
DETERMINANTS OF ACADEMIC ACHIEVEMENTS OF GRADUATING CLASS STUDENTS IN HARAMAYA UNIVERSITY

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ABSTRACT: *Background: Higher education plays a critical role in developing educated human capital. The higher educational institutions use to build the knowledge and skills of the students which can possibly increase productivity and growth of a nation, it's also vital in raising a living standards of the surrounding community. Graduates entering the Ethiopian work market each year are expected to make a significant contribution to the growth and transformation of Ethiopian economy. To satisfy these demands the graduated students need to have desired level of academic competency and skill during their stay in the Higher Institutions. Objectives: To identify and to investigate the relationship between independent variables and the academic achievement of graduating class of HU students. Method: Multi-stage stratified simple random sampling technique was employed to draw a sample of Haramaya University graduating class students. All Students who have graduated and graduating class students were considered as the parent population of the study. The data were collected from both secondary and primary sources. Primary data were collected via interviewee administered structured questionnaires. All the data were analyzed by SPSS 20 version. Descriptive statistics, Pearson correlation analysis, multiple linear regression models were fitted to the generated data. Results: Firstly, the study was identified determinants of academic competency of Haramaya University Graduating class students by the year 2018: motivation, gender, punctuality of the course instructors', experience of falling in love, department choice and first year cumulative grade point average were found out to have significant effect on the academic competency of the graduating class students in Haramaya University at the time of data collection respectively: Secondly, the study identified the variation observed in the trends of graduating and first year cumulative grade point in Haramaya University. Thirdly, the study was identified the variation observed in the trends of graduation cumulative grade point average in Haramaya University. Fourthly, the study was distinguished the mean of graduating and graduation year academic competency of students in HU. Conclusions: Firstly, based on result found from the study we conclude that the mean of graduating year academic competency of students in HU was and 3.12. Secondly, Based on the results obtained from multiple linear regression models we conclude that motivation, gender, punctuality of the course instructors', experience of falling in love, department choice and first year cumulative grade point average were factors that have a significant effect on the academic competency of the graduating class students in Haramaya University at the time of data collection.*

KEYWORDS: GC students, Haramaya University, academic competency, and multiple linear regression model.

INTRODUCTION

Background of the Problem

Education is one of the most important factors in producing human resource that is necessary for economic development of a country. Education, in a broad sense, is any act or experience that has a formative effect on mind, character or physical ability of an individual. The role of education plays and contributes to intellectual growth and development of society which becomes the common concern in both developed and developing countries (Hanushek, 2006). Schools, colleges and universities have no worth without students. Students are most essential asset for any educational institute. The social and economic development of a country is directly linked with student academic performance. Student academic performance measurement has received considerable attention in previous research, it is challenging aspects of academic literature, and science student performance are affected due to social, psychological, economic, environmental and personal factors. These factors strongly influence on the student performance, but these factors vary from person to person and country to country. Indeed, academic performance can be influenced by so many factors these variables are inside and outside school that affect students' quality of academic achievement. These factors may be termed as student factors, family factors, school factors and peer factors (Crosnoe, Johnson & Elder, 2004).

It is assumed that the number of determinants or factors other than university entrance result may significantly affect the academic performance of students in universities. The factors might be the type and location of secondary school attended, type of admission, quality of teaching, life in university, study habit, economic and educational background of parents, references and textbook availability in a university, students placement by their first choice etc. CGPA of students can measure student academic performance. This idea supported by (Hijaz & Naqvi, 2006) stated that GPA in university is commonly used indicator of student academic performance. Furthermore, higher education plays a critical role in developing human capital. The higher educational institutions use to build the knowledge and skills of the students which can possibly increase productivity and growth of a nation, it's also vital in raising living standards of the surrounding community. Currently, Graduates entering the Ethiopian work market are expected to make a significant contribution to the growth and transformation of Ethiopian economy. Thus, one way of measuring the competence of Graduates that join the work market is via their cumulative grade point average. There are potentially many factors that may have either negative or positive effect on academic achievement of students. Some of these factors: a student's age, gender, race and financial status may be easier to measure than others, such as a student's level of motivation for studying, the level of academic integration and the type of living conditions that exist at the university where they want to study (Rohana et al., 2016). Intelligence is not the only determinant of academic achievement of a student. Academic achievement of a student is always associated with the many components of learning environment. Learning and teaching environment ought to implement six functions: inform,

communicate, collaborate, produce, scaffold, and manage. Additionally, students' academic gain and learning performance is affected by numerous factor including gender, age, teaching faculty, students schooling, father/guardian social economic status, residential area of students, medium of instructions in schools, tuition trend, daily study hour and accommodation as hostelrys or day scholar (Shoukat et. al., 2013). Parent's income or social status positively affects the student test score in examination (Considine and Zappala, 2002). According to Minnesota (2007) "the higher education performance is depending upon the academic performance of graduate students.

