THE EFFECT OF MOTHERS' EDUCATION, OCCUPATION STATUS AND HOUSEHOLD INCOME ON BOYS' AND GIRLS' EDUCATION ATTAINMENT: THE CASE OF CAMBODIA

By

ENG Sokha

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
for the degree of

MASTER OF DEVELOPMENT POLICY

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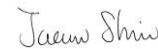for the degree of MASTER OF

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Approval as of July   , 2016

ABSTRACT

**THE EFFECT OF MOTHERS' EDUCATION, OCCUPATION
STATUS AND HOUSEHOLD INCOME ON BOYS' AND GIRLS'
EDUCTION ATTAINMENT: THE CASE OF CAMBODIA**

By

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Numerous studies have been presented on the correlation between mothers' education level and household income with children's education attainment. However, there is no single empirical study in Cambodia using the 2011 Socio-Economic Survey data to analyze the effects of mothers' education, occupation status and household income, on children's education attainment and school attendance, particularly with a focus on the child's gender. The study results reveal that mothers' education level and household income positively affect children's education attainment. More interestingly, girls have better education attainment than boys when they do not drop out, yet, girls have a higher probability of dropping out of school compared to boys.

ACKNOWLEDGMENTS

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

1.1 Background:

Increasing human capital development is expected to be a main component of economic growth for developing countries. Human capital development could be achieved through investment on education, therefore, increasing the primary net enrollment rate became a fundamental global objective under the Millennium Development Goals (MDG's), which were adopted by United Nation's (UN) member states in September, 2000 for a timeframe of 15 years. MDG Goal No. 2, "Achieve universal primary education", was set to "ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling".[1]

As a UN member state, Cambodia adopted the MDG's and contextualized them into its society as the Cambodian Millennium Development Goals (CMDG). In addition to improve primary school completion rates, CMDG Goal No. 2 aimed to achieve universal primary schooling by 2010 and nine-year basic schooling by 2015 for all Cambodian children. Moreover, two targets amongst others in CMDG Goal 2 were: **Target 2.2**: improving the net enrolment rate in primary education from 87 percent in 2001 to 100 percent in 2010 and **Target 2.3**: increasing the net enrolment rate in lower-secondary education from 19 percent in 2001 to 100 percent in 2015 (CMDG report, 2005). However, by 2013 Cambodia achieved only 97 percent net enrolment rate in primary schooling, 87.4 percent completion rate, and 53.6 percent

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[1] United Nations " Millennium Development Goals and Beyond 2015":
http://www.un.org/millenniumgoals/education.shtml

gross[2] enrolment rate at lower-secondary school, from7th-9th grade, (CMDG, 2013). Given that 87.4 percent of children completed primary schooling in the academic year 2012-2013 and only 53.6 percent enrolled in lower-secondary school, as a consequence about 34 percent discontinued their education to lower secondary education. By looking at the completion rate of 9th-grade students, 40.6 percent of students had completed lower secondary school, yet only 27 percent of them enrolled in upper-secondary school (MoEYS, 2012/2013,). Whilst there is a major drop in the enrolment rate across the lower secondary school level, the critical dropout rate was observed at 7th grade with 22 and 22.7 percent of female and male students dropping out respectively. In addition, dropout remained high at 8th grade with 20.7 percent of female and 18 percent of male students discontinuing their education (MoEYS, 2012/ 2013).

Children may face several constraints to continuing their education. In poor families, children's education is perceived as a luxurious good, thus they would only invest in children's schooling if they had available resources (Basu & Van, 1998). Even in situations where children are engaged in unpaid household activities, their contribution substitutes for an adult, enabling the adult to participate in the labor market (Cigno & Rosati, 2005). Unemployment shocks in households significantly increases the probability of children entering the labor force and failing to go to school (Duryea, Lam, & Levison, 2003). Therefore, the final completed schooling level depends on family's ability, family's income, and home's investments (Leibowitz ,1974).

The factors that impact whether a child continues their education may vary between boys and girls, and they might face different influences. In Cambodia, free

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[2] Note: Ministry of Education Youth and Sport prefers to use gross enrolment at lower secondary level rather than net, because children′s ages especially in rural areas are highly inaccurately reported.

universal basic education is provided until 12th grade, nonetheless, parents in rural areas tend to take their children to work in the household, making girls more likely to have higher dropout rate than boys (Velasco, 2004). Particularly in female-headed households composed of more than two children, girls are more likely to be working (ADB, 2014). In many cases, girls tend to have a higher probability of dropping out from school than boys in situations where parents could not afford to send all children to school because girls' schooling was perceived to be more expensive than boys'. For example, a girl needs uniforms, nice clothes and a bicycle (Velasco, 2001). Boys further have a higher probability of staying in school when they have elder sisters in the family (Zhang, Kao and Hannum, 2007).

Given the evidence that household work, family income and family members' (parents') employment impact families' decisions to support the continuation of their children's education, it is important to investigate the effects of mothers' education level, their primary occupation status and household income on education attained by their children. More importantly, since the data from Ministry of Education Youth and Sport (MoEYS), 2012/2013 had shown different trends between boys' and girls' dropout rates at the lower secondary school level, an investigation of how mothers' education level, their primary occupation status and household income affect boys' and girls' education levels differently is needed.

1.2. Objectives of the study:

This study will seek to determine the correlation between mothers' education level, their primary occupation status and household income and the level of education attained by their children in Cambodia. It will further analyze the differences in education attainment and school attendance between genders.

The study also aims to propose some recommendations to increase children's education attainment at the secondary school level, which the Cambodian government and policy makers should consider. These recommendations will address the underlying issue of high dropout rates at the secondary school level.

To achieve the objectives, the study will answer the following question:

(1) Do mothers' education level, primary occupation status and household income correlate with children's education attainment? How do these factors affect boys' and girls' education attainment differently?

(2) Is there a gap in school attendance between boys and girls? If there is a gap (3), what is causing it?

1.3 Scope and Limitation:

The study will test the correlation between mothers' education level, their primary occupation status and household income and the level of education attained by their children in Cambodia by using cross-sectional data from the 2011 Cambodia Socioeconomic Survey. Regarding the education attainment level, the study will focus on children aged between 12-17 years old, because this age group is supposed to be in secondary school.[3] There is not yet a comprehensive study on the causal relationship between mothers' education level, their primary occupation status and household income with children's education attainment in Cambodia.

