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# Impact of Socio-economic Factors on Undergraduate Students' Academic Performance in Bangladesh: A Case Study at Social Science Faculty, University of Dhaka

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## ABSTRACT

This study attempts to identify the potential impacts of socio-economic factors on undergraduate students' academic performance in Bangladesh. In this study, cross-sectional primary data have been collected from 300 randomly selected undergraduate students of the Social Science faculty, University of Dhaka. Among them, 164 are male students and 136 are female students. Sample students have been selected randomly through a simple random sampling method and a structured questionnaire containing both closed and open-ended questions has been used to collect data. Analysis of Covariance (ANCOVA) model is used to find out the impacts of all these socio-economic variables on undergraduate students' academic performance or CGPA (Cumulative grade point average). The OLS estimation technique is used for estimating slope coefficients of independent variables. The main findings of this study show that class attendance, study hour, previous academic results, university admission test scores, family income, father's education, mother's education, and group study have a positive and significant impact on under-graduate students' CGPA (Cumulative grade point average). And the dummy variables of gender, participation of part time-job, and extra-curriculum activities have a negative impact on CGPA. By analyzing the findings of this paper, it can be concluded that the academic performance of undergraduate students can be improved by motivating students about their regular class attendance and per day study hours, providing strong educational basement at the school and college level, providing free adult education, giving financial support to the students of a poor family, ensuring ICT based education system and free internet access for both teachers and students.

**Keywords:** Academic performance, Socio-economic factors, CGPA, OLS Method, and ANCOVA Model.

## INTRODUCTION:

Education is widely accepted as a learning instrument for promoting economic growth and development. Through education people can obtain requisite knowledge, skills and expertise which increase their productive capacity thereby enhancing economic growth and development. Students are most essential asset for any educational institute. Students' academic performance plays an important role in producing the best quality graduates who will become great leader and manpower for the country thus responsible for the country's economic and social development. Students who have access to quality educational programs perform better and successful in their lives. In a developping country like Bangladesh education gains even more importance. But in developing countries, the problem of poor academic performance leads to the widely acclaimed fallen standard of education. Con-

sidering the critical role of education in nation building and national development, countries particularly developing economies have over the years continue to introduce policy reforms in the education sector. By identifying the socio-economic factors having significant impact on students' academic performance in higher education, government will be able to design and implement the policies to improve the students' academic performance and the quality of education. Different researchers researched on various variables and a lot of different variables have been studied. All of the previous research reviews support the hypothesis that students' academic performance depends on different socio-economic, psychological and environmental factors. Anderson *et al*. (1994) performed a study on the determinants of success in university. The study shows that the result of the secondary school is consistently the best indicator of the result of college students. Also same study conveyed by them at university level. The estimated result of the study shows that previous academic background has an important positive impact on undergraduate students' introductory economics courses.

Another study conveyed by Considine and Zappala, (2002) shows that parents providing higher level of psychological support for their children through environments encourage the betterment of skill important for success at school. The study also implies that low socio - economic status of families negatively affect children's academic achievement because low socio-economic status prevents access to necessary resources and creates additional stress at home. Nayebzadeh *et al.* (2011) performed a study on the impact of background variables on educational performance in Zimbabwe using primary data for secondary and tertiary level of education. They performed a comparative study on the academic performance for both male and female students and showed that academic performance of female students are better than male students. They further explained that age, environment and access to internet are some of the important variables of academic achievement of undergraduate students. Cheesman *et al.* (2006) conveyed a research on determinates of students' academic attainment at graduation level reflection from the Caribbean on 900 sample students. The study indicates that gender gap in favor of male students is only related with university admission exam scores. They pointed out the reason that female students perform or score low grade in admission exam result and they joined in less competitive departments and this situation enables female students performing better or score high CGPA in undergraduate level than male students (Rashid & Islam, 2020).

