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COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES

SCHOOL OF ECONOMICS

DETERMINANTS OF SCHOOL DROPOUT IN UGANDA

BY

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OCTOBER, 2018
DECLARATION

I, Martha Byabagye Musimenta, declare that this work is original and has not been submitted for any other degree award to any other University before.

Sign: ..................................................

Date: 7th December 2018

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APPROVAL

This dissertation has been submitted for examination with my approval as the official University Supervisor.

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DEDICATION

This dissertation is dedicated to my late father, Mr. Byabagye Stephen, who did not live to see the success of his children. I treasure you father, and no matter where you are; you are truly loved and cherished!
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Last but not least, I would like to thank my single mother who toiled day and night to make my first dream of education a reality. Thank you mother, I am what I am because of you!

To my beloved sisters, Daphine and Agnes Lynn, thank you for teaching me the art of resilience. We have fought many battles together; am proud of the great women we have become today!

To my beloved husband, Mr. Katerega Deogratias, thank you for believing in me always. Am forever grateful for all the financial and moral support. Together, we shall achieve more!
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<tr>
<td>GoU</td>
<td>Government of Uganda</td>
</tr>
<tr>
<td>MFPED</td>
<td>Ministry of Finance Planning and Economic Development</td>
</tr>
<tr>
<td>MoES</td>
<td>Ministry of Education and Sports</td>
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<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>NER</td>
<td>Net Enrolment Ratio</td>
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<tr>
<td>NSDs</td>
<td>National Strategy for the Development of Statistics</td>
</tr>
<tr>
<td>UBOS</td>
<td>Uganda Bureau of Statistics</td>
</tr>
<tr>
<td>UDHS</td>
<td>Uganda Demographic Health Survey</td>
</tr>
<tr>
<td>UNHS</td>
<td>Uganda National Household Survey</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific, and Cultural Organization</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations International Children’s Emergency Fund</td>
</tr>
<tr>
<td>UPE</td>
<td>Universal Primary Education</td>
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<td>USE</td>
<td>Universal Secondary Education</td>
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<tr>
<td>UPPA</td>
<td>Uganda Participatory Poverty Assessment</td>
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<td>WB</td>
<td>World Bank</td>
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ABSTRACT

The objective of this study was to assess factors associated with child school dropout in Uganda. This was motivated by fact that while Uganda was one of the first African countries to introduce Universal Primary Education (UPE) in 1997, it is still faced with a number of challenges including high dropout rates and non-attendance. For instance, the recent UNHS 2016/17 shows that 12 percent of school-going age children have never attended while 48.2% have dropped out of school. Using UNHS 2016/17 and employing a logit model, the study examined the effect of child, household, and community characteristics on the likelihood of a school-going age child dropping out of school. The analysis was done using descriptive statistics, correlation analysis and marginal effects after estimating the logistic regression model.

The study findings reveal that the main determinants of school drop in Uganda are; the ownership status of the school, location of the school (that is whether in the urban or rural areas), the gender of the pupil, whether or not a pupil is an orphan, the region of the pupil (that is Central, Eastern, Northern, and the Western), the sex and highest level of education of the household head, the poverty status and the total education experience of the pupil.
CHAPTER ONE

INTRODUCTION

1.1 Background to the study

In the bid to promote economic growth and human development, government of Uganda introduced the Universal Primary Education (UPE) policy in 1997. UPE started by allowing only four children per family but in 2000, it was opened to every one of school going age or interested adults. The 2008 Education Act extended UPE to Universal Post-Primary Education and Training (UPPET), including Universal Secondary Education (USE). Ministry of Education and Sports (MOES) provides grants to (some) government-aided schools, and pays scholarships to some private schools under a Public Private Partnership (PPP). In 2012, a number of grants and scholarships were also given at upper secondary level under a further policy of Universal Post-O-Level Education and Training (UPOLET). MOES also encourages, but does not fund, universal Early Childhood Development (ECD). The sector has a good sector policy framework for equity and inclusion covering location, disadvantaged groups, special needs and gender equity.

The introduction of UPE accompanied by government commitment, including political leadership resulted into a surge in primary school enrolment from 3.1 million in 1996 to 7.6 million in 2003. Recent statistics from the 2014 census show that approximately 8 million pupils were enrolled in primary school in 2014. This marked a significant increase in enrolment since the previous census of 2002, were approximately 6.2 million pupils were enrolled in primary education (UBOS, 2017). However, much as primary school enrolment has been a success, the concern now is with regard to the internal efficiency of primary education such as the ability to retain pupils until they graduate from primary school. The
incidence of pupils dropping out of school is particularly high in primary six (34.9%) and primary five (22.1%) (NSDS, 2016).

The comprehensive evaluation of basic education in Uganda report (2016) asserted that UPE dropout has escalated from 4.7% in 2002 to 5.1% in 2016. It further notes that Net Enrolment Ratio (NER) for boys and girls stands at 93.01%, implying that there are still children of school going age who are not enrolled in school. In addition, completion rates for both boys and girls remain low—only 55% of boys and 54.6% of girls reach primary four, while 31.2% of the boys and 27.7% of girls manage to reach primary seven.\(^1\)

The problem of high dropout rates in Uganda is a challenge to policymakers. This is because it partly reflects the inadequacy of a schooling system in terms of either school quality or quantity. Noteworthy to mention is that dropouts are usually associated with chronically high unemployment levels, low earnings, and poor health outcomes (Okumu, Nakajjo and Isole, 2008), and persistent poverty among certain segments of society. Taken aggregately, these individual-level consequences of school dropouts are undermine national development by undermining national human capital development efforts.

1.2 Problem statement

Uganda was one of the first African countries to introduce Universal Primary Education (UPE). Many more schools were built, teachers trained and tuition fees abolished. In spite of the efforts made by the Government of Uganda to achieve UPE as part of the Education for All and Sustainable Development Goals, there are still many school-aged children who do not go to school or leave school at an early stage. For instance, the recent UNHS 2016/17 shows

\(^1\) Net Enrolment Ratio indicates the level of participation and share of children of official school-going-age that is actually enrolled in a particular level of education.
that 12 percent of school-going age children have never attended while 48.2% have dropped out of school.

Failure to complete a basic cycle of education not only limits future opportunities for children but also represents a significant drain on the limited resources that countries have for the provision of education (Sabates, Akyeampong, Westbrook and Hunt, 2010). Furthermore, dropouts are associated with lowered economic gains, reduced tax revenue, poor health outcomes, increased likelihood of legal trouble (Global Post, 2014).

1.3 Objectives of the study
The main objective of the study was to investigate determinants of school dropout in Uganda. Specifically, the study sought to examine the effect of child, household, and community characteristics on the likelihood of a child of school-going age dropping out of school.

1.5 Significance of the study
High school dropout rates remain a big challenge for Uganda's education sector. Nonetheless, little empirical work exists that examine factors associated with school dropout rates. A study by MoES (2012) on dropout rate across the country found out that the biggest reason why students leave the USE programme was due to early pregnancies (59% of the schools), transfer of parents to other area (31% of the schools) and only 10 percent of the schools reported death, influence of other students and sickness were also among the causes for students to leave the school. More so, Okumu, Nakajjo and Isoke (2008) analysed the socioeconomic determinants of primary school dropout in Uganda using the 2004 National Service Delivery Survey data and found out that parental education, household size and proportion of economically active household members were factors influencing the chances of pupil dropout. This study used the 2016/17 UNHS dataset and incorporated other variables like parent’s occupation, school expenses, among others that were not used by previous
authors like Okumu, Nakajjo and Isoke (2008), thereby expanding the scope of the study on
the factors associated with school dropout in Uganda. Moreover, since Okumu, Nakajjo and Isoke (2008) work, a lot has changed in Uganda in
terms of policy and availability of new datasets. For example, the national development
agenda shifted from focusing on poverty reduction through heavy investments in social
sectors like education and health as it was the case under Poverty Reduction Strategy Paper
(PEAP) to heavy investments in infrastructure under the national development plan (NDP). In
addition, new UNHS datasets are available, particularly the recent UNHS 2016 that could
offer new insights about the causes of school dropout in Uganda.

