



**Determinants of Students' Performance in Private Higher Education Institutions  
in Ethiopia**

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## ***Determinants of Students' Performance in Private Higher Education Institutions in Ethiopia***

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### **Abstract**

The performance of students in Private Higher Education Institutions (PHEIs) can be affected by a wide variety of factors. These factors include social, economic, academic and institutional aspects directly or indirectly influencing the teaching learning process. One or more of these factors or in combination can contribute to increment or decrement in academic performance of students.

The general objective of the study is to find out the academic, social, and institutional variables which can predict the difference between PHEI students with increasing academic performance and those with decreasing academic performance. The study will also assess gender differences affecting academic performance of students in private institutions of higher learning in Ethiopia.

The study population consists of the list of accredited private higher learning institutions in Addis Ababa. Sample size of the study was 200 students selected randomly from five accredited PHEIs located in Addis Ababa. Primary data were collected using pre-tested questionnaire. Binary logistic regression model was used to predict the determinants of students' increased and decreased academic performance. The same model was fit to identify the factors affecting the academic performances of male and female students. The findings indicated that learning motivation, class participation, starting time of study in semester and living condition of students have statistically significant effect in predicting students' academic performance.

### **1. Background**

#### **1.1 Introduction**

Higher education is vital in the betterment of the quality of life, recognition of drawbacks and hindrances in the actual process of development and in the formulation of various types of remedies for social and economic problems existing in Ethiopia. Higher institutions of learning are seen by the society as role models of innovation and change at large and are expected to play a critical role in promoting sustainable cultural, social and economic development (UNESCO 1998). Higher Educational Institutions in Ethiopia are established with the specific objectives of training and producing qualified humanpower required for economic development, conducting research and disseminating results (Eyuaem 2004). PHEIs are also established with more or less of the same objectives mentioned while being profitable in order to keep their survival in the competitive atmosphere of private investment.

Since 1998 more than 18 PHEIs have been accredited in Ethiopia. PHEIs are sharing the contributions made to society by public higher learning institutions in producing manpower that currently fills positions in government, industry, public and private sectors. PHEIs in Ethiopia have created opportunities for thousands of students who did not have chance to join public higher institutions because of the stiff competition for the limited spaces available (Wondwosen 2003).

### **1.2 Objectives of the Study**

In light of these facts, this study tried to identify the major determinants which can affect students' academic performances in PHEIs in Ethiopia. Therefore, the specific objectives of the study are to identify the:

1. academic, institutional and social factors predicting the difference between students with increasing academic performance and decreasing academic performance in PHEIs; and
2. gender differentials vis-à-vis academic performance of students in PHEIs.

## **2. Research Methodology**

### **2.1 The Data**

Primary data were used as a major input for analysis in the study. In order to sort out the would-be factors affecting students' academic performance, exploratory research was done on selected group of PHEI students. The information generated from the exploratory research was used to prepare the questionnaire used for the study. The questionnaire was pre-tested and was administered using the local language of the students. Secondary data were also used in order to facilitate interpretation of results.

### **2.2 Sampling Method**

Two stage simple random sampling technique was used to select students for the study. In the first stage, five PHEIs were selected randomly from the list of accredited PHEIs found in Addis Ababa. In the second stage, a total of two hundred students were selected; forty students from each college, using simple random sampling technique.

### **2.3 Data Analysis**

Descriptive statistics and binary logistic regression models were used as analytical tools in the study. According to Wright (1995), the binary logistic model can be used to predict the difference between two groups when the dependent or response variable has a binary nature. In this study, the binary logistic regression model was used to find out the factors that discriminate PHEI students to have increased and decreased academic performances. The same type of regression model was used to see whether there is gender differentials with regard to academic performance of students in PHEIs.

### **2.3.1 Specification of Variables**

Acaperfo: is the dependent variable in the first logistic regression model and represents students' academic performance; 0 if students' academic performances decreased, and 1 if increased.

Sex of student: is the dependent variable in the second logistic regression model; 0, if the sex of the student is female and 1, if otherwise.

