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Understanding Child Labor in Ghana Beyond Poverty

The Structure of the Economy, Social Norms, and No Returns to Rural Basic Education

Alexander Krauss

Abstract

One in six children age 6–14 are engaged in labor activities in Ghana, with child employment being the leading alternative to schooling. By exploring structural, institutional, geographic, monetary, demographic, and cultural factors affecting household decisions about child labor, the paper's main purpose is to identify the conditions and characteristics of working children, the root causes of their vulnerability, and thus help to inform decision-makers and actors who draft and implement public policy of possible ways to tackle child labor in Ghana. The paper empirically assesses the effects of individual, household, community, regional, and national factors on child labor simultaneously. Findings from the analysis indicate that the underlying causes of child labor vary from factors as widespread in their influence as the structure of the economy (which is largely shaped by family farming), demographics and relevant social norms to those as specific in their manifestation as the geographic isolation of particular groups in the North, a lack of higher returns to schooling up to the basic education level in rural areas, and the low priority and capacity to enforce anti-child labor laws. In addition, an interview conducted with the Minister of Education as well as interviews with Ghanaian children help identify specific interdependencies between child labor and schooling and highlight the societal and economic demand for children to be working. Finally, after identifying which constraints and enabling factors are most important, the paper outlines policy and reform approaches to tackle child labor in Ghana.

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1. Introduction

Child labor is pervasive in Ghana and it often constrains the choices and freedoms of children and their human and economic welfare later in life. Household decisions for or against child labor in Ghana are rarely the consequence of one single risk factor or event, but rather a chain of events and factors ranging from: the structure of the economy (which is largely driven by subsistence farming), cultural influences (social norms viewing child labor as part of socialization), occupational choices (with no higher returns to schooling up to the basic education level in rural areas), to low levels of institutional capacity (to enforce anti-child labor laws) and, among others, demographic variables (children's economic value increasing with age and multiple children competing over limited resources in households). Yet child labor is often narrowly viewed as largely an issue linked to household poverty (see e.g. Grootaert and Kanbur 1995; Canagarajah and Nielsen 2001; Blunch and Verner 2001; Ray 2002; Amin *et al.* 2004).

About one in every six children age 6-14 are employed in 2005/06 (15.6 percent), accounting for about 317,000 children of this age active in the labor market based on calculations of government population and EMIS data for 2006. Evidence from field research conducted in 2010 indicates however that all children interviewed contribute daily in one way or another to household tasks, which are commonly seen as an inevitable part of everyday life in Ghana, not only in rural areas.

Given the high incidence of child labor in Ghana, the paper examines, first, the underlying factors driving child labor and in response to the key findings assesses, secondly, what combination of programs and policy reforms is likely to mitigate child labor in the short- and longer-term. Answers to these questions are critical for policy planners and makers in Ghana. In particular, identifying which constraints and enabling factors are most important and which policies are therefore best in tackling child labor is the primary objective guiding this paper. Yet, because its underlying causes can be complexly interdependent, multifaceted and cross-sectoral, identifying the right mix of policy responses to tackle child engagement in labor activities is challenging.

2. Data and research methods

The paper is based on research carried out in Ghana between 2010 and 2011, with primary data analysis (interviews and fieldwork trips) conducted together with secondary data analysis (mostly employing household survey data) to be able to better inform policy and practice. The study's Q-squared approach to policy analysis, which uses mixed quantitative and qualitative methods, offers a rich foundation to investigate dynamic relationships between child labor and its various underlying social, institutional and economic causes. The paper seeks, largely by means of household data analysis, a better understanding of which multiple factors influence child labor strongest, and the forms of these relationships and potential determinants. Various regression analyses are conducted while descriptive data analysis is also used as it can be at times at least as informative and useful for policy as regression analysis.

The Ghana Living Standards Surveys (GLSS) analyzed here are vital for the planning of Ghanaian development and are commonly used and recognized as one of the most comprehensive and reliable sources of household data in the country. GLSS is carried out by

the Government of Ghana and used as one of the principal means to inform policy by the government itself and among others by multilateral development institutions. GLSS 2005/06 is the only nationally representative household survey in Ghana that included an employment activity module and collected information on child labor. Data from GLSS covers 8,687 households for the 2005/06 survey.[2] The survey is stratified by location and is clustered as census enumeration areas by applying the 'probability proportional to size' method (for more information on the sample design and questionnaire see: GLSS 2008). While this national, cross-sectional survey has limitations on drawing policy implications from the findings at the district level, it is possible to derive conclusions and discuss policy options on a regional and national scale.

With child labor identified as the leading alternative to schooling in Ghana using GLSS household survey data, further insight into the interdependencies between child labor and schooling is gathered through an interview with the Minister of Education, Hon. Alex Tettey-Enyo, on October 19th 2010, which allows for a nuanced interpretation of the drivers of child labor.[3] In addition, as part of the qualitative data collection, fifteen children and youth from two schools (one primary and one secondary school) in the capital Accra were randomly selected and interviewed after school on September 23rd and 24th 2010 using semi-structured questions and methods (see Van Evera 1997). The primary school provides services for poorer children while the secondary school for wealthier youth based on the author's observation. While it only represents a small sample of urban children and youth—with 51 percent of all Ghanaians living within urban areas in 2009 (UN population data)—this qualitative field research is only intended to offer additional micro-level insight and detailed explanations that at times help complement central findings from the household data analysis. Names have been omitted to preserve confidentiality. Indication of field research throughout the paper, unless otherwise indicated, refers to this data collection. These different research methods have been selected because combining such research approaches is possibly the most effective way to inform policy on the relative effects of a wide-range of factors, whether at the individual, household, community or national level, on decisions about child labor.

In defining child labor, the International Labor Organization (ILO 2008) differentiates between unharmful (or less harmful) 'child work' and more harmful 'child labor', with the latter defined broadly as the engagement of children under the age of 15 on a regular basis in prohibited work in order to make a living or compliment household earnings, either as a wage worker or through self-employment. The former in Ghana is typically related to the assistance with (non-economic) household activities before and after school, on weekends and during holidays such as fetching water and/or wood, cooking, looking after siblings and similar chores. In this paper, a definition of child labor is adopted in line with the ILO definition that is used by the Ghana Living Standards Survey and therefore endorsed by the Government of Ghana: a child is employed if he or she did "any work for pay, profit, family gain or produce anything for barter or home use during the last 7 days" (GLSS 2008).

