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**Intention of Pastoralist Students' to Attend University in Borana zone, Ethiopia**

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**ARTICLE INFO**

Received: July 15, 2019  
Accepted: August 13, 2019  
Published: September 30, 2019  
Volume: 1  
Issue: 5

**KEYWORDS**

*Intention, Pastoralist, Students, University, Logistic regression, Ethiopia*

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**ABSTRACT**

The purpose of the study was to assess pastoralist students' intentions to attend university in the Borana zone of Ethiopia. A descriptive survey research design was employed where quantitative and qualitative approaches were used to collect and analyze data. Data were collected from 512 grade 12 students, seven principals and seven districts (Woredas) educational heads. The study used both descriptive statistics and inferential statistics (Pearson correlation and logistic regression). The study revealed that few female students enroll in high schools which in-turn affects the number that enroll in university education as compared to male students. Students lack access to adequate toilets and water while libraries lack books and reference materials. Besides, in most of the school laboratories we not equipped or they had been converted in dormitories. The study also found that sex, life skills gap, and occupation of household head predict decision to attend the university while the drop-out is high for those who join. In conclusion, there is need to encourage female education in pastoralist areas. The government and non-profit organizations working with pastoral communities should provide training on life skills that ensure smooth transition to university or college life.

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**1. INTRODUCTION**

Globally, education is recognized as one of the most effective way to reduce poverty, and an opportunity to improve people's living standards, health, and productivity. Besides, education opens a way for people to raise their voice which in-turn promotes participation on issues that affect the society (Migosi et al., 2012). In Ethiopia, participation in higher education has dramatically expanded in the last decade. However, students from pastoralist communities face peculiar difficulties in accessing and continuing with higher education as compared to other communities (Krätli & Dyer, 2009). Temple (2009) opinioned that social concerns like; parental education levels, and access to resources could limit students' access to knowledge which in-turn help them cope with the school system. According to Temple (2009), getting relevant support and access to university information could give students an opportunity to get beyond the social concerns. Taking into considerations the benefits that come with education, understanding why just a small proportion of students from the pastoralist community follow through with university education would help to smooth their path to engage in higher learning.

The term 'pastoralism' is sometimes interchangeably used to refer to 'nomadism' which according to Carr-Hill and Peart (2005: p.25) reflects "a lifestyle based upon maintenance of herds of animals that depend mainly on natural vegetation for their food." According to the authors, seasonal mobility of these communities are also determined by other pressures like access to water and disease incidences. Due to their mobile life style, pastoral communities face marginalization which results in low levels of school enrolment and attendance, poor academic performance, and a limited number of students joining higher education (Carr-Hill, 2005; Raymond, 2012).

Globally, marginalized communities have been targeted by universal education policies which guide provision of education (Krätli & Dyer, 2009). However, students from pastoralist communities still experience difficulties in taking advantage of education, even when it is available (Krätli & Dyer, 2009). Krätli and Dyer noted that these communities could become isolated and at times remain 'outside' the system since education is a formal ticket to modernization and inclusiveness. Based on the researchers, shortage of infrastructure to engage in formal education could be an issue for pastoralists as the system does not work or it is inaccessible.

### **1.1 Problem statement**

Geographically, Borana Zone in Ethiopia is characterized by underdevelopment, harsh climatic condition and people are scattered across a wide area which is less accessible (Carr-Hill, 2005; Woldeesenbet, 2014). According to the researchers, the pastoralists have access to limited services, they experience frequent livelihood crises, in addition to insecurity. Based on a report by the Inter- Agency Rapid Needs Assessment ([IARNA], 2011), food insecurity and severe water shortage are evident in Borana zone where people walk for roughly 3-5 hours searching for water. The severity of the situations according to the report varies in the zone with less effect felt in Yabello district.

Livelihood for the Borana people is predominantly dependent on livestock or agri-livestock. But, severe stress due to climate has led to drought and consequently a total or partial loss of income. Additionally, conflicts and inter-communal violence has increased among the Borana and the Guji communities due to competition over water scarcity and pasture within the zone (IARNA, 2011). To cope with the situations, the Borana community has adapted various strategies (IARNA, 2011), including: increased migration, livestock sales, switching to casual labor (in towns), and sending children to school.

Education for the Borana community is taken as a household investment strategy to cope with the changing situations (Krätli, 2001; Krätli & Dyer (2009). To this community, education is used as a way of accessing resources (social capital) outside the pastoral circuit. However, Bishop (2007) noted that provision of education to pastoralist populations comes with challenges, such as; low population density leading to long distance walk to schools, pastoralists mobility which make it hard for children to attend static schools, and dependence on children labor which is not compatible with schooling.

Based on research, a pastoralist family weighs a number of factors before sending a child to school. According to Krätli and Dyer (2009), a household's decision to send a child or more to school depends on; the degree of livelihood security, availability of labor force to manage the livestock and/or domestic tasks, sex of the child, trustworthiness of the government on pastoralists' view, distance to the nearest school and its quality. Besides, attitude and preference of the child towards schooling, short term benefits for the family, employment opportunities after completion, family's social network, sponsorship, and availability of accommodation around the school for the child also play a role (Krätli & Dyer, 2009).