The explanatory variables hypothesized to affect student performance are:

Livcon : represents living condition of students; 1if students live with family, 2 if students live with relatives, and 3 if students live alone. Students living with family were expected to have increased academic performance due to continuous follow-up from their parents on their day-to-day college activities.

Timesem: represents study starting time during a semester; 1 if students start studying at the beginning of a semester, 2 if students start studying at the middle of a semester and 3 if students start studying at the end of a semester. Students that start studying early in the semester are expected to have increased academic performance as it gives them the opportunity to cover their subjects before final exams.

Clactiv: represents tendency of instructors to encourage class participation; 0 if instructors don't have the tendency to encourage class participation and 1, if otherwise. The higher the tendency of instructors in encouraging class participation, the better would be the academic performance of students.

Askqst: represents students' inclination to ask questions during lecture hours; 0 if a student asks questions and 1, if otherwise. Asking questions during lecture hours helps the student to clearly understand classroom discussions that increases the opportunity of having increased academic performance.

Lecnote: represents students' frequency of taking lecture notes; 1 if a student never takes lecture notes, 2 if a student sometimes takes lecture notes and 3 if a student takes lecture notes on a regular basis. Students who frequently and actively take lecture notes are expected to have increased academic performances.

Speaski: English language speaking skill of students; 1, if students' English language speaking skill is very poor, 2 if it is poor, 3 if it is good, 4 if it is very good and 5 if it is excellent. English language speaking skill helps to enhance the communication process in the teaching learning process, and hence, it is expected to affect students' academic performances positively.

Listski: English language listening skill; 1, if students English language listening skill is very poor, 2 if it is poor, 3 if it is good, 4 if it is very good and 5 if it is excellent. English language listening skill helps to enhance the communication process in the teaching learning process, and hence expected to affect students' academic performances positively.

Futedu: intention of a student for further education after completion; 0, if a student has no intention to continue his/her education after completion and 1, if otherwise. If a student has the intention to pursue further education, then the student is expected to have better motivation to study that could contribute to have increased academic performance.

Recre: attitude of student about his/her college recreational facilities; 1, if it is perceived as very poor, 2 if it is perceived as poor 3, if it is perceived as good, and 4 if it is perceived as very good. If a student is satisfied with existing recreational facility of his/her college, he/she could have better or increased academic performance.

Lernmo: students' motivation to learn; 1, if a student's motivation is very low, 2, if it is low, 3 if it is high and 4 if it is very high. The higher the motivation of a student to learn, the better would be his/her academic performance.

Preve: experience of students in looking at previous exams before sitting for exams; 0, if a student has no experience of looking at past exams and 1, if otherwise. If a student has the experience of looking at previous exams, s/he can come across repeated questions and would score better result than those students who do not have such experiences.

Jobpro: prospect of getting job after graduation; 0, if a student believes that s/he has no prospect of getting job after graduation and 1, if otherwise. If a student thinks that there is high probability of employment after completing his/her studies, his/her motivation to learn increases that will positively contribute to increased academic performance.

### **3. Result and Discussion**

#### **3.1 Characteristics of Sample PHEI Students**

##### **3.1.1 Program of Study**

From the total sample of PHEIs students, two percent were certificate students, eighty-two percent were diploma program students and sixteen percent were degree program students (see Table 1).

**Table1: Cross Tabulation of Students' Academic Performances with their Program of Study**

Program of Study	Academic Performance of Students				Total	
	Decreased		Increased		Frequency	Percentage
	Frequency	Percentage	Frequency	Percentage		
Certificate	-	-	3	2.1	3	1.5
Diploma	52	88.1	112	79.4	164	82
Degree	7	11.1	26	18.4	33	16.5
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

### 3.1.2 Year Level of Students

With regard to year level, the sample respondents included were first year, second year and third year students. Nineteen percent of the total samples of students were first year, nearly sixty-four percent were second year and seventeen percent were third year students. Since the data were collected in June, it was assumed that the first year students would not be in trouble for evaluating their academic performance on the basis of their two semester’s results. From the sample of PHEI students with decreased academic performance, nine percent were first year students, eighty-three percent were second year students and the remaining nine percent were third year students. On the other hand, twenty-three percent of the first year students, fifty-five percent of second year and twenty-one percent of third year students responded that their academic performance showed increasing trend during the same period (see Table 2).