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[2] The next round of GLSS is planned to be completed around the end of 2013 and is expected to be available for data analysis purposes around 2014.

[3] In terms of the semi-structured interview with the Minister, it is important to emphasise that the views expressed reflect his subjective standpoint and not necessary those of the Government of Ghana. Excerpts from the interview are found throughout the text; for interest in the full transcript of the interview contact the author.

3. Literature review and descriptive results

Employing children who are under the age of 15 is prohibited under Ghana's labor decree from 1967, while legislation allows for 'light' work. According to Article 32 of the Convention on the Rights of the Child from 1989, to which Ghana is a signatory, "state parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education" (OHCHR 1989). Although the enactment of legislation is an important step to combat child labor, field research in Ghana reveals that law enforcement officials generally do not *de facto* enforce laws restricting child labor, while the capacity to identify and penalize child labor is also constrained especially in rural areas.

Is child labor a form of exploitation or rather a basic component of socialization? For many Ghanaians, child labor is viewed as part of a child's socialization process in that working, as opposed to schooling, helps children get better accustomed to the skills needed later for employment. During the interview, the Minister of Education appears to culturally relativize child labor as part of life for many farming families, while he views, on the other hand, that Ghanaian children and youth should not be formally engaged (as wage workers) in agriculture. The Minister states:

> "We are doing the orientation and sensitization for the parents also to understand the issues of economic activities for minors—child labor—so that they can desist from holding their children back because of economic advantages they have. [...] At the moment, I think we, in Ghana, are at home with the farming peoples. But what is happening is that some parents still want to engage their children as a way of training them for the future in the occupations in which they are, at the moment, engaged. I belong to the old school, where you 'bring up the child the way he should go' so that if you are a child in a farming family you should be able to learn about farming from your parents. But it is not the major issue now. [...] They are engaged because they belong to families undertaking farming. And they are just helping their parents. [...] We have family farms and you have to take your children to the farm to grow some cassava, to plant some maize in good season and harvest it to supplement the household food sources."

In line with this rationale, the Food and Agriculture Organization (2010) highlights the positive dimensions of child labor and states that "working on the farm or on the fishing boat or herding cattle can, if it doesn't get in the way of school and occurs under safe circumstances, be very valuable. It's a means of acquiring skills, giving children a sense of belonging and cultural identity" (see also Canagarajah and Coulombe 1997). Field research conducted with primary students interviewed in 2010 confirms that economic activities of children are commonly accepted in society, for which the line between light work activities and more harmful economic labor is not always very clear. There are various forms of child work and labor in Ghana with different degrees of hazard, ranging from children who assist parents collecting wood or work seasonally in small-scale agriculture to those who chase tro-tros (mini-buses) in motion to sell products like fan-ice (ice-cream) and others who are exploited full-time or engaged in bondage-labor within fishing communities along the shores of Lake Volta, as participatory observations in 2010 indicate.

To help clarify discrepancies between 'acceptable' and 'unacceptable' work, the Ministry of Manpower, Youth and Employment (now called the Ministry of Employment and Social Welfare) categorized in 2008 the following activities as hazardous for children in the country's largest agricultural sector—the cocoa sector—based on ILO conventions: independent farm work (in isolation), cutting down trees, using machetes and applying pesticide, while simultaneously considering the extent to which education opportunities are being constrained for these children (FAO 2010). To this end, analysis of GLSS data for 2005/06 indicates that the vast majority of child laborers 6-14 years of age have at least

several other people at their place of work, with less than one percent working in isolation, while no information is provided on the specific tools or equipment used by working children. Simultaneously however, there appears to be evidence that labor activities help to constrain the educational opportunities of pockets of children particularly in the North (which incorporates the Upper West, Upper East and Northern regions), evidenced by the fact that 53.7 percent of children of this age group not in school are engaged in labor activities in this part of the country compared to 33.3 percent in the South.

Social acceptance and non-enforcement of anti-child labor legislation are influenced by the country's economic structure and agricultural dependency that creates direct demand for child labor. While together industry and services account for 44 percent of the labor force, most Ghanaians are employed in agricultural activities (56 percent). In Northern Ghana over 70 percent of the population have agricultural livelihoods (GLSS 2005/06 data). Nearly all child laborers in Ghana are thus employed in general agricultural work that is unpaid (93.7 percent). Since the majority of Ghanaians work in agriculture, not only is the demand for child labor persistent. But the limited possibilities to apply acquired knowledge and skills outside of the agriculture sector especially in rural areas also impedes the country's education and economic development.

People engaged in agriculture have very low annual income, at about US$60, irrespective if they finish nine years of schooling or not.[4] A very important finding is that the annual income of household heads 15 years of age or older who are self-employed in agriculture is basically the same for those with no schooling (US$59) as for those with 9-years of completed basic education (US$56) as shown in Table 1. Low returns to education are of serious policy concern since lower secondary is generally the highest level of education attained in rural areas, so that economic incentives to complete basic schooling are lacking in a country where most are employed in agriculture-related activities. This is important policy information because for many households the decision to send a child or adolescent to the field to assist in farming activities or to school and for what duration may be assessed using cost-benefit analysis, comparing—for primary school for example—the direct private costs (52.81GH¢ annually based on 2006 GLSS data) and the opportunity costs of schooling (the forgone earnings from work) together with the public costs (91.49GH¢ annually based on 2006 government EMIS data) on one hand with the future benefits to the household, including income returns, on the other (see Krauss 2012). Many people invest in their children's educational capital and at times their own—an added year or cycle of education—provided that the marginal value of the investment surpasses its additional expenses. Yet for agriculturally-dependent households in rural areas there are minimal incentives in terms of greater income generation to send children to school instead of the farm (Table 1).

There are several reasons for the lack of returns to schooling in agriculturally-dependent, rural areas. First of all, the agriculture sector demands little schooling, with labor (and not human capital) commonly recognized as the principal asset among the poor. Secondly, field research in 2010 in Ghana indicates that skills and competencies for most people are largely attained through 'learning by doing' in agriculture. Thirdly, although educational opportunities in rural areas have begun opening from very low levels, higher completion rates do not appear to have led to many alternative options beyond agricultural livelihoods (World

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[4] It is important to bear in mind that reported revenue levels are likely higher because individuals active in subsistence farming often do not state a portion of their revenue as it is consumed.

Bank 2011). Policies needed to respond to these challenges are discussed at the close of the paper.