1.4 Literature review:

Research on Mothers' Education Levels and Children's Education Attainment:

A number of studies have been done on the correlation between mothers' education levels and children's schooling. In the framework of these studies, mothers' education

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[3] Note: Cambodia's education system, children age 6-11 are supposed be in primary school (grade 1-6) and age 12-17 in secondary school level (grade 7 to 12). Source: MoEYS.

levels influence their decision to support their children's schooling. A recent study in China shows that mothers' education levels have a significant effect on their aspirations for their sons' education but not for their daughters' (Zhang et al, 2007). However, the study did not control for fathers' education levels and occupation status which are powerful drivers for children's education, especially for sons, as fathers are the main models for achievement for sons in China (Rosen and Aneshensel, 1978). Evidence from India claims that the higher the number of years of education completed by the mother results on higher probability for her children to attend to school (Giannelli and Grill, 2012). Despite of the fact that the number of mothers' years of education affects children's schooling, the study has not shown how mothers' education differently affects male and female children's education attainment. On the other hand, a case study in Egypt shows that mothers' education level is associated with their daughters' self-confidence; gaining higher self-confidence from home, daughters had a stronger desire to attend post-secondary school (Bach, Gadalla, Seoud and Gulick ,1985).

Research on Mothers' occupation status and children's education attainment:

A theory of mothers' employment and children's schooling claims that a mother's employment has a positive relationship with her children's schooling, in the sense that women's increased earnings contribute to an increase in their children's schooling. Nonetheless, Giannelli, and Grill (2012) show that there is a negative correlation between mothers' employment and children's education in India, because if the mother worked then the children had to contribute more to household chores or the family's income. However, these results might not be precise, as the study does not include wage and income as a control. In addition, mothers' employment was

observed to have a positive relationship with children's education outcomes in developed countries such as the United States, (Kalmijn,1994). Nevertheless, children of unemployed mothers have a better chance of getting ahead in school than children of mothers who are employed in a lower status occupation. This is because unemployed mothers are often from high income families and prefer to stay at home. Moreover, by looking at the nature of mothers' employment status and children's schooling outcomes, evidence from Nepal suggests that children with mothers who are employed in agriculture and fathers who are employed in the nonagricultural sector have high probabilities of school enrollment and attendance but the probability of school enrollment and attendance is lowered when the mother is employed full-time in the non-agricultural sector and the father works in agriculture (Ashish, 2010).

Household income and Children's Education attainment

Family income is an important factor in parents' choices to educate sons rather than daughters (Hannum, 2005). This conclusion might be biased by families' decision to educate children because of the cultural and family value of sons rather than daughters, thereby giving boys a privilege (Stromquist, 1989). The need for children to contribute to the household income is one of the causes for dropping out of school (Hing, Lun and Phann, 2014). In addition, parents tend to take girls out of school rather than boys as girls more often help with household work. Through reviewing the existing studies, there are some gaps that this paper is seeking to fill.

Firstly, a study by Zhang et al (2007) in China found that mothers' education levels correlated with their education aspirations for their children's education, particularly for sons. However, the study did not control for fathers' education and employment status, which this study aims to do. Additionally, this study will identify how mothers'

education levels affects boys' and girls' education attainment differently by controlling for household income, which was not included in a study by Giannelli and Grill (2012) in India.

Secondly, Kalmijn (1994) and Giannelli, et al (2012), do not show the different effects of mothers' employment status on boys' and girls' education, which leaves an important gap to further analyze. This study will therefore identify how mothers' occupation status impact differently on education attainted by boys and girls. In addition to the study by Kalmijn, which focused on children's education achievements at high school, this paper will consider children's education attainment at the secondary school level.

Thirdly, the study by Hannum (2005) addresses the effects of family income on children's education. In the case of China, Hannum found that higher family incomes have a positive effect on boys' education but again the results may be biased because the study did not control for cultures that prioritize sons more than daughters.

More importantly, there is no single study in Cambodia using the whole country's micro-data from the Cambodian Socio Economic Survey (CSES) [2011] to analyze the effects of mothers' education level, their primary occupation status and household income on children's education attainment and school attendance; particularly with a focus on the children's gender. Two empirical studies analyzed the causes of students dropping out and the schooling progression of students in rural areas in Cambodia. Yet, the study employed provincial survey data to analyze children's education, which might not have captured the big picture of children's education. The first study claimed that students in all grades had a high probability of dropping out because of the opportunity cost of education; Cambodian parents and students made rational decisions based on costs and benefits (No, 2012). The second study, done by Keng

(2004), concluded that household economic resources are necessary for children's education; though, it is not the most important factor. Other determinates include parents' education, career expectations and parental involvement in the children's education process. On the other hand, Velasco (2001) studied why girls are not in school in Cambodia by using focus group discussions. Velasco also pointed out that poor families take girls out of school because they could help with housework and income related activities, whereas boys can continue to go to school because they are perceived as less useful in completing household work compared to girls. There is a risk from taking only one province as a sample and conducting focus group discussions since it is not sufficient to generalize about children's education attainment and thus it is important to conduct an empirical analysis using CSES 2011 data, which would include all 24 provinces in the sample of the survey.

CHAPTER 2: METHODOLOGY

2.1 Data

This study employed the Cambodian Socio Economics Survey 2011 (CSES 2011), which was conducted from January-December 2011 by the National Institute of Statistic (NIS), a nationwide survey that captured all 24 provinces. CSES 2011 used the simple random 50% of the subsample from the CSES 2009 sample of villages. As a result, 3600 households were selected, comprised of 1360 urban and 2240 rural households. However, rural and urban households had a different chances of being selected since urban households had an average 1 in 400 chance while rural households had a 1 in 1000 chance of being selected. The survey asked questions to household members about housing conditions, education, economic activities, household production and income, structure of consumption, health, victimization as well as labor participation[4].

The sample of this study includes 1805 observations of children aged between 12-17 years in the household with parents or single mother/ father. Yet, the study does not focus on people aged 12-17, whose relation to household head is not children. The reason for choosing this age group is because the study aimed to test the influence of mothers' education levels, their primary occupation status and household income on their children's education attainment and school attendance at the secondary level.

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[4] Cambodian Socio-Economic Survey 2011, Micro-data catalogue, accessed at:
http://www.ilo.org/surveydata/index.php/catalog/340

2.2 Measure and variables:

Dependent variable:

The central aims of the study are to analyze the influence of mothers' education levels, their primary occupation status and household income on their children's education attainment level. Subsequently, focusing on gender in education attainment and school attendance. In this connection, two dependent variables in the study are children's education attainment and school attendance.