1.6 Organization of the dissertation

This research report is organised into five chapters; Chapter one includes background to the
study, statement of the problem, objectives of the study, research hypotheses, scope of the
study and significance of the study. Chapter two gives the overview of Uganda’s education
sector. The literature related to this study is reviewed in Chapter three; Chapter four presents
the data sources, model specification and estimation procedure and robustness checks. In
Chapter five, study findings are presented and discussed. Lastly, Chapter six presents
summary of the findings, conclusions, recommendations and areas for further research.
CHAPTER TWO

OVERVIEW OF PRIMARY EDUCATION

2.1 Introduction
This chapter presents an overview of Uganda’s primary education sub-sector. It looks at an overview of the performance of the sector and challenges facing the sub-sector.

2.2 Overview of Uganda’s Primary Education
The current Ugandan education structure has been in place since 1963 and came as a result of recommendation made by the Castle Commission. The country’s formal education system starts with seven years of primary school (ages 6-12), which is ‘supposedly’ compulsory and free according to the current Universal Primary Education policy/program. It is followed by six years of secondary education for ages 13-18. This level is succeeded by three to five years of University or tertiary education depending on the profession selected by the individual (Kakuru 2003). Primary education is central to the whole system and to the life of citizens in general. It enables individuals to acquire literacy, numeric and communications skills, as well as developing cultural, moral and spiritual values (MoES 1999). It is for this reason that primary education has been made “free” through UPE program.

Formal education was first introduced in Uganda during the colonial period in the 1880s by Voluntary Missionary Organization’s. In the early 1920s and 1930s, education was only available to a small group of people mainly children of the aristocrats, clergy and tribal chiefs. With time, the Government’s role in education has been expanding to include more people into the system though not everybody can access and succeed in it (Kakuru 2003). To address this problem, several commissions were formed by the government to look at the education system in Uganda.
In 1987, the NRM government instituted the Education Policy Review Commission (EPRC) under the Chairpersonship of Professor W. Senteza Kajubi to look at the state of education in Uganda with terms of reference to recommend policies at all educational levels. After consulting with stakeholders, it recommended primary education to be universalized. In defense of its recommendations, the commission emphasized that “unless every child is enrolled at the right age and does not dropout before completion, it will be impossible to ensure that all citizens have necessary basic education for living a full life” (ibid).

In 1989, the Government appointed a White Paper Committee with the task of examining the EPRC report and identifying the feasible recommendations for implementation as well as making amendments where necessary. After consultations, in 1992, the Government published and accepted the major recommendation of the EPRC on primary education reform modifying only the implementation time frame from 2000 to 2003 (Kakuru, 2003). Launching of UPE was being postponed until May 1996 during the first direct presidential elections where President Museveni made it a campaign platform issue in his manifesto and promised free primary education to four children per family if he is elected. On being elected President, in December 1996 he fulfilled his pledge and announced that UPE implementation was to begin in January 1997. This marked the breakthrough in the quest to achieve UPE in Uganda (MoES, 1999).

After the introduction of UPE, Government schools experienced a rapid increase in enrolments from 2.8 million in 1997 to 7.6 million in 2004 (MoES, 2005). This increase was not proportionately accompanied with increase in other educational facilities like infrastructures and teachers; which to some extent contribute to school dropout. While some studies indicate that UPE policy effectively improved access to primary education for children from poor families by abolishing fees in public schools (Deigninger, 2003), others...
reveal that various costs both direct and indirect charged under UPE policy affect negatively the education of the poor children, leading to their dropout (Suzuki, 2002).

2.3 Challenges facing primary education in Uganda

Quite evidently, Uganda has made enormous progress in improving access to primary education (NPA, 2015). Since 1997, GoU has succeeded in raising the access to primary education from 2.8 million (1996) to 8.5 million in 2015 (EMIS, 2014) as cited in NPA (2015). Considerable numbers of new teachers have been recruited from 74,000 (1995) to the current 187,668 (EMIS, 2014) (including private and community schools). The number of schools have increased from 12,500 (2000) to the current 22,600 (EMIS, 2014). The number of classrooms also grew from 68,000 (2000) to 151,239 currently (EMIS, 2014). National Planning Authority (2015) notes the following challenges facing primary education in Uganda;

Poor quality of primary education manifests itself in a number of ways including low learning outcomes (particularly numeracy and literacy), low efficiency, the role of high teachers’ absenteeism and inadequate school management supervision. Low efficiency in primary education is manifested by a larger number of factors that include among others high head-teacher and teacher absenteeism, high pupil absenteeism, dropout and repetition, large proportion of out-of-school children, low teacher utilization rates; dysfunctional district service commissions, and high teacher attrition rates, limited access to pre-primary education and institutionalized phenomenon of “ghost” (i.e. “ghosts” schools, teachers and learners).

Due to a combination of factors (that include narrow staff establishment at both national and district levels; limited budgetary resources; and overlapping mandates between national and district inspectorates), school inspection monitoring and support supervision functions are inadequately carried out. The scope of the monitoring and evaluation functions remains
limited (instead of being instruments for the improvement of the quality of education). Due to limited investment (mainly by donors), the Education Management Information System (EMIS), is limited to the collection of basic statistics (enrolment, teacher’s classrooms etc.), rather than being a tool for management as it was originally conceptualized. School inspection is weakest at Local Government levels due inadequate staff, skills and budget. Furthermore, Uganda has high population growth rate estimated at 3.0% (2014). Rapid population growth is increasingly putting pressure on the existing resources and facilities. This makes the achievement of quality primary education a moving target.

The allocation to the Education Sector may be seen to be increasing in nominal terms. However, putting into consideration the inflation rate and also the incremental enrolment rates (due to high population growth), the allocation to the Education Sector has been actually declining in real terms for example, the allocation trend to the Education Sector shows a steady decline from 16.85%, 15%, 14.61%, and 13.65% over the last 4 financial years (i.e. FYs 2010/11, 2011/12, 2012/13 and 2013/14 respectively) (EMIS, 2014). More so, primary School management is poor. This is attributed to factors that include rampant head teachers’ absenteeism, inadequate school supervision, dysfunctional school management committees, limited community participation in school activities and inadequate orientation and in-service training. Available evidence indicates that well-managed schools perform better and investing in the quality of management is a relatively cheap strategy for improving school outcomes. A better school management leads to higher pupil and teacher attendance, better-motivated teachers, better management of resources and a better school climate. As a result, pupils perform better. Further evidence indicates that private schools in Uganda perform better than public schools mainly on account of relatively good school management. Good school management is therefore, not only critical for improvement of school’s outcomes but also as a cost effective strategy for reducing teacher absenteeism as well.
In addition, communities are expected to be the true owners of schools and therefore are expected to take keen interest then in terms of monitoring school activities and participating in their development. Unfortunately, community participation in primary school activities in Uganda has drastically declined since the launch of UPE. Most communities (particularly in the rural areas) have abdicated this responsibility to Government on account of a misconception that being a publicly funded program, only government is responsible for its implementation and outcomes. Furthermore, NPA (2015) note that school feeding programmes are usually undertaken as a strategy to increase access and participation of children in primary education. The UPE policy gives the responsibility of feeding children to the parents. The rampant pupil absenteeism in the country is partly attributed to lack of institutionalized school feeding program. Areas like Karamoja sub-region (which frequently experience periodic droughts leading to rampant food shortages) have one of the lowest enrolment and attendance rates in the country. Absence of school feeding programs in schools thus affects the ability of children to engage effectively in the teaching and learning process and thereby, hampering the achievement of desired school outcomes. It also exacerbates the problem of school dropouts.

