Students' Performance in Higher Education

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Abstract:

Higher education builds efficient human resources, which advances a nation from all spheres. However, performance of students is significant as it indicates their ability to lead the organization. The objective of this study is to identify contributing factors, which have impact on BBA result. Three hundred undergraduates' students of faculty of Business Administration in Eastern University have been selected as respondent. Data were reduced in appropriate modeling analysis in SPSS software and multiple regression stepwise method was applied. Results showed that SSC result (.529) has positive impact on BBA result and Contribution in BBA result from both SSC and HSC (-.596), Contribution in result from HSC to BBA (-.342), Contribution in result from SSC to HSC (-.188), Students who come from Dhaka (-.162), and Gap from HSC to BBA (-.096) have negative impact on BBA result. This study will help policymakers of university to improve BBA result precisely.

Key words: Students performance, Higher education, Dependent variable, Independent variable.

Introduction

Education is imperative for the development of any nations today. It is such a technology that gets out people from darkness into light. It is the quality of education that shapes the long-term prosperity and well being of both nations and their people. The vast resources that government allocates to this sector make it imperative for those who manage education to ensure that education is effectively imparted in schools, universities and institutions of learning (Uddin, 2000).Education enlightens its citizens, build a base for higher education and improve the quality of human resources. However, higher education is not accessible by every citizen in developing countries like Bangladesh. Public universities cannot accommodate all the students who wish to have a higher degree. To bridge the gap between universities and students, private universities were established. In private university, business schools have become so established as part of the educational and business worlds that their purposes are rarely a subject of reflection, perhaps especially for those of us who teach within them (Grey, 2002). Undergraduate business education is a qualitatively different phenomenon. One distinction is that, arguably, the focus of management education is much clearer, as are the motivations of those who seek it. While

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postgraduate students may well be as instrumental in their original approach to course of study, reflecting an increasingly credentialized world of work (Mutch, 1997). Seeing the success of business graduate in corporate world a question might come why employers are appointing a graduate from business school? The standard answer to this question would be that business schools supply people who are technically equipped to manage better as a result of their BBA and MBA (and other qualifications), so they are hired by companies, which in turn perform better, contributing to the economic competitiveness of nations(Grey, 2002). While business education is only one of several departments in the school which contribute to consumer education, it assumes a large share of the responsibility because it's content is a natural vehicle for consumer education. As Adam Smith pointed out in 1776, the sole purpose of production is to accommodate the interests and desires of the consumer (Daughtrey, 1967). In addition, teachers have great role in creating better human resources in society. Therefore, When we prepare the student to enter the labor market as a producer, we must also prepare him to be an effective consumer of the goods and services which result from his and others' production (Daughtrey, 1967). This production and success of business graduate depends on their performance in education ie, their results, presentation skills, convincing skills and overall smart personality. Students result and feedback plays an important role in individual behavior and performance (Ashford and Tsui, 1991). Be it positive or negative, it is inherently affective (Ashford and Cummings, 1983). There is a research gap about student performance in higher education in Bangladesh. The article is conducted to fulfill this gap.

Literature Review

Many students enter a higher education environment with little preparation, having little idea of what to expect and little understanding of how the university environment can affect their lives (Upcraft & Gardner, 1989). This can result in an inability to make the necessary academic, social and personal adjustments to life at university in general and inhibit them from making commitments to their course and institution. In practice, many incoming students adopt a 'wait and see' attitude to their forthcoming university experience (Astin, 1975). When universities do not help incoming students form realistic expectations of themselves and of their institution, the demands of the new environment can be overwhelming (Levitz & Noel, 1989). In most cases, mismatches between expectations and reality are dysfunctional in nature (McInnis et al., 1995). These are the probable causes of unexpected performance in higher level.

