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**Does Orphan Status Affect Primary School Attendance?
An Analysis of Household Survey Data from Uganda**

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Introduction

The continent of Africa is currently experiencing two major interrelated social challenges: rising poverty rates and the HIV/AIDS crisis. There is a growing awareness among governments and NGOs alike, that AIDS is a major source of social and economic instability and therefore deserves serious consideration in the design of development policies. One of the outcomes of this epidemic is the growing number of AIDS-orphans. UNICEF Statistics reports that Sub-Saharan Africa is the only region in the world where the number of orphans has more than doubled since 1990. Africa is home to almost 11 million orphans, many from households where at least one parent has died from AIDS (UNICEF, 2003). According to UNICEF, over 80% of AIDS-orphans are raised by extended families. Grogan (2004) states that according to UNAIDS, UNICEF and USAID, orphans of primary school age are at a higher risk of living on the streets. This reality and the shifts in the structure of households due to the loss of one or both parents, can have adverse effects on orphans' access to education, healthcare, and other public and private goods and services.

In this paper, we analyze the factors that affect primary school enrollment in Uganda. Our primary objective is to test the hypothesis that the enrollment of orphans differs from that of non-orphans. The social and economic circumstances of households tend to differ by location, so we focus on differences in enrollment in rural versus urban areas. Differences in the enrollment of orphans is expected because of different social and economic structures that provide sustenance to orphans in rural and urban areas. Households are likely to employ different risk coping mechanisms which can, in turn, affect their decision to enroll a child in school. Assessment of rural-urban differences in

the vulnerability of orphans can help governments decide whether or not geographically targeted policies are in order.

Previous Research

According to Deininger, Garcia and Subbarao (2003), little research has been done on the impact of AIDS on surviving children and remaining family members. They note that earlier studies reveal that foster children are at a disadvantage when it comes to accessing health care services and education. This conclusion was supported by Case, Paxson and Ableidinger (2004) who conducted a study with data from eight sub-Saharan countries¹ and found a significant difference in school enrollment between orphans and non-orphans. They found enrollment differences within households where orphans lived with non-orphans, indicating intra-household discrimination toward the orphans. On the other hand, Ainsworth and Filmer (2002) found that in the majority of the cases they studied², the difference in school enrollment between orphans and non-orphans is overshadowed by the differences in enrollment between poor and non-poor children, however results were country specific.

In a recent paper using panel data that spanned almost five years from Busia district in Kenya, Evans and Miguel (2005) found that the death of a parent lowered school enrollment rates. One of the strengths of this study is that they were able to monitor a child before and after the death of a parent to more accurately observe impacts of parental death on the child. One shortcoming of their study is lack of information on household income, and their findings might be biased because they did not account for

¹ This study included Kenya, Malawi, Mozambique, Namibia, Tanzania, Uganda, Zambia and Zimbabwe. Two west African countries with lower HIV rates, Ghana and Niger, were added for comparison.

² This study included 28 developing countries in Africa, Latin America, the Caribbean and Asia.

this variable. As indicated by Ainsworth and Filmer (2002), household income might overshadow orphanhood in its effect on school enrollment. Income is potentially important because of expenses associated with enrolling a child in school. Expenses include not only school fees but also transportation costs, uniforms, school supplies, and the opportunity cost of sending a child to school. The latter cost may outweigh the perceived returns to schooling, especially in low-income households.

Some previous studies of school enrollment of orphans used countrywide data (Ainsworth and Filmer, 2002; Deininger, Garcia and Subbarao, 2003) while others used data for specific villages or communities (Evans and Miguel, 2005). Most studies fail to account for heterogeneity within countries by separating urban and rural households.