A report by IRIN (2013) noted that seasonal migration is a common phenomenon for pastoralist families, mainly due to; adverse weather leading to shortage of water or seasonal flooding, and insecurity. The government has so far made extra effort to include different approaches to reach the pastoralist communities, but, poverty related issues persists which further determine whether students attend school regularly or not. Therefore, this study was conducted to assess the views of students regarding their preparedness towards university education, and to identify factors that best predicts students' intention to attend university after completing grade 12 for the Borana pastoralist community.

## **2. LITERATURE REVIEW**

### **2.1 Theoretical framework**

Phelan, Davidson and Yu (1998) on Students' Multiple Worlds Model, argue that students may not attend or fail to transition into college/university because of borders that are created at a young age. These borders may include: socio-cultural (home versus schooling); socio-economic (economic gap if some students cannot afford cost-sharing in education); psychosocial (lack of concentration or settling at school due to depression or anxiety); linguistic (difficult adjusting to school setting due to language barrier); gender (gender roles promoted throughout the school); and, structural (expectations that prevent or discourage learning) borders.

Research by Tinto (2006) noted a number of forces that can shape students' transition and retention in higher education, like; cultural issues, economic, social, and institutional issues. Tinto (2006) argued that for a student to smoothly transition and follow through to completion there is need to break away from their way of life. However, according to the researcher, majority of students need to stay connected with their past communities or tribe, their family or even the church to sail through campus. In a lecture presented by Tinto (2014) in South Africa, on students' attrition in institutes of higher learning, the researcher argued that "people act on what they perceive" (p.9). Tinto noted that culture, values and perceptions of membership in a community contribute to the way students make decisions to join or leave an institution.

From research, a number of factors consistently affect high school students' decisions to attend institutions of higher learning, including; socio-economic status, socio-cultural issues, family influence, financial concerns, distance, information gaps, and expectations regarding university life, and lack of access to higher education (Phelan et al., 1998; Temple, 2009; Hussein, 2016; Thuo et al., 2017; Cooper, Strathdee & Baglin, 2018). From the researchers, these factors have been observed to be prevalent when students make decisions on whether to continue with formal education at college/university level.

Moges (2017) conducted a study on children's participation in schooling and education for pastoralist in Afar region in Ethiopia. The researcher identified barriers related with culture and economic such as; early marriage for girls, lack of interest for modern education, parents' education level, mobility in search of pasture, dependence on child labor, poverty and finance. Moges' study also revealed schools related problems such as; inability to attract and retain qualified teachers, poorly equipped schools, and perception of community on modern education as a threat to pastoralists' culture. Additionally, dispersed settlement patterns and mandatory seasonal mobility were identified as disabling factors.

Thuo et al. (2017) conducted a study on transition to university life in Wolaita zone, Ethiopia. The study revealed that during transition, students fear, get frightened, confused and at times are disorientated. Students relied on people close to them and rarely use university support systems during transition. From the researchers, students worry about failure, peer pressure, sexual harassment, pregnancy, and substance abuse as they journey with education. They concluded that high school students need exposure on the realities of university life while the culture of seeking help from university services need to be instilled early in life at the high school.

A study by Hussein (2016) in Mandera County in Kenya on factors that predict quality education for pastoralists community found that; parents' negative attitude towards female education, community preference of boy-child, female genital mutilation and early marriage, and excessive girl-child labor influence quality education for the pastoralists.

Cooper et al. (2018) conducted a study in Australia on the effect of distance on students' intention to attend university. Using a logistic regression, the researchers found that students who came from provincial areas were less likely to report intention to study at the university as compared to those from the metropolitan areas. Controlling for social economic status, the researchers also found that as the distance increased from Australian cities, the likelihood of students reporting intention to attend the university decreased.

**2.2 Econometric framework**

In econometric applications, discrete choice models predict a choice or a decision between two or more discrete alternatives. In our case the choice is binary (0/1); that is, a student makes a decision to attend university ( $y = 1$ ) or not to attend university ( $y = 0$ ). From Greene (2002), both logit and probit model results in discrete choice estimations which are almost identical. The only difference between the two models is that the probit uses the normal distribution while the logit is based on the standard logistic distribution. Additionally, logit model has slightly flatter tails than the probit model, but, results are almost similar. However, logit model is preferred over the probit in this study as it's simpler to estimate and interpret the results.

Unlike linear regression, the logistic regression is a mathematical model where a set of explanatory variables are used to predict a logit transformation of the dependent variable (Greene, 2002; Gujarati, 2003). The logistic regression assumes that the dependent variable is binary in nature where the two outcomes take numerical values of 0 and 1, and the independent variables are linearly related to the log odds. In a logistic regression, the probability of getting a success is modeled as:

$$P_i = Pr(Y = 1|X = x_i) \tag{1}$$

Following Gujarati (2003), the probability of getting  $Y=1$  is given as;

$$P_i = \frac{1}{1+e^{-z_i}} \tag{2}$$

Where,  $Z_i = \beta X_i + u_i$ ,  $\beta$  is the coefficient of the exogenous variables  $X_i$ , and  $u_i$  is assumed to follow a cumulative probability distribution.