Other inaccurate prior perceptions relate to the amount of time spent in lectures and study and the belief that the nature of learning would not differ too much from that experienced in secondary school (Cook & Leckey, 1999). Success is also dependent on the individual attributes of new students. Academic ability which he or she has acquired in past is probably the single most important determinant of success, but Yorke (1998) has shown that gender is also an important factor, with males more likely than females to report having more difficulty with aspects of study. Additionally, age has been shown to have a bearing on the nature of problems experienced (Power et al., 1987; Johnston, 1994; Ozga & Sukhnandan, 1998; Yorke, 1998). In general, older students who have break in study tend to make better choices and be more focused than younger students, but are more likely to be adversely affected by domestic commitments (Farr, 1994; Ozga & Sukhnandan, 1998). Younger students tend to be more dissatisfied with the quality of teaching and with aspects of the study environment (Yorke, 1998). School leavers have been found to be less diligent in their study habits and less academically orientated than older students (Power et al., 1987). Youth and inexperience characterize those students who leave through academic failure (Johnston, 1994).Students who live at home also find it more difficult to integrate into campus life (Woodward & Bradshaw, 1989).

There is a tremendous amount of research on college student development showing that the time and energy students devote to educationally purposeful activities is the single best predictor of their learning and personal development (Astin, 1993; Pace, 1979; Pascarella & Terenzini, 1991, 2005). Over the years, Astin has refined his model of student development, and in 1993 he revisited his 1977 study, again using data from the Higher Education Research Institute's Cooperative Institutional Research Program (CIRP) studies. The 1993 study identified six critical environmental variables: institutional characteristics, peer group, faculty, curriculum, major, financial aid, residence, and level of involvement. Again, he found that, regardless of type of institution, involvement in the academic experience is very important, especially with peers and with faculty in and out of class. In short, involvement (or engagement) helps explain how and why environmental variables affect student outcomes.

Reviewing the literature it has been found that students' previous behavior is a good predictor of future behavior (Camara, 2005) and researchers are beginning to develop instruments to measure these non-cognitive factors as admissions criteria (Thomas, Kuncel, & Crede, 2007).

Previous research has suggested that graduate school performance is multidimensional (Enright & Gitomer, 1989; Reilly, 1974). Extending Campbell's model of work performance (Camp- bell, 1990; Campbell et al., 1996) to the graduate school setting (Campbell, Kuncel, & Oswald, 1998) also proves the idea that students past academic performance is vital element which influence higher education. GGPA and Ist-year GGPA are the most widely used measures of graduate school performance, GGPA has a number of advantages and disadvantages as a criterion measure. In its favor, GGPA measures long-term work, knowledge acquisition, effort, persistence, and ability. It is also related to post-school success (Hoyt, 1966; Roth, BeVier, Switzer, & Schippmann, 1996). Not favoring GGPA is the fact that grading standards can vary widely across schools, departments, and even faculty teaching the same course (Hartnett & Willingham, 1980). The final moderator examined was student age. Older students are likely to differ from more traditional students in work experience, time away from school, and family obligations.

Objective

The broad objective of this research paper is "To find out the contribution of different factors in BBA result".

Methodology

This is a descriptive research. Both primary and secondary data have been used for conducting present research. The study is based on 300 undergraduate students studying in faculty of Business Administration, Eastern University. 1st to 15th batch students who have got admitted from summer, 2003 to Fall, 2007 are included among 300 respondents. Data analysis was performed by using SPSS for this study.

Results and Discussions

An analysis of the data revealed that the majority of Students are male (77.7 %) and female (22.3%). Though it varies from batch to batch such as students, who have admitted in Fall, 2006 and Summer, 2007 their ratio is 60:40.In case of Cell phone, 99% students have phone. Most students are using GP (48%) and Banglalink (32%). Emotional attachment with the institution can be measured by examining students Email ID. Only 11% students' use eu in their email ID. 51 % students have own house in Dhaka city among them male (70%) and female (30%).

Multiple regressions tell how well each independent variable predicts the dependent variable, controlling for each of the other independent variables. In this study, the regression would tell how well SSC result, predicted student BBA result, controlling for HSC result, own house, gap in study and so on as well as how well HSC result, predicted student BBA Result, controlling for SSC result, own house, gap in study and so on.

