

Child Schooling in *Sidama*: Predicting School Dropping out and Sex-Preference in Households' Enrolment Decision

Tesfaye Semela*

Abstract: This article examines the impediments of primary school attendance among young children amid at increasing gross primary school enrolment at both regional and federal levels. Accordingly, a survey was conducted on 263 randomly selected households in two rural localities of Sidama Zone, southern Ethiopia. In addition, an interview was made with 10 teachers and two principals of the local school to complement the survey data. The data generated were analyzed using qualitative and quantitative procedures. The findings reveal that the likelihood that households enroll school age children depends on family size and location of the households while the likelihood of child dropping out was found to significantly vary as a function of location suggesting a strong linkage between location and level of household poverty. On the other hand, preferential treatment of boys over girls while making enrollment decision was associated with father's literacy status, location, and gender of the household head. The policy implications that help strengthen the inclusion of disadvantaged children into the school system in view of achieving Universal Primary Education (UPE) by 2015 are discussed.

Keywords: child schooling, school dropping out, sex-preference, enrollment, Sidama

* Associate Professor, Institute of Education, Training, and Research, Hawassa University, Ethiopia, and Research Fellow of the Alexander von Humboldt Foundation, Institute of Educational Science, Department of School Education, University of Tübingen, Germany.

Introduction

Ethiopia is a country of 73.9 million people (PSC, 2008) and the second most populace nation in the Sub-Saharan Africa next to Nigeria. The economy is predominantly agrarian sustaining about 85% of the country's rural population. The report released by World Bank (2006) reveals that since 2004, agriculture has contributed about 46.9 % of the GDP while the share of the industry has been only 9.5%. According to the recent estimates, the average GNP per capital is USD 160 and 44% of its population is living below the poverty line (World Bank, 2006). However, its recent economic performance has been encouraging. In a positive note, the recent World Bank report indicated that the Country's GDP has grown by an average of 10% since 2004. In the education sector, notwithstanding the lingering "No-War-No-Peace" situation with its northern neighbor Eritrea and its subsequent military engagement in war-torn Somalia, Ethiopia has still managed to register considerable success. Consequently, primary school enrolment has shown a significant increase over the last one and a half decade climbing from as low as 36% in 1991 to as high as 83.4% in 2007/8 (MoE, 2009). In addition, the Alternative Basic Education (ABE) program is being implemented for out-of-school children in predominantly pastoralist areas to provide educational opportunities that suit their life style.

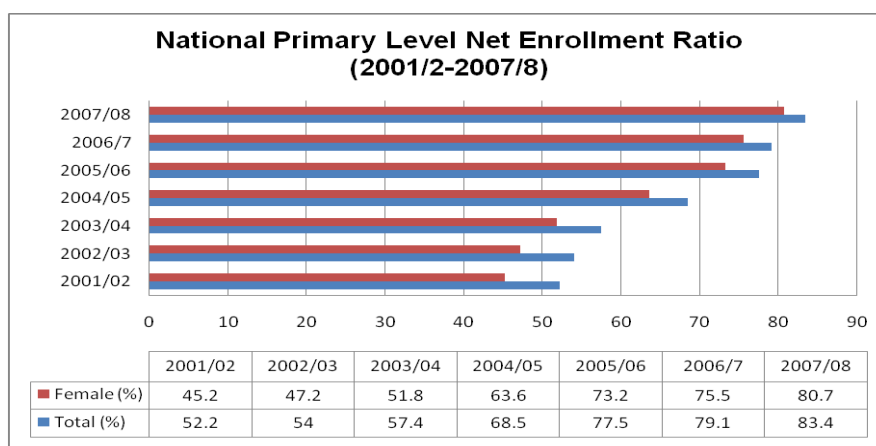
Though the achievements particularly in expanding schools and increasing enrollment rates in the past cannot be underestimated, the overall survival rate at primary level (Grade: 1-8) appears to remain the source of concern. This is because the survival rate at the primary level has shown marginal improvement due to the decline in dropout rates at national and regional levels. The experience over the last 7 years in particular suggests that there is much to be desired to ensure universal primary education in the year 2015. Thus, it was found imperative to unravel the underlying causes of school attendance (school attendance defined as a child completes the school year without terminating) by taking *Sidama* as an example.

This article is organized into six sections to address the underlying issues. Accordingly, section 2 analyzes the national and regional contexts in terms of primary school enrollment, drop-out and survival trends by making regional comparisons while at the same time giving special emphasis to Southern Nations, Nationalities, and Peoples' Regional State (SNNPRS). Section 3 presents a critical review of empirical research conducted in developing countries in general and Sub-Saharan African countries in particular. Nevertheless, special attention will be given to research studies conducted in Ethiopian context. Section 4 describes the sampling and methods of data gathering and analysis. Section 5 discusses the findings while section 6 presents the conclusions and policy recommendations.

The National Context

Over the last decade, primary education enrolment has shown a noticeable improvement at national level. For instance, as can be seen from Figure 1 below, the primary school Net Enrolment Ratio (NER) has grown by 31.2% for both sexes with a comparatively higher increment in female NER reaching 35.5 % between 2001/02 and 2007/08 alone.

However, since the NER is based on enrollment data obtained at the beginning of the school year, it does not necessarily imply that all children enrolled at the start of the school year have actually finished the grade level they are enrolled in. The increasing enrolment between 2001/2 - 2007/8 (MoE, 2009) is, however, complicated by the compelling statistical data revealing low completion/survival rates.



SOURCE: Education Annual Statistical Abstracts: 2004/5, 2006/7, 2007/08; MoE: 2006-2009

Figure 1: National Primary Level Net Enrolment Ratio (NER) (2001/2-2007/08).

Though the level of participation at national level has shown a marked increase over the indicated period, the distribution is uneven across regions. The NER and Gender Parity Index (GPI) – computed as a ratio of the number of boys by the number of girls depicted in Figure 2 illustrate this.