The probability of getting  $Y=0$  is given as:

$$1 - P_i = \frac{1}{1+e^{z_i}} \tag{3}$$

From Gujarati (2003), the expression,  $p_i/1-p_i$  is the ratio of the two probabilities in favor of attending university (equation 4).

$$\frac{p_i}{1-p_i} = \frac{1+e^{z_i}}{1+e^{-z_i}} = e^{z_i} \quad 4)$$

Hence, the odds of an event occurring is the ratio of the probability that a student will attend university to the probability that a student will not attend.

Logistic regression estimates can be interpreted as modeling the log odds which can easily transfer into odds ratio by exponentiation of the coefficients. Taking the natural log of equation 4, we obtain the log of the odds ratio (**logit**) which mathematically can be presented as;

$$\ln \left( \frac{p_i}{1-p_i} \right) = Z_i = \beta X_i + u_i \quad 5)$$

In logistic regression,  $p$  ranges between 0 and 1, and the logit ranges between  $-\infty$  to  $\infty$ . In logistic regression, the coefficients derived from the model indicate the change in the expected log of odds relative to a unit change in  $X_i$  holding all other factors constant. Estimation of binary choice models are usually based on maximum likelihood method.

### 3. RESEARCH METHODOLOGY

#### 3.1 Study Design

This study employed a descriptive survey research design where both quantitative and qualitative approaches were used to collect and analyze data, concurrently. The design is appropriate in describing the behavior or characteristics of a sample or population using a questionnaire and/or interviews as data collection tools (Creswell, 2012).

#### 3.2 Study Setting and Sampling

Borana zone (district) is located in Oromia Region of Ethiopia. The zone borders Southern Nations, Nationalities, and Peoples Region in the west and Kenya on the south. To the north are West Guji and Guji while the Somali Region is on the eastern side. The zone has 13 districts (woredas). Economically, Borana people keep livestock and to a small extent they practice sub-subsistence farming with low productivity due to erratic rainfall. The zone is basically a semi-arid area with no rivers where drinking water comes from unreliable open water sources or groundwater. Due to its low population densities and their nomadic type of culture, provision of services is difficult. Mobility of livestock is therefore used as the main strategy for risk management and efficiency as well as resource utilization by this pastoralist community (Lasage, Seifu, Hoogland & de Vries, 2010). According to the researchers, mobility during drought year has a major effect on children education and women socio-economic activities. Women roughly walk a distance of 10 to 20 kilometers to fetch water which leaves little time for them to engage in economic activities. Due to these problems, the zone posts high dropout rates for students enrolled in higher grades (Lasage et al., 2010).

From 13 districts (woredas), seven were purposefully selected as a representative sample based on accessibility and security reasons on the part of the researchers; however, both urban and rural schools were included in this study. In reality, each woreda has only one preparatory school, hence, seven schools were included in this study. On sample selection, Cohen, Manion and Morrison (2007) stated that sample size determination is not clear-cut as it depends on the purpose of the study and the nature of the population being studied. However, research indicates that the sample size may increase to allow stratification into groups; hence, larger samples are preferred for greater reliability and to enable more advanced statistical analysis. Other factors may also increase the sample size according to the researchers, like; possibility of failure to return the questionnaires for some participants, incomplete questionnaires (e.g. missing data, putting two or more ticks in a row of choices instead of only one) and copying responses from each other. Based on Cohen et al. (2007), a population of roughly 550 requires a sample of 226 at a sampling error of 5%, and confidence level of 95%. However, the researchers suggested doubling the size of the required sample unless one has full control of the process so as to allow for adequate data for analysis after data cleaning. In our study, all students in grade 12 were included in the survey based on the cited issues, and taking into consideration that the population was not very large; thus, 538 questionnaires were distributed to all grade 12 students.

In this study questionnaire and interviews were used as data collection tools. The questionnaire was designed in English for students. Interviews were done face-to-face with school principals and woreda education heads in their local language and transcribed into English. In total, seven principals and woreda education heads were interviewed in this study. Additionally, observations were made on school environment using a checklist in each school.

### 3.3 Pilot study

A pilot study was conducted in Elwaye preparatory school in Borana zone with 24 grade 12 students. Data collected from the pilot was used to determine validity and reliability of the study questionnaire. Based on the data collected, modifications were made in the questionnaire after discussions with experts while the Cronbach alpha test was used to determine the reliability of the questionnaire. Summary of the Cronbach alpha test results are presented in Table 1.

### 3.4 Data Analysis Methods

Both descriptive and inferential statistical methods were employed in data analysis. Descriptive statistics included; frequency counts, percentages, cross-tabulation, weighted mean and standard deviation. On inferential statistics, Pearson correlation and logistic regression were used. Data from open ended questions and interviews were used to supplement the quantitative data.