Their finding identify students' effort, previous schooling, parent's educational background, family income, self-motivation of students, age of student, learning preferences and entry qualification of students as important factors that have effect on student's academic performance. On the other hand the study done on social and educational background pointed out those students who mostly come from deprived socio-economic and educational background performed relatively better than others coming from higher socio-economic and educational area (Pedrosa et al., 2006). Understanding the effects of various background characteristics on academic performance in Higher Education (HE) has prompted a much debate with socio-demographic (McNabb et al., 2005). This factor is also implicated in the associations between other background characteristics and degree outcome. A student's age, for instance, has been found to be associated with degree performance. The average 'good' degree rate of female students over the period reviewed was found to be superior to the corresponding male rate. There was greater dispersion in male performance compared to females. In addition, females were less likely to fail or secure third/pass degrees than males. Further analysis indicated that if males were subjected to a female treatment, the male dispersion in performance would be dramatically reduced (Michael et al., 2009). The other important variable in determining student's college academic performance is studying hours. The number of hours students use to study per day significantly and positively related to academic performance of students with, $r = 0.758$. The regression result for the variable HS shows that studying hours is significant at 1% level of significant level (Moges et al., 2017). The study was designed specifically to assess the trend of CGPA for graduated students in the past few years from Haramaya as well as to study the determinants of academic achievement of 2018 graduating class students in the university.

Statement of the Problem

In Ethiopia most of the universities are not fully fulfill the desired level of services for their students due to various observable and none observable reasons. As Haramaya university is one part of the Ethiopian tertiary level educational institutions we have been observing that they have been facing different challenges in providing effective services and produce competent graduates as per the need of the nation's labor market. In addition, there have been unanswered assignments of the universities in producing graduates that can create job rather than with attitudes of job seeking. There are a lots of problems in the universities that have a direct impact on the academic competence of their students which lead the students to be incapable graduates that cannot be confident with their CGPA, satisfied with the knowledge and skill they want to

have as well as possibly fail to meet the demand of the labor market and it also unmotivated to be an entrepreneur. Thus, the universities have to transform their students' perceptions and attitudes from the expectation to job creation because without solving these problems how the universities can be able to meet the strategic goal and mission they are working for to be able to the accredited higher educational institutions in the world. Teaching-learning process could have both positive and negative impact on the academic achievements of university students (Rohana et al., 2016). On the other side, the estimated odds ratio 2.00 indicates that those students who arrange study outside class are 2.00 times more likely to perform better compared to their counterparts controlling for other variables in the model. Regarding father's education level the estimated odds ratio 2.51 indicates that those student whose father's level of education certificate and above level are 2.51 more likely to perform better compared to those counterparts controlling for other variables in the model. From the logistic regression analysis it was also concluded that the odds of securing first choice of department, peer influence, father's education level, study time, arranging study outside class and amount of money received from family are significant predictor variables seems to indicate better academic achievement of students in ok status as compared to their counterparts in college of natural and computational science of Wolaita Sodo University situation (Bereket et al., 2016). The majority of problems female students encounter and those factors that affect female students' academic performance are personal and the other problems are caused by the university environment (Yeshimebrata *et al.*, 2013). Thus, studying the factors affecting academic achievements of graduating class students in Haramaya University plays a crucial role in assessing: the past, the existing circumstances & for designing or predicting the future of the University.

The main objective of the study was to investigate the relationship between independent variables and the academic achievement of graduating class students in HU.

Significance of the Study

The study has the following significance for the following stakeholders in HU: It can be able to identify the determinant factors that affect the academic achievement of graduating class students, and the trend of academic achievement of the graduating class students. The university can be able to create their own strategy to alleviate the difficulties facing the institution in producing a competent graduate. Furthermore, the policy makers can take it as an input the finding of the study as well as any interested body can take it as an input for further study to be done in the area.

LITREATURE REVIEW

This section presents both theoretical and empirical literature reviews of related studies.

THEORETHICAL LITREATURE REVIEW

Undergraduate programs are offered for three, four or more years after completing secondary education. Completion of this program is certified by awarding a bachelor's degree.

Undergraduate graduates are those who completed their study at the higher education institutions, and were awarded a bachelor's or first degree.

EMPERICAL LITREATURE REVIEW

This section presents determinants of academic performance of University students explained by previous researchers. Martha (2005) found that high school grade point average is consistently the best predictor of college grade of students. And also the same study held by Anderson, Benjamin and fuss (1994) carried out a study on the determinants of success in university and found out that students performed better in high school also performs better in college and the researcher suggested that high school grades were predictors of academic performance at college without doubt. Grealz (1995) carried out a study on socio economic status in education research and policy found that socio economic background of students remains one of the major sources of educational inequality and the researcher adds that one's educational success depends on the socio economic status of one's parent. Considire and zapala (2002) agree with the result of graelz (1995), in their study on the influence of social and economic disadvantage in the academic performance of school students in Australia found that families where parents are advantaged socially, economically and educationally foster a higher a higher level of achievement in their children. They also found that parents provide higher level of psychological support for their children through environments that encourage the development of skill necessary for success at school. And they pointed out that low social economic status of families negatively affect academic achievement of children's because of low socio economic status prevents access to vital resources and creates additional stress at home. Koyoshaba(2005) conducted a study on determinant of academic performance and he test significant relationship between former school back ground and academic performance of undergraduate students. The regression result of the study shows that significant relationship between former school background and academic performance of undergraduate students. The Pearson product moment correlation coefficient index (r) a significant correlation or p-value prevails 0.000 which is less than alpha (0.01) hence this indicates that there is a significant relationship between former school background of students and academic performance at undergraduate level. (Hoskinsetal, 1997) carried out a study on performance of students at university of Plymouth, he identified the key variables that affect academic performance of students to be age, gender, prior qualification and discipline studied. Figueroa, cited by (cheesman et al, 2006) conducted a study using primary research and analyzing data for secondary and tertiary level institutions asserted that male students generally under achievement than female students with the gap widening out at the higher levels. They further explains that research conducted in Zimbabwe analysis that variables such as gender, age, environment and access to internet explained or determine the academic performance of undergraduate students. Gender gaps in favor of male students' better performance than females' students in academic achievement (Ever taderara, elinahmandimaka, 2011). A study conducted by (Nayebzadeh, addinandheirany, 2011) indicates that the significant relationship between priori educational success of students and their academic performance at undergraduate level and also the analysis proofs the direct relationship between parents socio economic background and