**Table 2: Cross Tabulation of Students’ Academic Performances with Their Year Level**

Level	Academic Performance of Students				Total	
	Decreased		Increased			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
First Year	5	8.5	33	23.4	38	19
Second Year	49	83	78	55.3	127	63.5
Third Year	5	8.5	30	21.3	35	17.5
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

### 3.1.3 Class Attendance

Frequent absenteeism and late coming of students can adversely affect their academic performance. Out of the total number of students covered in the survey, seventy-one percent stated that they are punctual in attending classes. Twenty-seven percent of students that their performances showed increasing trend responded attend classes coming sometimes late or don’t attend at all while thirty-two percent of them that their performances showed decreasing trend responded the same (see Table 3).

**Table 3: Cross Tabulation of Students’ Academic Performances with Class Attendance**

Class Attendance	Academic Performance of Students				Total	
	Decreased		Increased			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Sometimes late	10	17	22	15.7	32	16
Sometimes absent	9	15	17	12	26	13
Punctual	40	68	102	72.3	142	71
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

### **3.2 Study Habits of Students**

#### **3.2.1 Study Places**

PHEI students covered in the study used their college libraries, unoccupied classrooms and their home as places of study. From the total number of students that their performances showed increasing trend, fifty percent of them reported that they used to study in the college’s library. Fourteen and thirty-six percent of them reported to have used empty classrooms and their homes as their frequent locations for studying respectively. From the total of fifty-nine students that their performances showed decreasing trend, forty-four percent of them responded that they used to study in the college’s library. Nine and forty-eight percent of them responded to have used unoccupied classrooms and their home as frequent places for studying respectively.

The libraries are the major places of study preferred by both categories of students. In this regard, the respondents have mentioned several problems related to the libraries of PHEIs. Noise disturbance is the major problem stated by the students in all the five private colleges covered in the study. In some colleges, the library and typing rooms are found adjacent to each other. In others, the libraries are situated next to construction site with lots of incoming sound from outside. Group work inside libraries and lack of discipline are the other major complaint raised by the respondents. Absence of ventilation facility and lack of adequate seats/space, especially during exam times were also stated as problems. Regarding books, many of the libraries were described to have large number of similar types of books with very poor quality (reduced font size and dark photocopied materials), which are very difficult to ease reading.

**Table 4: Cross Tabulation of Academic Performances of Students’ with Study Place**

Study Place	Academic Performance of Students				Total	
	Decreased		Increased			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Library	26	44.1	71	50.4	97	48.5
Unoccupied classroom	5	8.5	19	13.5	24	12.0
Home	28	47.5	51	36.1	79	39.5
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

#### **3.2.2 Study Time during a Semester**

Both categories of students were asked in which time of the semester they habitually start studying or start preparing for examination. From the total of two hundred students, thirty-five percent stated they start studying at the beginning of the semester, fifty percent stated they start studying at the middle and the remaining fifteen percent responded that they start studying at about the end of a semester.

**Table 5: Cross Tabulation of Students’ Academic Performances with Starting Time of Study**

Starting Time of Study	Academic Performance of Students				Total	
	Decreased		Increased		Frequency	Percentage
	Frequency	Percentage	Frequency	Percentage		
At the Beginning of a Semester	12	20.3	58	41.2	70	35
At the Middle of a Semester	31	52.6	69	48.9	100	50
At the End of a Semester	16	27.1	14	9.9	30	15
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

Out of one hundred forty one students with increased academic performance, forty-one percent stated that they start studying at the beginning of a semester, whereas only twenty percent of the students with decreased academic performance did the same. On the contrary, twenty seven percent of the students with decreased academic performance responded that they start studying at about the end of a semester while only ten percent of the students with increased academic performance stated the same (see Table 5).