The above are some of the challenges that were cited in NPA (2015) to affect primary education in Uganda.

2.4 Conclusion

In conclusion, Uganda’s education structure is basically made up of three main levels, that is; primary, secondary and tertiary levels of educations. In reference to the primary section major challenges faced include; low learning outcomes, low efficiency, high teacher absenteeism and inadequate school management supervision.
CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

This chapter reviews literature, which is related to the study based on school dropout rate. It looks at school based factors, economic factors and environmental factors affecting school dropout rate.

3.2 Influence of economic factors on Students on Dropout Rate

Direct and indirect schooling costs are important factors for the education of children and some research indicate that schooling costs especially school fees, are a central reason for early dropout from schools. Schooling costs are sometimes linked to the gender of the children as parents are sometimes become unwilling to pay schooling fees for their daughters. For instance, Brown and Park (2002) investigated that in rural China, parents' incapability to pay compensate school fees was the reason for the dropout of 47% of girls while only 33% of boys dropout in elementary schools; in junior secondary high school, fees were half for the girls but only 8% for the boys. Hunter and May (2002) found that school fees were significant reason for the dropout rate of 27% of boys but 30% of girls before secondary school graduation in South Africa. From the family's perspective, Susmita & Sengupta (2012) observe that in poor households in India, the costs of schooling for girls are likely to be higher while the benefits more tenuous for them than the boys. The authors also observe that though direct costs are similar for boys and girls, parents are less willing to spend on girls. Lloyd et. al., (2000) also found that in Kenya, higher school fees increases the likelihood of dropping out for both boys and girls.
Household income is found to be an important economic factor in determining access to education as schooling potentially incurs a range of costs, both upfront and hidden. Upfront costs include school fees, while the more hidden costs include uniforms, travel, equipment and the opportunity costs of sending a child to school. Household income is linked to a range of factors: when children start school, how often they attend, whether they have to temporarily withdraw and also when and if they drop out (Croft, 2002). Cardoso & Verner (2007) notes that poverty is the most common primary and contributory reason for students to be out of school.

Dachi and Garrett (2003) asked a series of questions to parents/guardians about the financial circumstances surrounding children’s school enrolment in Tanzania, all households responding said the main barrier to sending children to school was financial and their inability to pay fees. Both statistical data and empirical research suggest that students from better off households are more likely to remain in school, whilst those who are poorer are more likely never to have attended, or to drop out once they have enrolled. For example, Brown and Park’s research in rural China (2002) saw poor and credit constrained children three times more likely than other children to drop out of school.

Poor households tend to have lower demand for schooling than richer households: whatever the benefits of schooling, the costs, for them, are more difficult to meet than is the case for richer households (Colclough et. al., 2000). For children from poorer backgrounds in particular, the pressure on them to withdraw from school increases as they get older, particularly as the opportunity cost of their time increases. Work patterns of household member’s influences whether income is coming in, and the possible expenditures available. Chugh (2004) looking at patterns of access and non-access in slums in Bangalore, India indicated that the income of the father was linked to the continuity or discontinuity of the
child in school; with the fathers of most drop outs not employed. If income levels are low, children may be called on to supplement the household’s income, either through wage-earning employment themselves or taking on additional tasks to free up other household members for work. This is more apparent as children get older and the opportunity cost of their time increases.

How people regard schooling and the importance placed on it at times might shape interactions between schooling, household income and dropping out. For example, Pryor and Ampiah’s (2003) research on schooling in a Ghanaian village, talked about education being regarded as a relative luxury, with many villagers considering education not worthwhile. Research indicates link between household income and drop-out of students from school. Fuller and Laing (1999) found that there is an association between a family’s financial strength, measured by level of household expenditure and access to credit, and the likelihood a child will remain in school in South Africa. Kadzamira and Rose (2003) indicate that when the cost of schooling is too high for households in Malawi, it is often children from poorest households who are less likely to attend, this agrees with Glick and Sahn (2000) research in Guinea which indicates that when household income increases, there is greater investment in children’s schooling.

3.3 Influence of family factors on Students on Dropout Rate

The type of family that a student lives in does affect the likelihood of dropping out of school. Family types include two-parents, single-parent, grandparents and stepparent families (Pong & Ju, 2000). Single-parent families can be further broken down into female-headed households as well as male-headed households. Divorce, separation, and death of a spouse are all variables that define change in family type from a two-parent family to a single parent family, a grandparent family or stepparent family. They further note that, children from single
parent or female-headed households are more likely to drop out than are children who reside in two-parent families and children living with stepparents are also more likely to drop out of school than children in a two parent family. When a couple divorces, the incomes of both parents becomes separate and this will in turn affect the child due to the loss of a parent's income which put the child in a family of poverty (Pong & Ju, 2000).

The children who are faced with the most economic deprivation are those living in single mother headed families and they have an increased chance of dropping out of school (Pong & Ju, 2000). A child's relationship with his or her parents can affect their chances of dropping out of high school. Factors that are associated with a child's relationship that negatively affect their chances of educational attainment are, the physical absence of adults in the household due to divorce, the limited amount of time parents and children spend together due to the rise in two earner families, and the corresponding parental inattention to children's activities such as monitoring school performance or instilling educational values (Lichter et. al., 1993). A child needs the attention of a parental figure. The less time that a child spends with his or her parents creates a gap in their relationship that could lead a child's attention towards a person of less nurturing and more deviant characteristics. Children of parents who are separated or divorced may be lacking the attention that is needed especially regarding their education (Lichter et al, 1993). Shonkoff and Garner (2012) notes that students whose families have high mobility, homelessness, hunger, food insecurity, parents who are in jail or absent, domestic violence; drug abuse are more likely to dropout in school. The changing nature of the family affects schooling access, (Edet & Ekegre, 2010).

Students whose parents monitor and regulate their activities, provide emotional support, encourage independent decision making and are generally more involved in their schooling are less likely to drop out of school (Russel, 2001). Bereavement amongst family members
and in particular parents often makes students more vulnerable to dropout, non-enrolment, late enrolment, or slow progress (Nyamukapa & Gregson, 2005). Orphan-hood often exacerbates financial constraints for poorer households and increases the demands for child labour and hence dropout and this is more pronounced in the era of HIV/AIDS (Hunter & May, 2003). Case & Ardington (2004) agree that bereavement amongst family members and in particular parents, often makes children more vulnerable to dropout, non-enrolment, late enrolment and slow progress.