Stepwise is the most sophisticated statistical method that has been adopted for analyzing data in this study. In this method, each variable is entered in sequence and its value assessed. If adding the variable contributes to the model then it is retained, but all other variables in the model are then retested to see if they are still contributing to the success of the model. If they no longer contribute significantly they are removed. Thus, this method should ensure that end up with the smallest possible set of predictor variables included in model.

Table 1: Model Summary of Students performance in Higher Education

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.418(a)	.175	.172	1.657	.175	63.142	1	298	.000	
2	.612(b)	.374	.370	1.446	.199	94.588	1	297	.000	
3	.705(c)	.497	.492	1.298	.123	72.554	1	296	.000	
4	.729(d)	.532	.526	1.254	.035	21.908	1	295	.000	
5	.748(e)	.559	.552	1.220	.027	17.938	1	294	.000	
6	.753(f)	.567	.559	1.210	.008	5.712	1	293	.017	1.844

a Predictors: (Constant), Contribution in BBA result from both SSC and HSC
b Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC)
c Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA
d Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC
e Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka
f Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka, Gap from HSC to BBA
g Dependent Variable: Result (BBA)

The dependent variable in this linear regression analysis is "BBA result" because the objective of this study is to explain differences in BBA results by SSC, HSC result and other factors. Therefore, Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka, Gap from HSC to BBA have been treated as independent variables.

In model 1, which included only contribution in BBA result from both SSC and HSC accounted for 17% of the variance (Adjusted R2 =0.172). The inclusion of SSC result into model 2 resulted in an additional 20% of the variance being explained (R2 change = 0.199). The model 3 also included Contribution in result from HSC to BBA, and this model accounted for 49% of the variance (Adjusted R2 =0.492). The model 4 includes Contribution in result from SSC to HSC, and this model accounted for 52% of the variance (Adjusted R2 =0.526). The model 5 includes students who come from Dhaka and this model accounted for 55% of the variance (Adjusted R2 =0.552). The inclusion of gap from HSC to BBA into

model 6 resulted in an additional 0.08% of the variance being explained (R2 change = 0.008). (Table-1).

Many scholars use Cohen's criteria for identifying whether the relationship between dependent and dependent variable is strong or weak (Cohen, 1983). Applying Cohen's criteria for effect size (less than .01 = trivial; .01 up to 0.30 = weak; .30 up to .50 = moderately strong; .50 or greater = strong), the relationship in this study was correctly characterized as strong (Multiple R = .753).

Regression analysis assumes that the errors (residuals) are independent and there is no serial correlation. No serial correlation implies that the size of the residual for one case has no impact on the size of the residual for the next case. The Durbin-Watson statistic tests for the presence of serial correlation among the residuals. The value of the Durbin-Watson statistic ranges from 0 to 4. As a general rule of thumb, the residuals are not correlated if the Durbin-Watson statistic is approximately 2, and an acceptable range is 1.50 - 2.50. The Durbin-Watson statistic for this problem is 1.844, which falls within the acceptable range from 1.50 to 2.50. The analysis satisfies the assumption of independence of errors.

Note that the unadjusted multiple R for this data is .753, but that the adjusted multiple R is .559. This rather large change is due to the fact that a relatively small number of observations are being predicted with a relatively large number of variables. The unadjusted value of R^2 means that all subsets of predictor variables will have a value of multiple R that is smaller than .753. (Table-1)