Table 1: Annual income for household heads age 15 or older relative to their level of skills/education and occupation, 2005/06

US$	Level of skills/education acquired:						Avg. income	# of obs.
	Unskilled			Semi-skilled (/skilled)		(Highly-) Skilled		
	No education	Primary	Lower secondary	Upper secondary	TVET	Higher educ.		
National average	*127*	*183*	*368*	*763*	*1,130*	*3,652*	*518*	*7,668*
Occupational group								
Public	*390*	*754*	*1,217*	*1,761*	*2,120*	*4,033*	*2,130*	565
Wage private formal	*846*	*835*	*1,130*	*1,391*	*1,913*	*5,185*	*1,489*	613
Wage private informal	*760*	*771*	*902*	*882*	*1,250*	*4,815*	*923*	544
Self-employed, agriculture	*59*	*47*	*56*	*117*	*218*	*1,446*	*680*	3,603
Self-employed, business (non-agri.)	*33*	*67*	*151*	*224*	*337*	*2,467*	*184*	1,890

Source: Author's calculations based on data from GLSS. Note: In terms of exchange rate calculations, the GLSS data set uses old cedis while 10,000 old cedis equals 1 new cedi, with the average exchange rate at GH¢0.92 (¢9,176.48) to one US dollar as of 2006 (GLSS 2008). Household income is measured here as income from employment, which better captures actual earnings related to one's level of schooling attained compared to using all sources of household income including income from agricultural and non-farm activities, rent, remittances and other sources. In terms of data for occupational groups, 6 percent of respondents (453 individuals in total) are not working, for whom data is missing and calculations are not possible. Finally, data for employment in agriculture has been merged to refer to engagement in either crop or export agriculture.

Eliminating poverty in Ghana will by no means eliminate child labor because large shares of children in wealthy households are employed. In merging labor participation rates among minors age 6-14 by quintile levels in Figure 2 in the annex, a very important finding emerges: while 21.7 percent of poor children—those falling into the bottom two quintile—are working, labor participation rates remain high for children in the middle quintile (12.4 percent), fourth quintile (8.4 percent) and richest quintile (4.6 percent). In total, 51.2 percent of child laborers fall into the bottom quintile while 27.9 percent of child laborers are non-poor (fall into the richest three quintiles). Figure 2 provides statistical evidence that child labor is merely in part explained by poverty, since 29 percent of non-poor children in the North are engaged in labor activities compared to 34.1 percent of poor children, i.e. from the bottom two quintile. These data findings are highly relevant for the policy discussion at the end of the paper.

Immediate or postponed gratification: interconnections between child labor and schooling. The need for child labor in many households in Ghana impedes initial schooling or the transition onto higher levels of education. At times high fees for education can push children prematurely into the labor force, sometimes to be able to offset school fees, or pull children out of school because of a lack of funding. Often children however need to work irrespective of the direct and indirect costs of schooling, since time is money and opportunity costs of children increase as they get older, as illustrated later. For many households in Ghana—with a bias towards poorer households—the demand for schooling competes with the demand for child labor often because of labor-intensive agricultural livelihoods. Primary participatory observations in early 2010 in Bonsaaso, a poor rural village located in the Amansie-West district (Ashanti region), suggests that the poor are more likely to mortgage their already low human and physical capital by pulling their children out of school and engaging them in labor activities including illegal gold mining, as children were observed mining during school hours. While instant household gains are associated with child labor, the future prospects of children who work can be negatively impacted. Parents gain in the short-term from children who work through their contribution to earnings and at the same time they can save on costs

for education if their children do not attend school. In the long-term, however, children who work generally earn less later in life as a consequence of a weaker educational background, as Table 1 illustrates above. Child labor can also have adverse effects on children's cognitive development by interfering with schooling and on their physiological and psychological development by increasing exposure to health hazards, particularly for those children involved in mining and agriculture (Heady 2000).

By merging data on child labor with educational attendance across the country, the spatial analysis in Map 1 can help policy planners and implementers in Ghana identify correlations and areas with greater need for programmatic attention. It illustrates the pervasiveness of child labor in the North, where over four times the share of 6-14 year old children are actively employed relative to the South (33.1 percent compared to 7.8 percent, respectively). In the Upper West region, only two thirds of children of this age participated in school (66.9 percent) and almost half engaged in labor activities (44.7 percent), while at the other end of the spectrum almost all children in the Ashanti region participated in school (96.9 percent) and child labor is almost nonexistent there (2.9 percent). In terms of this interrelationship between labor and school participation rates, the Eastern region is (despite a schooling rate of 97.2 percent) a outlier for higher levels of child labor which is at least in part explained by the direct labor-demand within fishing communities on Lake Volta, as participatory observations in 2010 indicate.

Map 1: Labor and school participation rates for children age 6-14 across Ghana, 2005/06
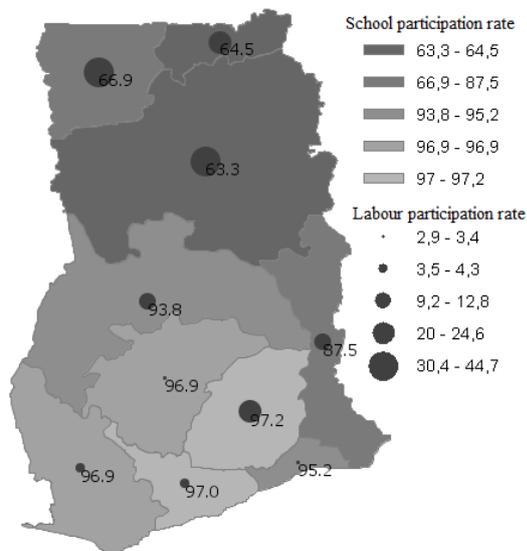
Source: Author's illustration based on calculations of data from GLSS. Note: The survey sample for this group of children covers 7,694 observations.

Households spend on average about US$60-100 per primary and lower secondary student annually. Educational expenses incurred by households for the average primary student are US$57.40 (GH¢52.81) and for the average lower secondary student US$96.55 (GH¢88.83) based on GLSS data. The fact that multiple school age children and youth live in most households multiplies this already large share of household expenditure for education. Circumstances that however allow for pockets of the economically disenfranchised population to not attend school or push them prematurely into the labor force due to the private costs falling on households, tend to offer few opportunities to overcome underlying factors that keep people in poverty. 69 percent of household expenditure on education is used

for food, board and lodging (40.7 percent) and registration fees (28.3 percent); policy efforts to reduce the burden of school costs need to especially alleviate these respective costs. Other specific school expenses, although not captured in the GLSS data set, are accrued by parents for their children's schooling such as printing materials, helping to purchase a chair, a table or even a school computer, as revealed by field research conducted in 2010 with primary students interviewed in Accra.