Aldin *et al.* (2011) conducted another study on the determinant of academic performance of undergraduate students. They tried to find out the relationship among different variables related with personal and family backgrounds and the average mark of students. They found that socio-economic background of family and good personal background of students contribute to better academic achievement. Another study performed by Bloom *et al.* (2006) on undergraduate students' academic performance of economics in Osun state. The study shows that socio-economic structure of family has an important impact on academic performance of undergraduate students. According to this study, family income, education level of parents, students' previous academic results and university admission exam score of students are important factors having significant impact on students' academic achievement. All these factors have positive impact on students' academic achievement. Martha, (2009) conveyed a study on factors affecting academic performance of undergraduate students at Uganda Christian University. The findings of the study display that parents economic status, university admission test score and student's regular class attendance all are have positive impact on undergraduate students' academic performance (Cada, 2021). The estimated slope coefficient of parents' economic status, university admission test score and class attendance are statistically significant. Weldegiorgis and Awel, (2013) conducted a study on the determinants of students attrition at Mekell University. The econometrics results of the study show that student's gender, study hour per day, national entrance examination overall results, mathematics result, student's alcohol drinking behavior, father's education level, mother's education level and family financial constraint all are important determinants of students' academic performance. Study hour per day, national entrance examination overall results, mathematics result, father's education level and mother's education level have

significant positive impact on students' academic performance. And student's gender, age, student's alcohol drinking behavior and financial constraint have significant negative impact on students' academic performance.

Mersha *et al.* (2013) performed a research on factors affecting female students' academic achievement, using a sample of 600 students on second year and above undergraduate female students at Bahir Dar University. They found that academic achievement of female students affected by students' personal related factors, university related factors and economic related factors. Moreover, previous academic background is an important factor for their low academic achievement. Another study performed by (Ali *et al.,* 2013) on factors contributing to the academic performance of graduate students of University of Bahawalpur Rahim Yar Khan Campus. The study shows that they took student academic performance (Test Score) as a dependent variable and age, gender, study hour, guardian schooling year, guardian economic status/income, admission test score, residential area, medium of school, tuition and accommodation as independent variables. The results of the study display that age, study hour and income have statistically significant impact on graduate students' academic performance. The impact of other factors may also have impact on academic performance but it is not statistically significant in their study. Hijazi and Naqvi, (2006) performed a study on factors affecting students' academic performance. They found that there is a significant positive relationship between previous academic results and students' academic performance. Moreover, class attendance and mother's education have positive impact on students' academic performance. The study of Yigermal, (2017) displays the presence of significant relationship between gender differences, university entrance exam, studying hours, students' former academic back ground, student's behavior on taking of alcoholic drug and academic performance (CGPA). Raychaudhuri *et al.* (2010) conducted a study on the socio-economic factors affecting students' academic achievement. The key findings of the study indicate that socio-economic factors like class attendance, family income, education level of father and mother, teacher-student ratio, presence of trained teacher in school, sex of student and distance of school are important factors that affect academic performance of students. The research study of Gustafsson *et al.* (2018) displays that many factors such as socio-economic status of family, learning facilities; gender, age differences, and previous academic background have significant impact on students' academic performance. Saenz *et al.* (1999) performed a study on the determinants of students' academic performances. The findings of the study show that the academic performances of students' are positively and significantly related to the use of library and the level of their parental education.

Another study on the factors affecting students' academic performance conducted by Mushtag and Khan, shows that students face a lot of problems in developing positive study attitudes and study habits. Guidance is an important factor that can improve students' study attitudes and study habits. The proper guidance from parents and teachers indirectly affects the performance of the students. The study of Kirmani & Siddiquah, (2008) implies that the academic environment, fathers' education and previous results are important variables that affect academic performance. Noble *et al.* (2006) showed the significant relationship between children academic achievement and family background variables. Another study performed by Shabani, (2013 shows that age, marital status, residence status, class size, occupation of parents and previous academic performance are important determinants of performance in examination. The main objective of this study is to investigate the impact of different socio-economic factors that affect undergraduate students' academic performance.