impacts of friend on academic achievement (Sakho, 2003) carried out a study on the determinant of academic performance hec- lausane graduates using tobit model and he analysis econometrically the relationship between different variables related with personal and family backgrounds and average mark of students and he conclude that socio economic background of family and good personal background of students contribute to better academic achievement. (Cheesman, et al., 2006), carried out a study on determinates of student performance at university reflections from the Caribbean analyze their study on 900 samples students and the econometric result shows that gender gap in favor of male students is only related with university entrance exam scores. But in undergraduate level female students score high grade or perform better than males. The researcher pointed out the reason that female students perform or score low grade in entrance exam result and they joined in less competitive departments and this situations makes female students perform better or score high CGPA in undergraduate level than male students. (Park and M.Kerr, 2005), conducted a study on determinants of academic performance of students by using multi-logit method of analysis on money and banking courses and use a sample of 97 students. The regression result indicates that college entrance exam and student's attendance determines academic performance. A student who attends attentively in class performs better in academic achievement (Farooq , chaudnry, shafiy, berhanu, 2011), addressed their research on effect of socio economic status of parents and students former education back ground specially for English and mathematics courses on academic performance on undergraduate level and they conclude that socio economic status of parents are significant indicators for students achievement. Students from high socio economic status family perform better than those not. And students' previous proficiency on mathematics and English subjects ply vital role on academic performance of students at college level.

A study conducted by (Florence, 2012) on undergraduate students of economics in Osun state indicates that family structure have great influence on academic performance of undergraduate students. According to this study family income and educational levels of parents as well as entrance exam of students determine student's achievement in education. Students from illiterate parents perform less than students from literate. This infers socio-economic background of parents is an impetus to academic growth and performance of students. (TsehayWeldegiorgis and Yesuf Mohammednur Awel, 2010/11) they conducted a study on the Determinants of Student Attrition at College of Business and Economics, Mekelle University: Econometric model investigation indicates that student's gender, national entrance examination overall results and mother education level significantly correlate with student performance. Female students found to perform lower than male students. Student's national entrance examination overall result is positively correlated with the student performance which was in line with their expectation. Those Students who do not drink alcohol found to have better academic performance than others. Student's mother educational background significantly affects student CGPA, i.e. the higher the level of mother education in years the better the student to perform keeping other things the same. (Yeshimebret, alemayehu and firew, 2013), carried out their research on factors affecting female students academic achievement at Bahirdar university. They have taken a sample of 600 students

on second year and above undergraduate female students and the result that they obtained shows that academic achievement of female students affected by students personal related factors such as less ability to competent, tension, failing in love easily, being addicted to drinking , smoking , disco houses etc. university related factors such as , influence of male students , lack of proper guidance, lack of proper reading place where students use freely, influence from male teachers and youth from surrounding environment.

Description of Study Area and Population

The study was conducted in Haramaya University. The institution was renamed Haramaya University in February 2006. Haramaya University is a public research university in Eastern Ethiopia. It is located 5 km from Haramaya town in the East Hararghe Zone, about 17 kilometers from the Harary regional state and 40 Km from Dire Dawa City, 510 km East of Addis Ababa. The second Campus is located in Harar City where College of Health and Medical Sciences including Hiwot Fana Specialized University Teaching Hospital are situated. Currently, the University is running 73 Undergraduate, 91 Masters and 24 PhD programs. The existing academic units in the University comprise College of Agricultural and Environmental Sciences, College of Business and Economics, College of Computing and Informatics, College of Health and Medical Sciences, College of Social Science and Humanities, College of Law, College of Veterinary Medicine, College of Natural and Computational Science, Haramaya Institute of Technology, College of Education and Behavioral Sciences, School of Graduate Studies and Continuing and Distance Education Directorate which runs Continuing Education (CEP) and Summer programs in various fields of study. The source population of the study was all HU graduated and graduating class students by the year 2018. Haramaya University also has graduated 6121 students in different fields of studies by first degree on July 14, 2018 which comprises the Target population (Haramay University Registrar, 2018).

Data source and study Population

The parent populations of the study were all graduating class students in the year 2018.

Study Design:

A cross- sectional study design was conducted from June, 2018 - to- July, 2018 for graduating class students of the university.

Sample size determination

The sample of 324 students was employed in the study

Variables of the Study

Response variable: CGPA of graduating class students of HU.