Education attainment is a continuous variable that reflects the highest grade that a child had obtained at the time of survey.

School attendance is a binary variable that reflects whether a child was in school or dropped out at the time of survey. A child attending school is assigned a 1, or a 0 if they have dropped out.

Independent variables:

The main explanatory variables of the study are the mother's education level, their primary occupation status, and household income.

Child' gender: The child's gender is one of the main variables of interest because the study will assess how a mother's education levels, their primary occupation status, and household income differently influence their male and female children's education attainment. In this study, 1 = male child and 0 = female child.

Mother's education: Mothers' education levels is one of the main influences on children's education attainment because educated mothers tend to have higher aspirations for their children's schooling. Zhang et al (2007) determine that mothers' education levels have significant effects on their aspirations for their sons' education

in China. Therefore, mothers' education levels should be taken as a predictor to examine in the study. Similarly to children, for the purposes of this study mothers' education levels will be determined by the highest grade of schooling that the mother has obtained at the time of survey, rather than the number of years spent attending school.

Mothers' primary occupation status:

How a mother's occupation status influences her children's schooling is still a controversial discussion because the level of children's schooling generally changes according to what kind of occupation the mother has and if the household is rural or urban (Giannelli and Grill, 2012). For instance, children of mothers who are employed in agriculture or self-employed in rural areas tend to have lower levels of education than those of mothers who are employed in urban areas. Ashish (2010) used the nature of mothers' occupation to explain the education outcome of children in Nepal, and Kalmijn (1994) explained children's education achievement by use dummy of mother employment (employed=1, 0 otherwise). Following the studies by Ashish and Kalmijn, this study will employ the primary occupation status of mothers according to three categories in the survey; employee, self-employed and unpaid-family work, according to the work undertaken by the mother in the 12 months prior to the survey. In the regression test, education attainment by children whose mother is primarily undertaking unpaid-family work is used as the base, in order to make comparisons with children whose mothers are self-employed or employees.

Household income:

Household income is used as another main interest variable analyzed in the study to determine its effect on school attainment. Following No (2012), household income

was used as an independent variable to explain the dropout rate of students in Cambodia. In his study, he calculated the household wealth and assets of households in Kampong Cham province in Cambodia to compare student dropout rates. However, this study will employ a more precise record of household income, as each household recorded every receipt of their daily income for a month during the survey period in 2011. The natural log of the families'' monthly income will be employed in the analysis in the regression test.

Control variables:

The control variables in this paper extensively include the child's age, the of number of siblings in a family, the father's education and employment status, geography (rural or urban) and the gender of the head of household.

Fathers' education:

The father's education is taken into account because an educated and employed father influences not only the level of his children's education but also the mother's employment. For instance, husbands often decide whether or not his wife should enter the labor force. Parental education and the father's occupation have a significant influence on increasing the education achievement of children in high school graduate Kalmijn (1994). A father's education level is a continuous variable of the highest grade that he has earned.

Fathers' employment status:

The father's employment status may be associated with inspiration for their children's higher education, given that the father's work may also increase the family's income and welfare. A father's employment status is a binary variable, where an employed father is allocated a 1 and an unemployed father is allocated a 0.

Numbers of siblings:

The control variable also includes the number of siblings because siblings tend to compete for limited resources at home. A large family has a significantly negative effect on schooling enrollment (Truong, Jonh, David, Jed, 1998). The number of siblings will be denoted as a continuous variable determined by the exact number of siblings in a family.

Geography:

Geography (rural/urban area) is also controlled in the study because children's education attainment levels are also associated with the area where they live. Children in rural areas may have less access to education facilities or resources than children in urban areas and thus a control on geography is important to avoid regional based bias. Moreover, income levels of families can be different between rural and urban area.

Children's age:

The child's age is also an important control because school grades should correlate to the child's age and the regression result will be misleading without controlling for age.

Gender of the head of household:

Lastly, the study controls for the gender of the head of household (female=1, male= 0) as different genders may make different decisions about their children's education, particularly regarding whether the boy or girl should be the priority to be educated.

Methodological and Empirical Strategies:

The study focuses its analysis on two outcome measures: educational attainment and school attendance.

Children's education attainment is a continuous variable, which is the highest grade completed by a child. To test this outcome, the study employed Ordinary Least

Square (OLS) to analyze the correlation between the dependent variable (children's education attainment) and the independent variables (mothers' education levels, their primary occupation status, and household income). Following Ashish (2010) and Hing, Lun, and Phann (2014), the OLS model is used to analyze children's education outcomes as a continuous variable. Ashish used OLS to test the education outcome of children aged 6-19 years old. Hing, et al (2014) employed OLS to test the effect of adult migration on children's education attainment using a target group of 10-17 year olds in Cambodia. Similar to Ashish and Hing et al, this study analyzes children's education attainment for a group aged 12-17 years old. In addition, it uses Quantile Regression (QR) to see how children's education levels across percentiles (Q 10, Q 25, Q 50, Q 75, Q 90) are affected differently by mothers' education levels, their primarily occupation status and household income. OLS only shows a coefficient that represents an increase or decrease according to the independent variable response to an increase of one unit. Yet, the QR shows coefficient changes in a specified quantile of the dependent variable produced by a one-unit change in the dependent variable (Simona 2012).

School attendance is binary variable, as a child is currently attending school or not. To test the likelihood of children attending school, the study uses the Probit model. The models are presented as the following equations below:

Education attainment (OLS):

$Y_{(child\_edu)i} = \beta_0 + \beta_1 (\text{mother as employee})_i + \beta_2 (\text{mother-self-employed})_i +$

$\quad \beta_3(\text{mother's edu})_i + \beta_4 (\text{log household's income})_i + \beta_5 (\text{child's gender})_i +$

$\quad \beta_k(\text{controls})_i + \varepsilon_i$

School attendance (Probit):

$$Y_{(school\_attendance)i} = \alpha_0 + \alpha_1(\text{mother as employee})_i + \alpha_2(\text{mother-self-employed})_i +$$

$$\alpha_3(\text{mother's edu})_i + \alpha_4 (\text{log household's income})_i + \alpha_5(\text{child's}$$

$$\text{gender})_i + \alpha_k(\text{controls})_i + \mu_i$$

Where:

$Y_{(child\_edu)}$= children's education level,

$Y_{school\_attendance}$= school attendance,

β_0 and α_0 = Y-intercept in OLS and Probit,

$\beta_1\ \beta_2\ \beta_3\ \beta_4\ \beta_5$ = coefficient of respective independent variables in OLS and

$\alpha_1\ \alpha_2\ \alpha_3\ \alpha_4\ \alpha_5$ = coefficient of independent variables in Probit.

i refers to individual i, k numbers of control variables (1,2,..k)

ε and μ = unexplained variance, error term.