## 4. RESULT AND DISCUSSION

This section presents data obtained from questionnaires and face-to face interview. In this study, a total of 538 questionnaires were distributed to grade 12 students, however, only 512 (95.2%) had usable data. Beside the questionnaires, data were obtained from seven principals through face-to face interviews.

### 4.1 Background information of respondents

Table 2 presents demographic characteristics of the students based on their responses. On age, students were on average 19.2 year with a standard deviation of 1.509. Results from Table 2 on family size further indicate that students came from large households with an average of roughly 9 persons and standard deviation of 2.932.

On sex of respondents, results from Table 2 indicate that 306 (59.2%) were male while 206 (40.2%) were female. The findings indicate low enrolment of female students at preparatory schools as compared with male counterparts.

On area of residence, result from Table 2 show that about 215 (42%) of the participants came from the urban areas while majority 297 (58%) were from the rural areas. Results also show that about 305 (59.6%) rent rooms around the school or stay in the school dormitory, but, roughly 207 (40.4%) reside with their parents during school time. Access to boarding facilities away from home is an advantage for pastoral students as they can plan and organize their study time without interference. Considering the scarcity of high schools in this zone, access to boarding services present an opportunity to get education, besides, students get to horn their skills on money management and other social skills.

From Table 2, result on parents' education show that about 273 (53.3%) of the household heads had formal education (i.e., primary, secondary or college) while 239 (46.7%) had no formal education. Besides, only 34 (6.6%) had formal employment while majority 483 (93.4%) had informal employment (i.e., pastoralists, merchants/traders, farmers or a combination of activities).

#### 4.1.1 Students distribution by school, section and by gender

This section provides background information regarding distribution of students by school, study section and by gender (Table 3).

From Table 3, it is evident that there is great variation on the number of students by school and by gender. From the Table 3, Dillo Preparatory has a total of only 12 students in grade 12 (male=9 & female=3) of which female students are the lowest in number. The same situation is shown for Borbor preparatory school with 28 students (male = 15 & female = 23). The rest of the five schools have a good number of students with Shalaqa having the highest with 128 students. However, the numbers of female students is slightly more than half for most schools with Yabelo preparatory school having the highest number.

To explain the disparities observed in these schools in terms of gender, interviews data from school principals were used to substantiate. Interview data were organized into four themes: distance from school, traditions, preference of boy-child, and income inequalities.

On distance, the principals indicated that students walk long distances to get to school on time. For example, a principal said that "... *the minimum distance from the place of residence to school is 2 kilometers.*" The distance could be an issue especially when making decision to send female students to school for the pastoralist community. Result on distance align with data presented in Table 2 where about 305 (59.6%) students rent rooms or stay in the dormitories while only 207 (40.4%) students stay with parents.

Decision to enroll students in school may also depend on households' migration decisions taking into consideration that they may move to inaccessible areas; in-turn increasing the distance to school. On this issue, a principal said that decision to enroll children may depend on "... *mobility of the parents with animals or being out of network areas.*" the decision not to enroll children in school affects mostly the girl child.

Traditions were also noted by interviewees as a contributing factor to low enrolment of girls. For example, a principal from one of the schools said that "... *poor enrolment could be attributed to the tradition of early marriage for girls and boys dropping out of school to take care of livestock.*" This result aligns with what was noted by Hussein (2016) in a study conducted in Kenya that found that early marriage and excessive girl-child labor as contributing factors to poor quality education. Similarly, the findings aligns with study by Moges' (2017) that early marriage and pressure for bride price could be a contributing factor for low enrollment of girls in education.

Interviewees also noted that preference of male child was a contributing factor to poor female enrolment in these schools. The findings align with what Hussein (2016) found in his Kenyan study that parents have a negative attitude towards female education. Besides, the researcher also found that pastoralist communities tend to prefer the boy-child in matters of education as compared to the girl-child.

Parental financial support was noted by interviewees as a contributing factor towards enrollment of students. They noted that income inequality lead to gender inequality in the acquisition of education. For example, a principal stated that

*... when poor families conclude that they can only afford to educate some of their children, they tend to favor sons over daughters. This is because of the belief that it is important to equip the boys for the job-market.*

## **4.2 Students preparedness towards university education**

Quantitative data in addition to open-ended questions were used to gather data on resources that are available to students to facilitate their education. Additionally, data from interviews with principals were used to supplement data obtained from students..

### **4.2.1 Absenteeism during school time**

This section presents data on whether students have ever missed school for various reasons. Five items were included in the questionnaire and results are as shown in Table 4. Results for item 1 on whether students have ever missed school due to water problem, about 306 (59.7%) disagreed while 317 (54%) agreed with the statement. However, 31 (6.1%) remained neutral on this statement.