Independent variables

Demographic Variables: Age, Religion, & residential area: public, private.

Socio-Economic and personal Variables: income, interest to learn in HU, housing fee, distance from the university, access to: clean water & light, time to get in and out, sound pollution, self-confidence, adequate effort, Homesickness, Being addicted to drinking, smoking, disco houses, Tension, Falling in love easily, Inability to become well planned and organized Enrolment, Language, Adjustment to the university life, internal locus of control Where the problem is lies, Autonomy or independence, Peer pressure, Students' and lecturers' attitudes towards each other, Help-seeking, Academic motivation of students, Self-esteem, High Grades, Stress, Capabilities, students' effort, previous schooling, parent's educational background, family income, learning preferences and entry qualification of students.

University related (Institutional) Variables: College admission criteria, proper reading place where they can use freely, proper guidance, Academic advising problem, University Library, course nature, Number of days students missed from class: own dorm, number of students in a dormitory, own chair, place to put documents, availability of working latrine, on time and sufficient library service, suitability to sit and read at library, air conditioned library, availability of clean water to drink or to wash hands after class, café around your class and dormitory, how do you rate a cafeteria service, method of assessment, habit of visit to the HU library either via web or direct, availability of references and text book for the courses you want to learn or conduct a research, ease access to the books, access to comfortable reading places that reserved for students, access to the internet, salience of the library, rate of the library service of HU, Availability of sufficient teaching class, class size, sufficient chairs, class setup to use projector, board setup and ease to write on it, the student staff-ratio, availability of working windows and door, salience of the class area, availability of sufficient computers that loaded with desirable software's, availability of lab chairs and tables, availability of lab equipment and chemicals, measurement tools and others that can facilitate an effective teaching and learning process in HU.

METHOD OF DATA ANALYSIS

Descriptive statistics: Pearson correlation, Frequencies, percentages, averages, Standard deviations were used. The results presented via: tables, graphs and figures.

Inferential Statistics: Uni-variate Analysis and Multiple Linear Regression model was used to study the linear relationship between dependent and independent variables.

RESULT AND INTERPRETATIONS

Descriptive Statistics

We used descriptive statistics to get some features about the distribution of the variables. The response variable in this study is graduation CGPA of Haramaya University Students those graduated in 2018. In this study multiple linear regression models was used to examine the relationship between the explanatory variables and the response variable. We begin our data

analysis by giving descriptive statistics. We then proceed to the univariate analysis and then provide the final model in multiple analyses.

Descriptive Statistics for Categorical Variables

Table4.1. Descriptive Statistics for Qualitative predictor variables for Haramaya University Graduating class of Students by the year 2018.

Explanatory Variables	Category	Frequency	percentage
Sex of Student	Male	196	68.1%
	Female	92	31.9%
Religion of student	Muslim	76	26.4%
	Orthodox	106	36.8%
	Protestant	90	31.2%
	Catholic	2	0.7%
	Other	14	4.9%
Cleanness of your dormitory	Not Clean	21	7.3%
	Clean	267	92.7%
Dormitory Security	Not Secure	42	14.6%
	Secure	246	85.4%
Comfort of Dormitory	Not Comfortable	31	10.8%
	Comfortable	257	89.2%
Your motivation to wards learning in the DDU/HU	Not Motivated	29	10.1%
	Less Motivated	13	4.5%
	Moderately Motivated	167	58.0%
	Highly Motivated	63	21.9%
	Very Highly Motivated	16	5.6%
Which University was your first choice	DDU	17	5.9%
	HU	194	67.30%
	Other	77	26.7%
Rate of your expectation before joining the DDU/HU	Never expect	36	12.5%
	Less	18	6.2%
	Moderate	87	30.2%
	High	92	31.9%
	Very high	55	19.1%

Have you got as you have been expected	No	98	34.0%
	Yes	190	66.0%
You have used your adequate effort	No	68	23.6%
	Yes	220	76.4%
Do you have the habit of Drinking Alcoholic Beverages	No	196	68.1%
	Yes	92	31.9%
Smoke Cigarettes	No	246	85.4%
	Yes	42	14.6%
Have you gone to Night Clubs	No	235	81.6%
	Yes	53	18.4%
How do rate the Level of Stress regarding your education	Very Low	19	6.6%
	Low	35	12.2%
	Medium	147	51.4%
	High	61	21.3%
	Very High	24	8.4%
Have you fall in Love	No	134	46.9%
	Yes	152	53.1%
Do you have well planned activities	No	47	16.4%
	Yes	239	83.6%
Have you experienced any Language barriers?	No	90	31.5%
	Yes	196	68.5%
language barriers	Instructional	45	22.3%
	Communication	151	74.8%
	Others	6	3.0%
Have you experienced any peer pressure	No	99	34.6%
	Yes	187	65.4%
Problem with your instructor	No	89	31.1%
	Yes	197	68.9%
Type of Harassment Students were faced from their instructors	Sexual Harassment	12	6.2%
	Grading Bias	113	57.9%
	Racial	26	13.3%
	Religious	34	17.4%
	Other	10	5.1%

From Table 4.10., we can observe that out of the total sample, the study shows that out of the total sample taken from HU, 68.1 percent are male students while the remaining 31.9 percent are

female students.