2. 3. Descriptive variables and expected results

Table 2.1: Descriptive variables

Independent variables	Definition	Expected sign
Mother's education	Highest education level (continuous variable)	+
Mother as self-employed	Dummy 1: self-employed 0: otherwise	–
Mother as employee	Dummy 1: employee 0: otherwise	–
Mother undertaking unpaid-family work	Dummy 1: homemaker 0: otherwise (Base variable)	+
Household income	Log household income	+
Child's gender	Dummy 1= Male 0= Female	+
Control variables	**Definition**	
Father's education	Highest education level (continuous variable)	
Father's employment status	Dummy 1: employed 0: otherwise	
Geography	Dummy 1: urban 0: rural	
Child's age	Age of child by years (12-17)	
Number of siblings	Numbers of children in the household	
Gender of the head of household	Dummy 1: Female 0: Male	
Dependent variable	**Definition**	
Education attainment	Education level that children had obtained at the time of survey (continuous variable)	**NA**
Children's school attendance	Dummy 1: attending school 0: otherwise	**NA**

The mothers' education was expected to have a positive correlation with their children's education attainment as well as school attendance. As mothers become educated, children have higher aspirations to attain education, (Zhang et al, 2007); (Giannelli and Grill, 2012). Mothers' education should have a positive influence on their children's education in any society, regardless of whether it is a developed or developing country, as educated mothers tend to make decisions for their children favoring higher education. Similarly to other countries, in Cambodia if mothers have higher levels of education, children would have more inspiration for schooling.

Mothers' primary occupation status (employed, self-employed or undertaking unpaid-family work) can affect their children's education attainment. In the Cambodian context, it is common for children to help parents' complete household chores, particularly in rural areas, in which children also help with agricultural work, such as feeding animals, etc. In this study, it was expected that children whose mother primarily undertakes unpaid-family would work have better education attainment than children whose mother is an employee or self-employed, as mothers who stay at home could reduce the household burden on their children and children could have more time for their schooling. In addition, whilst a mother's primary occupation might be unpaid-family work, they may still earn an income. Besides household chores and responsibilities, women also take care of rice fields and raise livestock such as cows, pigs, chickens, etc. These are often the main sources of a family's income, even though women's work at home is often not highly valued. Indeed, mothers in high income families might prefer to stay at home rather than working outside the home, as they could spend most of their time with their children.

Additionally, children whose mothers are employed may have less time to spend on their schooling than children whose mothers complete unpaid-family work. This is

because the employed mother might have to migrate to work in the capital city/urban area as a garment factory worker, to provide services or in other fields such as own-account worker. As a result, household burden will be put on the husband and of course heavily on her children, especially girls who generally undertake household chores. It is important to note that the experiences of Cambodian migrants who work in the city might be different from those in developed countries, as developed countries are often equipped with good transportation that enables women to return home after work. However, in the case of Cambodia, workers often only visit their homes after extended periods of time, e.g. once every 1-2 months, and particularly during national holidays. Therefore, if a migrant mother works in the city, household responsibilities would be left for the household members that remain at home.

Household income: Higher incomes are expected to have a positive effect on children's schooling. Children of high-income families would have more opportunities to stay in schooling longer than children of low-income families. Even though the Cambodian government provides free education from primary to secondary school, low financial incentives for teachers has discouraged many to perform well in their profession (Tandon & Fuka, 2015). Thus they often teach less than they are supposed to in public classes. Given the low incentives, teachers tend to put more effort into their private tutoring classes, which students have to pay for. Indeed, children from better income families would have more opportunities to enroll in private tutoring which is associated with better performance in public classes.

Child's gender (male): Cambodian cultural norms and stereotypes pronounce that girls are well-suited to completing household chores, whilst boys should be offered future career opportunities in the market economy (MoP, 1998). Hence, the variable of children's gender is expected to have a positive effect with education attainment

and school attendance, which means that boys are expected to have better education attainment and school attendance than girls.

CHAPTER 3: RESULTS

3.1 Children's education attainment

Table. 3.1 Regression on children's education levels

	Estimate children's education attainment level as a dependent variable (OLS)			
	(1) Children's education level	(2) Children's education level	(3) Children's education level	(4) Children's education level
VARIABLES				
Male	-0.456***	-0.418***	-0.472***	-0.431***
	(0.112)	(0.098)	(0.111)	(0.098)
Mother as Employee	-1.015***	-0.292	-0.898***	-0.271
	(0.231)	(0.209)	(0.229)	(0.208)
Mother as Self-employed	-0.602***	0.201	-0.594***	0.126
	(0.188)	(0.175)	(0.187)	(0.175)
Mother's education	0.267***	0.137***	0.239***	0.129***
	(0.017)	(0.018)	(0.017)	(0.018)
Log of household income			0.282***	0.173***
			(0.045)	(0.040)
Control	No	Yes	No	Yes
Observations	1,785	1,557	1,785	1,557
R-squared	0.148	0.425	0.166	0.432

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: Robust standard errors are given in parentheses. The control variables include dummies of geography (urban=1, rural=0), the father's education level, the father's employment status (employed=1), the child's age, the gender of the head of household (F=1), and the number of siblings.

The effects of mothers' education levels on their children's education attainment:

The correlation between mothers' education and children's education attainment is reported in Table 3.1. Children's education levels have a strong positive correlation with mothers' education levels. The regression coefficient reported a positive significance, because an increase in the mothers' education levels is associated with an increase in the children's education attainment level. The regression coefficient .12 indicates that the education of children who have the same age, gender, and family

characteristics is expected to increase by .12 of a grade if the mother's education increases by one grade. This result is supported by the international literature including (Zhang et al, 2007); (Giannelli and Grill, 2012). These studies indicate that mothers' education is associated with children's better education attainment, and particularly that educated mothers have higher aspirations for their children's higher education.