Family size influences children’s schooling cycle greatly. In comparison to children with fewer siblings, children with more siblings tend to enroll in school later, repeat grades more often and dropout of school earlier. Consequently, with larger family size, the financial burden is greater; children are less likely to attend school and often dropout (Enyegue, Parfait and Eloundou, 2000). In a study in India, Chugh (2011) found that having a large number of siblings, children were associated with a 36 percent increase in the odds of dropping out of school, in comparison to the odds for smaller families. Theoretically, it is widely accepted that large family size in most developing countries constrain limited resources of households on child investment, health and education. According to Boyle (2004), the number of children within a household is important in many cases and is a significant determinant of access to education.

But research differs on the impact of household size on access and dropout. Some studies indicate that with large household sizes (and in particular the number of children) the financial burden or potential workload is greater; children are less likely to attend school, and often dropout. However, with more children in the household, jobs can be spread between them and siblings more likely to attend school. A child from a larger household might have a higher probability of attending school because work is spread over a large number of
household members (Rose & Al-Samarrai, 2001). The effect of family size is conditioned by the specific cultural, political and socioeconomic settings (Sudha, 1997).

Research indicates that the educational level of household members is particularly influential in determining whether and for how long children access schooling. Ersado (2005) notes that parental education is the most consistent determinant of student’s education. Higher parental (household head) level of education is associated with increased access to education, higher attendance rates and lower dropout rates (Ainsworth et al., 2005). A number of reasons are put forward for the link between parental education and retention in school. Some researchers indicate that non-educated parents cannot provide the support or often do not appreciate the benefits of schooling (Pryor & Ampiah, 2003). Brown (2002) research in China indicates that for each additional year of a father’s education, the probability of his child dropping out of school falls by 12-14 percent.

3.4 Summary of literature review

The empirical literature reviewed shows that there are several factors affecting school dropout. These range from child specific factors to household and community factors (or if you want group these into demand-side factors and supply-side factors which you can actually use as the two themes to organise your empirical review) factors influencing dropout of students. Among the factors identified in the literature include school based factors, economic factors, and family factors. This review was conducted in general for both boys and girls, considering that much of the available literature focuses on issues affecting the education of either the girl child or boy child alone. Studies by Ogeto (2008), Koech (2008), Wamahiu (1994), Obura (1991) among others focused on issues affecting the education of the girl child. Kashu (2006) did a study on access and retention of boys in Kajiado District, Kiarie (2010) did a study on influence of school based factors on participation of the boy
child in Mirangaine District, Kenya and Wamalwa (2011) did a study on institutional factors affecting levels of discipline of the boys in Dagoretti District, Kenya. A study examining the likelihood of a child dropping out of primary schools in Uganda was needed.
CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This chapter presents the methodological approaches and research techniques used in analysis.

4.2 Data Source

The study utilized the 2016/17 Uganda National Household Survey (UNHS) collected by the Uganda Bureau of Statistics (UBOS). The UNHS 2016/17 covered all the 112 districts in Uganda. Field data collection was spread over a 12-month period from June 2016 to June 2017 to take care of seasonality factors. A total of 7500 households scientifically selected countrywide were covered. The Survey was comprehensive and had four modules, namely; Socio-economic, Labour Force, Community and Price modules.

The 2016/17 UNHS sample was designed to allow for reliable estimation of key indicators at the national, rural-urban, regions levels and separately for 15 sub-regions\(^2\). A two-stage stratified sampling design was used. At the first stage, Enumeration Areas (EAs) were grouped by districts and rural-urban location, then drawn using Probability Proportional to Size (PPS). At the second stage, households which are the Ultimate Sampling Units were drawn using Systematic Random Sampling.

---

\(^2\) The sub-regions include; West Nile, Acholi, Karamoja, Lango, Bunyoro, Central 2, Teso, Busoga, Bukedi, Elgon, Kampala, Central 1, Tooro, Ankole and Kigezi
4.3 Variable definitions and descriptions

Table 3.1 presents a description of the variables used in the analysis. The dependent variable considered is dropout while the independent variables in the study are; age of the pupil, gender of the pupil, whether the child is an orphan, location (that is; urban or rural), region (either Central, Eastern, Eastern, and Northern), ownership status of the school, sex of the household head, household head’s highest level of education, and poverty status of the child.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout</td>
<td>Dummy</td>
<td>This is a binary variable taking on a value of 1 if a child aged 6-12 years was in school last school year but is not in school the current school year and has not completed primary school; and 0 otherwise.</td>
</tr>
<tr>
<td>Age</td>
<td>Continuous</td>
<td>This refers to the age of the pupil and should range between 6-12</td>
</tr>
<tr>
<td>Gender</td>
<td>Dummy</td>
<td>Refers to the gender of the pupil taking on values of “1” for male and “0” for female</td>
</tr>
<tr>
<td>Orphan</td>
<td>Dummy</td>
<td>Refers to whether a pupil is an orphan or not taking on values of “1” if the child lost at least one parent and “0” otherwise</td>
</tr>
<tr>
<td>Urban</td>
<td>Dummy</td>
<td>Refers to whether a pupil is located in the urban areas or not taking on values of “1” if the child’s location is in the urban areas and “0” otherwise</td>
</tr>
<tr>
<td>Region</td>
<td>Dummy</td>
<td>This is a regional variable taking on values of “1” for central, “2” for Eastern “3” for Northern and “4” for Western.</td>
</tr>
<tr>
<td>Ownership</td>
<td>Dummy</td>
<td>Refers to the ownership status of the school a pupil attends taking on values of “1” if the school is owned by the government and “2” if the school is privately owned”</td>
</tr>
<tr>
<td>Sex of household head</td>
<td>Dummy</td>
<td>Defined as the gender for the household head taking on values of “1” for male household heads and “0” for female household heads.</td>
</tr>
<tr>
<td>Household head education level</td>
<td>Dummy</td>
<td>Refers to the highest level of education for the household head taking on values of “0” for no education, “1” for primary level, “3” for secondary level, and “4” for post-secondary level.</td>
</tr>
<tr>
<td>Poverty status</td>
<td>Dummy</td>
<td>Refers to whether the child is from a poor household or not taking on values of “0” for poor and “1” for non-poor.</td>
</tr>
<tr>
<td>Totaleduc_exp</td>
<td>Continuous</td>
<td>Total household expenditure on education</td>
</tr>
</tbody>
</table>
4.4 Data analysis

The analysis was done using STATA 13.0 at two levels: First, a descriptive summary of variables was performed and then regression analysis was done. However, before any analysis, the data was cleaned in order to provide robust results. More specifically, consistency checks were done. The data was inspected to see whether we had any duplicates. At the same time variables to be used in the study were generated through various transformations and for any dummy variables, appropriate codes were generated.

4.5 The Estimation strategy

The binary outcome (the probability of being a school dropout) was analysed with logistic regressions. This is desirable because when testing for the probability of a binary outcome, a regression model based on ordinary least squares (OLS) causes a number of problems. For example; the problem that relates to its functional form. A linear probability regression model assumes that the level of change in the dependent variable is constant for all levels of the independent variables. However, when the dependent variable consists of a probability, it is very likely that the impact of the independent variables increases or decreases as the predicted probability approaches 0 or 1. Another problem of the linear probability model is that it presents heteroscedastic errors, which implies that the estimated coefficients are not efficient and the hypothesis tests and confidence intervals may not be valid. The logistic regression method does not assume a linear relationship between the dependent and independent variables and is therefore more appropriate.

Formally, the logistic regression equation is expressed as follows:

\[
\text{logit} \{P(Y = 1)\} = \text{logit} \{P_i\} = X_i \beta
\]  

(1)
Where \( \text{logit}[P_i] \) refers to the natural log odds that a child is considered a school dropout. \( X_i \) is a vector of the considered variables in the study to have an impact on school dropout. \( \beta \) is a vector of regression coefficients.