With teacher salaries alone accounting for 96 percent of education expenditure in 2010 (EMIS data), the very strong supply-driven approach of the government in delivering educational services largely meets only the needs of those who reach a minimal socioeconomic level. This is because these private costs of schooling falling on households—despite legislation abolishing fees at lower levels (World Bank and UNICEF 2009) and interventions over the years to reduce public costs—remain an economic barrier for children at all levels of education which is coupled with the lower demand for schooling among agricultural communities.

Household expenditure on schooling is very high among the poor and can reflect their high expectation of educational investments in helping to overcome poverty. Field research indicates that it is not common in Ghana to find possibilities to borrow against expected increased wages to finance current schooling expenses, making it difficult for some very poor children and youth to break out of poverty and subsistence farming livelihoods through education. Yet, to send economically deprived children to school year after year until they complete basic education accounts for a particularly large share of income among households in the poorest quintile, with GLSS data calculations for 2005/06 indicating that education expenses represent 16 and 30 percent respectively of this group's total household income for public and private school students. But very high expenses can deter children entirely from schooling and leave them with no other alternative to assisting family enterprises. For many poor households, there is no margin of income above subsistence that can be channeled into future investments in the human capital assets of household members especially at higher levels of education (Krauss 2012).

Field research conducted in 2010 with secondary students in Accra indicates that some students interviewed dropped out of school temporarily solely because school fees were too expensive, in some cases because they increased by up to 40 percent over the course of one year (much higher than levels of inflation for recent years). Some parents though who perceive post-basic education to be unattainable for their children due to the associated expenses may be less inclined to send their children to primary or lower secondary at all and simply engage them in labor activities, given that prospects of being able to finance schooling at each higher level are incrementally scarce. This can be a critical issue that education planners and policy makers need to consider when setting school fees or abolishing them and how best to subsidize the financially disadvantaged at all levels of schooling.

Child labor and schooling are not mutually exclusive: 8.6 percent of all 6-14 year olds do both. Table 2 matches the employment status of 6-14 year olds with data on their attendance in school and crosses this information with a number of their background and labor-specific characteristics. Data calculations show that households do not always have to make decisions in favor of child labor and against schooling or vice versa. Rather, they are able to decide between one of four choices in relation to their children's work and schooling. By disaggregating data on child labor a more accurate picture emerges that illustrates the dynamics of the situation: 77.2 percent of children 6-14 years of age are schooling and not

employed, 8.6 percent are simultaneously employed and schooling, and 7 percent are employed but not schooling, while the remaining 7.2 percent are neither employed nor schooling (classified as being idle). Nearly one in ten children of this age in Ghana are therefore able to combine the two.

Birth place in the North or South is one of the strongest predictors of a child's likelihood of working in Ghana. If the South constituted its own country, nearly all 6-14 year olds would not be working (92.2 percent), while if the North formed its own country, one third of children of this age would be engaged in labor activities (33.1 percent). In the North, about half of the children of this age are only attending school (50.6 percent) and 18.9 percent are only working while 14.1 percent combine work with school and 16.3 percent are doing neither. The fact that only 1.6 percent of Southern children are working while not schooling compared to 18.9 percent of Northern children evidences the extent of the latter group's extreme marginalisation (Table 2). On one hand, in some households children may take on a job because they are not in school or may be in school because they are not currently employed. On the other, involvement in labor activities is not inevitably a contradiction to going to school, as outlined above, since earnings gained from employment are used at times to compensate educational costs. It is also possible that work is chosen at the expense of schooling as some perceive that the government does not provide adequate educational services especially within rural areas, and because uncertainty exists as to the practical value of acquired qualifications translating into viable work in the formal sector in these areas.

For the most at risk and those living at the level of subsistence, the decision can be very difficult: a family that decides to send their children to school and subsequently lacks sufficient labor on the farm and has a poor harvest could potentially even experience an unexpected and negative impact from schooling. This implies that for very deprived families with subsistence farming livelihoods to send all children to school may not always be a viable option in the short-term and that schooling combined with labor can still be positive if the alternative is to only be working on the farm.

There is a strong intergenerational relationship between child labor and parental education as well as agricultural livelihoods. 23.3 percent of children are employed whose father has no education, while the share rapidly and consistently drops as children's fathers are more educated. Results follow similar trends according to mothers' educational background (data not shown in table). The level of education that a child reaches is therefore a very good predictor later in life of the likelihood of labor participation but also school participation of his or her own children. Another intergenerational dimension of child employment is related to the kinds of livelihoods that parents pursue, as nearly all child laborers are employed in (unpaid) agriculture, leaving only 6.3 percent engaged in non-agricultural employment. It is also important to note that child labor in Ghana is generally not remunerated as only 3.8 percent receive payment for their work (Table 2).

A child's time is an important resource. Overall the odds of children being economically active tends to increase when the average distance needed to travel to and from school are longer due to children's time constraints. Although fluctuations exist, data indicate that an additional 12 minutes to and from school increases on average the likelihood of working by one percent and reduces the likelihood of schooling by one percent. These findings here confirm the results of previous research conducted in Ghana by Vuri (2008) analyzing travel distance to primary schools in 1998/99. Similarly, children who balance labor involvement with schooling spend consistently less time in class and doing homework (Table 2); this is

another reflection of time poverty. Children who are employed and do not participate in school work an average of 34.1 hours per week compared to 19.9 hours for those who are simultaneously schooling.