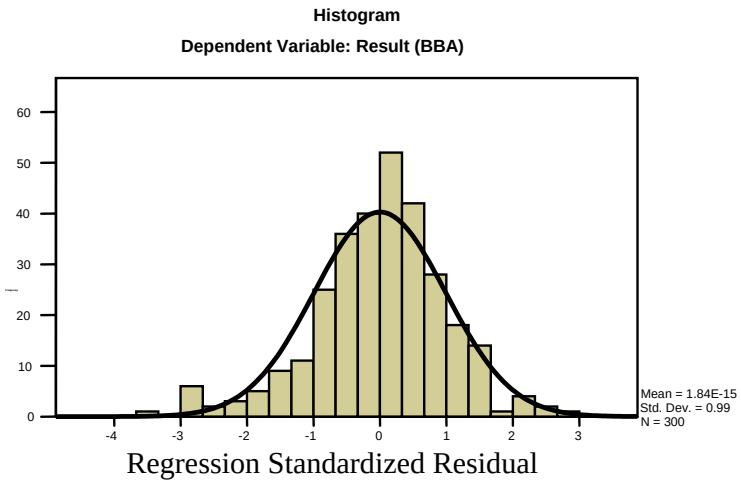

Figure 1: Visual identification of the shape of Normal distribution

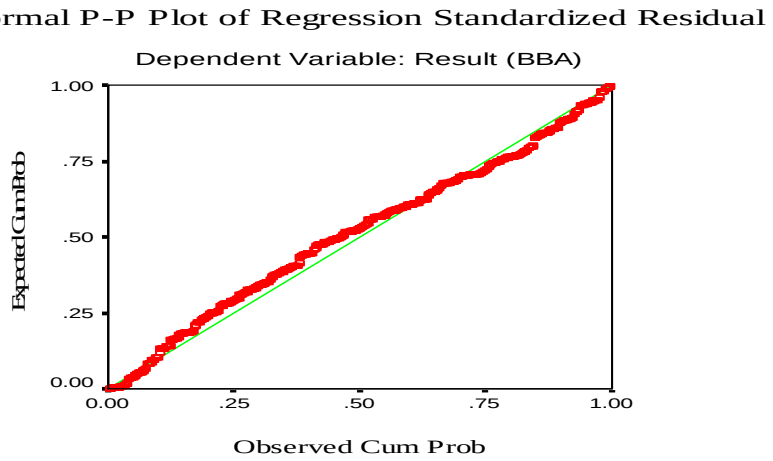

Figure 2: Normal Probability Plot of the Standardized Regression Residual

Figure 1 & 2 shows that histogram and normal probability plot do not indicate any departure from the assumptions and dependent variable is normally distributed. Darper and Smith (1981) found same result. These statistics on residual would make relatively confident that including them would not seriously limit the use of the model.

Table 2: ANOVA Table of Students performance in Higher Education

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	173.383	1	173.383	63.142	.000(a)
	Residual	818.283	298	2.746		
	Total	991.667	299			
2	Regression	371.039	2	185.519	88.780	.000(b)
	Residual	620.628	297	2.090		
	Total	991.667	299			
3	Regression	493.216	3	164.405	97.631	.000(c)
	Residual	498.450	296	1.684		
	Total	991.667	299			
4	Regression	527.675	4	131.919	83.872	.000(d)
	Residual	463.992	295	1.573		
	Total	991.667	299			
5	Regression	554.357	5	110.871	74.538	.000(e)
	Residual	437.309	294	1.487		
	Total	991.667	299			
6	Regression	562.719	6	93.787	64.063	.000(f)
	Residual	428.947	293	1.464		
	Total	991.667	299			

a Predictors: (Constant), Contribution in BBA result from both SSC and HSC
b Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC)
c Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA
d Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC
e Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka
f Predictors: (Constant), Contribution in BBA result from both SSC and HSC, Result (SSC), Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka, Gap from HSC to BBA
g Dependent Variable: Result (BBA)

Residuals are the difference between obtained and predicted dependent variable scores. The output for Residual displays information about the variation that is not accounted for by the model. A model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. A model with a large regression sum of squares (428.947) in comparison to the residual sum of squares (562.719) in model 6 indicates that the model accounts for most of variation in the dependent variable. Here, Model 1, 2, 3 have a large

