

Determinants of Student Dropout a Case of KIHA Town

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Abstract

In developing country like Ethiopia, student drop out affect economic development in both rural and urban areas. As such, this study aims at establishing the major cause of student drop out from school. To achieve the objectives 196 respondents were selected randomly from 1968 population. Both primary and secondary data were employed. Also the obtained data wear analyzed using both in descriptive and logit econometric model. The finding of the study shows that factors which are:- family size, family economic status, distance between school and home, sickness, behavior, frustration, sex and marriage affects students to drop out from school significantly. On the other hand low wages, skill gap, costs for families, societies are insignificant to affect student drop out.

Keywords: Student, Dropout, logit model, School.

1. Introduction

A countries potential for economic growth is greatly influenced by its endowments of physical resource and human resource. Human resource endowments i.e. people and their skill level is important to have good attitude towards work, access to information, willingness to innovate, and desire for self improvement as well as self confidence. The level of human skill will often determine the ability to alter the structure of production and the time it takes for such structural alteration to occur Rumberger, R. W. (2001).



In order to achieve development and structural change through research development and innovation, education is essential to develop the skill and experiences of peoples. Education plays a key role in the ability of developing country to absorb modern technology and to develop the capacity for sustaining growth and development (Tinto, V. (1975).

Sustainable growth and development will achieve through education is, when students in the school attained a full time lesson. But, behind this there are some problems that induce students to drop out. Those problem are related with students itself, school environment, community value, and their family characteristics. This dropping out problem is common in developing country like Ethiopia. This is because limited economic resource, gender discrimination, education infrastructure of school environment and others. For an individual in developing country deciding whether to go on from primary to secondary school education, four year of income are foregone (Mulat D 1998).

Direct costs like; school fees, student uniform, books and other expenditures that would not have been made if the individual had left school at the end of primary grades. Girls are most likely to drop out due to observance of parade ,early marriage, pregnancy, looking after off spring, parents indifference towards girls education while, boys are more likely to drop out to seek private employment to support their family, lower achievement or failure, lower levels of ability, lack of self confidence etc.(siddiqui,2004).

In real context there are different factors which determine the growth and development of the overall economy of a country. Among these determinant factors human capital resources is most important. We know that 85% of Ethiopian people are residing in rural areas rather than in urban areas and engage in subsistence agricultural production. in order to bring structural changes (transformation of agriculture sector to manufacture sector), it requires an educated human power who allocate resources efficiently.

As education is essential for social, economical and cultural development, but drop out press such development inward. Undeveloped human resources are an obstacle to economic development in LDC'S (least developed countries). Such countries lack in people possessing critical skill and knowledge required for all round development of the economy (Jhingan, 1997). Even if education is accessed for all and decent standard of living, the problem of drop out is not solved. Therefore the intention of this study is to find out those factors which affect students to drop out from school by collecting both primary data and secondary data. And more specifically the study formulates the following research questions and objectives so as to address the research problem.

-  To identify the main determinants of student dropout in KIHA town.
-  To assess trend of student dropout in the study area.

2. Methodology of the study

2.1Type and source of data

In order to verify and diversify the objective of the study, the study used both secondary and primary data. The primary data was collected through questioner where as the secondary data was collected from education office and from different published and unpublished documents.

2.2 Sampling technique and sample size

The study used a random sampling technique which is a part of probability techniques. The total numbers of target populations (preparatory students) wear 1968. The students are relatively homogeneously distributed in their status or occupation and education background. From the total population a sample of 196 students which is 10 percent of the populations are selected randomly as sample size of the study.

2.3 Method of data analysis

The collected data was analyzed by using both descriptive and econometric model. In descriptive analysis table, percentage and others was employed. For the econometric model analysis, the study used a logit regression method to show the effects of those explanatory variables on the dependant variable.