Exponentiating Equation (1) gives the odds of the \( i^{th} \) unit as:

\[
\text{odds} = \frac{P_i}{1-P_i} = \exp[X_i'\beta] 
\]

Solving for the probability \( p_i \) in the logit model in Equation (1) gives;

\[
P_i = \frac{\exp[X_i'\beta]}{1 + \exp[X_i'\beta]} = \Lambda(X_i'\beta)
\]

Where \( \Lambda \) indicates the cumulative distribution function of the logistic function and, thus, estimation of the logit model is done by maximum likelihood estimation.

In order to express the effect on the probability of increasing a predictor by one unit while holding the other variables constant derivatives with respect to \( x_i \) are taken. Using the quotient rule gives the marginal effects;

\[
\frac{\partial P_i}{\partial x_{ij}} = \beta_j P_i (1 - P_i) 
\]

Thus, the effect of the \( j \)-th predictor on the probability \( p_i \) depends on the coefficient \( \beta_j \) and the value of the probability.
CHAPTER FIVE

RESULTS AND DISCUSSION

5.1 Introduction

This chapter presents results on the factors associated with child school dropout in Uganda using cross tabulation, descriptive statistic’s, regression analysis. The chapter also includes the discussion of the results of the study.

5.2 Descriptive statistics of the variables

Table 4.2 presents the descriptive statistics that is; mean minimum (min), maximum (max), standard deviation (SD), Skewness and the total number of observations (N).

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout (1=Yes)</td>
<td>5.640e+06</td>
<td>0.0314</td>
<td>0</td>
<td>1</td>
<td>0.174</td>
<td>5.373</td>
</tr>
<tr>
<td>Age (in years)</td>
<td>5.640e+06</td>
<td>9.703</td>
<td>6</td>
<td>12</td>
<td>1.707</td>
<td>-0.268</td>
</tr>
<tr>
<td>Gender (0=Female)</td>
<td>5.640e+06</td>
<td>0.508</td>
<td>0</td>
<td>1</td>
<td>0.500</td>
<td>-0.0331</td>
</tr>
<tr>
<td>Gender (1=Male)</td>
<td>5.640e+06</td>
<td>0.492</td>
<td>0</td>
<td>1</td>
<td>0.500</td>
<td>0.0331</td>
</tr>
<tr>
<td>Orphan (0=No)</td>
<td>5.640e+06</td>
<td>0.870</td>
<td>0</td>
<td>1</td>
<td>0.336</td>
<td>-2.199</td>
</tr>
<tr>
<td>Orphan (1=Yes)</td>
<td>5.640e+06</td>
<td>0.130</td>
<td>0</td>
<td>1</td>
<td>0.336</td>
<td>2.199</td>
</tr>
<tr>
<td>Urban (0=Rural)</td>
<td>5.640e+06</td>
<td>0.760</td>
<td>0</td>
<td>1</td>
<td>0.427</td>
<td>-1.220</td>
</tr>
<tr>
<td>Urban (1=Urban)</td>
<td>5.640e+06</td>
<td>0.240</td>
<td>0</td>
<td>1</td>
<td>0.427</td>
<td>1.220</td>
</tr>
<tr>
<td>Region (1=Central)</td>
<td>5.640e+06</td>
<td>0.277</td>
<td>0</td>
<td>1</td>
<td>0.447</td>
<td>0.997</td>
</tr>
<tr>
<td>Region (2=Eastern)</td>
<td>5.640e+06</td>
<td>0.287</td>
<td>0</td>
<td>1</td>
<td>0.452</td>
<td>0.941</td>
</tr>
<tr>
<td>Region (3=Northern)</td>
<td>5.640e+06</td>
<td>0.193</td>
<td>0</td>
<td>1</td>
<td>0.395</td>
<td>1.555</td>
</tr>
<tr>
<td>Region (4=Western)</td>
<td>5.640e+06</td>
<td>0.243</td>
<td>0</td>
<td>1</td>
<td>0.429</td>
<td>1.199</td>
</tr>
<tr>
<td>Ownership (1=Government)</td>
<td>5.640e+06</td>
<td>0.590</td>
<td>0</td>
<td>1</td>
<td>0.492</td>
<td>-0.365</td>
</tr>
<tr>
<td>Ownership (2=Private)</td>
<td>5.640e+06</td>
<td>0.410</td>
<td>0</td>
<td>1</td>
<td>0.492</td>
<td>0.365</td>
</tr>
<tr>
<td>Sex of household head (0=Female)</td>
<td>5.640e+06</td>
<td>0.304</td>
<td>0</td>
<td>1</td>
<td>0.460</td>
<td>0.854</td>
</tr>
<tr>
<td>Sex of household head (1=Male)</td>
<td>5.640e+06</td>
<td>0.696</td>
<td>0</td>
<td>1</td>
<td>0.460</td>
<td>-0.854</td>
</tr>
<tr>
<td>HH education level (0=No education)</td>
<td>5.640e+06</td>
<td>0.119</td>
<td>0</td>
<td>1</td>
<td>0.324</td>
<td>2.350</td>
</tr>
<tr>
<td>HH education level (1=Primary)</td>
<td>5.640e+06</td>
<td>0.572</td>
<td>0</td>
<td>1</td>
<td>0.495</td>
<td>-0.290</td>
</tr>
<tr>
<td>HH education level (3=Secondary)</td>
<td>5.640e+06</td>
<td>0.240</td>
<td>0</td>
<td>1</td>
<td>0.427</td>
<td>1.215</td>
</tr>
<tr>
<td>HH education level (4=Post-Secondary)</td>
<td>5.640e+06</td>
<td>0.0686</td>
<td>0</td>
<td>1</td>
<td>0.253</td>
<td>3.412</td>
</tr>
<tr>
<td>Poor_16 (0=Non-poor)</td>
<td>5.640e+06</td>
<td>0.780</td>
<td>0</td>
<td>1</td>
<td>0.414</td>
<td>-1.355</td>
</tr>
<tr>
<td>Poor_16 (1=Poor)</td>
<td>5.640e+06</td>
<td>0.220</td>
<td>0</td>
<td>1</td>
<td>0.414</td>
<td>1.355</td>
</tr>
<tr>
<td>Total educ exp</td>
<td>5.496e+06</td>
<td>11.53</td>
<td>5.704</td>
<td>15.74</td>
<td>1.302</td>
<td>0.157</td>
</tr>
</tbody>
</table>

Source: Author’s computations based on UNHS 2016/17.
Note: The data has been weighted so N is the population of children aged 6-12.
From table 4.2, a proportion of 3.14 percent of the children had dropped out of school (that is; were in school in the last school year but not in school the current school year). In addition, the average age of children considered in the sample was 10 years with minimum age being 6 years while the maximum age was 12 years. Regarding gender, 51 percent of the children were female while male children accounted for 49 percent. Majority of the children were not orphans (that is; 87 percent) and likewise the highest proportion of children were from rural areas accounting for 76 percent while those from urban areas covered a fraction of 24 percent. Descriptive statistics further reveal that 28 percent of the respondents were from the central region while those from the Eastern, Northern, and Western region accounted for 29, 19.3 and 24.3 percent respectively.