From Table 4 item 2, students were requested to state if they have ever missed school due to flooding in their area. From the results, about 336 (65.6%) disagreed while 129 (25.1%) agreed. However, 47 (9.2%) were unsure about the statement. The findings relate with what was reported by IRIN (2013) on seasonal flooding that at times the area is cut-off, indicating that a considerable percent of students may miss school due to flooding.

Results on item 3 on whether students had missed school due to family migration in search of pasture, about 250 (48.8%) disagreed while 205 (40.0%) agreed with the statement. However, about 57 (11.1%) were unsure about the statement. The findings align with what was noted by Bishop (2007) that pastoralist mobility poses a major challenge while providing education services to pastoralist communities.

From Table 4 item 4, students were asked to indicate if they had missed school to help with family matters (i.e., herding livestock or other household duties), about, 130 (44.9%) disagreed while 235 (45.9.0%) agreed with the statement. However, about 47 (9.2%) were unsure about the statement. The findings confirm what Bishop (2007) observed that pastoralist dependence on children labor affects provision of formal schooling for students from these communities. The findings also align with a study by Krätli and Dyer (2009) who noted that the decision to send children to school may depend on availability of enough labor force to manage livestock or perform domestic work.

From Table 4 item 5, students were asked to indicate if they ever missed school because of poverty or lack of money to buy school materials. About 256 (50.0%) disagreed while 199 (38.9%) agreed with the statement. However, about

57 (11.1%) were unsure about the statement. Results confirm work by Krätli and Dyer (2009) that livelihood security determines whether a child will continue with schooling or not.

The weighted aggregated mean for missing school due to uncertainties was 2.68 with a standard deviation of .942; meaning, sometimes students missed school due to reasons that included a need to migrate due to flooding, water scarcity, poverty or lack of finances, search for pasture, and herding animals or household duties.

To corroborate this information, data obtained from open-ended questions were categorized into themes as follows: *Sanitation facilities (water and toilets), instructional resources, and communication with parents.*

On sanitation, students were asked to give their views regarding access to adequate toilets and water at school. On availability of toilets, students had mixed responses where for some toilets were inadequate; meaning, they share with teachers, or boys and girls share same toilets. In some schools they indicated that they have adequate toilets which are well kept unless there is water problem. Commenting on inadequacy of toilets, a student from school number one had this to say, "... toilets are not enough ... we use only two toilets and they are not separate for girls and boys" (SI<sub>15</sub>).

Another student from school number two said that "*our male and female students and teachers use the same toilets ... we lack enough toilets*" (S<sub>242</sub>). On the contrary, a student from school number seven said that "*our toilets are good, we have enough water. If we use the toilets we wash our hands, but, at times we don't get water which is a problem even in the area*" (S<sub>7523</sub>).

On access to water, most of the students stated that it is a problem for all the schools including the surrounding areas. For example a student from school number five said that "*our school does not have a water source, what we have is not good for drinking*" (S<sub>5241</sub>). From school number four a student said that "*there is no water, there is water problem ... our school and all surrounding areas have no water*" (S<sub>4206</sub>).

On the availability of educational resources, most of the students indicated that all the schools have library and laboratories rooms. However, libraries lack enough text books and educational reference materials. The laboratories have no chemicals or equipment for the natural science section. Based on observation data, in some schools, the library and laboratories have been converted to dormitories.

On mode of communication with parents for those residing away from home, students indicated that they use mobile phones or plan a meeting during market days. However, students mentioned several challenges, including; lack of mobile connection, distance, and loss of contact due to migration. For example a student from school number seven said that "*I do not communicate with them because there is no network connection where they live. I communicate with them sometimes when they move to areas with network which is far from home*" (S<sub>7536</sub>).

Distance was noted as an issue for these students when it came to communicating or meeting with parents. A student from school one said that "*my family is very far from my school. If I want to communicate with family, I leave school and go to my family for one week*" (SI<sub>11</sub>). Another student from the same school said that "*I see my parent at the end of the year*" (SI<sub>17</sub>) while another said that "*my parents live far and we communicate less at weekend. I go to my parents in summer*" (SI<sub>22</sub>). Findings indicate long distance to school where students only see or speak with their parents during the long vacation over summer.

Communication between parents and children was also cut-off due to migration in search of pasture. For example, a student from school number one said that:

*I visit my parents during weekends. Due to the parents occupation (pastoralists) they are migrating from one area to another to search for water and grass for the livestock. At that time, I visit them at the end of the semester because they are far* (SI<sub>21</sub>).

In summary, it is worth noting that students from the Borana zone face several challenges in their pursuit for high school education as compared to students in most Ethiopian schools. However, when asked about their parents and society expectation regarding their education, majority of the students indicated that their parents want them to perform well and go to the university. Others indicated that with their education they intend to bring change in their community. The observation made on the support given to the students by parents aligns with the conclusion made by Krätli and Dyer (2009) that pastoralists send children to school as a household investment strategy to cope with the changing times.

#### **4.2.2 Students' expectation about higher education**

From Table 5, two items were included in the questionnaire as a measure of students' expectations at the university based on their skills.