2.4 Specification of logit model

According to Gujarat, (2007),logit model is based on the cumulative logistic probability function.

$$Pr(\text{drop out}=1/\text{sex, marriage, family size, family economic status, distance, sickness, behavior frustration}) = \frac{e^{(B_0+B_1\text{sex}+B_2\text{bhvr}+B_3\text{frusn}+B_4\text{fmlysz}+B_5\text{fmlyin}+B_6\text{dst}+B_7\text{sck}+B_8\text{mrrg})}}{1+e^{(B_0+B_1\text{sex}+B_2\text{bhvr}+B_3\text{frusn}+B_4\text{fmlysz}+B_5\text{fmlyin}+B_6\text{dst}+B_7\text{sck}+B_8\text{mrrg})}}$$

Where:

Where x shows all explanatory variables in matrix form

dst – distance from the school

Fmlysz-family size

Fmlyin-family economic status

bhvr- behavior

Frusn-frustration

Sck-sickness

Mrrg-marriage

Sx-sex

B – Parameters to be estimated

3. Results and Discussions

3.1 School enrolment in Ethiopia

According to the report of central statistics authority reports the net enrollment ratio for children for grades 1-8 is 62%,and those for grades 9-12 it is 11%.the figures show that the school attendance drops steeply after the vary basic education. The sex difference is rather small and in favor of females. The structure of primary education has been changed since 2004 to encompass eight grades instead of six grades; nevertheless, there has been very considerable positive development in the net enrolment ratio of both sexes since 2004. The main difference in Ethiopia lies between the enrolment ratios of urban and rural areas. In primary education there is a major difference is in favor of urban areas, and the difference is even larger in secondary education, but also in this respect the disparity has been reduced considerably since 2004. The gross enrolment ratio at country level is 20.3% for secondary school level. According to the data the gross enrolment ratio at secondary school level in rural and urban areas are seems succeed to secondary school (enrolment rate of 10.3%) compared to 60.8%of children in urban areas.

Table1: school net enrolment ratio for grade 9-12 by sex.

School/sex	Year 1996		Year 1998		Year 2000		Year 2004		Year 2011	
	gross	net	gross	net	gross	net	gross	net	gross	net
Male	13.7	8.8	17.4	10.9	19	12.2	28.3	16.6	22.4	10.9
Female	12.3	8.7	13.8	9.6	15.2	10.9	17.9	11.6	18.1	11.0
total	13.0	8.8	15.6	10.2	17.1	11.6	23.1	14.5	20.3	11.0

Source: CSA.

Table 2: school net enrolment ratio for grade 9-12 by residence

Residence	Year 1996	Year 1998	Year 2000	Year 2004	Year 2011
Rural	3	4.8	6.4	14.7	10.27
Urban	59.6	65.9	68.2	64.2	60.67
Total	13	15.6	17.1	23.1	20.29

Source: CSA

3.2 Determinants of student dropout

The result of logit model cannot directly interpret but it simply shows us the direction and significance of log

odds ratio. But the marginal effect can directly interpret.

Behavior: - as shown in the above logit model estimation shows there is a negative relationship between behavior and drop out. This means that when the behavior of student becomes bad and bad the probability of drop out from school is increase. As shown in the marginal effect behavior has 52%less probability of being dropped out .I can also say that when the student’s behavior became bad the probability of being dropped out is increase 52%.

Frustration:-this is another explanatory variable that affect student drop out. Based on the logit model result it has a positive relationship with drop out. This shows that when students become frustrate the probability of being dropped out is increase. Looking at the marginal effect, frustration has a 58% more probability of being dropped out or when students become frustrate the probability of being dropped out is increased by 58%.

Family size: - this is also another explanatory variable that affect student drop out. As the above logit model estimation shows there is a negative relationship with drop out. (Other things are constant).hence, the more the number of children within a family, the greater the probability of attending school, holding other factors constant. This result is influenced by labor requirement in rural areas, where children are sought to help with farm work. Since, the probability of going to school declines for households with fewer children and vise versa. As shown in the marginal effect, large family size has 13% less probability of being dropped out or when family size increase by one child the probability of being dropped out is decreased by 13%.

Table3: factors of student drop out-logit model estimation result.