In reference to the ownership status of the schools were children studied, table 4.2 shows that 59 percent of the children were from government owned schools while 41 percent of the pupils had attended private owned schools. The highest proportion of children were from households headed by male respondents (that is; 70 percent) while those children from female headed households accounted for 30.4 percent. Summary statistics further show that majority of the household heads had their highest level of education as primary at 57 percent while those with no education at all stood at 12 percent. Household heads with the highest level of education as secondary and post-secondary accounted for 24 and 6.86 percent respectively. Table 4.2 further reveals that the highest proportion of children was from non-poor households, at 78 percent while those from poor households took a fraction of 22 percent.

5.3 Pairwise Correlation among the variables

Table 4.3 presents correlation coefficient results for the variables used in the study. A brief discussion is on the correlations or relationships between the dependent variable dropout and
other independent variables are presented in this section. The stars imply that the relationship between the respective variables is significant at 5 percent.
Table 5.3: Pairwise Correlation Matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout (1=Yes)</td>
<td>1.00</td>
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<tr>
<td>Age (in years)</td>
<td>0.18*</td>
<td>1.00</td>
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<tr>
<td>Gender (0=Female)</td>
<td>0.03*</td>
<td>-0.02*</td>
<td>1.00</td>
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<tr>
<td>Gender (1=Male)</td>
<td>-0.03*</td>
<td>0.02*</td>
<td>-1</td>
<td>1.00</td>
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<tr>
<td>Orphan (0=No)</td>
<td>-0.00*</td>
<td>-0.05*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>1.00</td>
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<tr>
<td>Orphan (1=Yes)</td>
<td>0.00*</td>
<td>0.05*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>-1.00*</td>
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<tr>
<td>Urban (0=Rural)</td>
<td>-0.10*</td>
<td>0.06*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>1.00</td>
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<tr>
<td>Urban (1=Urban)</td>
<td>0.10*</td>
<td>-0.06*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>-1.00*</td>
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<tr>
<td>Region (1=Central)</td>
<td>0.10*</td>
<td>-0.02*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>0.05*</td>
<td>-0.05*</td>
<td>-0.27*</td>
<td>0.27*</td>
<td>1.00</td>
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<tr>
<td>Region (2=Eastern)</td>
<td>-0.04*</td>
<td>-0.01*</td>
<td>0.02*</td>
<td>-0.02*</td>
<td>0.03*</td>
<td>-0.03*</td>
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<tr>
<td>Region (3=Northern)</td>
<td>-0.05*</td>
<td>0.02*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>-0.06*</td>
<td>0.06*</td>
<td>-0.06*</td>
<td>-0.30*</td>
<td>-0.31*</td>
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</tr>
<tr>
<td>Ownership (1=Government)</td>
<td>-0.08*</td>
<td>0.08*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>-0.07*</td>
<td>0.07*</td>
<td>0.19*</td>
<td>-0.19*</td>
<td>-0.35*</td>
<td>0.15*</td>
<td>0.26*</td>
<td>-0.02*</td>
<td>1.00</td>
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</tr>
<tr>
<td>Ownership (2=Private)</td>
<td>0.08*</td>
<td>-0.08*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>0.07*</td>
<td>-0.07*</td>
<td>-0.19*</td>
<td>0.19*</td>
<td>0.35*</td>
<td>-0.15*</td>
<td>-0.26*</td>
<td>0.02*</td>
<td>-1.00</td>
<td>1.00</td>
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</tr>
<tr>
<td>Sex of hh (0=Female)</td>
<td>0.01*</td>
<td>0.01*</td>
<td>0.00*</td>
<td>-0.00*</td>
<td>-0.26*</td>
<td>0.26*</td>
<td>-0.04*</td>
<td>0.04*</td>
<td>0.04*</td>
<td>-0.04*</td>
<td>0.02*</td>
<td>-0.02*</td>
<td>0.02*</td>
<td>0.02*</td>
<td>-0.02*</td>
<td>1.00</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sex of hh (1=Male)</td>
<td>-0.01*</td>
<td>-0.01*</td>
<td>-0.00*</td>
<td>0.00*</td>
<td>0.23*</td>
<td>-0.26*</td>
<td>0.04*</td>
<td>-0.04*</td>
<td>-0.04*</td>
<td>0.04*</td>
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<td>0.03*</td>
<td>0.01*</td>
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<td>-0.07*</td>
<td>-0.02*</td>
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<td>0.06*</td>
<td>0.04*</td>
<td>0.04*</td>
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<td>-0.21*</td>
<td>1.00</td>
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<td></td>
<td></td>
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<tr>
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<td>0.05*</td>
<td>-0.01*</td>
<td>0.02*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>0.21*</td>
<td>-0.21*</td>
<td>-0.14*</td>
<td>0.10*</td>
<td>0.03*</td>
<td>0.02*</td>
<td>0.14*</td>
<td>-0.14*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>-0.43*</td>
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<td></td>
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</tr>
<tr>
<td>HH educlevel (3=Secondary)</td>
<td>0.03*</td>
<td>-0.06*</td>
<td>0.03*</td>
<td>-0.03*</td>
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<td>-0.08*</td>
<td>-0.18*</td>
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<td>-0.04*</td>
<td>-0.02*</td>
<td>-0.08*</td>
<td>-0.12*</td>
<td>0.12*</td>
<td>-0.11*</td>
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<td></td>
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</tr>
<tr>
<td>HH educlevel (4=Post-Secondary)</td>
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<td>-0.01*</td>
<td>0.01*</td>
<td>0.04*</td>
<td>-0.04*</td>
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<td>0.19*</td>
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<td>-0.06*</td>
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</tr>
<tr>
<td>Poor_16 (0=Non-poor)</td>
<td>0.07*</td>
<td>-0.03*</td>
<td>0.04*</td>
<td>-0.04*</td>
<td>0.02*</td>
<td>-0.02*</td>
<td>-0.16*</td>
<td>0.16*</td>
<td>0.20*</td>
<td>-0.26*</td>
<td>-0.09*</td>
<td>0.15*</td>
<td>-0.24*</td>
<td>0.24*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>-0.09*</td>
<td>-0.12*</td>
<td>0.13*</td>
<td>0.12*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor_16 (1=Poor)</td>
<td>-0.07*</td>
<td>0.03*</td>
<td>-0.04*</td>
<td>0.04*</td>
<td>-0.02*</td>
<td>0.02*</td>
<td>0.16*</td>
<td>-0.16*</td>
<td>0.20*</td>
<td>0.26*</td>
<td>0.09*</td>
<td>-0.15*</td>
<td>0.24*</td>
<td>-0.24*</td>
<td>-0.01*</td>
<td>0.01*</td>
<td>0.09*</td>
<td>0.12*</td>
<td>-0.13*</td>
<td>-0.12*</td>
<td>-1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Total educ exp</td>
<td>0.20*</td>
<td>0.03*</td>
<td>0.01*</td>
<td>-0.01*</td>
<td>0.06*</td>
<td>-0.06*</td>
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<td>0.41*</td>
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<td>-0.29*</td>
<td>-0.26*</td>
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<td>-0.64*</td>
<td>0.64*</td>
<td>-0.02*</td>
<td>0.02*</td>
<td>-0.10*</td>
<td>-0.27*</td>
<td>0.22*</td>
<td>0.28*</td>
<td>0.39*</td>
<td>-0.39*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Source: Author’s own calculation based on UNSH 2016/17
It is highlighted in the table that the relationship between dropout and the age of the child is positive and weakly significant (the coefficient is below 0.5). Similarly, the relationship between dropout and variables like being an orphan, staying in the urban areas, attending school in a private owned school and coming from a poor and a female headed household is positively and weakly significant at 5 percent. On the other hand, coefficients in table 4.3 indicate a negative weak relationship between the dependent variable dropout and variables like; the gender of the child (specifically being male), not being an orphan, region (that is; Eastern, Northern and Western), attending a government owned school, and originating from a male headed household.