In this article, different socio-economic variables like gender, age, class attendance, study hour, university admission test score, previous academic results, family income, father's education, mother's education, part time job, participation of extra-curriculum activities and group study are used to find out the important determinants of undergraduate students' academic achievement or CGPA (Cumulative grade point average). This research will be different from previous researches in a way that it is the first research in which some independent dummy variables like students' part time job participation, internet using for education pur-

pose, students' participation in extra-curriculum activities and group study will be studied. Recently Bangladesh has achieved the status of lower middle income country and GDP growth rate has reached more than 8 percent. In order to maintain this economic growth and development, Bangladesh has to give more focus on the improvement of the quality of education and human development. As a developing country, Bangladesh needs to utilize the resources properly the country has. Therefore, the outcome of this study will be helpful for both parents and government concerned authority to take proper steps in order to improve overall educational attainment in Bangladesh.

## METHODOLOGY:

In this study, an Analysis of covariance model (ANCOVA) is applied to find out the different socio-economic factors undergraduate students' academic results or CGPA. An ANCOVA model is the model in which dependent variable is the function of quantitative variables as well as dummy variables (Guajarati, 2004). Dummy variable is the variable in which it takes value 0 and 1. In such type of variables, 0 indicates absence of an attribute and 1 indicates presence of an attribute. In this paper ANCOVA model is constructed by different types of socio-economic variables where undergraduate students' academic performance or CGPA (Cumulative grade point average ) is dependent variable and class attendance, per day study hour, previous academic results, gender, family income, father's education, mother's education, students' participation of part time job, participation of extra curriculum activities, participation of group study and using internet for education purpose these are independent variables.

**Econometric model -** The basic ANCOVA linear model can be written as:

$$CGPA_i = \alpha_1 + \beta_1 G_i + \beta_2 CA_i + \beta_3 SH_i + \beta_4 PR_i + \beta_5 ATS_i + \beta_6 FI_i + \beta_7 FE_i + \beta_8 ME_i + \beta_9 PJ_i + \beta_{10} IU_i + \beta_{11} EA_i + \beta_{12} GS_i + U_i \quad \ldots\ldots\ldots\

| | | |
|---|---|---|
| | | 12 if higher secondary/HSC level, 16 if graduation level, 17 if post- graduation level. |
| $PJ_i$ | $i^{th}$ student's participation in part time job. | Dummy variable, 1 for those students who participate in part time job. 0 for those students who don't participate in part time job. |
| $IU_i$ | $i^{th}$ student's internet uses for education purpose. | Dummy variable, 1 for those students who use internet for education purpose. 0 for those students who don't use internet for education purpose. |
| $EA_i$ | $i^{th}$ student's participation of extra-curriculum activities. | Dummy variable, 1 for those students who participate in extra-curriculum activities. 0 for those students who don't participate in extra-curriculum activities. |
| $GS_i$ | $i^{th}$ student's participation of group study. | Dummy variable, 1 for those students who participate in group study. 0 for those students who don't participate in group study. |
| $U_i$ | Random disturbance / error term in our above regression model. | |
| $\alpha$ | Intercept term in our above regression model. | |

To apply OLS (Ordinary Least Square) method on this model and ensure the estimated slope coefficients are BLUE (Best Linear Unbiased Estimator), the above model is assumed as linear in parameters, with zero mean value of error term and no autocorrelation between error terms.

**Sample and sampling technique -** A cross- sectional research design allows the collection of data in a particular region at one point in time. The cross - sectional design is the most efficient method of data collection in terms of time and financial resources (Kothari, 2004). In this study, a cross-sectional research design is applied to collect primary data from 300 randomly selected undergraduate students of Social Science faculty, University of Dhaka. Among them, 164 are male students and 136 are female students. Sample students have been selected randomly through simple random sampling method and a structured questionnaire containing both closed and open ended questions has been used to collect data. Both quantitative and qualitative primary data have been used in this study. The selection of sample size is based on statistical principles. In this study, each department is considered as a stratum and the samples have been selected from each stratum. Both probability and non- probability sampling techniques are applied to select samples. In this study, Slovin's formula is applied in calculating the sample size of 300 undergraduate students. The Slovin's formula is as follows (Dhokhikah *et al.,* 2005).

$$\eta = \frac{N}{N * d^2 + 1}$$

Where, $\eta$ = Number of sample, N = Total number of population, and d = Error margin.