The effects of Mothers' primary occupation status on children's education attainment

Table 3.1 reports that without adding control variables, children's education has a negative correlation with mothers' primary occupation status as an employee and a self-employed mother (model 1 and 3). Children of mothers who are employees or self-employed have a lower education than children of unpaid-family mothers (who are home-makers). However, after adding the control variables (fathers' employment status, fathers' education, geography, and number of siblings) the significant negative correlation became insignificant (model 4). This suggests that different primary occupation status have no effect on children's education attainment. This result does not support the prior expectations, in which children whose mothers complete unpaid-family work should have better education attainment. The effects of mothers' primary occupation status on children's schooling can be captured in the household income because the different education attainment of children can be reflected by the level of income that mothers or households earn. In addition to that, even though unpaid-family work mothers may have more time at home than other mothers, who are employees or self-employed, it doesn't mean that unpaid-family work mothers pay attention to checking up children's school work. This could be because the ability of

checking children's work and quality of time that mothers spend with children might be driven by the level of the mother's education.

The effects of household income on children's education attainment

To analyze the influence of household income on children's education levels, the paper uses the sum of the daily income receipts that were noted for one month by each household during the survey period (2011). The regression result in Table 3.1 shows that household income has a strong positive correlation with children's education. By controlling other variables, a 1 percent increase in a household's income is expected to increase children's education attainment levels by a grade of 0.17. This result is also consistent with other literature that determines that increased household income has a positive correlation with children's education outcomes. Besides household income, the number of siblings shows a negative correlation with children's education attainment. As siblings tend to compete for resources in a household, children with higher numbers of siblings tend to have lower education levels. Large family sizes are generally associated with a lower probability of enrollment in school (Truong, et al, 1998).

3.2 Comparison across quantiles of children's education

Table 3.2 presents the different percentiles of education levels, which is effected by household income and mothers' education levels.

	OLS	Q(0.10)	Q(0.25)	Q(.50)	Q(0.75)	Q(0.90)
Mother's education	0.13***	0.16***	0.13***	0.13***	0.10***	0.05*
	(0.02)	(0.04)	(0.03)	(0.02)	(0.02)	(0.02)
Log of household income	0.17***	0.14	0.19**	0.22***	0.16***	0.12*
	(0.04)	(0.10)	(0.06)	(0.05)	(0.05)	(0.05)
Male	-0.43***	-0.92***	-0.66***	-0.35**	-0.17	-0.17
	(0.10)	(0.23)	(0.14)	(0.11)	(0.11)	(0.12)
Control	Yes	Yes	Yes	Yes	Yes	Yes

N	1557	1557	1557	1557	1557	1557

Note: Standard errors are given in parentheses. The control variables include dummies of geography (urban=1, rural=0), the father's education level, the father's employment status (employed=1), the child's age, the gender of the head of household (F=1), and the number of siblings.

The quantile is divided into five percentiles from the lowest Q10, Q20, Q50, Q75 to the highest, Q90. The highest quantile (Q90) means that children attended the right school grade at the right age (12-17 year olds are supposed to be in secondary school, grades 7 to 12, MoEY). Children who are in the right grade at the right age means that he/she has started grade 1 at age 6 and has never repeated a class or dropped out, and thus they have moved to a higher grade at the end of each year of education. It is important to look at the magnitude of the coefficient of OLS; as there is minimal difference between them. For instance, through OLS regression, where a mother's education increases by 1 grade, the children's education attainment is expected to increase by a grade of 0.13, which is the same size of the coefficient in the Q25 and Q50 percentiles. Nonetheless, the lowest percentile of children's education attainment level (Q10) has the biggest coefficient across quantiles, which indicates that mothers' education levels have the highest influence on the lowest percentile of children's education attainment (Q10). Interestingly, mothers' education levels have the lowest effect on children's education attainment at the highest percentile (Q90), which is reported with a coefficient of 0.05. Children who have good performance at school seem less affected by their mother's education level than children who perform poorly. Similarly to mothers' education levels, the size of the regression coefficient for household income is slightly different across quantiles and OLS. Household income has the highest influence on children's education attainment at the Q50 percentile,

with a coefficient of .22. In addition, the size of the coefficient reduces to 0.12 at the highest percentile.

3.3 School attendance:

Table 3.3 reports an estimation of children's school attendance by using probit regression.

	Estimate of children's school attendance (attending school=1)		
VARIABLES	(1) Linear probability Model (LPM)	(2) Probit	(3) Probit (marginal effect)
Male	0.035*	0.153*	0.0352*
	(0.019)	(0.081)	(0.0186)
Mother's education	0.012***	0.054***	0.0125***
	(0.003)	(0.016)	(0.00368)
Log of household income	0.016**	0.082**	0.0189**
	(0.008)	(0.034)	(0.00789)
Mother as employee	-0.030	-0.155	-0.0355
	(0.038)	(0.161)	(0.0368)
Mother as self-employed	0.032	0.118	0.0270
	(0.032)	(0.136)	(0.0312)
Control	Yes	Yes	Yes
Observations	1,527	1,527	1,527
R-squared	0.216		

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: Robust standard errors are given in parentheses. The control variables include dummies of geography (urban=1, rural=0), the father's education level, the father's employment status (employed=1), the child's age, the gender of the head of household (F=1), and the number of siblings.

The regression table suggests that mothers' education levels have a positive impact on children's school attendance. Highly educated mothers tend to keep their children in school longer than mothers with low levels of education. The probit marginal effect in Table 3.3 indicates that on average, where mothers' education increases by one grade, the probability of children being in school increases by 1.2 percent. Similarly to the effect of mothers' education, fathers' education levels also have a positive influence on children to stay in school. This result is consistent with other literature as well as the OLS analysis on children's education attainment.

23

Furthermore, household income also has a positive effect on children's school attendance. This could be because higher income families can afford to pay for education expenses such as private tutoring, uniforms and study materials, and as a result children tend to stay in school longer than those from low-income families. It might also reflect that children from high-income families could follow lessons better than those from low-income families, in the sense that they are be able to pay for private tutoring classes that could substitute for what they could not keep-up with in public classes. On average, where household income increases by 1 percent, the likelihood of children staying in school increases by 1.8 percent. This result supports the prior expectations.

On the other hand, mothers' primary occupation status (whether that is as an employee or self-employed) does not have a significant impact on the probability of children's school attendance. This result indicates that children whose mothers are employed in various occupational statuses don't have different probabilities of being in school. The result doesn't confirm the prior expectation that children whose mothers undertake unpaid family work should have a higher probability of staying in school than children whose mothers are in one of the other two occupation categories.