Table 2: Descriptive data on labor and school participation rates for 6-14 year old children, 2005/06

	School, with		No schooling, with		Total	# of obs.	School	Work
	no work	**work**	**no work**	**work**				
Total	**77.2**	**8.6**	**7.2**	**7.0**	**100**	**7,694**	**85.8**	**15.6**
	All shares refer to labor or school participation rates out of 100%						Shares are not to add up to 100%	
Age								
6-8	78.0	5.0	12.1	4.9	100	1,968	83.0	9.9
9-11	77.6	8.7	7.0	6.7	100	2,832	86.3	15.4
12-14	76.2	11.0	4.3	8.5	100	2,894	87.2	19.6
Gender								
Female	78.0	7.9	7.7	6.4	100	3,716	85.9	14.3
Male	76.4	9.3	6.8	7.5	100	3,978	85.7	16.8
Location								
North	50.6	14.1	16.3	18.9	100	2,366	64.8	33.1
South	89.0	6.2	3.2	1.6	100	5,264	95.2	7.8
Region								
Western	93.1	3.8	2.7	0.4	100	706	96.9	4.3
Central	94.5	2.5	1.9	1.1	100	565	97.0	3.5
Greater Accra	92.0	3.2	4.6	0.2	100	585	95.2	3.4
Volta	80.4	7.1	6.8	5.7	100	674	87.5	12.8
Eastern	78.1	19.1	1.9	0.9	100	790	97.2	20.0
Ashanti	94.6	2.3	2.4	0.7	100	1,327	96.9	2.9
Brong Ahafo	87.8	6.0	2.9	3.2	100	617	93.8	9.2
Northern	54.5	8.8	15.1	21.6	100	963	63.3	30.4
Upper East	52.2	12.3	23.2	12.3	100	684	64.5	24.6
Upper West	43.9	23.0	11.4	21.7	100	719	66.9	44.7
Father's level of education								
No schooling	66.6	13.1	10.1	10.2	100	994	79.7	23.3
Primary	88.4	6.6	1.7	3.3	100	181	95.0	9.9
Lower secondary	93.0	5.3	1.1	0.6	100	972	98.3	5.9
Upper secondary	97.6	0.6	1.8	0.0	100	167	98.2	0.6
Tertiary	98.2	1.8	0.0	0.0	100	55	100	1.8
Levels of welfare								
Welfare quintile 1 (poorest)	58.1	12.2	15.2	14.6	100	2,287	70.2	26.8
Welfare quintile 2	78.4	9.1	6.8	5.7	100	1,693	87.5	14.8
Welfare quintile 3	84.3	8.9	3.3	3.6	100	1,480	93.1	12.4
Welfare quintile 4	89.3	5.5	2.3	2.9	100	1,267	94.8	8.4
Welfare quintile 5 (richest)	93.5	3.2	2.0	1.3	100	967	96.7	4.6
School location								
Time to and from school, 0-59 min.	91.5	8.5	..	..	100	4,915	100	8.5
Time to and from school, 60-119 min.	89.0	11.0	..	..	100	1,094	100	11.0
Time to and from school, 120+ min.	84.6	15.4	..	..	100	391	100	15.4
School participation rate by hours of class attended last week								
24 hours or less	86.9	13.1	..	..	100	1,180	100	13.1
Between 25 and 34 hours	91.9	8.1	..	..	100	2,650	100	8.1
35 hours or more	94.1	5.9	..	..	100	1,306	100	5.9
School participation rate by hours spent on homework done								
Less than one hour	88.9	11.1	..	..	100	4,737	100	11.1
One or more hours	96.1	3.9	..	..	100	1,605	100	3.9
	Shares or figures are not necessarily to add up to 100%							
Avg. number of hours worked in week	..	19.9 h	..	34.1 h	..	1,199	..	26.3 h
Share who received payment for work	..	3.8	..	3.9	..	1,199	..	3.8
Child labor type								
Employment in agriculture, unpaid work	..	92.6	..	95.1	..	1,125	..	93.7
Employment in non-agriculture	..	7.4	..	4.9	..	76	..	6.3
Work place in village or town								
Yes	..	94.4	..	89.2	..	1,106	..	92.1
No	..	5.6	..	10.8	..	95	..	7.9

Source: Author's calculations based on data from GLSS. Note: Children who were on school holiday during data collection have been omitted. Data that refers to fathers with tertiary education should be read with caution given limited observations.

[Typical profile of a child laborer (whether also schooling or not) in the last column]

Household demand for child labor rises as children get older or (more accurately) bigger. Data disaggregated by different age groups indicate that once children are physically bigger, their usefulness or value around the household and community increases, evidenced by an incremental rise in child employment from 9.9 percent for 6-8 year olds to 15.4 percent for 9-11 year olds followed by 19.6 percent for 12-14 year olds. That is, as children grow older they are more often pulled out of school or forced to balance school with work in order to contribute towards household income generation. With older children at greater risk, respective policies may need to place particular attention on older cohorts to help reduce pressures of early entry into the labor force and ensure they continue their schooling. Figure 1 provides age-specific evidence of the increasing demand for children to only be working as they get older or bigger.

Figure 1: Labor and school participation rates by individual age, 2005/06
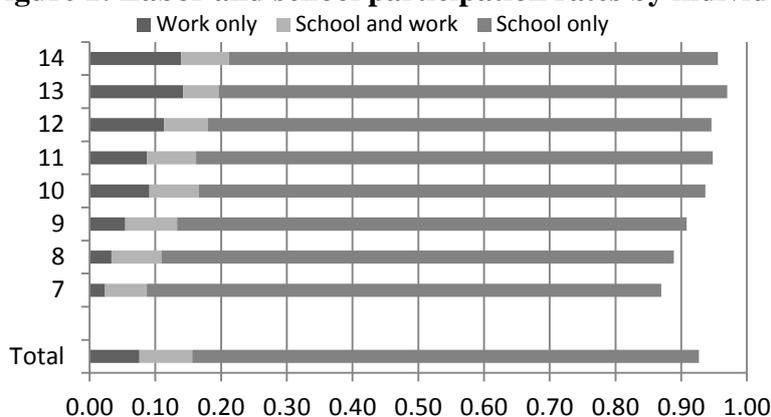
Source: Author's illustration based on calculations of data from GLSS. Note: The remaining share out of 100 percent reflects those who are neither working nor schooling. Data for children six years of age have been omitted given limited observations.

An aspect of child employment not captured in the large household surveys conducted in Ghana is seasonal and temporary labor which can cause seasonal and temporary fluctuations in school attendance patterns. A study by Fentiman *et al.* (1999) found that in rural Ghana some children who are enrolled commonly miss school throughout seasons when families need additional assistance to plant and harvest crops. Children also assist with watching over animals during harvest seasons or ensure that birds do not damage crop fields. Even if it is common for parents to only temporarily pull children out of school, research on the prevalence of dropout indicates that withdrawing children from school during particular seasons can often lead to complete dropout (ibid.). This appears to be a widespread phenomenon in West Africa. A study in Nigeria observed that low school attendance is common within rural areas and in particular throughout harvest seasons and on days of local markets (Francis *et al.* 1998). Policy instruments to help mitigate such seasonal effects are discussed at the end of the paper.