### 3.2.3 Note Taking Habits

Reading skill is one of the skills that makes a student more competent in his/her college performance. Taking short notes while reading can help students quickly summarize during times of examination. From the total sample students, nearly forty-one percent stated that they always take down notes while reading, and around fifty five percent stated that they sometimes take notes while reading.

**Table 6: Cross Tabulation of Students’ Performances with their Frequency of Note Taking while Reading**

Frequency of Note Taking while Reading	Academic Performance of Students				Total	
	Decreased		Increased		Frequency	Percentage
	Frequency	Percentage	Frequency	Percentage		
Always	16	27	65	46	81	40.5
Sometimes	39	66	70	50	109	54.5
Never	4	7	6	4	10	5
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

On the other hand, from the cross tabulation table presented above, forty-six percent of the students with decreased academic performance responded that they always take note while reading. Sixty-six percent of students with decreased academic performance reported to have the experience of note taking only “Sometimes”. However, fifty percent those students whose performances showed increasing trend reported to have the experience of note taking only “Sometimes” (see Table 6).



### **3.3 Other Characteristics**

#### **3.3.1 Job Opportunity**

Students included in the study had overall positive expectation with respect to job opportunity after completion of their studies. As it is clearly shown in table 7, eighty-nine percent of the total sample of respondents stated that they expect to be employed after completion of their studies. Ninety-four percent of students with increased academic performance and seventy-eight percent of students with decreased academic performance responded that they would get employment opportunity after graduation (see Table 7).

**Table 7: Cross Tabulation of Students’ Performances with their Prospect of Getting Jobs after Graduation**

Prospect of Getting Job after Graduation	Academic Performance of Students				Total	
	Decreased		Increased			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Yes	46	78	132	93.6	178	89
No	13	22	9	6.4	22	11
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

#### **3.3.2 Further Education**

Students with an inclination to continue their education after completion of current studies are expected to have higher motivation to work hard and improve their performance as compared with students who have no desire to pursue further education after completing their current program. Results of the study showed that ninety-three percent of the respondents stated that they want to continue their education after completing their current studies. Out of one hundred forty-one students who have increased academic performance, ninety-five percent showed interest to continue their education while eighty-eight percent of students who have decreased academic performance reported that they have the interest of pursuing their education after completion of current program (see Table 8).

**Table 8: Cross Tabulation of Students’ Performances with their Desire for Further Education**

Do You Have the Desire to Continue Further Education?	Academic Performance of Students				Total	
	Decreased		Increased			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Yes	52	88	134	95	186	93
No	7	12	7	5	14	7
<b>Total</b>	<b>59</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>200</b>	<b>100</b>

#### **3.3.3 Living Condition of Students**

From the age distribution of the students, ninety percent of them are below 25 years old implying that close family follow up is required to improve their academic performance. Out of the total number of students whose academic performance showed increasing trend, seventy-eight percent were living with their families; nine percent of them were found to live with relatives and thirteen percent of them were found to live alone in rented houses. From the total of fifty nine students

whose academic performances showed decreasing trend, nearly sixty percent were found to live with their families/parents; twenty percent of them were found to live with relatives and the remaining twenty percent of them were found to live independently in rented houses (see Table 9).

**Table 9: Cross Tabulation of Students’ Academic Performances with their Living Condition**

Living condition of students	Academic Performance of Students				Total	
	Decreased		Increased			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
With family	35	59.4	110	78	145	72.5
With relatives	12	20.3	13	9.2	25	12.5
Independently	12	20.3	18	12.8	30	15.0
Total	59	100	141	100	200	100

**3.4 Gender versus Academic Performance in PHEIs**

To see whether there are differences in the academic performances between male and female students, the data were also analyzed through the binary logistic regression model. In order to find out the discrimination between male students with high academic performance and female students with high academic performance, cases with increased academic performance were selected and included in the binary logistic regression model.