In addition, the CSES 2011 questionnaire also asked "Why is [the child] not attending (has never attended) school?". The main reasons for boys and girls not being in school in this sample include:

Main reason for not being in school	Boys	Girls
Has no inspiration to continue	(16.8 percent)	(1.8 percent)
Did not do well in school	(14 percent)	(4.1 percent)
Contributes to household income	(30.8 percent)	(61.8 percent)
Contributes to household chores	(12.6 percent)	(19.4 percent),
Family is too poor	(19.1 percent)	(1.8 percent)

Source: CSES 2011

The main reason for both boys and girls to drop out of school is due to the fact that they can contribute to household income. This was stated as the cause of drop out in 61 percent of cases for girls and 30 percent for boys. Likewise, this indicates that instead of staying in school, boys and girls have to participate in economic activity that contributes to the family's income. Contributing to household chores is the second main reason that both boys and girls drop out of school. However, girls more frequently are required to contribute to household chores, as it was stated as the main reason for dropping out of school in 19.4 percent of cases for girls, whilst only 12.6 percent of cases for boys. Starting school at a late age,(for example, children started primary school at 8-10 years old) is also a reason for dropping out of school, as by the time these students complete year 5 or 6, they are at an age where they generally would be joining the labor force. In addition, children should enroll in school at 6-7 years of age, and thus children who start school at an older age may feel uncomfortable sitting with younger students (CMDG, 2013).

3.4 Analysis of children's gender in education attainment and school attendance:

OLS regression in Table 3.1 reports that girls have higher education attainment levels than boys. The regression coefficient 0.43 (model 4) indicates that with the same family characteristics, age, and family income, boys have 0.43 lower education attainment level than girls. On the other hand, the Probit regression in Table 3.3 reports that on average girls have a higher probability of dropping out of school than boys (3.5 percent higher). From the OLS and Probit regression results, it can be concluded that girls have better performance at school than boys; however, more girls tend to drop out than boys. The Probit regression result supports the findings of the Cambodian Human Development Report (MoP, 1998) that girls have a higher

probability of dropping out than boys because parents pulled girls out of school after 4 grade, and particularly at grade 5 when girl reach 12 years old.[5] Even though girls have more likelihood to drop out of school than boys, girls who stay in school have better performance than boys, which is demonstrated by test scores and the number of students repeating grades. Female pupils have slightly higher examination scores than male pupils (MoP, 1998). Additionally, the Education Static & Indicator (2005-2014) shows that boys have a higher rate of repeating a class than girls.[6] This raises questions regarding why more girls than boys drop out of school, despite that girls have better performance than boys. Girls who remain in school are often those who have better performance, as parents tend to remove girls from school when they fail exams or perform poorly, however, parents more often give boys a second chance. The Cambodian Human Development Report (MoP, 1998) explained several reasons why parents keep girls out of school. First, there is a perception amongst parents that boys should have career opportunities and market wages, and parents may perceive that there is not much benefit to sending girls to school as generally they will stay home and work in rice fields. Second, parents take girls out of school earlier than boys, particularly at age 12, because parents perceive that girls have higher opportunity costs than boy at that age; in comparison to boys, girls could do more household chores and provide care for their younger siblings. Third, girls stop attending school as a result of a lack of access to physical school infrastructure. Children in rural areas can easily access primary schools in their villages, however, challenges remain in accessing secondary school[7], especially upper secondary school. In rural areas, Cambodian students commute to school by bicycle or walk due to the

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[5] Mean age for starting school in 1998 was 8 years old, thus girls were 12 when they reach grade 5.
[6] Annex 1.2: number of student enrollment and class repeaters, 2005-2014. Source: Education Statistic and Indicator (MoEY 2005-2014): http://www.moeys.gov.kh/kh/emis/577.html#.VpnhNPl97Dc
[7] On average distance, lower secondary school located 4.2km away (CMDG, 2013)

inaccessibility of public transportation. When attending to schools that are far from their homes or villages, boys can traditionally stay at monasteries (wats), whilst girls cannot. Furthermore, the absence of separate toilet facilities for girls is another burden for female students, particularly as they often have to spend all day at school due to the distance of the school from their homes.

The CMDG, 2013 report claimed that the perception of the priority of boys' education over girls' education seems inaccurate since parents, especially mothers, feel secure if their daughter studies more because eventually they will stay with their daughters rather than with their sons. It seems that parents expect future financial support from their daughters during their old age and thus they are happy to invest on their children's education. However, Keng (2004) found that there was no correlation between parents' expectations for future financial assistance from their children and their investment in their children's schooling. The expectation from parents for financial assistance from their children is very common in Cambodian society because of the absence of government pension programs. Therefore, it does not make sense that financial expectations could have increased investment in children's schooling. Another reason for girls remaining out of school is the influence from neighbors. Even though the main stated reason for dropping out of school was economic, qualitative interviews by Khieng, Srinvasa, Chhem, (2015) with girls who had dropped out school and were working in Phnom Penh recorded that they admire women neighbors' who discontinued their study to work in Phnom Penh, and perceived them as having money and being beautiful. In summary, increased role models of highly-educated women in the community could be a driving factor for keeping girls in school.

Marginal effects on children's gender:

27

The interaction term between the child's gender (male), the mothers' education levels, their primary occupation statuses, and household income, which is reported below in Table 3.4, was used to understand whether mothers' education levels, their primary occupation status and household income differently affect boys' and girls' education. The regression results suggests that there is no significantly different marginal effect on children's education by gender, given mothers' education levels, and household income. No significant sign is reported by using the interaction term between the child's gender as male and mothers' education levels and household income. The gender enrollment gap was smaller in families where mothers themselves were educated (MoP, 1998), in the sense that mothers tend to give the same support for education to their female and male children. In addition, there is no different effect on children's education attainment by gender across the mother's occupation status.