Urbanization will likely reduce the prevalence of child labor. Because only 6.3 percent of all child laborers in the country are engaged in non-agricultural employment (Table 2), it is likely that the incidence of child labor will reduce at a similar pace to which the country continues to urbanize which in turn is structurally contingent on efficiency gains in the agriculture sector. Nevertheless, in the most urbanized area of the country, the capital Accra, field research with primary and secondary students interviewed in 2010 reveals that they reported assisting with random non-remunerated household chores like washing clothes,

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carrying buckets of water and buying household items on average about 1-1.5 hours per day, but such familial activities did not interfere with these urban children's schooling and were thus only conducted before and/or after school and on weekends.

After this discussion of the descriptive data results, the following section turns to regression analysis, controlling for the presence of individual, parent, household, regional and cluster determinants, to help further understand the underlying forces and their relative significance in influencing decisions about child labor in the country.

4. Regression model and results

Regressions are conducted here applying variables available in GLSS and influenced by variables that previous research has found to affect labor and school participation, in part based on a similar model employed in Ghana using data from the late 1980s and early 1990s (see Canagarajah and Coulombe 1997). Given that working and schooling are two interdependent decisions (not mutually exclusive as shown above), a bivariate probit model is applied which permits interconnected relationships between these two dependent variables, with school participation defined as "having attended school" and labor participation defined as doing "any work for pay, profit, family gain or produce anything for barter or home use during the last 7 days" (GLSS 2008). The correlates of working and schooling in Ghana are examined applying both supply- and demand-side variables, for a number of which the significance of their correlation is outlined in the descriptive analysis above. Independent variables explored range from sex, parental levels of education and household welfare to the number of household members, household occupation in agriculture/non-agriculture, region of residence and education supply indicators (for further information on variables and methodology applied see Table 3).

The first model assesses the effects of demand variables on influencing household choices in favor of or against child labor and schooling, while the second model is similar but also takes into account supply variables such as distance to the nearest school facility and total school expenditure. The regression results of the econometric models are presented in Table 3, while only the last column reflects basic descriptive statistics of the explanatory variables applied. Results for both models are very similar due to the limited effects of supply variables and those for the second model are described in the following for simplification purposes.

In terms of gender, regression results show that overall the difference between 6-14 year old boys and girls is not significant in their probability of being engaged in work. This finding is consistent with previous research (Canagarajah and Coulombe 1997). If a mother is present in the household, her child's likelihood of working is not statistically affected, but the likelihood of schooling increases by 2.5 percent, with everything else (individual, household, community and cluster factors) being equal. In relation to fathers' without any schooling (the reference group), those who have at least primary education are 4 to 5 percent less likely to require their children to work while they are in turn 3 to 6 percent more likely to send their children to school. This finding supports the argument that opening educational opportunities for children and youth is a good insurance for the schooling and non-employment of their own children later in life. In terms of household members, with each additional member age 5 or below the odds of children 6-14 years of age being employed increase by about one percent.

The probability of a child being involved in labor activities is about 7 percent lower if he or she falls into the top quintile compared to the bottom quintile (the reference group). These percentages are the likelihood for a simulated child who would have the same age, physical location, access to a school facility and, among others, household characteristics as an average Ghanaian child but who would live in a household falling into the richest welfare quintile. Household welfare levels also have effects on attending school, with children in one of the top three welfare quintiles being 2 to 3 percent more likely to be in school compared to the bottom quintile. A very important finding with direct policy implications is that household welfare in Ghana appears to have weaker effects on the prevalence of child labor and schooling than geographic location, casting doubt on the common perception that it is mainly poverty pushing children prematurely into employment.

The effect of conditions associated with geographic location on labor participation seems very strong: children who live in the Ashanti region are 7.5 percent less likely to be working compared to those in the Northern region (the reference group) while those in the Upper West region are 13.6 percent more likely to work, reflecting a difference of 21.1 percent in the likelihood of being employed, with other factors held constant. Children in the Ashanti region are 4.4 percent more likely to attend school in comparison to those in the Northern region. Given these findings, the analysis breaks away from the conventional thinking that monetary poverty largely explains child labor and stresses the point that being born in the North can often cause educational and monetary poverty (with the North home to all districts that fall into the bottom quintile) and lead to involvement in agricultural activities, while educational and monetary poverty does not cause relocation to the North.

Children living in households with one or both parents employed in agriculture (the reference group) are about 2-3 percent more likely to be working themselves. This effect is surprisingly low given that nearly all child laborers are engaged in agriculture, whilst the very large effects of geographic location in the North already partly capture these children's residency in rural, subsistence areas as well as other geographic metrics influencing agricultural livelihoods that are discussed further below.

The school expenditure variable, which reflects potential household budget limitations in financing children's schooling, indicates that higher costs associated with education have an insignificant effect on labor involvement and schooling. In terms of school distance, estimations illustrate that a distance of less than 30 minutes (compared to the reference group of over 30 minutes) has an insignificant effect on working although a positive effect on the prevalence of schooling by about 3 percent. It was expected that the effects of distance on working and schooling would be larger. The results could be because distances to school in 2005/06 remain relatively long for most children largely irrespective of various background characteristics including North/South or rural/urban residency, with descriptive data indicating that 22.5 percent of primary students in the country take at least one hour to get to and come home from school. Simultaneously however, the results here may suggest that some overall improvements in school proximity have been made over time. Earlier multi-regression analysis by Vuri (2008) analyzing the availability of and travel time to basic schools within Ghana in 1998/99 found that the greater the distance to school, not only the higher the likelihood that children work but also the lower the probability that they attend school.