Still from table 4.3, the coefficients for the different correlations between the considered independent variables are all below 0.8 which at a glance implies that the independent variables are not related to one another, hence there are no issues of multi-collinearity.

5.5 Estimation Results

This section presents the empirical findings from the logistic model estimations that were earlier on specified in chapter 3. From the table 4.5, three models are mainly presents where the first column stands for the overall model for the determinants of school dropout in Uganda. The other two super columns are models covering differences in the factors explaining school dropout between ownership status of the school (that is; whether private or government owned) and differences across the location of the school, that is schools in urban areas versus those in rural areas. In all the models we control for heteroskedasticity while running robust standard errors.

The results in table 4.5 reveal that the ownership status of the school has a negative and a statistically significant effect on being a school dropout. The estimated marginal effects
Imply that being in a privately owned school reduces the probability of being a school dropout by 1.26 percentage points compared to being in a government owned school.

Table 5.5 Regression analysis for the determinants of school dropout in Uganda

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>General model (1)</th>
<th>Ownership Model (2)</th>
<th>Location Model (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Government Private</td>
<td>Rural Urban</td>
</tr>
<tr>
<td>Ownership (2=Private)</td>
<td>-0.0126***</td>
<td>0.0109***</td>
<td>-0.0017***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Urban (1=Urban)</td>
<td>0.0070***</td>
<td>0.0034***</td>
<td>-0.0490***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0003)</td>
<td>(0.0005)</td>
</tr>
<tr>
<td>Age</td>
<td>0.0254***</td>
<td>0.0397***</td>
<td>0.0156***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0003)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Gender (1=Male)</td>
<td>-0.0120***</td>
<td>-0.0223***</td>
<td>-0.013***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0002)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Orphan (1=Yes)</td>
<td>0.0007***</td>
<td>-0.0056***</td>
<td>0.0057***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0004)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Region (2=Eastern)</td>
<td>0.0027***</td>
<td>0.0127***</td>
<td>-0.0019***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0004)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Region (3=Northern)</td>
<td>-0.0104***</td>
<td>-0.0293***</td>
<td>0.0004</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0007)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Region (4=Western)</td>
<td>-0.0056***</td>
<td>-0.0114***</td>
<td>-0.0023***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0004)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Sex of household head (1=Male)</td>
<td>-0.0066***</td>
<td>0.0190***</td>
<td>-0.0044***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0003)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>HH Education Level (1=Primary)</td>
<td>-0.0004***</td>
<td>-0.0069***</td>
<td>0.0038***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0005)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>HH Education Level (3=Secondary)</td>
<td>0.0022***</td>
<td>0.0000</td>
<td>0.0081***</td>
</tr>
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<td>(0.0003)</td>
<td>(0.0005)</td>
<td>(0.0003)</td>
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<tr>
<td>HH Education Level (4=Post-Sec)</td>
<td>0.0004</td>
<td>0.0012***</td>
<td>-0.0021***</td>
</tr>
<tr>
<td></td>
<td>(0.0003)</td>
<td>(0.0005)</td>
<td>(0.0004)</td>
</tr>
<tr>
<td>Poor_16 (1=Non-poor)</td>
<td>-0.0061***</td>
<td>-0.0301***</td>
<td>0.0007***</td>
</tr>
<tr>
<td></td>
<td>(0.0003)</td>
<td>(0.0008)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Total Expenditure on education</td>
<td>0.0256***</td>
<td>0.0345***</td>
<td>0.0183***</td>
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<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0002)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Observations</td>
<td>5,495,751</td>
<td>2,231,683</td>
<td>4,177,714</td>
</tr>
</tbody>
</table>

Note: 1) Marginal Effects are reported
2) Level of Significance *** p<0.01, ** p<0.05, * p<0.1
3) Robust standard errors in parenthesis

Source: Author’s own calculation

The results further show a positive and statistically significant effect of location of the school and being a school dropout. Precisely, being in a school located in the urban areas increases the probability of being a school dropout by 0.7 percentage points compared to attending school in rural areas. Age of the child has a positive and statistically significant effect on being a school dropout. The estimated marginal effects imply that for a one unit increase in age of the child, the probability of being a school dropout increases by 2.54 percentage points.
In addition, the findings show that gender of the child has a negative and statistically significant effect on being a school dropout. This result implies that being a male pupil reduces the chances of being a school dropout by 1.2 percentage points in comparison to being a female pupil. Likewise, the estimated marginal coefficient on orphan reveals that being an orphan increases the likelihood of being a school dropout by 0.07 percentage points as compared to not being an orphan. With regards to region, that results show that being a pupil in the Eastern region increases the probability of being a school dropout by 0.27 percentage points as compared to being a pupil in the central region. On the other hand, the estimated marginal effects reveal that being a pupil in the Northern part of country reduces the probability of being a school dropout by 1.04 percentage points compared to being a pupil in the central region. Likewise, being a pupil in the western region reduces the likelihood of being a school dropout by 0.56 percentage points as compared to being a student in the Central region.

The results showing the effect of the highest education level of the household head on school dropout are rather surprising where the estimated marginal effects show that being a pupil from a household with the head having the highest level of education as primary reduces the probability of being a school dropout by 0.04 percentage points as compared to being a pupil from a household with the head having no education at all. On the contrary, the results show that being a pupil from a household with a head having the highest level of education as secondary increases the likelihood of being a school dropout by 0.22 percentage points in comparison to being a pupil from a household with a head having no education at all. Regarding the poverty status of the pupils, the findings reveal a negative statistically significant relationship on being a school dropout. From the table 4.4, the estimated marginal effects reveal that coming from a non-poor household reduces the probability of being a school dropout by 0.61 percentage points as compared to coming from a poor household.
Table 4.4 further captures the determinants of school dropout while comparing across the ownership status of the school (that is government or privately owned) as well as the location of the school, that is whether the school is located in the rural or urban areas.

Under model (2) where comparison is made across the ownership status, the results reveal that being in a government owned school which is located in the urban areas is associated with a higher probability of being a school dropout (that is, 1.09 percentage points) as compared to being in a privately owned school which is located in the urban areas whose associated probability of being a school dropout increases by only 0.34 percentage points. Similarly, while looking at the marginal effects of age, the results highlight that a unit increase in the age of a pupil by one year who is in a privately own school is associated with a higher increased likelihood of being a school dropout by 3.97 percentage point as compared to the effect of a unit increase in the age of a pupil who is in a government owned school whose probability of being a school dropout increases by only 1.5 percentage points.

While comparing across gender and ownership status of the school, the estimated marginal effects show that being a male pupil attending a privately owned school has a much higher reduced probability of being a school dropout (that is by 2.23 percentage points) as compared to being a male pupil in a government owned school whose probability of being a school dropout reduces by only 0.44 percentage points. From table 4.4 in model (2), the results show that being an orphan while attending a government owned school increases the probability of being a school dropout by 0.29 percentage points while being an orphan and at the same time attending a privately owned school reduces the likelihood of being a school dropout by 0.56 percentage points.