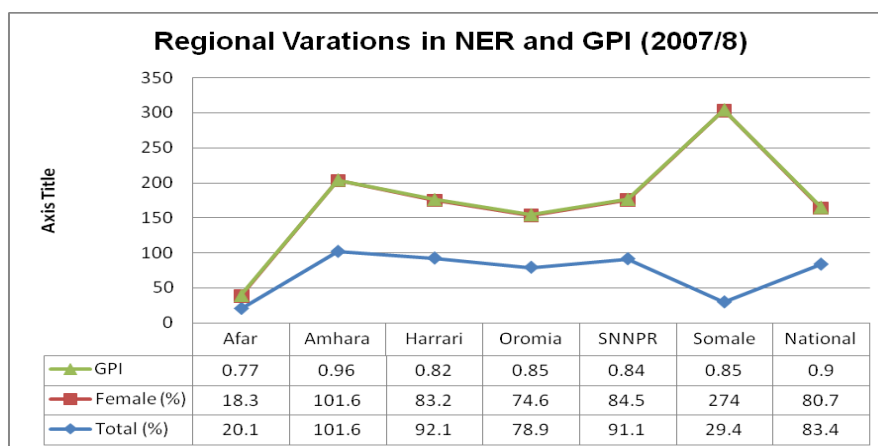
The NER data in Figure 2 shows that some regions are better than others with clear gap among regional states. Particularly, the predominately pastoralist regions such as Afar and Somale represent the lowest share of primary level NER of 20.1% and 29.4 % respectively Harari, Oromia, Amhara, and SNNPR reached 92.1%, 78.9%, 101.6% and 91.1% respectively. This implies that most federal states are making significant strides towards universalization of primary education.

Considering the situation before the year 2000, the gender gap as expressed in GPI is also revealing positive changes. However, regional variation is still apparent. Figure 2 below shows that GPI is the highest in

Somale (GPI = .77; i.e., for 100 boys there number of girls was 77) and the lowest in Amhara (GIP = .96; i.e., for 100 boys enrolled in the age group the number of girls enrolled in the same age group was 96). However, the GPI for SNNPAR as of 2005/06 academic year was 84. This is below the national norm which stands at .90 for the same year (MoE, 2009). This suggests that primary school participation of girls relative to boys in SNNPR is below the national average.

The Regional Context

A closer look at the state of primary school participation in Southern Nations Nationalities Peoples Regional State (SNNPRS) discloses the existence of a within-region variation. Table 1 below reveals the disparity across constituencies. Evidently, the NER is the lowest in Wolyeta (75.3%) and the highest in Dawro (96.5%) while it stands at 76.2 % in Sidama which is again lower than the regional average – which stands at 78.6%.



SOURCE: Education Annual Statistical Abstract 2007/08; MoE, 2009

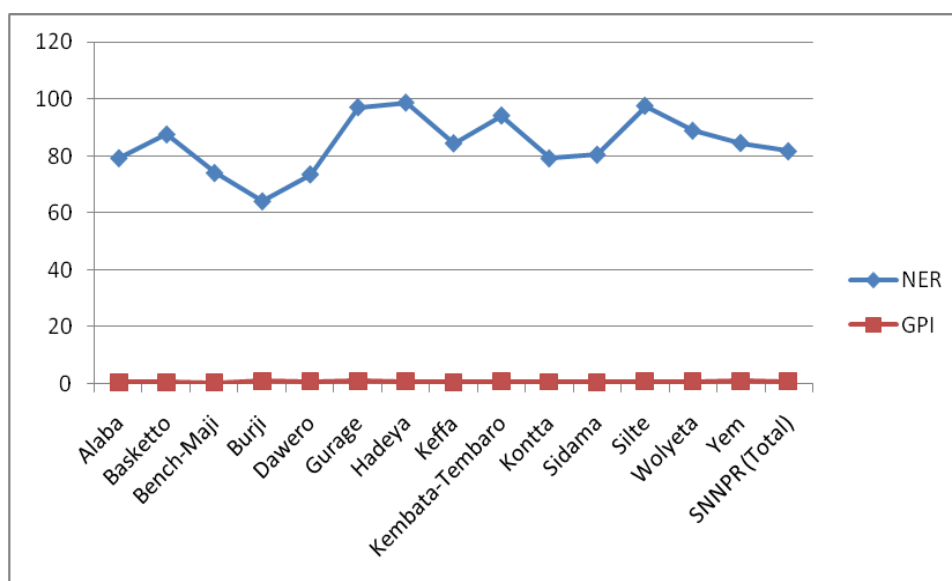
Figure 2: Primary Level Net Enrolment Ratio (NER) and Gender Parity Index (GPI) for Selected Regions

On the other hand, though understanding the causes deserves a research attention in its own right, the gender gap is almost closed in *Yem* (GPI = 1.09), *Burji* (GPI = 1.06), and *Gurage* (GPI = 1.01) exceeding unity (GPI = 1.00). This implies a slightly more participation of girls compared to boys. In contrast, in *Bench-Maji* (GPI = .61), *Alaba* (GPI = .73), and *Basketto* (GPI = .73) the proportion of girls enrolled in primary schools was below the regional (SNNPR-GPI = .87) as well as the national (GPI = .90) averages. As illustrated in Figure 3, however, the within region disparity in NER is more evident than the GPI indicating some Zones achieving parity between the sexes even though their NER is far below the average (e.g., *Burji*, NER = 64.2%)

Table 1: Primary NER and Gender Gap (GPI) in SNNPR

Zone/Special Wereda	NER	GPI
Alaba	79.3	.73
Basketto	87.6	.73
Bench-Maji	74.1	.61
Burji	64.2	1.07
Dawero	73.6	.97
Gurage	97.1	1.01
Hadeya	98.7	.96
Keffa	84.5	.82
Kembata-Tembaro	94.2	.97
Kontta	79.2	.84
Sidama	80.5	.83
Silte	97.6	.95
Wolyeta	88.9	.90
Yem	84.6	1.09
SNNPR (Total)	81.7	.87