Table 3.4: The table reports the results of the interaction term to test the different effect on boys' and girls' education attainment:

Estimate of children's education attainment level as a dependent variable (OLS)			
VARIABLES	(1) Children's education level	(2) Children's education level	(3) Children's education level
Male * mother as employee	-0.588		
	(0.411)		
Male* mother as self employed	-0.484		
	(0.319)		
Male	0.045	-0.486***	-1.672*
	(0.298)	(0.170)	(1.007)
Mother as employee	0.167	-0.293	-0.274
	(0.286)	(0.209)	(0.207)
Mother as self-employed	0.552**	0.200	0.121
	(0.243)	(0.175)	(0.175)
Male* mother's education		0.017	
		(0.029)	
Mother's education		0.128***	0.128***
		(0.021)	(0.018)
Male* log of household income			0.090
			(0.072)
Log of household income			0.124**
			(0.052)

28

Control	Yes	Yes	Yes
Observations	1,577	1,557	1,557
R-squared	0.405	0.425	0.432

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: Robust standard errors are given in parentheses. The control variables include dummies of geography (urban=1, rural=0), the father's education level, the father's employment status (employed=1), the child's age, the gender of the head of household (F=1), and the number of siblings.

CHAPTER 4: CONCLUSION AND IMPLICATIONS

The study's primary analysis included a review of the influence of mothers' education levels, primary occupation status and household income on children's education attainment and school attendance in Cambodia. It also focuses on two main questions: do mothers' education levels, primary occupation status and household income correlate with children's education attainment? Is there a gap in school attendance between boys and girls?

The study results show that mothers' education levels and household income have a strong positive correlation with children's education attainment. In addition, increases in mothers' education and household income are associated with a higher probability of their children's school attendance. To promote children's education attainment, particularly at the secondary level, it is important to consider the micro-family level, where influences such as maternal education and household income can have substantial impacts on education attainment. Even though the government has supplied physical primary school infrastructure in villages and made secondary schools more accessible to students, it is not enough to keep children in school given competing influences such as the opportunity cost to the join labor force. Indeed, poor households usually have a higher opportunity cost than higher income households.

Quantile regression shows that at the Q50 percentile of education attainment, household income has the highest impact across the quantiles. In addition, mothers' education is another important factor that determines their children's final grade of attainment and educated mothers tend to expect formal-employment for their children.

The results also reveal that mothers' primary occupation status do not have statistical significance for children's education attainment and school attendance. It is important to note that occupation status might be associated with family income and thus the importance of the occupational status could be captured in household income. The role mothers' occupation status played on influencing and encouraging children to remain in school was not assessed in this study. Children whose mothers were professionally employed could have better education attainment, however, most women in Cambodia are employed in agriculture (64.5 percent) and only 2.5 percent are employed as professionals.[8] Therefore, an additional study assessing children's aspirations for their education in relation to their parents' primary occupation status would be useful.

The interaction terms between the main variables of interest and children's gender are employed to check the marginal effects on children's education attainment based on gender. Yet, the results show that there are no different effects on gender as a result of mothers' education levels, their primary occupation statuses and household income.

OLS regression reports that there is a gap between boys' and girls' education attainment and that girls have better performance than boys. However, the Probit regression reveals that girls have a higher probability of dropping out of school than

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[8] Key Gender Statistic in Cambodia, 2014. Accessed at:
www.jica.go.jp/**cambodia**/office/information/.../**gender_statistics_**en.pdf

boys. This result might reflect that parents tend to take girls out of school if they do not perform well, whereas parents tend to give boys a second chance. Therefore, girls who remain in school tend to have better performance afterwards. Furthermore, increasing job opportunities in garment factories in urban areas, where women could get a job even if they haven't obtained primary school education[9], might be another motivation for girls and parents to take girls out of school to join employment, especially if the girl is not performing well at school. It is really important to invest on the education of girls, because they will be future mothers, and as the research demonstrates there is a positive relationship between mothers' education and their children's education is important for the human development index and the overall growth/wellbeing of Cambodia. In addition, for policy makers to consider the quality of education to allow slow learners to catch up with lessons. Education qualifications should also be relevant and linked to future career paths to encourage girls to continue to higher education with visible market wage employment.

The findings and limitations of this paper highlight potential avenues for further research. For example, the study only considers 12-17 year olds, which is the expected age secondary school students. Nonetheless, many Cambodian students start school late, therefore making it relevant for future research to include an additional group of 18-24 year olds to address their education outcomes. Likewise, household income might have a lagged effect on children's education attainment, which is beyond the scope of this research study. There should be further study on the effect of income by using penal data, and consider the reverse causality that could occur between children's schooling and income, because income could increase when parents pull children out of school to join the labor force. In addition, mother's

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[9] According to ILO's report, the majority of women worker in the garment factories are younger than 29 years old, with 43 percent of them have not completed primary school education (ILO, 2013).

income, which is not provided in the survey data set, might have a significant effect on their children's education. Furthermore, birth order of male or female children and family composition might matter on a decisions whether daughters or sons should attend school. Lastly, girls' mean education attainment at the age 12-17 is slightly higher than boys, it might lead the regression result of having boy has lower education attainment.

References

1. Ashish,B. (2010). "The Nature of mothers' work and children's schooling in Nepal: The influence of income and time effect," working paper 21.

2. Basu,K., Van, P.H . (1998). "The Economics of Child Labor," *The American Economic Review,* 88. 3, 412-427.

3. CMDG, (2005) "Cambodian Millennium Development Goal report,*"*Available at: http://www.mop.gov.kh/home/cmdgs/tabid/156/default.aspx.

4. CMDG (2013), "Annual Progress Report, Achieving the Millennium Development Goals," Phnom Penh.

5. Cigno, A., & Rosati, F. C. (2005*).* "The Economics of Child Labor," *Oxford University Press.*

6. Duryea. S., Lam. D., & Levison. D.(2003). "Effects of Economic Shocks on Children's Employment and Schooling in Brazil," PSC research report, 03-541.

7. Hing, V., Lun, P., and Phann, D. (2014). "The Impacts of Adult Migration on Children's Well-being The Case of Cambodia", CDRI, Phnom Penh.

8. ILO (International Labor Organization). (2013). *"*Twenty Ninth Synthesis Report on Working Condition in Cmabodia's Garment Sector".

9. Keng, C. (2004), "Household Determinants of Schooling Program Among Rural Children in Cambodia*", International education journal*, 5.4.

10. Khieng S., Srinivasa, M., and Chhem, R., eds. (2015) "Cambodia Education 2015: Employment and Empowerment"*,* Phnom Penh: CDRI.

11. Mathijs, K. (1994) "Mother Occupation status and schooling*", American Sociological Review*. 59.2.

12. MoP (Ministry of Planning). (1998). "Cambodia Human Development Report", women contribution to development, Phnom Penh.

13. No, F. (2012). "Identifying causes of drop out through longitudinal quantitative analysis in rural Cambodia basic schools," *Journal of international development and cooperation.* 19.1. pp 25-39.