Table 3: Bivariate probit regression results: determinants of child labor and school participation for 6-14 year olds, 2005/06

	Model 1 Demand variables				Model 2 Demand and supply variables				Basic descriptive data avg.
	Labor participation		School participation		Labor participation		School participation		S 0.83
									L 0.17
Marginal effect reflects the share of a variable's impact. T-ratio shows if a variable's significance level is over 95% if >1.96 or <1.96	Marg-inal effect	t-ratio	Marg-inal effect	t-ratio	Marg-inal effect	t-ratio	Marg-inal effect	t-ratio	
Independent variables									
Child characteristics									
Age	0.657	1.72	0.383	1.41	0.609	1.58	0.368	1.47	*9.7*
Age^2*	-0.330	-1.23	-0.235	-1.22	-0.318	-1.18	-0.219	-1.22	*--*
Male (1 if so, 0 if not) (reference group, female)	0.018	1.68	-0.015	-1.94	0.020	1.85	-0.012	-1.69	*0.52*
Real child (1 if relationship to head is child, 0 if not)	-0.031	-2.00	0.019	1.63	-0.025	-1.58	0.013	1.19	*0.69*
Parent characteristics									
Mother lives in HH (1 if so, 0 if not)	0.016	1.05	0.026	2.26	0.015	0.97	0.025	2.33	*0.68*
Father's education, primary (1 if so, 0 if not) (ref. group, no edu.)	-0.035	-2.33	0.036	4.67	-0.042	-3.05	0.039	5.85	*0.07*
Father's education, lower sec. (1 if so, 0 if not)	-0.055	-4.12	0.066	6.41	-0.054	-3.86	0.056	5.92	*0.38*
Father's education, upper sec. or higher (1 if so, 0 if not)	-0.054	-3.65	0.042	5.10	-0.049	-3.32	0.034	4.15	*0.08*
Household characteristics and conditions									
Welfare quintile 2 (1 if so, 0 if not) (ref. group, quintile1)	-0.018	-1.21	0.009	0.96	-0.013	-0.89	0.006	0.65	*0.22*
Welfare quintile 3 (1 if so, 0 if not)	-0.021	-1.30	0.020	1.96	-0.032	-2.08	0.019	2.05	*0.20*
Welfare quintile 4 (1 if so, 0 if not)	-0.031	-1.98	0.026	2.61	-0.042	-2.85	0.025	2.64	*0.17*
Welfare quintile 5 (1 if so, 0 if not)	-0.074	-6.12	0.036	3.89	-0.069	-5.70	0.027	2.77	*0.13*
HH occupation in non-agriculture (ref. group, agriculture)	-0.027	-2.11	0.015	1.65	-0.024	-1.86	0.016	1.84	*0.46*
With each additional HH member age 0-5	0.014	2.23	-0.007	-1.69	0.014	2.27	-0.007	-1.85	*1.4*
With each additional HH member age 6-14	0.004	0.95	0.004	1.06	0.002	0.52	0.005	1.44	*6.6*
With each additional HH member age 15-59	-0.003	-1.05	0.005	2.25	-0.003	-1.00	0.006	2.37	*2.9*
With each additional HH member age 60 or older	-0.012	-1.30	0.008	1.36	-0.008	-0.90	0.006	1.01	*0.4*
Regional and cluster characteristics									
Western region (1 if so, 0 if not) (ref. group, Northern region)	-0.048	-3.03	0.037	4.49	-0.040	-2.30	0.028	3.03	*0.08*
Central region (1 if so, 0 if not)	-0.065	-4.92	0.042	5.36	-0.074	-6.60	0.040	5.50	*0.08*
Accra region (1 if so, 0 if not)	-0.044	-2.51	0.020	1.69	-0.043	-2.31	0.008	0.53	*0.06*
Volta region (1 if so, 0 if not)	-0.038	-2.18	0.033	3.79	-0.023	-1.11	0.032	4.14	*0.10*
Eastern region (1 if so, 0 if not)	0.063	1.95	0.046	5.83	0.062	1.79	0.042	6.00	*0.11*
Ashanti region (1 if so, 0 if not)	-0.082	-5.90	0.054	5.89	-0.075	-5.10	0.044	4.84	*0.16*
Brong Ahafo region (1 if so, 0 if not)	-0.042	-2.51	0.045	6.32	-0.040	-2.46	0.039	5.67	*0.08*
Upper East region (1 if so, 0 if not)	0.018	0.65	-0.033	-1.49	0.028	0.97	-0.027	-1.34	*0.11*
Upper West region (1 if so, 0 if not)	0.138	3.18	-0.010	-0.59	0.136	3.13	-0.001	-0.04	*0.10*
Total school expenditure, lowest tercile (ref. group, highest tercile)	--	--	--	--	-0.012	-0.74	-0.014	-0.99	*0.33*
Total school expenditure, middle tercile	--	--	--	--	-0.022	-1.66	0.001	0.12	*0.33*
Distance to school, 0-29 min. (ref. group, 30 or more min.)	--	--	--	--	-0.002	-0.17	0.033	2.63	*0.76*
Sample size of children	2,385				2,214				

Source: Author's regression results based on calculations of data from GLSS. Note: HH stands for household. Household occupation in (non-)agriculture is calculated to reflect if one or both parents are employed in (non-)agriculture. Given that data on household expenditure for education and distance to school are only provided for students (i.e. not for children who do not attend school), these two supply variables are calculated creating the cluster median (the average for a given geographic enumeration area used for the national census), making the assumption that educational expenses for households and school distance would be very similar within a given cluster which the data also confirms. Total school expenditure includes costs for school and registration fees; contributions to PTA; uniforms and sports clothes; books and school supplies; transportation to and from school; food, board and lodging; expenses on extra classes; and in-kind expenses. Total school expenditure is divided into terciles: the lowest school expenditure tercile reflects clusters that spent on average between GH¢0 and GH¢14.30 (new cedis), the middle school expenditure tercile spent between GH¢14.31 and GH¢43.80 and the highest school expenditure tercile between GH¢43.81 and GH¢700.00. *Age^2 represents age squared and is included in order for the regression to allow for non-linearity in age. Two variables have been dropped from the model with demand and supply variables due to collinearity: if the 'father lives in the household', as results are very similar to whether the mother lives in the household, and if the 'supply variables are missing', as available information is very similar to that for a cluster on distance to school and household expenditure for schooling. From the model with only demand side variables, one variable (if the father lives in the household) has been dropped due to collinearity. To capture a larger sample of all 6-14 year old children (increase the number of

observations and the accuracy of results), mothers' level of education has been withdrawn from the initial regression design, for which effects are similar to fathers' level of education.