From Table 5 item 1, students were requested to indicate if they fear that they don't have sufficient skills that are needed at the university as compared to the high school. From the results, majority 314 (61.4%) disagreed with the statement while 131 (25.6%) were in agreement that they don't have sufficient skills that are needed at the university as compared to the high school. However, 67 (13.1%) were unsure about this statement.

From Table 5 item 2, students were requested to state if they lack skills to manage money on their own. From the results, majority, 296 (57.8%) disagreed while 157 (40.6%) were of the opinion that they lack skills of managing money on their own. However, 59 (13.1%) were unsure about this statement. The finding that majority of students have no issue with money management could be explained by the fact that about 60% live on their own during school time; hence, they have acquired money management skills over time.

The weighted aggregated mean for the expectation was 2.46 with a standard deviation of 1.107. This indicates that students fear that they don't have sufficient skills that would enable them to smoothly go through the transition and cope with university life was moderately low. This may be true for this group of students especially on financial management since they start managing their finances early enough as compared with other students in Ethiopia who live with their parents. However, there is a considerable percent of students who feel that they don't have enough skills to go through with higher education. Besides, students need more than money management as a skill set at the university.

#### **4.2.3 Students Views on their Academic Performance**

Students were requested to indicate their views regarding their academic performance using a 5-point Likert scale with eight items. The responses were aggregated and weighted by the number of items (Table 6).

From Table 6, majority of students indicated that they do well academically (70.2%), they are smart in their course work (56.6%), are motivated to study (71.5%), they use study time efficiently (63.8%), and they believe their reading ability is good compared to others (71.2%).

In summary, majority of students found academic work difficult (51.8%), about 46.4% have trouble concentrating when studying or doing homework, and roughly 50.4% have fear taking exams. The aggregated mean for education performance was 3.34 with a standard deviation of .660; meaning, students rated themselves as average performers.

#### **4.3 Students' Intention toward University Education**

Students were requested to indicate their intention on whether they intend to attend the university or not. Five responses were included in the questionnaire as indicated in Table 7.

##### **4.3.1 Intention after Completing Grade 12**

Results presented in Table 7 shows the intention of students after completion grade 12.

From Table 7, majority of the students 390 (76.2%) indicated that they intend to attend the university either full time or part time. About 21 (4.1%) indicated that they intend to take a break from school. From the same Table, about 19 (3.7%) indicated that they intend to get married and have children while 80 (15.6%) stated that they would like to look for work and help their families. However, 2 (.4%) of the students indicated that they intend to migrate to other countries and look for work. In summary, about 390 (76.2%) intend to pursue university education while 122 (23.8%) have other intentions besides continuing with university education. The findings on the high number of students aspiring to join the university corresponds with what was observed by Krätli and Dyer (2009) that the pastoralist communities has of late taken education as a household investment strategy to cope with the hard economic times.

Interviews with district (woreda) education heads on university education also confirmed the finding noting that of late many students from the community join colleges and universities. However, the bureau head from one of the district education office said that "*students in the pastoralist areas of Borana mostly join university, but, they drop out due to various problems ... like financial, distance from home to university, and migration of the parents with animals.*"



### 4.3.2 Pearson Correlation analysis

Pearson correlation analysis was computed to determine factors that are statistically and significantly associated with the intention to attend university (Table 8). The analysis was also used to rule out any multi-collinearity among the variables to be considered in the regression analysis.

Twelve factors were included in the analysis where four factors, namely; location, education (HHeduc), occupation of household head (HHocc), and students' education performance (Educ-perf) had a positive association with intention to attend university. Eight factors had a negative relationship with the dependent variable, namely: sex, age, section, family size (FMsize), housing, sibling education (Sib-edu), expectation (Expect), and uncertainty (Uncertain). However, only two factors including occupation of household head and expectations at the university had a significant statistical relationship with intention to attend university.

From Table 8, results show low and positive relationship between occupation of the household head and intention to attend the university ( $r=.112, p=.011$ ). This implies that students whose parents had formal employment were more likely to attend the university as compared to those whose parents depended on pastoralism, agriculture, trade or a mixture of the livelihood activities. The coefficient of determination (R square) between occupation of the household head and intention to attend the university was .013; meaning, 1.3% of the variance of intention to attend university can be explained by occupation of the household head.

Results from Table 8 indicate low and negative relationship between students' expectation about the university and intention to attend the university ( $r= -.114, p= .010$ ). This implies that fear about relevant skills that ensure success at the university may deter students' intention to follow through with university education especially those from pastoralist communities. The coefficient of determination (R square) between students' expectation at the university and intention to attend the university was .0129; meaning, 1.3% of the variance of intention to attend university could be explained by students' expectation about skills they need at the university.

### 4.3.3 Logistic Regression Model

Results from the Logistic regression analysis on predictors of intention to attend university are presented in Table 9. Results revealed positive and significant relationship on three variables: sex of the student, expectation about relevant skills, and the occupation of household head. Four variables including; family size, housing (staying with parents or renting/boarding), education performance, and education of household head (HHeduc= ability to read and write or not) maintained the expected signs but were not significant. The constant is also significant at 5% level implying that other factors not included in the model predict the students' intention to attend the university. Model interpretation is based on the odds ratio (OR).