Based on religion of students, from the total samples, about 26.4 percent are followers of Muslim religion, 36.8 percent are followers of orthodox religion, 31.2 percent are followers of protestant religion, 0.7 percent was followers of catholic religion and the remaining 4.9 percent is others.

With regards to Cleanness of students' dormitory most of the student said that their dormitory is clean, about 7.3 percent of the students replied that their dormitories are no clean while the remaining 92.7 percent of the student said their dormitory is clean. With regards to comfort of dormitory, out of the total sample 10.8 percent of the students are not comfortable while the remaining 89.2 percent were comfortable.

The motivation of students to wards learning in HU is one of the explanatory variables which are assumed to be affect students competency. About 10.1 percent of the students were not motivated, 4.5 percent were less motivated, 58.0 percent were moderately motivated, 21.9 percent were highly motivated and the left 5.6 percent were very highly motivated to wards learning in HU.

Regarding to students' first choice university, about 5.9 percent of students in HU replied that HU were their first choice, 67.3 percent of students in HU replied that HU were their first choice and the remaining 26 percent of students were other universities. With regards to rate of expectation of students before joining HU, about the total number of students, 12.5 percent were never expect, 6.2 percent were less, 30.2 percent were moderate, 31.0 percent were high and the remaining 19.1 percent were very high. With regards to get as students' as have been expected, about 34.0 percent were not got while the remaining 66 percent of the students were got as they have been expected. About, 12.5 percent of students were not confident regarding their educational activities while the remaining 87.5 percent were confident regarding their educational activities.

Student used their adequate effort to succeed was another important variable with regard to students competency, about 23.6 percent were not used their adequate effort and the left 76.4 percent of students were used their adequate effort to succeed. Regarding to the habit of drinking alcoholic beverages, about the total students 68.1 percent were not drink alcohol and the left 31.9 percent were drink alcoholic beverages. In addition, about 85.4 percent were not smoke cigarettes and the left 14.6 percent of the students in HU were smoke cigarettes.

With regards to the level of stress regarding their education, about 6.6 percent were very low, 12.2 percent were low, 51.4 percent were medium, 21.3 percent were high and the left 8.4 percent of the students were very highly stressed regarding their education. Concerning Students having well planned activities about 16.4 percent were not planned while the left 83.6 percent of students have well planned activities.

With regard to experience any language barriers, about the total students 31.5 percent were not

experienced any language barriers and the left 68.5 percent were experienced any language barriers. In addition, from the students who experienced any language barriers most of them get communication problem i.e. 74.8 percent, 22.3 percent faced instructional language barriers and 3 percent of the respondents have reported that they have faced other language barriers. With regard to students experienced any peer pressures, about 34.6 percent were not experienced any peer pressure and the left 65.4 percent experienced any peer pressure. With regard to problem with instructor, about 31.1 percent of them have no problem with instructor and the left 68.9 percent of them have problem with your instructor.

6.2 percent of the respondents reported that they have faced sexual harassment, 57.9 percent of them faced grading bias, 13.3 have faced racial discrimination, 17.4 of them faced religious bias, and 5.1 percent of them responded that they have faced other harassment types. Father and mother educational status are also another important variables which are affect students' academic competency about 25 percent of students reported that their father has no formal education, 35.7 percent of students whose father was primary education, 22.5 percent of students whose father was secondary education and the remaining 16.8 percent of students was above secondary. Whereas, students whose mother has no education were about 38.2 percent, students whose mother has primary education were about 35.7 percent, students whose mother has secondary education were about 16.6 percent and students whose mother education level was above secondary were about 9.4 percent.

With regard to the effects of the surrounding community on students CGPA, about 9.5 percent were very low, 10.6 percent were low, 42.7 percent were medium, 25 percent were high and the left 12.2 percent were very high effect on students' graduation CGPA. The availability of text book also have its own effect on students' academic competency, about 7 percent were not available, 9.4 percent were less available, 43.7 percent were moderately available, 30.4 percent were highly available and only 9.4 percent of students in HU were reported that very highly text books were available. Regarding department choice, 6.6 percent joined with their third choice, 19.2 percent joined their second choice, 66 percent were joined their first choice, and 7.9 percent of the students reported that were joined their other choice department. From the Table4:2, one can see that the student first year academic achievement was 3.06, and the graduation academic achievement was 3.12. The students reported that they wait for eating for an average time of 26.92 minutes in the queue.

MULTIPLE LINEAR REGRESSION MODEL ONE ENTER METHOD FOR HU

Table 4:3. Model Summary

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.884	0.782	0.774	0.18932

The 77.4 % of the variability observed in the response variable is explained by the independent variables included in the multiple linear regressions.

Table 4:4. ANOVA for Multiple Linear Regression Model (overall significance test) for HU

Model	Sum of Squares	D.F.	Mean Square	F	Sig.
Regression	35.528	11	3.230	90.110	0.000
Residual	9.893	276	0.036		
Total	45.420	287			

$$H_0 : \beta_1 = \beta_2 = \dots = \beta_k = 0$$

H_a : not all $\beta (i=1, \dots, k)$ equal zero.

Based on the result displayed in Table 4:20, the null hypothesis and conclude that there is at least one pair that has a significant linear relationship with academic competency.