## RESULTS AND DISCUSSION:

**Data -** This paper is based on direct sample survey of 300 students among them 164 are male students and 136 are female students. The statistical properties of sample data are demonstrated below:

**Table 1:** Statistical Properties of Data Set (Source: Authors' calculation).

| Variable | Observation | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| CGPA | 300 | 3.255 | 0.479 | 2.18 | 4 |
| G | 300 | 0.547 | 0.498 | 0 | 1 |
| CA | 300 | 0.59 | 0.492 | 0 | 1 |
| SH | 300 | 3.09 | 1.690 | 1 | 9 |
| PR | 300 | 4.631 | 0.415 | 3.5 | 5 |
| ATS | 300 | 68.55 | 8.461 | 51 | 89.15 |

| | | | | | |
|---|---|---|---|---|---|
| FI | 300 | 31.81 | 18.609 | 8 | 120 |
| FE | 300 | 11.623 | 3.542 | 5 | 17 |
| ME | 300 | 9.937 | 3.502 | 5 | 17 |
| PJ | 300 | 0.677 | 0.468 | 0 | 1 |
| IU | 300 | 0.657 | 0.475 | 0 | 1 |
| EA | 300 | 0.67 | 0.470 | 0 | 1 |
| GS | 300 | 0.63 | 0.483 | 0 | 1 |

The above statistical table shows that the mean CGPA (Cumulative grade point average) is 3.25 while minimum and maximum CGPA are 2.18 and 4 respectively. Approximately, 59 percent students including both male and female students have at least 80% class attendance. And the remaining 41 percent students have less than 80% class attendance. Per day mean study hour for each student is 3.09 hour, where minimum and maximum per day study hour of students are 1 and 9 hour respectively. The mean value of previous results which is the average GPA (Grade point average) of SSC and HSC results for each student is 4.63. The maximum previous average GPA is 5 and minimum is 3.5. The mean value of students' university admission test score is 68.55 where maximum and minimum admission test score are 51 and 89.15 out of 120.The average monthly family income of respondents students is 31.81 thousand BDT. Where the maximum and minimum monthly incomes are 120 and 8 thousand BDT. The average year of the school-ing of fathers of the respondent students is 11.62 years and the average year of the schooling of mothers is 9.93 years. Among 300 students, 67.67% students have performed part time job like tuition, coaching etc. in their graduation period. Moreover, 65.67 % students have used internet facilities for their education purpose. And 63% students have participated in group study for education purpose in their graduation period. Among 300 students, 201 students that is 67% students have participated in different extra-curriculum activities.

**Regression Analysis -** The result of the regression analysis is given below:

**Table 2:** Result and hypothesis test (Source: Authors' calculation).

| CGPA | Coefficient. | Std. Err. | t | p> \| t \| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| G | -0.0036 | 0.0362 | -0.10 | 0.921 | -0.0750 | 0.0678 |
| CA | 0.2182 | 0.0409 | 5.34 | 0.000 | 0.1377 | 0.2987 |
| SH | 0.0522 | 0.0117 | 4.47 | 0.000 | 0.0292 | 0.0752 |
| PR | 0.1389 | 0.0464 | 2.99 | 0.003 | 0.0474 | 0.2303 |
| ATS | 0.0111 | 0.0028 | 3.84 | 0.000 | 0.0054 | 0.0167 |
| FI | 0.0025 | 0.0012 | 2.05 | 0.041 | 0.0001 | 0.0049 |
| FE | 0.0163 | 0.0067 | 2.44 | 0.015 | 0.0031 | 0.0295 |
| ME | 0.0134 | 0.0061 | 2.20 | 0.029 | 0.0014 | 0.0254 |
| PJ | -0.0607 | 0.0369 | -1.64 | 0.102 | -0.1335 | 0.0120 |
| IU | 0.0079 | 0.0432 | 0.18 | 0.854 | -0.0771 | 0.0930 |
| EA | -0.0100 | 0.0524 | -0.19 | 0.849 | -0.1132 | 0.0932 |
| GS | 0.1241 | 0.0466 | 2.66 | 0.008 | 0.0323 | 0.2159 |
| Constant | 1.1233 | 0.2445 | 4.59 | 0.000 | 0.6420 | 1.6045 |