From Table 9, result reveals that the coefficient for sex was positive and statistically significant at 5% level. This implies that male students were more likely to attend university as compared to female students. From the results, a student's intention to attend the university can be predicted by sex of the student. An increase on the number of male students in the predicted odds ratio ( $OR=1.556, p=.051$ ) would increase the odds of attending the university by 1.556 points other variables held constant. In other terms, male students have 55.6% in the odds of attending the university than female students.

From Table 9, result reveals that the coefficient for expectation was negative and statistically significant at 1% level. This implies that the more students perceive that they lack necessary skills to smoothly transition to university life the more likely they will opt not to attend the university. From the results, a student's intention to attend the university can therefore be predicted by a student's expectation about skills needed at the university. A unit increase on a student's expectation in the predicted odds ratio ( $OR= .763, p= .006$ ) would increase the odds of attending the university by .763 points other variables held constant. In other terms, a student who perceives that he/she does not have skills that are expected at the university is 23.7% less likely to attend the university. The findings align with what Temple (2009) noted that students aspiring to join the university should be given relevant support and access to university information so as to get beyond the social concerns and settle. Similarly, results support what Thuo et al. (2017) found that high school students need more information regarding skills they need to transition at the university, and to clear the myths regarding university life.

From Table 9, result reveals that the coefficient for the occupation of household head was negative and statistically significant at 5% level. This implies that students whose head of household has a formal employment is less likely to attend university as compared to those whose household heads have informal employment. From the results, a

student's intention to attend the university can be predicted by the occupation of household head. An increase on the occupation of household head (formal) in the predicted odds ratio ( $OR = .215, p = .041$ ) would increase the odds of attending university by .215 points other variables held constant. In other words, a student whose head of household has formal employment is 78.5% in the odds of not attending the university as compared to a student whose household head has informal employment.

## 5. CONCLUSION

This study concluded that female participation is still low for the pastoralist communities in Ethiopia. Although parents are doing their part to support their children at school, much need to be done to provide basic needs like; clean toilets, water access, and provision of education materials in libraries; and equip laboratories with relevant materials to bring this community at par with other students. Sex, parent occupation and expectation about campus life were key factors that influence students' decision on whether to continue with education or not. Conversations regarding campus life and life skills that come in handy to survive the handles of campus life should be prioritized at high school especially with female students.

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## Appendix

**Table 1: Cronbach Alpha Test**

Component	Number of items	Cronbach alpha
1. Expectations on campus life	2	.707
2. Uncertainties at the household level	5	.872
3. Performance Measures	7	.726

**Table 2: Description Statistics on Background Information**

Variable	Description	Freq.	%	Mean	SD	
Age		-	-	19.2	1.509	
Fam-size	Family size	-	-	8.5	2.932	
Sex	Male = 1	306	59.2			
	Female =0	206	40.2			
HMresid	Urban = 1	215	42.0			
	Rural = 0	297	58.0			
Par-educ	Parent Formal education =1	273	53.3			
	No education = 0	239	46.7			
Housing	Boarding/rental or live with parents	Rent =1	305	59.6		
		Parents=0	207	40.4		
Par-occup	Parent employment	Formal =1	34	6.6		
		Informal =0	478	93.4		

**Table 3: Grade 12 Student distribution Cross-tabulation results**

Gender * School Cross-tabulation Variable description		School name							Total
		Dillo Prep	Borbor prep	Dubuluk prep	Hidi Lola Prep	Yabelo Prep.	Mega Prep	Shalaqa prep	
Gender	Male	9	15	54	45	47	56	80	306
	Female	3	8	26	37	50	34	48	206
Total		12	23	80	82	97	90	128	512

**Table 4: Absenteeism due to Uncertainties**

Absenteeism at schooling	1	2	3	4	5
1. I have missed school because of water problems in our area	162 (31.6)	144 (28.1)	31 (6.1)	108 (21.1)	67 (13.1)
2. I have missed school because of flooding in our area	168 (32.8)	168 (32.8)	47 (9.2)	75 (14.6)	54 (10.5)
3. I have missed school because our family needed to migrate to look for feeds for animals	123 (24.0)	127 (24.8)	57 (11.1)	141 (27.5)	64 (12.5)
4. I have missed school to help with livestock or family matters (taking care of household)	124 (24.2)	106 (20.7)	47 (9.2)	153 (29.9)	82 (16.0)
5. I have missed school because of poverty (lack of finances to buy essentials for school)	164 (32.0)	92 (18.0)	57 (11.1)	105 (20.5)	94 (18.4)
<b>Aggregated weighted mean</b>	<b>Mean= 2.68</b>		<b>SD=.942</b>		