Table 3: Summary Statistics of Students Performance in Higher Education

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	7.914	.375		21.109	.000	7.176	8.651					
	Contribution in BBA result from both SSC and HSC	-1.681	.212	-.418	-7.946	.000	-2.098	-1.265	-.418	-.418	-.418	1.000	1.000
2	(Constant)	6.162	.373		16.504	.000	5.427	6.897					
	Contribution in BBA result from both SSC and HSC	-1.968	.187	-.489	-10.527	.000	-2.335	-1.600	-.418	-.521	-.483	.975	1.025
	Result (SSC)	.305	.031	.452	9.726	.000	.244	.367	.375	.491	.446	.975	1.025
3	(Constant)	8.601	.441		19.511	.000	7.733	9.468					
	Contribution in BBA result from both SSC and HSC	-2.257	.171	-.561	-13.184	.000	-2.594	-1.920	-.418	-.608	-.543	.937	1.067
	Result (SSC)	.296	.028	.438	10.499	.000	.241	.352	.375	.521	.433	.974	1.027
	Contribution in result from HSC to BBA	-.855	.100	-.359	-8.518	.000	-1.053	-.658	-.274	-.444	-.351	.956	1.046
4	(Constant)	9.660	.482		20.025	.000	8.711	10.609					
	Contribution in BBA result from both SSC and HSC	-2.471	.172	-.615	-14.396	.000	-2.809	-2.133	-.418	-.642	-.573	.870	1.149
	Result (SSC)	.341	.029	.505	11.803	.000	.284	.398	.375	.566	.470	.865	1.156
	Contribution in result from HSC to BBA	-.852	.097	-.358	-8.780	.000	-1.043	-.661	-.274	-.455	-.350	.956	1.046
	Contribution in result from SSC to HSC	-.477	.102	-.202	-4.681	.000	-.678	-.277	.060	-.263	-.186	.849	1.179
5	(Constant)	9.670	.469		20.612	.000	8.747	10.593					
	Contribution in BBA result from both SSC and HSC	-2.402	.168	-.597	-14.319	.000	-2.732	-2.072	-.418	-.641	-.555	.862	1.160
	Result (SSC)	.338	.028	.501	12.030	.000	.283	.394	.375	.574	.466	.865	1.156
	Contribution in result from HSC to BBA	-.811	.095	-.340	-8.545	.000	-.997	-.624	-.274	-.446	-.331	.946	1.057
	Contribution in result from SSC to HSC	-.435	.100	-.185	-4.367	.000	-.631	-.239	.060	-.247	-.169	.840	1.190
	Students who come from Dhaka	-.332	.078	-.166	-4.235	.000	-.486	-.178	-.237	-.240	-.164	.976	1.024
6	(Constant)	9.621	.466		20.652	.000	8.704	10.538					
	Contribution in BBA result from both SSC and HSC	-2.396	.166	-.596	-14.397	.000	-2.723	-2.068	-.418	-.644	-.553	.862	1.160
	Result (SSC)	.358	.029	.529	12.313	.000	.300	.415	.375	.584	.473	.799	1.252
	Contribution in result from HSC to BBA	-.814	.094	-.342	-8.651	.000	-.999	-.629	-.274	-.451	-.332	.946	1.058

	Contribution in result from SSC to HSC	-.444	.099	-.188	-4.485	.000	-.638	-.249	.060	-.253	-.172	.839	1.192
	Students who come from Dhaka	-.323	.078	-.162	-4.156	.000	-.477	-.170	-.237	-.236	-.160	.974	1.026
	Gap from HSC to BBA	-.184	.077	-.096	-2.390	.017	-.336	-.033	.009	-.138	-.092	.912	1.096

a Dependent Variable: Result (BBA)

residual sum of squares than regression sum of squares. However, Model 4, 5, 6 have large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. As the significance value of the F statistic is small (smaller than 0.05) then the independent variables did a good job explaining the variation in the dependent variable. (Table-2)