Covariates	Logit result			Marginal effect		
	Coefficients	Std.err	p-value	coefficient	Std.err	p-value
Behavior	-3.62	(1.68)	0.032	-0.52	(0.20)	0.011
Frustration	4.39	(1.71)	0.01	0.58	(0.18)	0.001
Family size	-0.88	(0.43)	0.042	-0.13	(0.06)	0.034
Family economy status	2.32	(1.16)	0.045	0.33	(0.14)	0.019
distance	0.35	(0.19)	0.057	0.05	(0.03)	0.045
sickness	3.25	(1.57)	0.039	0.47	(0.23)	0.038
marriage	0.03	(1.15)	0.980	0.004	(0.16)	0.980
sex	0.58	(1.22)	0.634	0.09	(0.18)	0.643
Sample size	196					
LRchi2(8)	=25.53					
Prob>ch2	=0.0013					

Source: own estimation

Family economy status: this is the most important explanatory variable that affect drop out. As the above logit model result shows there is a negative relationship with drop out. This means when the families of the student are poor the probably of being dropped out is higher. This shows that if the families of the student are poor, students can not satisfy their direct and indirect cost, since the probability to drop out from school is increase. Look at the marginal effect, poor family economy status has a 33% more probability to drop out from school, or when the economy status of student’s family is poor; the probability of drop out is increased by 33%.

Distance:-this is another important or significant explanatory variable that affect students to drop out. As shown in the above logit model result, distance from school has a positive relationship with drop out. This means when student’s resident is far and far also the probability or students to drop out are also higher and higher. Look at the marginal effect, distance has a 5%more probability of being dropped out or when distance is increased by one kilometer the probability of drop out is increased by 5%.

Sickness: - sickness is another significant explanatory variable that affect students to drop out from school. Based on the logit model regression result, there is appositve relationship between sickness and drop out. This means when students becomes sick the probability to attained school is low, or I can say that when students are becomes sick and sick the probability of dropped out from school is also higher and higher. Look at the marginal effect, when students become sick the probability of drop out is increased by 23%, or sickness has a23% more probability of being dropped out.

3.3 Diagnostic Tests

Diagnostics test are usually undertaken to detect model misspecification and as a guide for model improvement. And it is a must to test the data for different diseases which would mislead the output and end up with wrong interpretations and conclusions. To this end different tests namely: Breusch-Godfrey LM test for autocorrelation, Jarque-Bera Normality test, Chow Breakpoint Test for stability of parameters, Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity, Ramsey and RESET test, were employed to assure the robustness of the model.

3.4 Conclusion

The paper examines the factors affecting student drop out from school in Kiha town. To address the specific objectives both descriptive and econometrics (logit model) techniques were used. Logit model estimation technique is employed for the purpose of better understanding the factors of drop out in Kiha secondary school. The evidence indicates that the major factors for drop out are: - family size, family economy status, and distance from the school, frustration, sickness and bad behavior of student. Based on the regression result, explanatory variables such as family economy status (famlyin), family size (fmlysz) and behavior of student (bhvr) have negative relationship with drop out. On the other hand, distance from the school (dst), frustration (frusn) and sickness (sck) have appositive relationship with drop out. This means that when the economy status of families is poor and poor the probability of drop out is high and high. And when the family size of the students is low in number the probability of drop out is high. The same is true for that when the behavior of the students become misbehavior the probability of drop out is increase or high. On the positive relationship of distance from the school, since when the distance between student's home and school becomes far and far the probability of drop out is increase or high and high. Also when students become more and more frustrated the probability of drop out also gates high and high. On the other hand when students become sick the probability of dropout also becomes high and high or gaits increase.

3.5 Recommendation

Based on the data analyzed and the knowledge obtained from the literature, the study suggest the following recommendation.

- ✓ Transforming the physical operation of school plants such as length of school year and flexibility in school day and class room functions. A vary basic purpose of it should be to make school experiences more suitable and appropriate according to the needs of the learner.
- ✓ More time is required for dialogue between students and teachers by reducing class size. Teacher's attention to solve problems faced by the students in the class room can be of paramount importance and can be help full in generating interest among students to wards learning.
- ✓ Low socio economic background of the parents is one of the most important causal factors leading to drop out of school. thus, there exists a need to provide financial aid to parents of student at secondary school level that would give those students an opportunity to study rather than hold an after school job or support in parental occupation.
- ✓ Developing drop out retrieval and re-entry program. Since, once a students have dropped out, it is still possible to re-engage them in the school process through program specifically designed to help them transition back to a school environment.

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