SOURCE: Annual Education Statistical Abstract (2007/08) SNNPAR, REB-EMIS, 2009

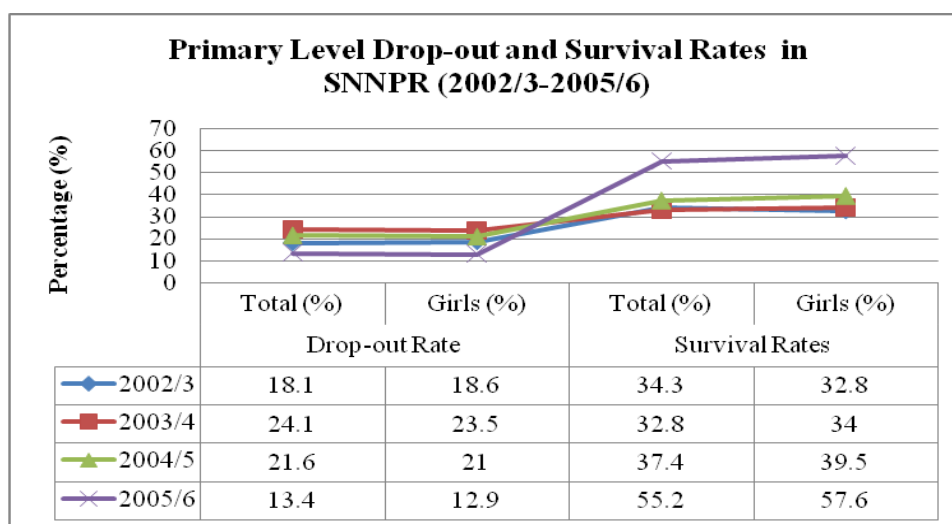


SOURCE: Education Annual Statistical Abstract, REB-EMS, 2009

Figure 3: With-in-Region Disparity in NER, SNNPR,

On the other hand, while drop-out rate has declined from as high as 18.1% in 2002/3 to as low as 13.4% in 2005/6, survival/completion rate has grown from 34.3 2002/3 to 55.2% in 2005/6 in SNNPRS (see Figure 4). Nevertheless, these percentage figures should be cautiously interpreted as the nature of data depicted in Figure 3 may confound the effects of location i.e. rural-urban differences as well as the variations across the Zones and Special Weredas. As a result, the possible differences that may emanate from variations in socio-economic, cultural, and geographical conditions are concealed. In this connection, the Young Lives study which is an international research project on childhood poverty conducted in four developing countries, i.e., Ethiopia, India, Peru, and Vietnam, provided strong evidence that location (urban/rural) is robustly associated with multiple disadvantages suffered by households (Lyytikäinen et al, 2006)

including child school enrollment. Thus, there is a need for a closer look at the status of childhood education in rural areas and remote localities as national or regional level data fail to be reliable and adequate to unravel the extent of the problem at the grass root level.



SOURCE: Annual Education Statistical Abstract. 1999 (2006/07) SNNPAR, REB-EMIS, 2008

Figure 4: Primary Level Drop-out and Survival Rates in SNNPR (2006/07)¹

The existing level of child participation still needs a renewed effort to make the desired improvement. This means that in a situation where 44.8% were unable to finish primary education (i.e., only 52.2% of the children enrolled in 2005/6 completed primary school) from the same cohort of children enrolled, achieving the Millennium Development Goals (MDGs) appears less realistic unless the root causes for low completion and high dropout rate are timely addressed. This paper, therefore, attempts to identify some of the underlying reasons for low primary school completion rates via revealing the factors that encroach on school attendance and dropping out among school age children in rural *Sidama*.

In the section that immediately follows, an attempt will be made to offer tentative answer to the question: “what factors affect primary school attendance, dropping out and primary school completion/survival rate in developing countries in general and in Ethiopia in particular?” based on a review of empirical research.

Literature Review

A body of empirical research on the state of child education in developing countries largely focuses on uncovering the factors that affect school enrolment and household demand for schooling. Some of these studies were conducted in countries like Botswana (Chernichovsky, 1985); Brazil (e.g.; Cardoso and Souza, 2003); Ethiopia (e.g.; Ayalew, 1989; Esmonde, 1991; Destefano et al, 1993; Mulugeta, 1998; Tesfaye and Solomon, 2001; Kassahun, 2008); Ghana (Ray, 2003); Malawi (Tan, Lee and Mingat, 1984); Mali (Brisdall and Orivel, 1996); Peru (Gertler and Glewwe, 1989; Pal, 2004), and the Sudan (Maglad, 1994). Though the studies were made in two geographically different regions of the world, the findings are strikingly similar. Thus, studies made in Latin American context came out with more or less findings that are similar to the findings noted in the African context. For instance, in rural Peru, Gertler and Glewwe (1989) have separately analyzed the level of demand for households with local school alternative and households with far away school alternative. The study revealed the level of parents' education, presence of other children of secondary school age, child's sex, school quality and cost of schooling as the most important determinants of schooling. Besides this the study indicated that parents' level of education positively correlates with enrolment. In Brazil (Singh, 1992) household size was found to be an important factor that negatively affects school enrolment. However, Chernichovsky (1985) in a study of schooling in Botswana, found family size to be positively correlated with school enrolment.

On the other hand, similar studies in Sub-Saharan African, confirmed earlier findings reported in Latin American context. In this vein, Tan, Lee and Mingats' (1984) study of the determinants of school enrolment among Malawian children reported that cost of schooling (school fees + other schooling expenses) exerts a statistically significant negative effect on the actual number of eligible children that households enroll. Other variables which were statistically significant include mother's education, residential variation (urban-rural), and proportion of girls among household's children. A similar study in rural Mali (Birdsall and Orivel, 1996) indicated that school fees, distance from school and school quality measured by student teacher ratio, number of books per classroom and the late payment of teachers' salaries had a negative association with enrolment. Among the household variables, the effect of income appeared to be negative. The study also found that school fee has a higher negative correlation, in absolute terms, with demand than with distance from school. In Sudan (Maglad, 1994), child enrolment into school was found to relate to the availability of a school inside a village. Hence, overcoming long distance makes it possible for children to attend school at lower opportunity costs, as the child can even attend school at times when demand for his/her labor is at its peak (during harvesting seasons for instance). Land ownership, which can be expressed by land holding per adult, was also found to have a significant effect on child enrolment. On the other hand, the most recent study conducted in five francophone African Countries; i.e., (Bukina Faso, Cameroon, Cote d'Ivoire, Guinea and Togo) Lloyd and Mensch (2008) noted that the risks of dropping out among girls aged 12 and over is higher for reasons other than child birth and marriage.