Table 4:5. Regression Coefficients for individual test of significances for Haramaya University Students

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	0.637	0.107		5.975**	0.000	0.427	0.847
First CGPA	0.773	0.028	0.847	27.736*	0.000	0.718	0.828
Fall in Love	-0.074	0.023	-0.093	-3.239*	0.001	-0.119	-0.029
F	-0.049	0.026	-0.058	-1.919*	0.056	-0.100	0.001
VHM	0.169	0.062	0.097	2.738*	0.007	0.047	0.290
HM	0.040	0.043	0.041	0.926	0.355	-0.045	0.124
MM	0.040	0.038	0.050	1.045	0.297	-0.035	0.115
LM	0.093	0.064	0.049	1.464	0.144	-0.032	0.218
YPANC	0.066	0.025	0.076	2.666*	0.008	0.017	0.115
SNDC	0.113	0.050	0.113	2.239*	0.026	0.014	0.212
FDC	0.063	0.045	0.075	1.398	0.163	-0.026	0.151
TRDC	0.109	0.061	0.068	1.787	0.075	-0.011	0.229

$H_0: \beta_j=0$ or $H_a: \beta_j \neq 0, j=1,2,3,\dots,k$

$$\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 X_{i1} + \hat{\beta}_2 X_{i2} + \hat{\beta}_3 X_{i3} + \hat{\beta}_4 X_{i4} + \hat{\beta}_5 X_{i5} + \hat{\beta}_6 X_{i6} \quad \text{1HU.}$$

$$\hat{Y}_i = 0.637 + 0.773X_{i1} - 0.074X_{i2} - 0.049X_{i3} + 0.169X_{i4} + 0.066X_{i5} + 0.113X_{i6} \quad \text{2HU.}$$

From the fitted multiple linear regression model HU, one can see that the average grade point average is 0.637 when all the predictor variables in the model are zero. GCGPA increases by 0.773 as the First year CGPA of the students' increases by a unit keeping constant the rest of independent variables in the multiple regression models.

Academic competency of graduating class students decrease by -0.074 for students who

responded as they have the experience of falling in love during their stay at Haramaya University compared to the students who responded as they have no experience of falling in love during their stay in Haramaya University held constant the rest of the explanatory variables in the multiple linear regression model. Academic competency of graduating class students' decrease by -0.049 for female students compared to the male students held constant the rest of the explanatory variables in the multiple linear regression models. The academic competency increase by 0.169 for students who responded as they were very highly motivated to learn in Haramaya University compared to the students who responded as they were not motivated to study in Haramaya University held constant the other independent variables in the multiple linear regression models. Academic competency of graduating class students' increase by 0.066 for students who were responded as their instructor were punctual compared to the students who responded as their instructor were not punctual held constant the rest of the explanatory variables in the multiple linear regression model.

RESIDUAL PLOTS

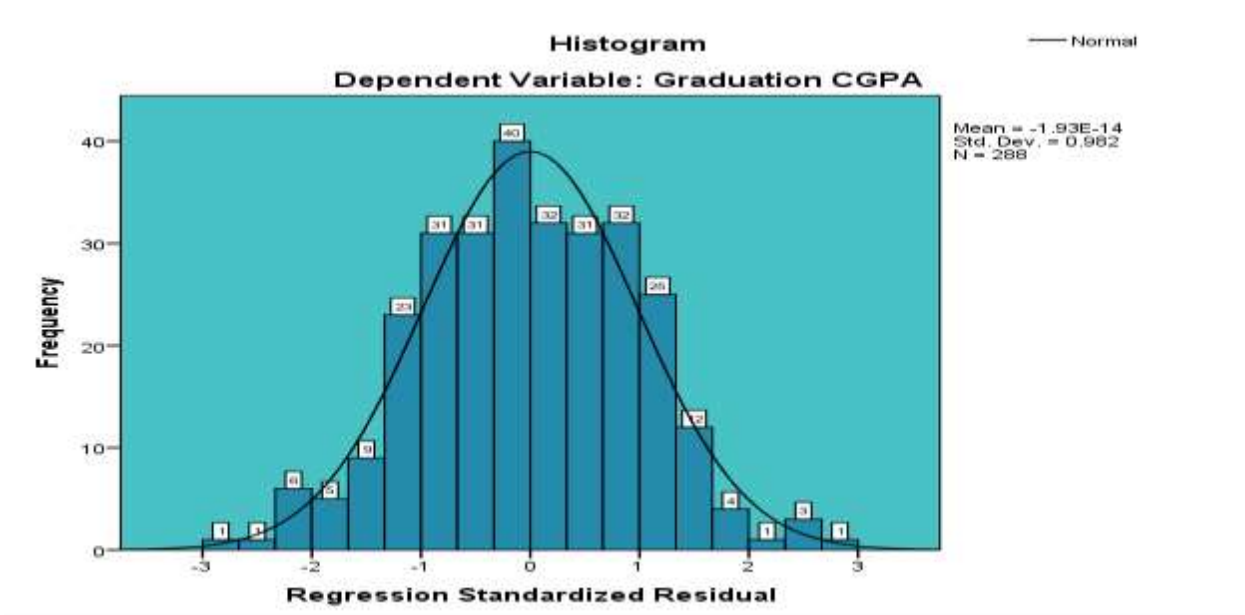


Figure6HU: shows the normality assumption, show that the error term has a zero mean and constant variance. That it follows the standard normal distribution which satisfies the assumptions of the errors terms has a zero mean and constant variance.