In reference to the regions, the estimated marginal effects in model (2) reveal that being the eastern region and at the same time attending a government owned school reduces the
probability of being a school dropout by 0.11 percentage points while being in the Eastern region and at the same time attending a privately owned school increases the likelihood of being a school dropout by 1.27 percentage points. The results in model (2) further reveal that being in the Northern region and at the same time attending a privately owned school has a much higher reduced probability of being a school dropout (that is, 2.93 percentage points) as compared to being in the Northern region and at the same time attending a government owned school whose associated probability of being a school dropout reduces by only 0.39 percentage points. Likewise, attending a privately owned school which is located in the Western region is attached with higher reduced probability of being a school dropout (that is; 1.14 percentage points) as compared to being in a government owned school located in the Western region whose probability of being a school dropout reduces by only 0.3 percentage points.

The results in model (2) further reveal that being a pupil from a male headed household and at the same time attending a privately owned school reduces the probability of being a school dropout by 1.9 percentage points while on the other hand, being a pupil from a male headed household and at the same time attending a government owned school increases the probability of being a school dropout by 0.21 percentage points. While comparing across education levels of the household heads, the estimated marginal effects in model (2) show that being a pupil from a household with the head having the highest level of education as primary and at the same time attending a privately owned school reduces the probability of being a school dropout by 0.69 percentage points. On the other hand, being a pupil from a household with the head having primary as the highest level of education and at the same time attending a government owned school increases the likelihood of being a school dropout by 0.3 percentage points.
Furthermore, results in model (2) show that being a pupil from a non-poor household and at the same time attending a privately owned school reduces the probability of being a school dropout by 3.01 percentage points while in contrast being a pupil from a non-poor household and at the same time attending a government owned school increases the likelihood of being a school dropout 0.13 percentage points.

5.6 Discussion of Results

From the study findings, it was established that attending a privately owned school is associated with a reduced probability of being a school drop. A plausible explanation for this finding may be that over time, there has been an increase in the number of private schools which are better established and enduring in nature as compared to government owned schools in most cases inefficient. In addition, such private schools are often of high quality hence tending to retain pupils in comparison to government owned schools which are often of low quality. This finding is in line with findings from Hanushek et al. (2008). The results further established that being a male pupil reduces the probability of being a school dropout. This may be the case where many females are caught up with a number of traditional socio norms that prevent them from completing school as well as other household responsibilities unlike their male counter parts. This finding is in line with findings from Siddhu (2011); Hanushek al. (2008); Suryadarma et al. (2006) and Connelly and Zheng (2003).

The results indicate that a pupil being an orphan increases his/her likelihood of being a dropout. This finding is in agreement with results from Chuong & Operario (2012) and may imply that children who are orphans are more likely not be in position of affording to stay in school as the cost of education is high and in most cases they have nobody to provide for them the required school material and even when in the presence of care takers, they may not care so much about education. On the other hand, their counterparts who are not orphans since the assumption is that their parents are able to afford the cost of education. Likewise,
results reveal that children from poor households are more likely to drop out of school as compared to their counterparts from non-poor households. This finding is in line with results from Okumu et al. (2008) and as expected this result implies that children from non-poor households are able to afford the cost of education until the level of completion while the children from poor households are not able to afford school materials and therefore might opt out of school to go look for money themselves.

Furthermore, the results reveal that children from households with heads having their highest level of education as primary are less likely to drop out of school compared to those from households with heads having no education at all. This result may imply that educated household heads are more effective in helping their children in academic work and are able to monitor and supervise their children’s academic progress. Also, the academic attainment of household heads enhances a positive attitudinal change towards children’s education. This finding is in agreement with findings from Okumu et al. (2008); Siddhu (2011); and Hanushek et al. (2008).

Findings further reveal that a unit increase in the age of a pupil is associated with an increased likelihood of a pupil becoming a dropout. A possible explanation for this finding is that as the age of the child increases, some children especially the females tend to feel so grown up and ready for marriage and so choose to drop out of school and prioritize marriage. Some parents take their children, more specifically girls as a source of income inform of bride wealth so they marry them off having attained a certain age.

5.7 Conclusion

Overall, the research findings reveal that the main determinants of school drop in Uganda are; the ownership status of the school, location of the school (that is whether in the urban or rural areas), the gender of the pupil, whether or not a pupil is an orphan, the region of the pupil
(that is Central, Eastern, Northern, and the Western), the sex and highest level of education of the household head, the poverty status and the total education experience of the pupil.
CHAPTER SIX

CONCLUSION AND POLICY RECOMMENDATIONS

6.0 Introduction

This chapter summarizes the present research and gives policy recommendations based on the findings. The chapter contains three sections; section 5.1 presents the summary of the study; policy recommendations are given in section 5.2 while section 5.3 gives recommendations for future research.

6.1 Conclusion

The major aim of this research was to contribute to the existing body of literature on the determinants of school dropouts for children aged 6 to 12 years in Uganda and also guide in the effective design and implementation of micro-level policies targeting increased child retention in school. With dropout as the main dependent variable, the research sought to explore the effect of child characteristics (like age, whether or not a child is an orphan and gender), household characteristics (like sex of the household head, highest education level of the household head, poverty status) and community characteristics (like the region and location “urban or rural”) on the likelihood of a child of school-going age dropping out of school.

While using the UNHS data for 2016/2017, this study applied a logistic model estimation strategy to address the main research objective. The research findings reveal that the main determinants of school drop in Uganda are; the ownership status of the school, location of the school (that is whether in the urban or rural areas), the gender of the pupil, whether or not a pupil is an orphan, the region of the pupil (that is Central, Eastern, Northern, and the
Western), the sex and highest level of education of the household head, the poverty status and the total education experience of the pupil.

6.2 Policy Recommendations

The research findings provide new insights that are critical for appropriate policy formulation both at school and government level to support increased retention of children in schools or reduce child school dropouts. Based on the study findings, there is a need for policies focusing on government owned schools as the results show that they exhibit high dropout rates. Such policies may entail increased government investments into public schools with the view of improving quality or any other obstacle causing the high dropout rate.

Policies targeted towards the reduction of the cost of education in order to cater for the poor and the orphans are required. This may also entail policies and programmes aimed at enhancing productive capacities at household levels to help mitigate the problem of high dropouts that comes with high household poverty levels. In line with this recommendation, the government through its UPE program should ensure that education is completely free unlike the current situation where parents or children have to pay a certain amount towards education even when the child is under UPE.

There is a need for education policies and programmes that are gender mainstreamed with special attention for the female students in order to reduce on their dropout rates. This may call for programs that must be designed to reach girls and their families early to increase incentives for ensuring their timely progression through school.

The findings also call for policies that cover adult education in order to rule out increased school dropouts that come as a result of an increase in the age of the pupil. There is a need for retention educational policies that mainly target specific regions in the country with high dropout rates for example in the Eastern region.
6.3 Further areas of research

The data used could only allow us to study factors associated with school dropout at the household and community level but not at school level. Critical issues like latrines, books, teacher absenteeism, school management committees, among others; have not been included yet they can cause drop out. Therefore, future research could incorporate such issues.

Furthermore, future studies should examine the underlying reasons for high dropout rates in government owned schools and why dropout rates vary across different regions in the country. This will necessitate a regional comparative study on school dropout among pupils in primary school in Uganda. In addition, a qualitative study on the parents of children who have dropped out of school and children themselves would be highly appreciative as it would expose the causes of school dropout in Uganda.
REFERENCES


UN Declaration on the Right to Development (1986) New York, 4 December 1986


Global Education Digest 2012, 22.11.2012 issue UNESCO press

Suzuki, I. (2002) 'Parental Participation and Accountability in Primary Schools in Uganda'.