Similar efforts went into unraveling the factors that underpin child schooling in Ethiopian context (e.g., Ayalew, 1989; Esmonde, 1991; DeStefano *et al*, 1993; PHRD, 1995; Mulugeta, 1998; Tesfaye and Solomon, 2001; Kassahun, 2008). However, the majority of these studies significantly vary in focus. For example, some of these attempted to address equity in enrollment in terms of gender (Esmonde, 1991), region or geographical location

(Ayalew, 1989) while others were interested in the identification of the factors that impinge on school enrolment (e.g., Mulugeta, 1998; Tesfaye and Solomon, 2001; Kassahun, 2008), dropping out (Tilaye, 1999), and absenteeism (Darge, 2000). For instance, Mulugeta (1998), using a multivariate procedure, disclosed that household's demand for schooling significantly depends on education and sex of the household head, location of residence (rural-urban), size of school age population in the household, distance to school, mother's education in years of schooling and total expenditure as important determinants. Moreover, "Father's education in years of schooling" for both primary and secondary school demand and "Return's from education" for secondary schooling, were found vital in addition to the above mentioned factors. A recent study (Kassahun, 2008) based on the 2004 nationally representative Welfare Monitoring Survey (WMS) concurs with Mulugeta's (1998) findings. Kassahun's study shows that gender of the household head, education of the household head, household composition, household wealth, and exposure to shocks were significant family level determinants of child school enrolment. In particular, the study indicated that children living in a female headed households have from 40% to 60% more likelihood to be enrolled in school than children in male headed households in both rural and urban areas (Kassahun, 2008, p. 12).

A more comprehensive study commissioned by USAID (DeStefano *et al.* 1993)² came out with important findings relevant to rural households in Ethiopia. In the study, DeStefano *et al.* (1993) surveyed 520 households in four regional localities; i.e., Bale, Wolyeta, Gonder and Tigray that yielded useful information on factors that affect demand for schooling in rural Ethiopia. The study noted that economic constraints represented the most salient impediments to participation and persistence in primary school in the rural areas. This is true of studies made in Malawi (Tan *et al.* 1984); Mali (Bridsall and Orivel, 1996), and the Sudan (Maglad, 1994). In the study, both mothers and fathers agreed that opportunity costs (need to work at home) and school costs were the biggest obstacles for them to send their sons and

daughters to school. However, those who sent their sons to school reported that they perceived boys as returning parents' investment in schooling. A similar study by Psacharopoulos and Woodhall (1997) showed gender difference to be linked with other important determinants of demand such as attitudes and values pertaining to costs and benefits of sending a female or male child to school.

Though the existing literature maintains that child labor negatively affects schooling, studies in Bangladesh (*e.g.*, Shafiq, 2005; Salmon, 2005); Brazil (*e.g.*; Cardoso and Souza, 2003), and Ghana (Ray, 2003) show that children can combine school and work. Combining school and labor activities may be due to inadequate household income or inadequate amount of conditional cash transfers. This was reported in a study of Brazilian families (Cardoso and Souza, 2003). A consistent finding was reported in similar survey among Ethiopian subjects where children were found to be going to school as well as doing labor work at home (Tassew et al, 2005).

Taken together, the existing literature on child schooling in developing countries tends to attach greater importance to the impact of household poverty (Cardoso and Souza, 2003; Ray, 2003; Salmon, 2005; Shafiq, 2005; Tassew et al, 2005). This generally holds true in Ethiopian context as well. Nonetheless, the array of factors that predict child school attendance may vary from one geographical location to the other and from one socio-cultural context to another (*e.g.*, Ray, 2003; Eloundou-Enyeguean and Williams, 2006). Hence, it is important to investigate which household characteristics impinge on child schooling/attendance apart from household income (ability to pay) which is viewed as an already established factor determining child schooling in all developing countries. In other words, apart from household characteristics that are related to school attendance, school dropping out, parental follow up, sex-preference in making enrolment decision, the explanations behind the behavior of households are of paramount importance to design intervention mechanism that works in specific socio-

cultural and socio-economic contexts. These are the issues that the present paper has been planned to address.

Research Questions

In view of the above, the following questions guided this study:

- What are the major household characteristics related to school attendance among school-aged children?
- Which household characteristics are related to dropping out of school?
- Which household characteristics predict sex preference in making enrolment decision? And what are the explanations for making preferential enrollment decision?
- Which socio-economic and demographic variables are related to parental follow up of child's school work?

Key Terms

- **Sex-preference:** an actual incident of giving priority to either sex while making enrolment decision by the household heads.
- **School dropping out:** is measured at a household level by presence or absence of an incidence of termination of school by at least one of the school-age children in the same household.
- **School attendance:** is measured whether or not the school-aged child is currently attending school.

Methodology

This section presents the methods used to generate data for the study. It describes the data sources, study sites, sampling techniques, instruments of data gathering, procedure of data collection, and the methods of data analyses.

Data Sources

The study used primary and secondary data sources. The primary data were collected through a household survey while the secondary data were obtained from recent annual educational statistical reports published by the Federal Ministry of Education and the Southern Nations Nationalities Peoples' Region State (SNNPRS) Education Bureau. In addition, quantitative information on school enrolment, drop-out and completion (survival) rates were obtained from Annual Educational Statistical Abstracts at national and regional levels.

Study Sites and Sampling

Primary data were gathered in *Cheffe* and *Datto Kebeles* (which is the lowest government administrative structure) near by the city of Hawassa, the Capital of the Southern Nations Nationalities and Peoples' Region (SNNPR). Though the two sites are close to the city, they have significant rural characteristics. The majority of people inhabiting these localities are ethnic *Sidamas*. The choice of *Cheffe* and *Datto* was purposeful as there had been reports of high attrition rate among both male and female children in these localities. Secondly, the two survey sites are accessible to the researchers in all seasons for possible future intervention.

From the two *Kebeles*, a total of 263 households were randomly selected using a stratified random sampling procedure using the villages within the *Kebeles* as strata. Accordingly, out of the total sample, 49% of the households were selected from *Cheffe* while 51% were selected from *Datto*. Thus, individual households were selected using systematic random sampling procedure. Overall, the sample represented about 20% of all households in the two *Kebeles*.

Instrumentation

A 10-page household survey interview protocol consisting of closed and open ended items were prepared as part of a bigger study. A portion of the interview questions was used for the purpose of the present paper. The contents of the questionnaire include items designed to assess the bio-data of household heads and spouse, households' willingness to enroll children in school, parental follow up of children's schooling, sex-preference while enrolling children, incidents and reasons of dropping out, and households' willingness to enroll non-school going children to Alternative Basic Education Centers (ABECs). In addition, the household survey interview protocol has also included a checklist designed to assess the nature of houses, possession of livestock and other domestic animals, and land holding in order to use a proxy estimate of socio-economic status (SES) of the households participated in the survey. The Interview protocol was originally prepared in the Amharic Language for translation into *Sidamegna*, which is the language of the local population. The enumerators used both versions to avoid confusion during the data collection.