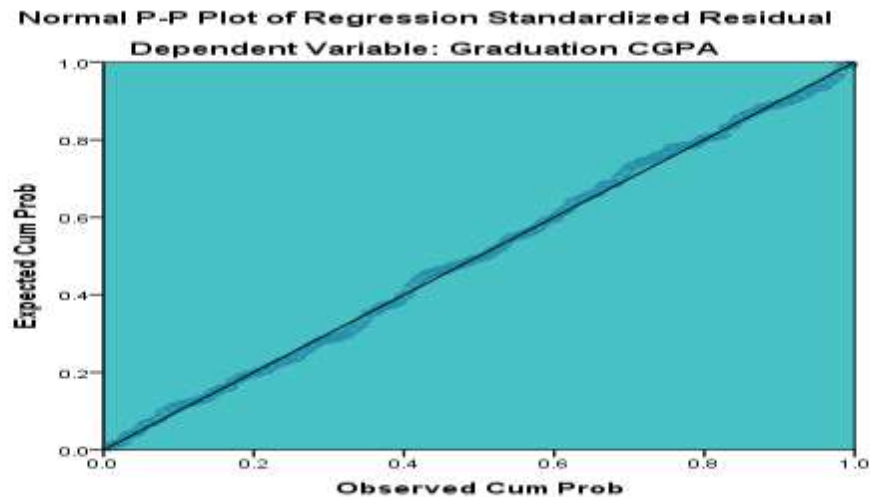


Figure7HU: shows the normality assumption, the figure shows that the normality assumption is satisfied, thus we can conduct a statistical inference.

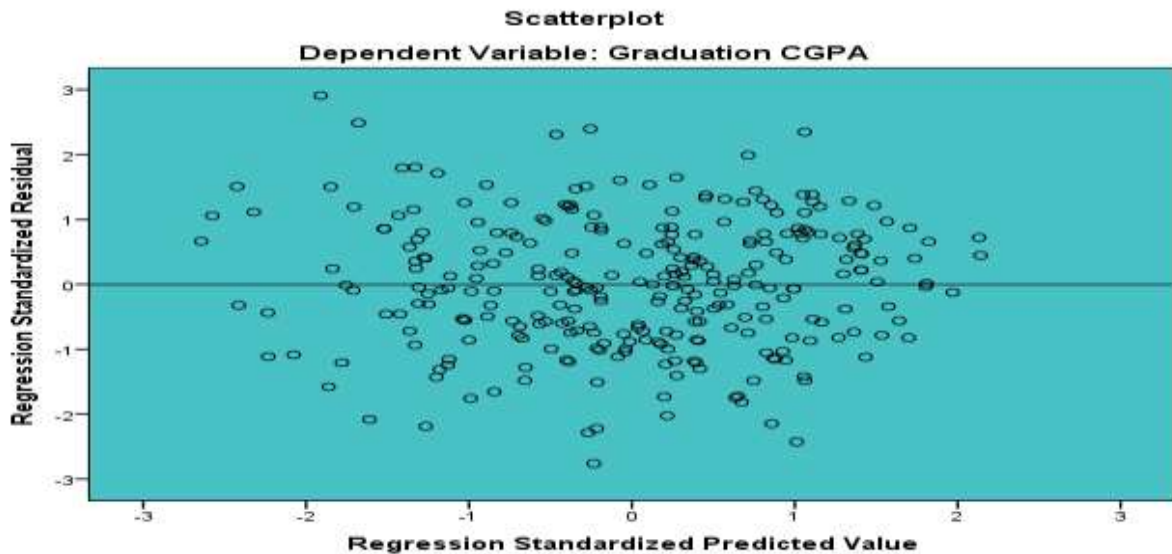


Figure8HU: shows the constant of variance assumption, the figure shows that the assumption of constant variance of the error term was valid.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study was intended to identify and investigate the determinants of academic competency for Haramaya University students. Accordingly, descriptive analysis and multiple regression analysis were used. Student academic performance measurement has received considerable attention in previous research, it is challenging aspects of academic literature, and science student performance are affected due to social, psychological, economic, environmental and personal factors. These factors strongly influence the student performance, but they vary from person to person and country to country. Indeed, academic performance can be influenced by so many factors these variables are inside and outside school that affect students' quality of academic achievement. These factors may be termed as student factors, family factors, school factors and peer factors (Crosnoe, Johnson & Elder, 2004). From the Table4:2, one can see that the student first year average academic achievement was 3.06, and the graduation average academic achievement was 3.12. The students reported that they wait for eating for an average time of 26.92 minutes in the queue. When we consider the results from the multiple linear regression model summary the value $R^2 = 77.2$ and $R^2_{adj.} = 76.4\%$ which signals that the variation (change) in graduation academic competency explained by explanatory variables in the model. From multiple linear regression model the following six explanatory variables were found out to have a significant linear relationship with academic competency of graduating class of Haramaya university students: Motivation of the students to learn in Haramaya University, punctuality of the course instructors, experience of students falling in love during their stay in the university, gender of the students, and first year commutative grade point average and department choice.