Estimated equation is given below:

$\widehat{CGPAi}$ = 1.1233 -0.0036$G_i$+0.2182 $CA_i$ + 0.0522 $SH_i$ + 0.1389 $PR_i$ + 0.0111 $ATS_i$ + 0.0025 $FI_i$ + 0.0163 $FE_i$ + 0.0134$ME_i$ – 0.0607 $PJ_i$ + 0.0079 $IU_i$ -0.0100$EA_i$ + 0.1241 $GS_i$ …….. (2)

The above estimated equation shows the relationship between dependent and independent variables. In the above estimated equation, average CGPA (Cumulative grade point average) varies 0.0036 (Out of 4.00) across gender of students with reference category of dummy variable is female. Ceteris paribus, average CGPA is lower by on average 0.003 for male students compare to female students. That means, female students performs better than male students in their academic

examinations. Since the P- value (The exact level of significance at which null hypothesis can be rejected; N Gujarati) of the estimated slope coefficient of the dummy variable gender is 0.921 which is greater than 0.05. So we can't reject null hypothesis on the basis of t- test at 5% level of significance. That is, the estimated slope coefficient of the dummy variable gender is not statistically significant from zero. Here, the estimated slope coefficient of dummy variable CA (Class attendance) is 0.2182. Ceteris paribus, CGPA increases on average by 0.2182 for those students who attend at least 80% of classes. The P- value of the estimated slope coefficient of dummy variable CA (class attendance) is 0.000 and absolute t- value is 5.34. So, we can reject null hypothesis on the basis of t- test at any level of significance. That means, class attendance has a significant impact on CGPA. Again the value of estimated slope coefficient of explanatory variable SH (Study hour) is 0.0522. Ceteris paribus, if the per day study hour of students increases by an hour, it will increase CGPA on average by 0.0522.The P- value of the estimated slope coefficient of study hour is 0.000 and absolute t- value is 4.47. So, we can reject null hypothesis on the basis of t-test which is used for testing individual slope coefficient. In other words, the estimated slope coefficient of SH (Study hour) is statistically significant different from zero. The value of the estimated slope coefficient of PR (Previous results) which is the sum of the average of SSC (Secondary school certificate) and HSC (Higher secondary certificate) GPA (Grade point average) is 0.1389. Ceteris paribus, if the average GPA of previous results increases by 1.00 point out of 5.00, it will increase CGPA on average by 0.1389. The P- value of the estimated slope coefficient of previous results is 0.003 and absolute t- value is 2.99. So, we can reject null hypothesis that previous results have no significant impact on CGPA of undergraduate students. That means, estimated slope coefficient of previous results is statistically significant different from zero. The value of the estimated slope coefficient of university admission test score is 0.0111. There is a positive relationship between university entrance examination score and graduation level CGPA of sample students. Ceteris paribus, average CGPA of a student increases on average by 0.0111 if that particular student gets one mark more in his university admission test. The P-value of the estimated slope coefficient of ATS (Admission test score) is 0.000 and absolute t- value is 3.84.So we can reject null hypothesis that university admission test score has no significant impact on graduation level CGPA on the basis of individual slope coefficient t-test. So the estimated slope coefficient of ATS is statistically significant from zero at any level of significance which means that university admission test score has a significant impact on undergraduate students' academic performance. The value of the estimated slope coefficient of FI (Family income) is 0.0025. Ceteris paribus, if average monthly family income increases by one thousand BDT (Bangladeshi taka), it will increase CGPA on average by 0.0025. The P-value of the estimated slope coefficient of monthly family income is 0.041 and absolute t – value is 2.05. So, we can reject null hypothesis that monthly family income has no significant impact on CGPA on the basis of t- test. The estimated slope coefficient of monthly family income is statistically significant different from zero at 5% level of significance.

