97/papers/dirks.html>.

Dixon D. (2004). Relations between variables of pre-admission, medical school performance, and COMLEX- USA Levels 1 and 11 performance. In *J Am. Osteopath Assoc.* 2004 August; 104 (8) : 332-6

Evans P.; Wen F.K. (2007). Does the medical college admission test predict global academic performance in Osteopathic medical school? In *J Am. Osteopathic Assoc.* 2007 April, (4) : 157-62

Exxon Education Foundation. *Principle of good practice for assessing student learning: Assessment Forum*. <http://www.aahe.org/assessment/principle.ht>

Francis, J. (1982). A case for open book examination. *Educational Review* 34 , pp.-13-26 (informaworld).

Gardner H. (1983). *Frames of Mind: The Theory of Multiple Intelligence* . New York: Basic Books.

Hall, J. and Tinklin, T. (1998). *Disabled students in higher education*. Scottish Council for Research in Education , Edinburgh.

Hamdorf , J. M. and Hall , J. C. (2001). Surgical education. *Australian and New Zealand Journal of Surgery* 71 , pp. 178-183. (crossref).

Hawkins D.A.; Clinedinst M. (2006). *State of college admission 2006*. Alexandria VA 22314, NACAC (National Association for College Admission Counseling).

Julian E.R. (2005). Validity of the Medical College Admission Test for predicting medical school performance. In *Acad. Med.* 2005 Oct; 80 (10) : 910-1

Klenowski, V., Askew, S. and Carnell, E. (2006). Portfolios for learning, assessment and professional development in higher education. 8 , pp. 107-115.

McMillan J.H. (2001). *Classroom assessment principles and practice for effective instruction*. London: Allyn and Bacon

Melnick M.(1972). *A further investigation of success in the MBA programme at Hofstra University*. New york: Hofstra University, Centre for the study of Higher Education, Hempstead, New York.

Mennin S.P.; Skipper B.; Kalishman S.; Synder J. (1993). Performance on the NBME 1 and 11, and 111 by medical students in the problem-based learning and conventional tracks at the University of New Mexico. In *Acad. Med.* 1993, August; 68 (8) ; 616-24.

Naik B. and Ragothaman S. (2004). Using neural networks to predict MBA student success. In *College Student Journal* , March, 2004.

Rambottom-Lucier M.; Johnson M.M.;Elam C.L. (1995). Age and gender differences in the students' pre-admission qualifications and medical school performances. In *Acad. Med.* 1995 March; 70 (3) : 236-9

Roth K.S.; Riley W.T.; Brandt R.B.; Seibel H.R. (1996). Prediction of students' USMLE Step 2 performances based on pre-medical credentials related to verbal skills. In *Acad. Med.* 1996 Feb; 71 (2) 176-80

Sadlacek W.E. (1993). Employing non-cognitive variables and retention in higher education. In *Achieving Diversity: Issues in the recruitment and retention of under-represented racial/ethnic students in higher education.* Alexandria, VA.: National Association of College Admission Counselors, 1993.

Silver B. Hodgson C.S. (1997). Evaluating GPAs and MCAT scores as predictors of NBME 1 and clerkship performance based on students' data from one undergraduate institution. In *Acad. Med.* 1997 , May, (5) : 394-6.

Sternberg R.J. (1985). *Beyond IQ: A Triarchic Theory of Human Intelligence.* New York: Cambridge University Press.

—————(2004). Theory-based University Admissions Testing for a new Millennium. *Educational Psychologist*, 2004, 39 (3), 185-198.

Thompson, K. and Falchikov, N. (1998). Full on until the sun comes out: The effects of assessment on student approaches to studying. *Assessment and Evaluation in Higher Education* 23 , pp.-379-390 (informaworld).

Truell A.D.; Woosley W. (2008). Admission criteria and other variables as predictors of business student graduation. *College Student Journal*, June, 2008.