The Model Chi-square value was significant at less than five percent level showing that knowing the independents makes a difference in predicting the difference between male and female students with increased academic performance. The classification table result also showed that 86.3 percent of male students and 41.3 percent of female students have been classified correctly. The overall classification rate of the model was found to be 71.6 percent, which is good for cross sectional data (see Table 10).

**Table 10: Results of the Binomial Logit Model for the Gender Desegregated Data**

*(Dependent variable: Academic performances of Female and Male Students; 0 if the sex of the student is female and 1, if otherwise)*

Variables	B	S.E	Exp (B)
Livcon	0.559	0.276	1.75**
Timesem	0.198	0.346	1.23
Clactiv	0.344	0.629	1.41
Askqst	0.884	0.489	2.42***
Lecnote	-0.918	0.468	0.40**
Speaski	0.316	0.292	1.37
Lernmo	-0.825	0.347	0.44**
Recre	-0.309	0.216	0.73
Prevex	0.472	0.429	1.60
Futedu	-0.085	0.942	0.92
Jobpro	1.503	0.896	4.49***
Constant	1.335	1.870	3.80

<sup>8</sup> Sig. at 1%, \*\* Sig. at 5% and \*\*\* Sig. at 10%

-2 Log Likelihood=149.906; Overall Model Prediction= 71.65 and Model chi-square Value=28.17\*

Living condition, asking questions in class, taking lecture notes, learning motivation and job prospect of students were found to be the significant predictor variables between male students of increased academic performance and female students of increased academic performance. Living condition of students was found to be significant at less than five percent level and bears a positive sign. It means that if a student with increased academic performance lives independently or away from the family, the odds that the student who falls into the male category are high. Accordingly, male students score high academic performance when they live independently rather than with their families.

Tendency of students to ask questions in classroom was also found significant at less than one percent level and with a positive sign. Students with higher academic performance who ask questions in classroom discussion hours belong to the group of male students. This implies that even if both male and female students considered in the analysis are those whose academic performances showed increasing trend, female students are not accustomed to asking questions in class lecture hours. This could be attributed to fear and shyness which is common to female students. Most of the female students reported that they rely on family members and their classmates to get additional assistance in understanding their subjects.

Frequency of taking lecture notes was found to be statistically significant at five percent level. In this respect, male students take lecture notes less frequently contrary to their counterparts. This might be attributed to the fact that female students rarely ask questions during lecture hours. Consequently, they try to catch up with the discussion by taking as much lecture note as possible.

Learning motivation of students was found to be statistically significant at less than five percent level and bears a negative impact. As the learning motivation of student increases, the odds that the student belongs to the group of female students with high academic performance increases. In other words, one can say female students with increased academic performance have higher motivation to learn than their male counterparts. For the male students, even if they are from the group of increased academic performance, motivation alone might not be the sole factor contributing towards their better academic performance.

Finally, the prospect of getting job was found to be statistically significant at less than one percent level and bears a positive sign. Thus, male students with increased academic performance had greater anticipation of getting employed after graduation as compared to female students with increased academic performance.

### 3.5 Major Determinants of Academic Performance of Students in PHEIs in Ethiopia

Binary logistic regression model was used to predict the explanatory variables discriminating between students whose academic performance showed increasing trends with those students whose academic performance showed decreasing trends.

The Model chi-square value was found to be significant at less than one percent level showing that the predicting power of the model is strong. Again, based on the model classification statistics, 77.4 percent of the cases were classified correctly.

**Table 11: Results of the Binomial Logit Model for Predicting Students’ Academic Performance**  
(Dependent Variable: Academic Performance of students with binary values of 0= Decreased and 1=Increased).