Conceptual Framework

Education is a service whose consumption requires the household to expend resources. It is therefore reasonable to draw ideas from the theory of consumer demand in microeconomics in explaining school enrollment. We posit that primary school enrollment is a function of money cost, opportunity cost, household income, parental preferences, demographic characteristics, and geographic location. Price and income are universally included in consumer demand studies. The price of education includes school fees, costs of uniforms and school supplies, transportation costs, and opportunity cost. In sub-Saharan Africa, children often play a vital role in household production and informal sector activities, so the opportunity cost of school attendance can be substantial. It seems reasonable to assume that education is a normal good and therefore demand should increase as household income increases. Consumer preferentials, which in

microeconomic theory are generally considered to be exogenous and to differ across categories of consumers, are likely to affect the demand for education, just as they do for other goods and services. In the absence of survey data on parental preferences regarding school enrollment, we assume that the level of education of the parents is a useful proxy for parental preferences regarding education of their children. Household preferences for schooling may also be influenced by whether the child is an offspring of the household head or an orphan. We regard age of the children, gender of the child, gender of the head of household, and location (rural versus urban and major geographical regions) to be potential shifters of the demand for education.

Data

The dataset used in testing hypotheses about primary school enrollment is from the 2002/2003 Uganda National Household Survey. The survey, consisting of a sample of 9,711 households, covered the entire country except one district excluded because of civil unrest. The survey provides information on socio-economic characteristics, labor force characteristics, and economic activities of households including informal sector activities, and community characteristics. In our study, we utilize the sub-sample of households with children in the 6-12 age bracket. The number of children of this age in the survey is 5,497.

Empirical Analysis

We estimated the probability of a child attending school using the following multivariate probit model:

$$P(y=1) = \beta_0 + \beta_1 \text{Dist}_i + \beta_2 \text{Age}_i + \beta_3 \text{Age}_i^2 + \beta_4 \text{EDHD}_{ij} + \beta_5 \text{EDSP}_{ij} + \beta_6 \text{Gender}_i + \beta_7 \text{HDGender}_i + \beta_8 \text{Loginc}_i + \beta_9 \text{HHsize}_i + \beta_{10} \text{HHsize}_i^2 + \beta_{11} \text{Wkhrs}_i + \beta_{12} \text{Orphan}_i + \beta_{13} \text{Ownchild}_i + \beta_{14} \text{D}_{i2} + \beta_{15} \text{D}_{i3} + \beta_{16} \text{D}_{i4} + \varepsilon_i$$

where Dist_i = distance of the school from the center of the village in kilometers

Age_i = age of the child

EDHD_{ij} = educational attainment of household head (dummy variable: 1=yes, 0=no; j=1 for some primary schooling, j=2 for full primary schooling and j=3 for post-primary schooling)

EDSP_{ij} = educational attainment of spouse of household head (dummy variable: 1=yes, 0=no; j=1 for some primary schooling, j=2 for full primary schooling and j=3 for post-primary schooling)

Gender_i = child's gender (1=female, 0=male)

HDGender_i = gender of household head (1=female, 0=male)

Loginc_i = log of household consumption per capita in US dollars³

HHsize_i = number of members of the household

Wkhrs_i = hours that child works on a typical day

Orphan_i = child is an orphan (1=yes, 0=no)

Ownchild_i = child is the son or daughter of household head

D_i = regional dummies (1=Central region, 2=Eastern region, 3=Northern region, 4=Western region)

$\varepsilon_i \sim N(0, \sigma^2)$ = Normally distributed error term with mean 0 and variance σ^2

³ We converted Uganda shillings to U.S. dollars at the exchange rate of 1800 shillings to 1 U.S. dollar.

We analyze the probability of primary school enrollment, measured by school attendance per household for children ages 6 through 12. Uganda is an interesting case study because of the Universal Primary Education (UPE) policy introduced in 1997 in which the government of Uganda eliminated primary school fees. This policy was implemented as part of the United Nations' Millennium Development Goals which aims to provide equal access to education and ensure that every child completes primary school (Grogan, 2004). In Uganda, however, households must still pay the cost of school uniforms and personal school supplies, but UPE lowered the money cost of school attendance significantly. We expect income per capita to have a positive effect on probability of school attendance.