The Household Survey

Data collection was made with the help of 12 enumerators (all teachers) who spoke the *Sidama* Language. They were given a training that included a field try-out data collection before their deployment to the actual data gathering. After the field tryout, the enumerators together with field supervisors and the investigator made corrections and clarifications of some vague items of household interview questionnaire before their use in the major data collection.

Interview

A semi-structured interview schedule was developed following the preliminary results that were based on the household survey questionnaire.

The respondents to the face-to-face interview were 10 teachers and 2 school directors of the near by *Datto Dae* Primary School. The items sought qualitative explanations of the reasons for school attendance, dropping out, parental follow up of children's school work, seasonal variation in school attendance and dropout rates and the nature and households' characteristics of children who were vulnerable to termination of school.

Data Analyses

The field data were coded and entered into a computer using a SPSSWIN Version 11. The techniques used to summarize and interpret data included descriptive and inferential statistics including bivariate correlation, chi-square statistics, and logistic regression to test the statistical hypotheses. Moreover, qualitative data obtained from the face-to-face interview were integrated into the analyses to complement quantitative results.

Findings

Descriptive Results

As indicated earlier, the survey was made on 263 households of which 129 (49%) were from *Cheffe* and 134 (51%) from *Datto Kebeles*. Due to the comparable sample size drawn from the *Kebeles*, the Chi-square results did not show significant variation in proportion ($\chi^2 = .095$, $df= 1$; *ns*) of households participated from *Datto* and *Chefe*. In contrast, the proportion of male household heads (58.1%) is much higher than those households headed by females (41.8%). Furthermore, the results show that a significant majority of the survey participant households heads were farmers (80.3 %), with a limited number of civil servants (15.1%) and petty traders (3.5%). With regard to religion, the majority of the population; i.e., 82.5% were protestants while Muslims constituted only 8.7% of the respondents ($\chi^2 = 647$, $df= 4$; $p < .0001$) in the surveyed localities were protestants.

Table 2: Socio-demographic Characteristics of Household Heads

Variables	N	%	χ^2
Gender			
Male	153	58.2	7.03
Female	110	41.8	(.008)
Marital status			
Married	244	93.1	
Unmarried	3	1.1	650.0
Divorced	1	0.4	<i>df</i> = 3
Widow/er	14	5.3	(.000) ^a
Residence			
Cheffe	129	49.0	.095
Datto	134	51.8	(<i>ns</i>)
Mothers Education			
Illiterate	105	42.2	
Read/write	44	17.7	125.47
Primary	72	29.0	<i>df</i> =3
Secondary	28	11.2	(.00)
Father's Education			
Illiterate	191	74.6	
Read/write	25	9.8	542.33
Primary >	40	15.6	(<i>df</i> = 2)
Occupation			
Farmer	208	80.3	384
Civil Servant	39	15.1	<i>df</i> = 2
petty trade	12	4.7	(.00)
Religion			
Protestant	217	82.5	(0.4)
Orthodox	9	3.4	647
Muslim	23	8.7	<i>df</i> = 3
Catholic	13	4.9	(.00)

SOURCE: Field Data

^aChi - square result has not been used due to low cell frequencies

Impact of Gender and Parental Education on Child's Schooling

Table 3 below presents the correlation matrix that involved the key variables of interest in this study. Accordingly, gender and educational attainment of mothers were found to significantly influence the education of their children. In other words, a child's stay or dropping out of school, parental follow up,

and child's school attendance are the key variables affected by the gender and level of education of the household head. More specifically, the significant linear association between 'Gender' and 'Parental Follow up' ($r = .23$, $p < .0001$) reveal that female household heads are more likely to follow up the child's conditions in school and significantly less likely to have children who dropped out ($r = .20$, $p < .01$) of school than those headed by males. In addition, those parents who follow up their children's school work tend to be better off (e.g.; own houses roofed by corrugated iron) ($r = .16$, $p < .05$) and have bigger landholding ($r = .16$, $p < .05$). This is evidence suggests that childhood education may be impacted by multiple factors that are directly or indirectly associated with economic conditions of the household.

Table 3: Correlation Matrix

		1	2	3	4	5	6	7	8	9	10
1	Gender	-	-.01	.16**	-.02	0.23*	.02	-.19**	.11	-.27**	-.09
2	Mother Ed		-	.51***	-.08	.15**	.26**	.15*	.08	-.10	.10
3	Father Ed			-	-.04	.05	.12	.10	.05	.09	-.12*
4	Location				-	.43***	.11	.15**	-.12	.02	-.12
5	Parental follow up					-	.147**	.00	.16*	-.01	-.16**
6	School attendance						-	.00	.10	.27**	.05
7	Dropout							-	.10	.22**	-.07
8	SES								-	.18	.16**
9	Family size									-	.12*
10	Landholding										-

* $p < .10$, ** $p < .05$; *** $p < .01$

SOURCE: Field Data

In addition, the study revealed that lack of parental follow up correlated highly with dropping out ($r = .43$, $p < .01$). However, the problem of dropping out appears to be more serious in one of the locations than in the other as revealed by the correlation results. Accordingly, more children dropped out of school from *Datto* than *Cheffe* ($r = .147$, $p < .05$). The explanation for this

may be attributable to the agro-ecology and life style of the people residing in the respective localities. In this regard, the school director of *Datto Kebele* had to say the following:

Children in *Datto Kebele* are impacted by the pastoralist life style. Their parents, usually their father move from place to place during dry season in search of water and pasture for the livestock. So children especially male children accompany their father dropping out of school. [Code: DSD 001]

The other interesting finding is the significant correlations between family size and enrollment ($r = .27, p < .05$) and incidents of dropping out ($r = .22, p < .05$). This revealed that with large family size the likelihood of child enrolment in the school is and the likelihood for dropping out of school is lower. Similarly, family size significantly correlated with SES ($r = .18, p < .05$) and landholding ($r = .16, p < .05$) implying that larger families tend to be economically better off and tend to own larger farmland.