<i>Variables</i>	<i>B</i>	<i>S.E</i>	<i>Exp (B)</i>
Livcon	-0.537	0.229	59**
Timesem	-0.775	0.292	0.46*
Clactiv	0.071	0.476	1.07
Askqst	0.669	0.377	1.95***
Lecnnot	-0.376	0.380	0.68
Speaski	0.330	0.261	1.39
Listski	0.256	0.250	1.29
Recre	0.170	0.185	1.19
Futedu	0.658	0.684	1.93
Lernmo	0.551	0.276	1.74**
Prevex	0.054	0.366	1.06
Jobpro	-0.808	0.545	0.45
constant	-0.589	1.493	0.56
* <i>Sig. at 1%</i> ** <i>Sig. at 5%</i> *** <i>Sig. at 10%</i> <b>Overall Model Prediction=77.4%; -2 log likelihood=196.4 and Model chi-square Value=43.8*</b>			

Living condition of students, starting time of study in a semester, class participation and learning motivation were found to be the statistically significant predictors of the odds for belonging to students with increased academic performance or students with decreased academic performance (see Table 11). Living condition of students was found to be significant at less than five percent level and bears a negative sign showing that PHEI students living with their families belong to group of increased academic performance. Whereas if a student lives away from his/her family, the odds are that having higher academic performance decreases. Those students who live with their parents/ families get close follow up and supervision on their day-to-day activities than those living with relatives or alone in rented facility. As a result, their academic performances are found to be improved. Consequently, it may be inferred that close family follow up can have a constructive role in boosting the academic performance of students.

Starting time of study during the semester was found to be significant at less than five percent and has negative sign. This means if a student starts studying late in the semester, the odds that he/she

belongs to the group of students with increased academic performance decreases. It has been mentioned in earlier sections that the majority of the sample of PHEI students with increased academic performance responded that they start studying at the beginning of the semester and most of them stated at middle of the semester. Accordingly, early start of studying can be considered as one major determinant which can increase the academic performance of students in private higher learning institutions.

Asking questions during classroom lecture hours was found to be significant at less than ten percent level and bears a positive sign. This implies that if a student asks questions or participates in classroom discussions, the odds that he/she would belong to the group of students with increased academic performance increases. In other words, asking questions during lecture hours has a positive impact on improving academic performance of students. This indicates the need to encourage class participation and motivation of students to raise questions either during or after the lecture before winding up their session.

Lastly, learning motivation was found to be significant at less than five percent level and has a positive sign. This is interpreted as as the learning motivation of a student increases, the odds that he/she belongs to the group of students with increased academic performance increases. Motivation is expected to influence students' class attendance and study behaviour, which in turn contributes to the improvement of students' academic performance. Hence, the drive to learn can be one of the key determinants affecting academic performance of students in private higher educational institutions in Ethiopia.

#### ***4. Conclusions and Recommendations***

The gender differences with respect to academic performance were reflected in terms of class participation, frequency of taking lecture notes, learning motivation and job prospect. It was shown earlier that male students with increased academic performance have better class participation status while the female students with increased academic performance had higher inclination to take lecture notes as compared to their male counterparts. Female students with increased academic performance had higher motivation to learn as compared to the male students. With regard to job prospect, male students have shown to have greater anticipation of getting jobs after completion of their academic careers.

The major determinants of academic performance as predicted by the binary logistic model included living condition, starting time of study during semester, class participation and learning

motivation of student. Students with increased academic performance mostly live with their parents /families, start studying either at the beginning or mid of semester, participate in classroom discussion by asking questions and have a high motivation as compared to students with decreased academic performance. In light of the foregoing discussion, the following points are worth considering by PHEIs in order to help their students with decreasing academic performances. PHEIs need to:

- ❖ encourage female students and students at risk to be active participants in classroom discussion;
- ❖ create awareness for female students on how they can get employed upon completion on equal basis with their male counterparts;
- ❖ provide counseling service for students living away from their families as it has been shown to be one of the major factors impacting academic performance;
- ❖ make sure that their instructors are evaluating students on a progressive basis since this can pressurize students to start studying earlier in the semester, which, in turn, improves academic performance of students; and
- ❖ facilitate forums and discussions with their students which aim towards improving the motivation of students in their college career.

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