The variables for age, own child, education of both the household head and the spouse are expected to have a positive impact on the probability to attend school while the distance to the school, household size, work hours and orphan-hood should have a negative impact. The gender of the both the child and the household head, are expected to be negative. In many African traditions, females are less likely to attend school since they are expected to undertake most of the household duties (Ainsworth and Filmer, 2002). Previous studies suggest that African families may invest more in their sons with the expectation of higher returns. Female headed households typically have less wealth and face social discrimination, and therefore children in these households may be less likely to attend school. Ainsworth and Filmer (2002) found that although results varied by country, the majority of them indicated that there are clear gender differences in school enrollment rates.

There are four major geographical regions in Uganda: Central, East, North, and West. The North suffers from poor infrastructure and twenty years of civil unrest, and children there are expected to have the lowest probability of school enrollment. The Central region, because it contains the capital city of Kampala, has the highest standard of living and children there are expected to have the highest probability of enrollment.

In Table 1, we present results for a nationwide model in which the official definition of orphan-hood is used⁴. We find that distance to the primary school, age of the child, educational attainment of the head's spouse at all three levels as well as education attainment of the head at the secondary and tertiary levels are highly significant and yield the expected signs in all cases. The only significant regional dummy indicates that children in the Northern region are less likely to attend school than those in the Central (default) region. Orphanhood is not statistically significant when either the official definition (one parent deceased) or a more restrictive definition (both parents deceased) is used. The rural-urban intercept shifter (dummy variable) is not statistically significant. Still, however, rural versus urban location could affect the way that individual independent variables influence enrollment.

After performing a Chow test, we reject the null hypothesis that the rural and urban regressions are equivalent. We therefore ran separate rural and urban regressions in which we find important differences in the results as expected. In the urban model (Table 2), distance to the primary school, age of the child and the tertiary level of education of both the spouse and household head are significant and yield the expected signs. These results also indicate that orphans who lost both parents are substantially less likely to

⁴ An orphan is officially defined in Uganda as a person below the age of 18 who has lost one or both parents.

attend school while the loss of only one parent is not significant in explaining school attendance. All three regional dummies are significant, indicating that children in the North, East and West regions are less likely to attend school than those in the Central region.

In the rural model (Table 3), distance to the school and age of the child are significant and have the correct signs but several other variables differ in significance compared to the urban model. Education of the spouse is now significant at all three levels instead of only at the tertiary level. Household size is also now statistically significant and the sign is negative as expected. Furthermore, income is now highly significant in explaining school attendance. The vast majority of rural households operate at or near the subsistence level and are more likely to be engaged in informal income generating activities (UNHS, 2002/03). As a result, many children are used as labor in the fields or in other activities to help supplement household income. Despite the subsidized school fees, the opportunity cost of sending a child to school may be too high for rural families that require the extra labor for their livelihood. However, the variable for number of hours a child works on a typical day is not significant and yields an unexpected positive sign. The East (positive sign) and North (negative sign) regional dummies are significant for this regression.

An important difference between the urban and rural regressions is that orphan status has no significant impact on the probability of a child attending school in rural households. The adverse effect of orphanhood on school attendance shows up only in the urban model. This could be explained by the fact that rural African communities tend to have stronger social networks and support systems relative to urban communities. Many

rural villages are comprised of families and relatives living within close proximity of each other. This may make it easier for an orphan to be absorbed into other households without loss of access to education and other goods and services.

To better understand the effects of orphanhood on school enrollment, we further disaggregated the urban and rural data into two age groups (6-7 and 8-12). The justification for this is two-fold. First, careful observation of the data revealed that the rate of orphanhood increases with age. The rate among children aged 8 to 12 is almost double that of the younger group. This could be a result of the considerable decrease in infection rates in Uganda over the last few years (UNAIDS, 1998). The differences in rates of orphanhood by age group may be reflecting this downward trend. Second, the UNHS data reveals that late enrollment in Uganda is very common, so that many children start attending school after the expected age of 6. Therefore, the enrollment rate among younger children is expected to be much lower. Separating the two age groups may provide insight as to how these two factors, orphanhood and late enrollment, can be addressed.