Household Characteristics and Child Schooling

The findings generally indicated that most parents are willing to send their children to school as evidenced by the large proportion of parents who have already enrolled their school-age children. The variables (see Table 4) that are found in the related literature to affect household demand for schooling, with the exception of family size ($Wald = 2.91, p < .10, df = 1$), did not produce a significant predictive relationship. This falls short of the required level of probability margin ($\alpha = .05$). On the other hand, the apparent relationship of family size reveals that households with more members tend to be willing to enroll their children in schools as their labor requirements will be taken care of by extended family members or others living with the family.

Table 4: Logistic Regression for Likelihood of Child Enrolment ^b

Variables ^a	B	SE	Wald	df	Exp (β)
Gender	.735	.729	1.01	1	2.08
Location	-.265	.653	.165	1	.767
Mother Ed.	-.181	1.14	.025	1	.835
Father Ed.	-.319	.727	.194	1	.726
Father Emp.	.361	1.19	.692	1	1.435
Family Size	.301	.176	2.91*	1	1.129
Landholding	.417	.941	.197	1	1.518
SES	.197	.685	.083	1	1.218

* $p < .10$; Model Chi-square = 4.34, $p = .825$, $df = 8$; % of correct classification = 92.99%; -2 Log Likelihood = 75.353; Goodness-of-fit = 155.025

SOURCE: Field Data

^a Independent variables reference categories: Gender = Female; Location = Datto; Mother Edu. = Illiterate = 1 and; 0 = Literate; Father Edu: = Illiterate = 1 and 0 = Literate; Father Emp.; Farmer = 1; Otherwise = 0; SES (proxy): Roof of house (corrugated Iron) = 1; Otherwise = 0; Landholding= Farm Plot measured in hectares; and Family Size = Number of members of the household.

^bThe dependent variable: Likelihood of child enrolment is a dummy variable coded. 1= if all school-age children are currently enrolled; 0= otherwise.

It is striking to note how bigger family size can become useful for child schooling in some situations. In this connection, a teacher who worked in the same locality for over three years has to say the following to yield substantive evidence:

If the household has some source of income, for example, farm land or livestock – it is common to find children still able to attend school though there are five or more school-age children in the family. In such conditions we do not notice dropping out except some degree of absenteeism. Because since children attend school in two different shifts, they take turns to attend school as they substitute each other in the household activities. [DTE 010]

Sex Preference in Child Schooling

In Table 5 below the attributes of parents that are expected to relate to the education of their sons and daughters were identified and entered into a logistic regression model. The results show that “Location” (whether the child is from *Datto* or *Cheffe*) and “Father’s Education” emerged as significant predictors of households’ sex preference in child enrollment (sex-preference defined as: Giving priority to the male child over the female child). In other words, female children with illiterate fathers run significantly higher risk of not being enrolled as illiterate father prefer to send their sons to school (Wald = 5.069, $p < .005$, $df = 1$). On the other hand, though the “Gender” variable did not achieve the required level of statistical significance the negative coefficient (Wald = -1.185, $p < .10$) indicates that female household heads are less likely to give priority to their sons over their daughters. In other words, sex preference to educate a child depends on the level of education of the father, and to some extent, the gender of the household head. Furthermore, the statistical significance of “Location” reveal that households of *Datto Kebele* generally prefer boys to girls in enrolling into school – This, as indicated earlier, is related to the life style and the nature of the locality’s economic activity.

Table 5: Logistic Regression for Sex Preference in Child Schooling^b

Variables^a	B	SE	Wald	df	Exp (β)
Gender	-1.41	.665	4.58*	1	.245
Location	1.16	.617	3.53*	1	3.19
Mother Ed.	-.372	.96	.162	1	.689
Father Ed.	1.75	.862	4.12*	1	5.75
Father Emp.	-.695	1.258	0.318	1	.492
Family Size	-1.11	2.12	.272	1	.946
Landholding	-1.302	.952	.893	1	.270
SES	-.344	.593	.335	1	.930

* $p < .05$; Model Chi-square = 17.55, $p < .05$, $df = 8$; % of correct classification = 88.46%; -2 Log Likelihood = 93.965; Goodness-of-fit = 131.188

^a*Variable reference categories: Gender = Female; Location = Datto; Mother Edu. = Illiterate = 1 and 0 = Literate; Father Edu: = Illiterate = 1 and 0 = Literate; Father Emp.; Farmer = 1; Otherwise = 0; SES (proxy): Roof of house (corrugated Iron) = 1; Otherwise = 0; Landholding= Farm Plot measured in hectares; and Family Size = Number of members of the household*

^b*The dependent variable: Sex preference in child schooling is a dummy variable coded: 1= is preference to the male child; 0= otherwise*

According to the qualitative results, parents in the *Datto* move to different places to earn their livelihood. This happens mainly during harvesting and dry seasons. Thus, particularly girls in this locality are less likely to be sent to school as they are the ones who take care of responsibilities around home including caring for younger siblings, and the elderly, preparing food, and fetching water from distant places.

Asked about why girls were treated differently from boys in matters related to schooling teachers who were interviewed gave an array of responses that could be classified under two different domains. One is related to socio-cultural factors and the other is economic or wealth-related factor. The *socio-cultural* underpinnings of discriminatory practice among the community with respect to educating girls are to do with the long-held traditional stereotypes about females. The tradition encourages the socialization of girls in accordance with the widely held belief “The place of a woman is in the kitchen” This does not give any credit to women except for their reproductive role. Thus, education of girls is largely believed to be not important. It is seen as an obstacle for girls to learn skills around home like how to be a good mother and wife.

The wealth-related/economic-aspect of the discriminatory practice on the other hand, emanates from the fact that among the Sidama, females do not normally inherit wealth, as they belong to the family of their husbands once they get married (or sometimes abducted to marry the abductor later). Thus,

any investment on the female child is very unlikely to be paid back later when she becomes an adult compared to the male child.