The value of the estimated slope coefficient of FE (Father's education) is 0.0163. Ceteris paribus, if complete years of father's education increases by one year, it will increase CGPA on average by 0.0163. The P-value of the estimated slope coefficient of FE (Father's education) is 0.015 and absolute t- value is 2.44. So we can reject null hypothesis that FE (Father's education) has no significant impact on CGPA on the basis of t- test. So, the estimated slope coefficient of FE (Father's education) is statistically significant different from zero at 5% level of significance. The value of the estimated slope coefficient of ME (Mother's education) is 0.0134. Ceteris paribus, if complete years of mother's education increases by one year, it will increase CGPA on average by 0.0134. The P-value of the estimated slope coefficient of ME (Mother's education) is 0.029 and absolute t- value is 2.20. So we can reject null hypothesis that ME (Mother's education) has no significant impact on CGPA on the basis of t- test. So, the estimated slope coefficient of ME (Mother's education) is statistically significant different from zero at 5% level of significance. The value of the estimated slope coefficient of dummy variable PJ (Part-time job participation) with reference category of not participation in part time job is -

0.0607. Ceteris paribus, if a student participates in part time job during his/her graduation period, it will decrease his/her CGPA on average by 0.0607. The P-value of the estimated slope coefficient of PJ (Part-time job participation) is 0.102 and absolute t- value is 1.64. So we can't reject null hypothesis that PJ (Part-time job participation) has no significant impact on CGPA on the basis of t-test. So, the estimated slope coefficient of PJ (Part-time job participation) is not statistically significant different from zero at 5% level of significance.

The value of the estimated slope co-efficient of dummy variable IU (Internet using) with reference category of those students who do not use internet for education purpose is 0.0079. Ceteris paribus, CGPA on average increases by 0.0079 for those students who use internet for their education purpose. The P-value of the estimated slope coefficient of IU (Internet using) is 0.854 and absolute t- value is 0.18. So we can't reject null hypothesis that IU (Internet using) has no significant impact on CGPA on the basis of t-test. So, the estimated slope coefficient of IU (Internet using) is not statistically significant different from zero at 5% level of significance. The value of the estimated slope coefficient of dummy variable EA (Extra-curriculum activities) with reference category of those students who do not participate in extra-curriculum activities is -0.0100. Ceteris paribus, if a student participates in extra-curriculum activities during his/her graduation period, it will decrease his/her CGPA on average by 0.01 The P-value of the estimated slope coefficient of EA (Extra curriculum activities participation) is 0.849 and absolute t- value is 0.19. So we can't reject null hypothesis that EA (Extra curriculum activities) has no significant impact on CGPA on the basis of t-test. So, the estimated slope coefficient of EA (Extra curriculum activities) is not statistically significant different from zero at 5% level of significance.

The value of the estimated slope co-efficient of dummy variable GS (Group study) with reference category of those students who do not parti-cipate in group study for education purpose is 0.1241. Ceteris paribus, CGPA on average increases by 0.1241 for those students who participate in group study for education purpose. The P-value of the estimated slope coefficient of GS (Group study) is 0.008 and absolute t- value is 2.66. So, we can reject null hypothesis that GS (Group study) has no significant impact on CGPA on the basis of t-test. So, the estimated slope coeffi-cient of GS (Group study) is statistically significant different from zero at 5% level of significance. The value of intercept term in this estimated regression equation is 1.1233.