In the separate age 6-7 and age 8-12 regressions, we find substantial differences between the two age groups. For children aged 6 and 7 in rural households (Table 4), distance to the school, household size and the spouse's education at the secondary and tertiary levels are all significant with the expected signs. The number of hours that a child works has a significant and unexpected positive impact on the probability of school attendance. It is possible that in this age bracket, children whom parents perceive to be more mature are more likely both to be sent to school and to be assigned work at home, whereas children perceived to be less mature are less likely to enroll and to work. Table 5

shows the results for the urban regression for ages 6 and 7. There are no significant variables except distance to the primary school, educational attainment of the spouse at the tertiary level and the dummy variable for the North). In both the urban and rural data for this age group, children in the Northern region were less likely to attend school relative to those in the Central region. Both orphanhood and income are insignificant in the rural and urban regressions for this age group.

For the 8-12 age group in rural households (Table 6), the distance variable is insignificant. In contrast, this variable was significant and negative for the younger age group, indicating that distance does not have the deterrent effect on enrollment of older children that it has on younger children. Educational attainment of the spouse at all three levels and educational attainment of the head at the secondary level are statistically significant with the expected signs. Coefficients on the regional dummies indicate that children from the Eastern region are more likely than those from the Central region to enroll in school, while those from the North are less likely to enroll.

The urban regression for children aged 8-12 (Table 7) indicates that distance to the school, female headship, number of work hours, and the loss of both parents had significant negative impacts on the probability of a child attending school. The regional dummies for the North and East were both negative and statistically significant. A possible explanation for the fact that female headship has a negative effect on enrollment in urban areas but not in rural areas is that women might receive less financial and in-kind support from relatives in urban areas than in rural areas. Children in female-headed households may be required to work to supplement household income. An important distinction about these results is that orphan status has a significant negative impact on

school enrollment among the older children. This finding is supported by Case, Paxson and Ableidinger (2004) who concluded that the impact of orphanhood on school enrollment increases with age.

The differences in results between the rural and urban regressions suggest a lack of homogeneity over regions in factors affecting school enrollment. Understanding these differences is important in the design of educational policies. In rural communities, orphans that have lost either one or both parents do not appear to be at a disadvantage when it comes to school enrollment. In urban areas, however, where social networks capable of supporting orphans may be weak, the enrollment of orphans might be increased through subsidies to households with orphans. These subsidies could take the form of vouchers for school uniforms and school supplies or cash grants to households. Subsidies could be distributed either by the government or by the many non-governmental organizations (NGOs) that currently provide assistance to orphans in Uganda.

Apart from the needs of orphans, our analysis indicates that distance to primary school is an important determinant of school enrollment. We find that distance is a factor in the late enrollment of young primary-age children through the country and is a deterrent to enrollment for even older primary-age children in urban areas. A compelling case can be made for the construction of new schools in Uganda. Many of the existing primary schools became seriously overcrowded after universal primary education was implemented in 1997. Rather than simply expanding existing schools, educational authorities should consider increasing the number of schools in order to reduce the distance that children have to walk.

A final policy implication is that increasing household incomes through new or expanded sources of earnings is likely to increase primary school enrollment in rural areas. The focus on income generation is nothing new, of course, in African development policymaking, and Uganda already has many policies and projects designed to boost incomes. Our finding provides additional confirmation that efforts to raise incomes, facilitate consumption smoothing and improve access to financial services are essential because of the impact household income has on enrollment in rural areas. Policies should also begin to address the issue of how these families can replace a child's labor when he or she becomes enrolled in school (Grogan, 2004). These efforts are important because income levels today affect the current level of investment in human capital and, hence, the level of income that household will be able to earn in the future.