Correlates of School Dropping out

The socio-demographic attributes of the household heads investigated revealed incidents of dropping out. For example, Table 6 shows that only the "Location" variable emerged as the only significant predictor (Wald = 6.175, $p < .00001$, $df = 1$). In other words, dropping out or staying within the school system among children in the studied households depends on their location. In particular, the findings indicated that children from *Datto Kebele* are more vulnerable to dropping out than those from *Cheffe*. In this connection, it is perplexing to learn how children from impoverished households pass their days at school as reported by a female teacher who works at the school

Datto is an extremely underprivileged *Kebele*. The environment is also dry and this makes life difficult for poor farmers whose life is hand-to-mouth. It is common to find children who come to school without having their breakfast [DTE 008].

In addition to their lack of a decent family income, children of *Datto* are victims of the mobility of parents (mainly the head of the household) to other places during the school year. The absence of the key family member makes it difficult for the local children to succeed in school work. Thus, economic reasons are glaring as most children in those households could not afford to buy the necessary learning materials for school work. In this vein, the majority of the teachers who participated in the interview responded that most of *Datto* children are the breadwinners of their respective families by engaging in petty trade, including selling sugarcane, fire wood and fetching water from distant places.

Table 6: Logistic Regression for Likelihood of Child School Dropping-out^b

Variables ^a	B	SE	Wald	df	Exp (β)
Gender	-.408	.395	1.07	1	.665
Location	-.911	.370	6.05*	1	.402
Mother Ed.	-.296	.586	.256	1	.744
Father Ed.	.224	.407	.305	1	1.25
Father Emp.	.702	.833	.709	1	2.048
Family Size	.125	.075	2.76	1	1.129
Landholding	-.059	.294	.039	1	.943
SES	-.032	.380	-.007	1	.994

* $p < .05$; Model Chi-square = 13.55, $p = .11$, $df = 8$; % of correct classification = 68.7%; -2 Log Likelihood = 193.373; Goodness-of-fit = 147.194

^aThe Independent variables coded as follows: Gender = Female; Location = Datto; Mother Edu. = Illiterate = 1 and 0 = Literate; Father Edu. = Illiterate = 1 and 0 = Literate; Father Emp.; Farmer = 1; Otherwise = 0; SES (proxy): Roof of house (corrugated Iron) = 1; Otherwise = 0; Landholding = Farm plot measured in hectares; and Family Size = Number of members of the household

^bThe dependent variable: Likelihood of child's school dropping-out is a dummy variable coded: 1 = if there is at least one school-aged child has dropped-out; 0 = otherwise.

The interviews conducted with school teachers and principals further revealed that due to the semiarid climatic conditions, Datto's residents adopted a semi-pastoralist life style. Therefore, fathers of school-age children normally leave their homes in search of grazing land for the livestock. As the breed-winners are away from home, children often replace them to generate income through getting engaged in petty trade or in some other labour activity during the school year. According to the teachers and the principals, the involvement of local school children in labour activities significantly reinforced their dropping out of school. Thus, seen from this perspective, the reason is essentially economic rather than a sheer

“Location” issue. For instance, teachers of the nearest *Datto Dae* School identified some of the manifestations of parental poverty. They stated that the local children either drop out or not at all enroll due to inability of their parents to afford buying them learning materials, clothes or school uniforms. Some parents also may not be able to pay registration fees or they may even fail to feed their children regularly. On top of that, the interviewees cited the absence of basic infrastructure such as adequate and affordable health care facilities as other factors that have further exacerbated the plights of the local children.

As regards girls, a number of reasons are involved apart from their engagement in labor activities. Table 7 below summarizes what the parents (household heads or their spouses) in the studied households replied when asked why their sons and daughters, dropped out of school.

Table 7: Reasons for School Dropping out (N = 129)

Reasons	Gender	
	Male	Female
Sickness	30.2 (39)	37.9(49)
Cost of schooling	34.9(45)	14.7(19)
Early marriage	0.00	13.1(17)
Abduction	0.00	20.2(26)
Labor Activities	34.9(45)	14.0(18)

SOURCE: Field Data

Accordingly, sickness (37.9%), abduction (20.3%), cost of schooling (14.5%), engagement in labor activities (14.5%), and early marriage (10.1%) were the reported causes for female termination of school. On the other hand, the majority of the male children dropped out due to cost of schooling (34.9%), engagement in “labor activities” (34.9%), and “Sickness” (30.2%). It is to be noted that except sickness which is an apparently significant factor in discouraging child schooling, the reasons for dropping out seem to follow a discernable pattern of gender differences in which female children are forced

to drop-out largely due to socio-cultural influences such as abduction and early marriage. In contrast, the antecedents of dropping-out for a male child is more of economic i.e. boys terminate their education either due to engagement in labor activities to augment family income or they are unable to cover the cost of schooling.

It is interesting to note that the critical analysis of the apparent relationship among the list of factors identified above enables one to decipher the interconnectedness of economic and socio-cultural factors. In other words, the low level of socio-economic development has deterred the local population to develop a crucial infrastructure including the use of modern technology, which in turn permits the creation of job opportunities and improve quality of life. On the other hand, the impact that modernization brings in terms of bolstering urbanization, reduces and eventually eliminates practicing harmful traditions such as early marriage and abduction.

Discussion

The present study indicated that household characteristics which include gender of the household, parental education, and family size are important factors that determine child schooling in the studied communities. A closer look at the level of education of parents depicts that 79.6% of the fathers in the studied households were illiterate while the illiteracy rate of the mothers included in the study was only 42.22%. Though how the proportion of literate mothers exceeded that of their husbands' should be subjected to further empirical scrutiny, it is apparent that the level of illiteracy in these localities is a glaring mother compared to the official literacy rate at a national level. This may undoubtedly affect their attitude towards the education of their sons and daughters. This finding provides a partial empirical support to Destefano et al's (1993) argument that purports valuing the education of children require the education of parents themselves. Destefano et al concluded that parents must be educated to be both consumers of and informed consumers of schooling.

The other key finding is that compared to female headed households, male headed households prefer to enroll a male child. These findings seem to get a strong theoretical support from a feminist sociologist in that the marginalization of girls from getting equal access to schooling is the result of a patriarchal system rooted in the macro structural relations (e.g.; Burman, 2005). Consistent with the view of feminist theory, the subsidiary place of females in *Datto* is that (this is the practice among communities in *Sidama*) girls are not entitled to the inheritance of their parents' wealth (e.g.; Farm Land). A similar study conducted among the *Gedeo*, a neighboring ethnic group, reported similar findings (Tsfaye and Solomon, 2001).