Table-3 shows that Result (SSC) has impact on BBA result whereas Contribution in BBA result from both SSC and HSC, Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka and Gap from HSC to BBA have negative impact. It can be shown in the following way:

Model 1: BBA= 7.914- 1.68 both SSC and HSC , R2= .175, Sig. of F =.000

(.375) (.212) (P value < .001)

Model 2: BBA= 6.162 – 1.968 both SSC and HSC+ .305 SSC, R2= .374, Sig. of F =.000

(.373) (.187) (.031) (P value < .001)

Model 3: BBA= 8.601- 2.257 both SSC and HSC+.296 SSC

(.441) (.171) (.028)

-.855 HSC to BBA , R2= .497, Sig. of F=.000

(.100) (P value < .001)

Model 4: BBA= 9.660 - 2.471 both SSC and HSC+.341 SSC

(.482) (.172) (.029)

- .852 HSC to BBA – .477 SSC to HSC , R2= .532, Sig. of F=.000

(.097) (.102) (P value < .001)

Model 5: BBA= 9.670- 2.402 both SSC and HSC+.338 SSC - .811 HSC to BBA

(.469) (.168) (.028) (.095)

– .435 SSC to HSC- .332Students from Dhaka, R2= .559, Sig. of F=.000

(.078) (.100) (P value < .001)

Model 6: BBA= 9.621- 2.396 both SSC and HSC+.358 SSC - .814 HSC to BBA

(.466) (.166) (.029) (.094)

-.444 SSC to HSC- .323Students from Dhaka

(.099) (.078)

-.184 Gap from HSC to BBA , R2= .567, Sig. of F =.000

(.077) (P value < .001)

The *F* ratio is highly significant at the 0.001 level, which means that the results of the regression model could hardly have occurred by chance. The fitted regression model also shows that Contribution in BBA result from both SSC and HSC, Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students come from, Students who come from Dhaka have negative impact on BBA result whereas result (SSC) has positive impact on BBA result.(Table-3)

The Standardized Beta Coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this independent variable has a large effect on the dependent variable. In this study, Result (SSC) has big absolute t value (.529) suggests changing result in SSC contributes more in BBA result. (Table-3)

The t statistics can help to determine the relative importance of each variable in the model. If the significance value is small (less than say 0.05) then the coefficient is considered significant. The partial correlation is the correlation of each independent variable with the dependent variable after removing the linear effect of variables already in the model. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are strong. Tolerance is a statistic used to determine how much the independent variables are linearly related to one another (multicollinear). A variable with very low tolerance contributes little information to a model, and can cause computational problems. VIF or the variance inflation factor is the reciprocal of the tolerance. As the variance inflation factor increases, so does the variance of the regression coefficient, making it an unstable estimate. Large VIF values are an indicator of multicollinearity. The tolerance values for all of the independent variables are larger than 0.10: "Result (SSC)" [.799]" Contribution in result from SSC to HSC " (.839), " Contribution in BBA result from both SSC and HSC (.862), Gap from HSC to BBA " (.912), " Contribution in result from HSC to BBA"(.946),"Students who come from Dhaka " (.974).Multicollinearity is not a problem in this regression analysis.(Table-3)

Conclusion

Private university has opened a greater scope for the students who do not get opportunity to study in public University. Generally, it is assumed that public university is producing efficient employees for corporate sectors in comparison to private university. However, students studying in private university also proving themselves as creative and quality some candidates and standing out the crowd. The performance in higher education, especially undergraduate level determine whether students will be able to place themselves in reputed corporate house. Several factors create impact on BBA result , among them SSC result is significant whereas Contribution in BBA result from both SSC and HSC, Contribution in result from HSC to BBA, Contribution in result from SSC to HSC, Students who come from Dhaka and Gap from HSC to BBA have negative impact on BBA result. Students own house, school and college area, students who come from Dhaka, gender, getting, admission after results, guardian professions do not have impact on BBA result. This

study will help to determine policy regarding students' admission to university so that university can produce best business graduate.

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