Conclusion

This paper examined the factors impacting primary school enrollment in Uganda. Three key results that were found. First, orphans in urban areas between ages 8 to 12 are significantly less likely to enroll in primary school. The support systems in urban areas for children that have lost both parents need to be strengthened to ensure that they are not at a disadvantage in accessing education. The government and organizations committed to monitoring school enrollment need to find ways to ensure that orphans of primary school age are reached, regardless of household income levels. Because household income is not a significant determinant of primary school enrollment in urban areas, it seems reasonable to consider the issue of intra-household discrimination that was raised by Case, Paxson and Ableidinger (2004). If discrimination does exist, the government

should adopt measures to ensure that orphans receive the benefit of funds that are earmarked for them. This has important implications for assessment of the effectiveness of current educational policies as well as for the design of future policies.

The second key finding is that the negative impact of income in rural areas overshadows the impact of orphan status on school enrollment, despite the elimination of primary school fees. One of the restrictions of UPE is that free education is provided for up to four children per household but, beyond this, households must pay fees (Grogan, 2004). Thus, income generation policies and programs contribute importantly to the goal of increasing primary school enrollment. The third key finding is that there are considerable differences in factors affecting the enrollment of younger versus older primary-age children. Household size has a negative impact on school enrollment for children ages 6 and 7 in rural areas. Further investigation of late enrollment and policies to address this problem are important because late enrollment appears to be a determinant of retention and educational attainment in a child's later years (Grogan, 2004).

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Table 1. School Enrollment in Uganda, Nationwide Data, Ages 6-12

Variable	Coefficients
Intercept	-5.372* (0.632)
Distprim	-0.059* (0.018)
Age	1.387* (0.139)
Age ²	-0.063* (0.008)
EDHD ₁	0.105 (0.080)
EDHD ₂	0.221** (0.099)
EDHD ₃	0.599** (0.119)
EDSP ₁	0.111*** (0.062)
EDSP ₂	0.331* (0.105)
EDSP ₃	0.599* (0.119)
Gender	-0.014 (0.054)
HDGender	-0.035 (0.172)
Loginc	0.026 (0.019)
HHsize	-0.072 (0.061)
HHsize ²	0.004 (0.004)
Wkhrrs	0.011 (0.024)
Orphan	-0.019 (0.136)
Ownchild	0.002 (0.095)
D ₂	0.093 (0.083)
D ₃	-0.520* (0.082)
D ₄	-0.053 (0.082)
Urban	0.069 (0.076)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses

Table 2. School Enrollment in Uganda, Urban Data, Ages 6-12

Variable	Coefficients	
	One Parent Dead	Both Parents Dead
Intercept	-4.651* (1.556)	-4.463* (1.546)
Distprim	-0.197* (0.068)	-0.210* (0.069)
Age	1.338* (0.347)	1.332* (0.351)
Age ²	-0.062* (0.019)	-0.061* (0.020)
EDHD ₁	0.094 (0.211)	0.065 (0.214)
EDHD ₂	0.136 (0.245)	0.102 (0.248)
EDHD ₃	0.482** (0.237)	0.447*** (0.239)
EDSP ₁	-0.079 (0.171)	-0.046 (0.170)
EDSP ₂	0.322 (0.241)	0.313 (0.242)
EDSP ₃	0.561** (0.242)	0.607** (0.245)
Gender	0.133 (0.137)	0.129 (0.137)
HDGender	-0.157 (0.311)	-0.215 (0.309)
Loginc	-0.045 (0.050)	-0.034 (0.051)
HHsize	0.022 (0.123)	0.009 (0.126)
HHsize ²	-0.003 (0.007)	-0.002 (0.007)
Wkhrrs	-0.042 (0.062)	-0.036 (0.063)
Orphan	-0.104 (0.327)	-
Orphan2	-	-0.986* (0.332)
Ownchild	0.151 (0.229)	-
D ₂	-0.579** (0.245)	-0.617** (0.246)
D ₃	-1.095* (0.236)	-1.109* (0.239)
D ₄	-0.395*** (0.239)	-0.391*** (0.242)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses

Table 3. School Enrollment in Uganda, Rural Data, Ages 6-12

Variable	Coefficients	
	One Parent Dead	Both Parents Dead
Intercept	-5.441* (0.701)	-5.444* (0.699)
Distprim	-0.048** (0.019)	-0.048** (0.019)
Age	1.426* (0.154)	1.423* (0.154)
Age ²	-0.065* (0.009)	-0.065* (0.009)
EDHD ₁	0.099 (0.088)	0.097 (0.087)
EDHD ₂	0.231 (0.109)	0.228** (0.109)
EDHD ₃	0.159 (0.110)	0.158 (0.110)
EDSP ₁	0.157** (0.068)	0.156** (0.068)
EDSP ₂	0.377* (0.120)	0.377* (0.120)
EDSP ₃	0.594* (0.141)	0.593* (0.141)
Gender	-0.035 (0.059)	-0.033 (0.059)
HDGender	0.020 (0.211)	0.022 (0.211)
Loginc	0.038*** (0.022)	0.038*** (0.022)
HHsize	-0.133*** (0.075)	-0.138*** (0.074)
HHsize ²	0.008*** (0.004)	0.008*** (0.004)
Wkhrrs	0.018 (0.026)	0.019 (0.026)
Orphan	0.010 (0.152)	-
Orphan2	-	0.039 (0.216)
Ownchild	-0.04 (0.107)	-
D ₂	0.195** (0.090)	0.192** (0.090)
D ₃	-0.431* (0.089)	-0.433* (0.089)
D ₄	0.004 (0.089)	-0.001 (0.088)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses

Table 4. School Enrollment in Uganda, Rural Data, Ages 6-7

Variable	Coefficients	
	One Parent Dead	Both Parents Dead
Intercept	1.549* (0.431)	1.566* (0.422)
Distprim	-0.059** (0.025)	-0.061** (0.025)
EDHD ₁	0.103 (0.121)	0.095 (0.121)
EDHD ₂	0.125 (0.145)	0.112 (0.144)
EDHD ₃	0.196 (0.147)	0.195 (0.147)
EDSP ₁	0.128 (0.091)	0.124 (0.091)
EDSP ₂	0.329** (0.149)	0.322** (0.149)
EDSP ₃	0.485* (0.165)	0.479* (0.165)
Gender	0.003 (0.078)	0.004 (0.078)
HDGender	-0.109 (0.266)	-0.110 (0.266)
Loginc	0.035 (0.028)	0.035 (0.028)
HHsize	-0.270* (0.101)	-0.285* (0.099)
HHsize ²	0.016** (0.006)	0.016* (0.006)
Wkhrrs	0.121* (0.037)	0.125* (0.037)
Orphan	0.221 (0.239)	-
Orphan2	-	0.309 (0.363)
Ownchild	-0.070 (0.142)	-
D ₂	0.144 (0.114)	0.135 (0.114)
D ₃	-0.465* (0.119)	-0.466* (0.119)
D ₄	-0.059 (0.116)	-0.071 (0.115)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses

Table 5. School Enrollment in Uganda, Urban Data, Ages 6-7

Variable	Coefficients	
	One Parent Dead	Both Parents Dead
Intercept	0.311 (0.907)	0.667 (0.856)
Distprim	-0.172*** (0.090)	-0.192** (0.089)
EDHD ₁	-0.009 (0.291)	-0.037 (0.291)
EDHD ₂	0.024 (0.332)	-0.001 (0.333)
EDHD ₃	0.321 (0.325)	0.272 (0.324)
EDSP ₁	-0.002 (0.245)	0.051 (0.239)
EDSP ₂	0.172 (0.309)	0.166 (0.308)
EDSP ₃	0.584*** (0.322)	0.651** (0.320)
Gender	0.106 (0.190)	0.095 (0.189)
HDGender	0.140 (0.457)	0.089 (0.449)
Loginc	0.071 (0.070)	0.067 (0.069)
HHsize	0.112 (0.179)	0.099 (0.179)
HHsize ²	-0.007 (0.010)	-0.006 (0.010)
Wkhrrs	0.152 (0.105)	0.140 (0.103)
Orphan	0.251 (0.517)	-
Orphan2	-	-0.728 (0.619)
Ownchild	0.296 (0.321)	-
D ₂	-0.299 (0.323)	-0.355 (0.317)
D ₃	-0.880* (0.313)	-0.892* (0.314)
D ₄	-0.423 (0.307)	-0.444 (0.307)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses

Table 6. School Enrollment in Uganda, Rural Data, Ages 8-12

Variable	Coefficients	
	One Parent Dead	Both Parents Dead
Intercept	1.232* (0.464)	1.186* (0.455)
Distprim	-0.014 (0.029)	-0.013 (0.029)
EDHD ₁	0.101 (0.126)	0.102 (0.126)
EDHD ₂	0.467* (0.180)	0.469* (0.180)
EDHD ₃	0.153 (0.165)	0.152 (0.165)
EDSP ₁	0.185*** (0.100)	0.186*** (0.100)
EDSP ₂	0.363*** (0.197)	0.361*** (0.197)
EDSP ₃	0.709** (0.282)	0.704** (0.282)
Gender	-0.092 (0.092)	-0.094 (0.092)
HDGender	0.386 (0.418)	0.384 (0.418)
Loginc	0.043 (0.035)	0.044 (0.035)
HHsize	0.063 (0.106)	0.065 (0.104)
HHsize ²	-0.003 (0.006)	-0.003 (0.006)
Wkhrrs	-0.033 (0.036)	-0.033 (0.036)
Orphan	-0.112 (0.194)	- (0.194)
Orphan2	- (0.194)	-0.033 (0.258)
Ownchild	-0.028 (0.158)	- (0.158)
D ₂	0.262*** (0.145)	0.265*** (0.146)
D ₃	-0.367* (0.135)	-0.365* (0.135)
D ₄	0.056 (0.135)	0.058 (0.135)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses

Table 7. School Enrollment in Uganda, Urban Data, Ages 8-12

Variable	Coefficients	
	One Parent Dead	Both Parents Dead
Intercept	3.231* (1.122)	3.289* (1.091)
Distprim	-0.306* (0.119)	-0.321* (0.123)
EDHD ₁	0.435 (0.322)	0.394 (0.328)
EDHD ₂	0.431 (0.383)	0.405 (0.389)
EDHD ₃	0.768** (0.350)	0.738*** (0.354)
EDSP ₁	-0.234 (0.262)	-0.221 (0.262)
EDSP ₂	0.756 (0.498)	0.728 (0.499)
EDSP ₃	0.629 (0.413)	0.697 (0.432)
Gender	0.131 (0.213)	0.158 (0.216)
HDGender	-0.837*** (0.436)	-0.898** (0.439)
Loginc	-0.139*** (0.078)	-0.112 (0.079)
HHsize	0.022 (0.185)	-0.004 (0.191)
HHsize ²	-0.003 (0.009)	-0.001 (0.010)
Wkhrs	-0.163*** (0.089)	-0.154*** (0.091)
Orphan	-0.318 (0.459)	-
Orphan2	-	-1.033** (0.415)
Ownchild	-0.034 (0.364)	-
D ₂	-1.044** (0.438)	-1.102** (0.446)
D ₃	-1.583* (0.439)	-1.622* (0.450)
D ₄	-0.403 (0.451)	-0.363 (0.462)

*, **, *** indicate significance at 0.01, 0.05, 0.1 levels respectively
Standard Errors in parentheses