The data reveals consistent results with the national scenario as far as the trend in school enrolment (NER), decline in drop-out rates and increase in primary level completion rate are concerned. Nevertheless, the NER for SNNPR is still less than that of the national average and so is the drop-out rate. Furthermore, the NER for *Sidama* Zone is still less than that of most Zones and Special Weredas within the region. The survey results in the target localities of *Datto* and *Cheffe* show that households are keen to enroll their children in school. They are generally interested in educating their children despite the challenges caused by the high degree of impoverishment in their households. Though the majority of the households are willing and in fact, have enrolled their school-aged children, some households prefer to give priority to boys. This is particularly true of those households where fathers are illiterate. In contrast, households headed by females are generally found not to discriminate between their sons and daughters to educate their children. Giving priority to a male child over the female child is generally more likely in *Datto* than in *Cheffe*. A similar study based on a comprehensive sample (i.e., Kassahun, 2008) reported that children from female headed households are less likely to delay in school progress compared to children from male headed households in both rural and urban areas. On the other hand, school dropping out is significantly correlated with literacy status of the mother, gender of the household head, and location (whether the child is in *Datto* or *Cheffe*). Children whose

mothers are literate tend to continue their education compared to those with illiterate mothers. Similarly, female household heads tend not to allow their sons and daughters to drop out of school.

The likelihood of enrolling children of eligible age group is found to be high among households with a larger family size. Similarly, bigger family size is associated with less likelihood of school dropping out. A similar finding was reported in a more comprehensive sample in Ethiopian context (Kassaun, 2008). On the other hand, this finding agrees with earlier studies made in Botswana (Chernichovsky, 1985) and Peru (Pal, 2004) while it contradicts the results of a similar study made in Brazil (Cardoso and Souza 2003) where family size is inversely related to child enrolment. The explanation is that in Ethiopian large family size increases the likelihood of getting a “substitute” child to take care of labor activities while the other child/children attend school. A similar finding in a study among Peruvian children (Pal, 2004, p. 674) concluded that the positive impact of more siblings in working age category reflects the lower opportunity costs of schooling among children. Under such circumstances, relieving some of the school-age children in those households to attend school and other school-related work is apparent. However, this finding should be interpreted with caution since large family size cannot alone guarantee school attendance for all children in situations where households vary in their income level and wealth. In the absence of a relatively adequate source of income, from farming, livestock production, or small business, allowing some of the school-age children to attend school seems very unlikely.

The absence of basic facilities (health centers, power, communication, potable water, etc.) and infrastructures which create conducive situation for employment opportunities for the communities in the two *Kebeles* appears to be the fundamental reasons that affected child schooling. The limited chance to increase quality of life due to poor infrastructure and limited access to basic amenities and the prevalence of harmful traditions such as early marriage and abduction have seriously threatened female’s education.

Conclusions and Policy Implications

The present study is based on data generated from 263 households. Interview data were also obtained from 10 teachers and two school principals of the local school in two rural localities of *Sidama* Zone, Southern Ethiopia. The purpose was to reveal the impediments of school attendance among children of primary school age. The study attempted to capture the socio-economic and demographic attributes of the households that have a predictive relationship with the likelihood of school enrollment, households' sex-preference in making enrolment decision and causes of dropping out in two *Kebeles* in *Sidama* Zone. On the bases of the results the following conclusions can be drawn:

- The need for child labor is generally found to negatively affect school attendance. Hence, it appears that there should be a substitute for poor households that would compensate for the indirect/opportunity cost of sending their children to school. For this purpose, boosting household income should be considered as a mechanism to sustain schooling of children in localities like *Datto* and *Cheffe*.
- The findings revealed that the *Datto* locality represents the most impoverished with most households living in extreme poverty. Intervention mechanisms that address poverty at household level should be developed to improve the status of child education in the locality. The success of this program implies the possibility of replicating the same in similar situations within the region as well as at the national level. One of the possible ways of introducing this small scale loan by microfinance institutions now flourishing in Ethiopia can help vulnerable households to engage in improved farming of crops or livestock production, or small businesses. This may help not only to ensure the sustainability of income generation but also it may help to overcome the possible 'dependency syndrome' among the poorest segment of the society.

- Sex-preference among households while making decision to enroll children is related to the literacy status of the father. It is to be noted that girls who have illiterate fathers are less likely to be sent to school compared whose fathers are literate. Thus, it is crucial to put in place an intervention to avert the pattern of gender discrimination. Such measures may include adult education program that goes beyond a sheer literacy and numeracy to help parents develop the conviction that education is valuable for their children in general and their daughters in particular. Steps such as this may help to fend off problems encroaching on female education as a result of the traditional practices like early marriage and abduction.
- The education of girls' is found to be affected by economic as well as socio-cultural factors. In the wealth-related or economic front two key variables stand out. One is the lack of enthusiasm to invest in the education of girls. This tendency emanates from the belief that once girls are married the likelihood for them to repay in kind or in financial terms is little. Boys are expected to return their debts after marriage. Secondly, girls' labor is highly indispensable for the benefit of the household. Among the most common household chores in which girls in *Datto* and *Cheffe get* involved is fetching water from distance places. Apart from the time that should be spent walking long distances, there is an apparent danger of being exposed to abduction, rape or other form of violence. Intensifying local infrastructural development efforts along with community-level deliberations on the indispensability of female education may minimize the existing scenario.
- Regardless of poverty induced school dropping out such as inability to cover school expenses and opportunity cost, children are forced to terminate school due to sickness. This can be addressed by mobilizing resources from the community and the government to build health facilities for the local population. In particular, easily preventable diseases such as malaria should have early warning and prevention measures to overcome premature departure from school.

Besides, the local government should give due attention to putting in place potable water distribution centers in the villages as part of the effort to be made to increase the likelihood of school attendance among young children in these localities.

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Note

1. The most recent publications of the Federal Ministry of Education, Education Statistics Annual Abstract (2007/8), MoE (2009) does not provide recent figures on dropout and survival rate. What was reported in MoE (2009) was based on 2006/7 data. Similarly, the data published by SNNPRG Education Bureau in its 2009 edition have no recent data on dropout and survival rates.
2. For complete information of determinants of school demand in Ethiopia, refer: to Destefano et al (1993). *The Demand for Primary Schooling in Rural Ethiopia. A Research Study*, Addis Ababa, USAID.

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