Key: mean interpretation – 1.0 -1.49 = never, 1.5 – 2.49 = rarely; 2.5 – 3.49 sometimes; 3.5- 4.49 = more often; 4.5 – 5.0 = always

**Table 5: Essential life skills**

Item description	SD (%)	D (%)	UD (%)	A (%)	SA (%)
1. I fear that I don't have sufficient skills that are needed at the university unlike that at the high school	178 (34.8)	136 (26.6)	67 (13.1)	85 (16.6)	46 (9.0)
2. I lack skills to manage money on my own	172 (33.6)	124 (24.2)	59 (11.5)	100 (19.5)	57 (11.1)
Aggregated weighted mean	Mean = 2.46		Std. Dev. = 1.086		

Key: mean interpretation – 1.0 -1.49 = low, 1.5 – 2.49 = moderately low; 2.5 – 3.49 moderate; 3.5- 4.49 = moderately high; 4.5 – 5.0 = high

**Table 6: Students response on Academic Performance**

Item description	SD (%)	D (%)	UD (%)	A (%)	SA (%)
1. I do well academically considering the effort I put	57 (11.1)	55 (10.7)	42 (8.2)	228 (44.5)	130 (25.7)
2. I do not find academic work difficult	113 (22.1)	152 (29.7)	76 (14.9)	124 (24.2)	47 (9.2)
3. I feel I am smart enough in my course work	37 (7.2)	66 (12.9)	119 (23.2)	191 (37.3)	99 (19.3)
4. I do not have trouble concentrating when studying or doing homework	99(19.3)	139 (27.1)	68 (13.3)	127 (24.8)	79 (15.4)
5. I am motivated to study	27 (5.3)	37 (7.2)	82 (16.0)	176 (34.4)	190 (37.1)
6. I don't mind taking exams	160 (31.3)	98 (19.1)	86 (16.7)	105 (20.5)	63 (12.3)
7. I use study time efficiently	50 (9.8)	54 (10.5)	81 (15.7)	184 (35.9)	143 (27.9)
8. I belief my reading ability is good compared to others	38 (7.4)	35 (6.8)	78 (15.3)	169 (33.0)	192 (38.2)
Aggregated weighted mean	Mean = 3.34		Std. Dev .660		

Key: mean interpretation – 1.0 -1.49 = low, 1.5 – 2.49 = moderately low; 2.5 – 3.49 moderate; 3.5- 4.49 = moderately high; 4.5 – 5.0 = high performer

**Table 7: Intention after Completing Grade 12**

Item description	Frequency	Percent
1. Attend university full time or part time	390	76.2
2. Take a break from school	21	4.1
3. Get married and have a family	19	3.7
4. Start working and help my family	80	15.6
5. Migrate to other countries for work	2	.4
Total	512	100

**Table 8: Correlations Analysis**

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Intention	1												
2. Sex	-.085	1											
3. Age	-.018	.252**	1										
4. Section	-.028	.118**	-.007	1									
5. FMsize	-.058	-.048	-.010	.050	1								
6. Location	.039	-.149**	-.080	-.040	-.064	1							
7. HHeduc	.019	-.065	.028	.019	-.083	.336**	1						
8. Housing	-.078	.160**	.094*	.090*	.054	-.412**	-.181**	1					
9. Sib-edu	-.008	.077	-.019	.026	.021	.037	.104*	-.051	1				
10. HHoccp	.112*	-.021	-.014	.045	-.136**	.250**	.187**	-.196**	.020	1			
11. EducPer	.069	-.025	-.112*	-.052	-.005	.053	.065	.016	.067	.028	1		
12. Expect	-.114**	-.061	.001	-.159**	-.046	.100*	-.083	-.020	-.006	-.049	-.045	1	
13. uncertain	-.014	.029	.007	-.006	-.022	-.093*	-.017	.089*	-.038	-.100*	.005	.108*	1

\*\*Significant at the 0.01, \* Significant at the 0.05 level (2-tailed).

**Table 9: Logistic Regression Model Estimates**

Variables in the Equation		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)		
								Lower	Upper	
Step 0	Constant	1.162	.104	125.505	1	.000	3.197			
Variables in the Equation		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)		
Step 1	Sex	.442	.226	3.823	1	<b>.051*</b>	1.556	.999	2.425	
	Housing	.270	.229	1.388	1	.239	1.310	.836	2.052	
	EducPer	.253	.164	2.380	1	.123	1.288	.934	1.776	
	Expectation	-.271	.099	7.512	1	<b>.006**</b>	.763	.628	.926	
	FMsize	-.048	.036	1.747	1	.186	.953	.888	1.023	
	HHeduc	.159	.218	.533	1	.465	1.173	.765	1.799	
	HHoccp	-1.535	.752	4.163	1	<b>.041*</b>	.215	.049	.941	
	Constant	2.552	.998	6.533	1	<b>.011*</b>	12.827			
	-2 Log likelihood				538.018					
	Cox & Snell R Square				.046					
Nagelkerke R Square				.069						
Sample				512						

\*\*Significant at 1% level, \* significant at 5% level