The P- value and absolute t- value of the intercept term are 0.00 and 4.59 respectively. So, this intercept term is statistically significant on the basis of t-test. That indicates the logic behind the inclusion of intercept term in this regression equation. The signs of all the slope coefficients of the above estimated regression equation is relevant to our priori expectations.

**Test of Goodness of Fit and ANOVA Table -** The value of R-square is commonly known as the co-efficient of determination and most commonly used to measure of the goodness of fit of a regression line. The value of R-square measures the proportion or percent-tage of the total variation in dependent variable explained by the explanatory variables or regression model. The value of adjusted R- square also measures the total variation in dependent variable due to ex-planatory variables adjusted with the degree of free-dom.

The value of R-square and adjusted R-square of this regression equation are 68.04 percent and 66.71 percent respectively. So in the above regression model, the dependent variable is well explained by the explanatory variables. The overall significance of a multiple regression test is performed by using F-test. The result of the ANOVA (Analysis of Variance) of this regression model is given below:

**Table 3:** ANOVA Test Results (Source: Authors' calculation).

| Sources | df | SS | MS | F-value | Prob. > F | R-Squared | Adj.R-squared |
|---|---|---|---|---|---|---|---|
| Regression | 12 | 46.6887 | 3.8907 | 50.92 | 0.0000 | 0.6804 | 0.6671 |
| Residual | 287 | 21.9278 | 0.0764 | | | | |
| Total | 299 | 68.6166 | 0.2294 | | | | |

In the above ANOVA model, F value is 50.92 and the P-value of F-test is 0.00. Since P-value is smaller than 5% level of significance, we can reject the null hypothesis that all the partial slope coefficients are simultaneously equal to zero. So the above estimated model is statistically significant.

## CONCLUSION AND RECOMMENDATIONS:

The main objective of this study is to assess the socio-economic factors that affect undergraduate students' academic performance in Bangladesh. The findings of the study show that student's gender, class attendance, study hour, previous academic results, university admission test score, family income, father's education, mother's education, participation in part time job, students' internet using for education purpose, participation in extra-curriculum activities and participation in group study are important determinants of students' academic performance or CGPA (Cumulative grade point average). Among them, class attendance, study hour, previous academic results, university admission test score, family income, father's education, mother's education, internet using for education purpose and participation in group study have positive impact on CGPA (Cumulative grade point average). Dummy variable gender with reference category of being female students, participation in part time job and participation in extra-curriculum activities have negative impact on CGPA. Although gender, participation in part time-job, internet using for education purpose and participation in extra-curriculum activities each have an impact on CGPA (Cumulative grade point average) , these impacts are not statistically significant in this study. Depending on the results of this paper, some of the following recommendations are given below in order to improve academic achievement of undergraduate students in Bangladesh. Since family income is one of the important determinants of students' academic performance, policy should be taken to provide special support to those students coming from low income family. Working in the ground with school and college level and ensuring better educational basement of students can play a significant role in improving academic performance of graduation level. Students should be careful to their regular class and study. Teachers can motivate their students in this regard by explaining the importance of regular class attendance and per day study hour. Since parents education has an important impact on improving academic performance of their children, adult education can play a significant role in this regard. Students should participate in their group study so that they can solve their academic query by discussing each other. Group study helps to understand academic lessons clearly which is important to improve graduation level academic performance. Moreover, the provision of teaching and learning materials, improvement of academic infrastructures, better teacher training and payment of incentive to teachers, ICT based education system and free internet access for both teachers and students are recommended to improve the quality of education. Understanding the social and economic determinants of undergraduate students' academic performance is of great importance in policy formulation and educational planning policies. Because incorrect assumptions leads to formulation of unsound policies on fees, scholarship and subsidies. Therefore, the outcome of this study can be useful to formulating policies and guidelines for overall attainment of the education status of this country.

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## CONFLICTS OF INTEREST:

The author declares no possible conflict of interest in concerning the study, data collection and analysis.

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