This result was in accordance with the study done by Ever, et al (2011), but this result was in contrast to other studies of Wint, et al (2006) which indicated that male students generally under achievement than female students. Our study was in a line with study conducted in Arba Minch Ethiopia by (Moges, et. at., 2017) that proved the existence of significant relationship between gender difference, students former academic back ground, studying hours and academic performance. Our finding was also in line with (Hijaz & Naqvi, 2006) which identified that study habit of the student, educational background of parents, students placement by their first choice were have significant effect on academic competency of the students. This idea was additionally supported by students' academic gain and learning performance is affected by numerous factors including gender, teaching faculty, students schooling, daily study hour and accommodation as hostelry or day scholar (Shoukat et. al., 2013). According to Minnesota (2007) "the higher education performance was depending upon the academic performance of graduate students. Their finding identify students' effort, previous schooling, parent's educational background, family income, self-motivation of students, age of student, learning preferences and entry qualification of students as important factors that have effect on student's academic performance, this result also agree with our study finding. However our study finding was in contrast to the

result (McNabb et al., 2005) which was implied that after understanding the effects of various background characteristics on academic performance in Higher Education has prompted a much debate with socio-demographic. The average 'good' degree rate of female students over the period reviewed was found to be superior to the corresponding male rate. There was greater dispersion in male performance compared to females. In addition, females were less likely to fail or secure third/pass degrees than males. Further analysis indicated that if males were subjected to a female treatment, the male dispersion in performance would be dramatically reduced (Michael et al., 2009).

On the other hand Gender gaps in favor of male students' better performance than females' students in academic achievement (Ever, et al, 2011) which produce similar result with our study finding. The other important variable in determining student's college academic performance is studying hours. The number of hour's students use to study per day significantly and positively related to academic performance of students with (Moges et al., 2017). This finding was quite agreed with our study finding which was study hour was significantly and positively correlated with academic competency of the graduating class students. Based on our study finding we conclude that the following factors were found out to have significant relationship with academic competency of graduating class students of Haramaya University at the time of the study: motivation, gender, first year commutative grade point average, the experience of the graduating class students to fall in love during their stay in the University, punctuality of the course instructors and department choice were the important factor that have been identified as a determinants of academic competency of the haramaya university graduating class students at the time of data collection. Our finding was produced a similar result with a study done by Yeshimebret, alemayehu and firew(2013), in Bahirdar university the result that they obtained shows that academic achievement of female students affected by students personal related factors such as less ability to competent, tension, failing in love easily. In regard to the Instructors Quality to the academic competency of the students the study done by (Analiza G., 2018) reveals that Instructors should stimulate students towards positive response on the discovery, analysis and synthesis of their daily experiences in University. Educational researchers have investigated many factors considered to affect student learning. Research demonstrates that among all educational resources teachers' abilities are especially crucial contributors to students' learning. Studies indicate that students want lecturers to be knowledgeable, enthusiastic, approachable and friendly, humorous, fair, and positive; effective communicator; flexible and open-minded; and encourages student participation Voss, R, and Gruber,T (2006) and Salfi, N. A., & Saeed, M. (2007). According to the study done by Chetty, R., Friedman, J.N. & Rockoff, J.E. (2011) the teacher factors that significantly contributed to low academic achievement was incidences of lateness, incidences of absenteeism. Underlying the above descriptions of the qualities of a teacher, the important role teachers' play in supporting students' performance is emphasized. Researchers have noted that the interaction which occurs between teachers and students in the classroom is remarkable. Teacher's emotional support can help students become more self-reliant, motivated to learn, and willing to take risks. Pianta RC, Hamre BK. (2009), also

suggested that Teachers have meaningful causal effects on both test scores and the non-cognitive factor, the findings were in agreement with our finding that Instructors qualities have found to have a significant contribution to the academic competency of the students.

RECOMMENDATIONS:

Based on the result we have found from descriptive and inferential statistics we recommend the following action plans to be taken by the concerned stake holders:

- ❖ The students have to be motivated to learn in the university they have already placed, since it has undeniable positive influence on their academic competency compared to the none motivated students to study in the University.
- ❖ The students have study taking a sufficient amount of time, this because study time of the graduating class students has a positive relationship with their academic competency.
- ❖ Female students have to get a considerable attention for the betterment of their academic competency, since the academic competency of female students was decreasing compared to the male counterparts.
- ❖ Students have to get the appropriate guidance and counseling or need to be given a remarkable amount of mentor during their stay in the university regarding their sexual activities, since students who have responded as they have the experience of falling in love were negatively related with their academic competency.
- ❖ Students are advised to utilize their maximum effort to achieve the desired level of competency; this is because students who have responded that they have used their adequate effort were positively related with their academic competency at the time of data collection.
- ❖ The course instructors have to be punctual, that is the punctuality of the instructor was positively related with academic competency of the graduating class students compared to none punctual instructors.
- ❖ Students have to score the desire level of first year cumulative grade point average, since it was highly correlated with their graduating cumulative grade point average.
- ❖ The university has to create and facilitate a suitable condition to motivate their students' for achieving a desired level of academic competency during their stay in their respective campuses.

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