14. Roesn, B.C & Aneshensel, C.S. (1978) "Sex differences in Educational-Occupational Expectation Process," Social force, 57, pp164-86.

15. Simona, D. (2012) "Stat News #70: Quantile Regression" Cornell University, accessed at https://www.cscu.cornell.edu/news/statnews/stnews70.pdf

16. Stromquist, N. (1989). "Determinant of Educational Participation and Achievement of Women in the Third World: Review of the Evidence and a Theoretical Critique," *Review of Educational Research*, 59 (summer).

17. Tandon.P & Fuka.T. (2015). "Educating the Next Generation: Improve teacher quality," World Bank Group.

18. Truong, S.A, Jonh, K., David, L., Jed, F. (1998). "Family size and children's education in Vietnam," Demography, 35.1 (spring).

19. Torberg, F., and Bjarne, S. (2008). " Student progression in upper secondary education: The effect of academic ability, gender and schools,"   Working paper, Norwegian University of Science and Technology. 6/ 2008.

20. United Nations "Millennium Development Goal and Beyond 2015,". Accessed on 10 September 2015 at http://www.un.org/millenniumgoals/education.shtml

21. Velasco, E. (2004). "Ensuring Gender Equity in Education For All: Is Cambodia On Track?" , Prospects 34(1): 37-51.

22. Velasco, E.(2001). "Why are Girls Not in School? Perceptions, Realities and Contradictions in Changing Cambodia,"*,* Hun Sen library. Available at: http://119.82.251.165:8080/xmlui/handle/123456789/183

23. Zhang, Y., Keo, G., and Hannum, E. (2007*).* "Do mother in rural china practice gender equality in educational aspiration for their children?", Comparative Education Review. 51.2. pp 131-157.

NNEXURES

1.1 Descriptive statistic:

Variable	Obs	Mean	Std. Dev.	Min	Max
Children's education level	1805	6.14626	2.58271	0	12
In school or not	1765	0.7614731	0.4263036	0	1
Log household's income	1807	13.78788	1.274486	8.987197	19.10402
Mother's education	1787	4.1108	3.464107	0	19
Father's education	1580	6.08038	4.211537	0	20
Mother as employee	1807	0.1472053	0.3544085	0	1
Mother as self-employed	1807	0.7232983	0.4474916	0	1
Father's employment status	1807	0.845047	0.36196	0	1
Geography (urban=1)	1807	0.3574986	0.479396	0	1
Number of siblings	1807	3.485888	1.462599	1	10
Gender (M=1)	1807	0.5113448	0.5000097	0	1
Child's age	1807	14.54787	1.726224	12	17
Female a household headed	1806	0.1500554	0.3572246	0	1
Boy's education	924	5.94	2.66	0	12
Girl's education	881	6.35	2.47	0	12

1.2 Number of students enrollment and class repeaters by year (2005-2014)

Year	Enrollment					Repeater				
	Total	Boy		Girl		Total	Boy		Girl	
2005-2006	3427394	1836633	54%	1590761	46%	347112	202609	58%	144503	42%
2006-2007	3387310	1812410	54%	1574900	46%	309725	182549	59%	127176	41%
2007-2008	3289286	1751007	53%	1538279	47%	282404	164799	58%	117605	42%
2009-2010	3248479	1708402	53%	1540077	47%	223141	132578	59%	90563	41%
2010-2011	3190109	1674163	52%	1515946	48%	176020	104361	59%	71659	41%
2011-2012	3123082	1631738	52%	1491344	48%	144545	86748	60%	57797	40%
2012-2013	3125140	1640115	52%	1485025	48%	127282	76812	60%	50470	40%
2013-2014	3036018	1570522	52%	1465496	48%	117663	71537	61%	46126	39%

Source: Ministry of Education Youth and Sport

1.3 Number of students attending school and ever/ drop out at the time of interview (2011)

Source: CSES 2011

Children are attending the school at the time of interview																
	Girl's age								Boy's age							
Grade	12	13	14	15	16	17	Total	Grade	12	13	14	15	16	17	Total
0	2	0	0	0	0	0	2	0	2	2	0	1	0	0	5
1	2	1	0	0	0	0	3	1	5	2	0	1	1	0	9
2	11	5	0	1	1	1	19	2	19	9	0	0	2	0	30
3	18	14	5	1	0	1	39	3	29	17	5	5	0	0	56
4	29	19	8	10	0	0	66	4	28	23	14	8	3	1	77
5	40	30	13	5	2	3	93	5	32	25	12	12	11	3	95
6	23	39	19	18	7	1	107	6	26	32	19	22	12	3	114
7	8	15	20	17	12	4	76	7	9	19	28	19	16	7	98
8	0	10	28	22	17	8	85	8	1	9	13	19	19	11	72
9	0	1	7	28	20	14	70	9	1	1	11	16	20	14	63
10	0	1	1	9	21	15	47	10	0	0	2	7	17	23	49
11	0	0	0	3	6	23	32	11	0	0	0	0	9	21	30
12	0	0	0	0	0	1	1	12	0	0	0	0	0	4	4
Total	133	135	101	114	86	71	640	Total	152	139	104	110	110	87	702

Children are attending the school at the time of interview																
	Girl's age								Boy's age							
Grade	12	13	14	15	16	17	Total	Grade	12	13	14	15	16	17	Total
0	0	0	0	1	0	1	2	0	0	1	0	0	0	0	1
1	1	0	0	2	0	2	5	1	2	1	1	0	3	1	8
2	1	1	0	5	3	2	12	2	0	1	1	4	7	4	17
3	1	3	2	1	3	1	11	3	2	2	0	2	4	2	12
4	1	3	3	3	2	4	16	4	1	2	3	2	8	9	25
5	0	1	4	12	10	10	37	5	0	2	3	4	13	6	28
6	1	1	5	11	7	7	32	6	0	0	3	5	11	9	28
7	0	5	2	10	11	18	46	7	0	0	3	11	10	12	36
8	0	1	4	3	8	13	29	8	0	0	0	6	8	6	20
9	0	0	0	1	10	12	23	9	0	0	0	0	5	9	14
10	0	0	0	1	3	8	12	11	0	0	0	0	1	2	3
11	0	0	0	0	0	1	1	12	0	0	0	0	0	3	3
Total	5	15	20	50	57	79	226	Total	5	9	14	34	70	63	195