Other variables are included in the second model (with both demand and supply variables) to confirm robustness and test whether they effect the decision for children to engage in work or go to school. One variable that does show variance is religion, at least in terms of school participation, while the effect of different religious affiliations on working is insignificant. With all other effects remaining largely similar, results suggest that Muslims would be about 4 percent more likely to ensure that their children attend school relative to animists (the reference group), while Catholics and Protestants are about 5 to 6 percent more likely to do so, respectively (this finding nonetheless has little policy relevance relative to many other variables). In addition, when the regression is conducted without levels of household welfare to test whether its exclusion affects the parameters of the other variables, it is established that there is nearly no change at all in the remaining parameters. Estimates of sub-groups for the full model by age (children age 12-14 or even 10-14) constrain the sample size, but disaggregation is possible for gender. In a gender split model (using both demand and supply variables), differences between boys and girls were very small for all explanatory variables with two exceptions: the effect of household welfare on girls' school attendance is insignificant, and the effect of living in the Eastern region on boys' labor involvement is very strong and significant (which is likely in part due to boys working in fishing communities on Lake Volta as field research in Ghana in 2010 indicates). Estimations of these sub-samples for gender (although these two variations arise) also verify on a whole the robustness of the findings.

Overall, the statistical analysis reveals that three of the most significant predictors in helping to determine labor participation and constrain school participation include:
- Geographic location especially in the North;
- Having parents without any schooling, particularly fathers;
- Living in a household found in the lower welfare quintiles, particularly for boys.

The results reinforce the need to better target interventions that mitigate child labor to the North, increase children's and youth's levels of education and possibly promote adult literacy programs more aggressively, and improve demand-side policy levers that strategically aim to reduce the need for child labor and the opportunity costs for schooling. An important finding is that the regression results reveal that school supply variables (school expenditure and distance) have a limited or insignificant effect on determining labor and school participation in the country.

Northern residency is a very strong explanatory factor for child labor due to a combination of many inter-locking variables and conditions coming together in this part of the country. First of all, since the models control for the lower levels of parental education and household welfare of Northerners, their very high levels of household engagement in agriculture and, among other factors, their higher number of children within households, the large effects of Northern residency in the regression models capture remaining conditions (beyond the control variables) associated with living in this part of the country as outlined in the following. The North has an arid environment conducive to a higher prevalence of drought, it must cope with climate stress that continues to intensify in this part of the country, and its population is thus known to live under harsher environmental and agricultural conditions (World Bank 2010). This, together with lower soil fertility and more unpredictable water and resource availability, generates lower agricultural productivity and output than in southern areas, and leads to food insecurity being more precarious in the North (ibid.). Furthermore,

population density in the North that is 3.6 times lower than in the South (39.9 people per square kilometer against 142.4 people in 2010) makes delivering most basic social services to its widely and sparsely dispersed population more costly (Government of Ghana 2011). Northern Ghana is therefore the most physically isolated and least integrated part of the country. It is however not only geographically disadvantaged, but remains also politically disadvantaged (Krauss 2012), as it does not receive the necessary attention at the policy- and resource allocation-level, as illustrated below. These multiple factors combined—for which information is not found in the GLSS survey—help contribute to the very strong effects of living in the North on child labor. Secondly, the high importance of Northern residency in the model has direct policy implications on the targeting of respective programs to those living in this part of the country (see also Map 1 above), as spatial targeting has much lower administrative costs than targeting based on other household traits and is thus often much more efficient in implementing resources but also in achieving results.

5. Policy discussion and implications

The hope of this paper is, first, to identify which constraints and enabling factors are most important (the content of the preceding sections) and, secondly, which policy and reform approaches would then be best in reducing child engagement in labor activities (the content of the current section). Each step is incomplete without the other; together they are crucial for planners and policy makers to tackle child labor in Ghana.

Because statistical and qualitative evidence on child labor in the country indicates that there are multiple contributing factors, multiple policy interventions will be needed for its mitigation. In terms of setting the legal framework, anti-child labor legislation has been established but, although a necessary initial step, it has been constrained in minimizing child labor, partly because the priority and capacity of the police to enforce such legislation is low as field research in 2010 indicates. Traditional authorities and community leaders would also need to play a central role in helping to enforce anti-child labor laws. Though, this type of change will likely be a slow process requiring a rethinking of widely-accepted societal values in Ghana, since some parents view their children at times as a form of 'free' or 'cheap' labor, as participatory observations in Ghana indicate. Providing sensitization seminars for parents (as outlined above in the interview with the Minister) can contribute towards greater community understanding of the negative externalities associated with many forms of economic activities among minors.

In analyzing the country's economic structure, it is almost logical that the demand for child labor in Ghana is high as most households have agricultural, subsistence livelihoods. Farming households require much manual labor and often perceive labor as the principal asset for both children and adults—relative to human and physical capital. Given this situation and that higher completion rates do not appear to have led to many alternative options to agricultural livelihoods in rural Ghana, it is clear that the country must intensely increase its agricultural productivity. In the longer term, raising the efficiency and output of the agriculture sector (accounting for 33.5 percent of GDP in 2008 based on World Development data) is likely the most effective means to mitigate child labor in Ghana. The rate at which the country reduces its agricultural dependency will not only strongly determine the rate at which child labor decreases but also the rate at which volatilities in overall economic output reduce, the domestic tax base increases, and thus growth in available public spending (see Krauss 2011). Such structural shifts would nonetheless need to be better coupled with policy interventions

that widen access at the secondary and tertiary education level in rural areas and that expand the formal job market outside of agriculture for graduates. Shorter term policy measures to reduce the labor engagement of children are discussed further below.

Child labor is mainly an agricultural phenomenon in the rural North and policies to combat it must be pro-rural North. GLSS data calculations for 2005/06 indicate that when asked 'where main work usually takes place' for 6-14 year old laborers, 88.4 percent reported on the farm/land, 2.3 percent on a river/at the ocean (fishing) and 5.1 percent reported at home, while the remaining 4.2 percent were employed in other places. Since farming and cattle rearing require intensive labor, child labor is strongly restricted to rural Ghana. Three very revealing findings here for policy purposes are that: (i) nearly all child laborers in Ghana are employed in general agricultural work that is unpaid (93.7 percent), (ii) nearly all child laborers work therefore in a village or town (92.1 percent) and not a city, and (iii) older children in the North are the most vulnerable group, with 41.3 percent of 12-14 year olds being employed who live in the North. Taken together, this is vital information to formulate public policies as any targeted incentive package aimed at reducing labor activities among children and simultaneously increasing their school participation rates that does not place rural households with subsistence farming livelihoods in the forefront, with a particular emphasis on the North (and possibly on older children), is likely to fail or not achieve set targets. The paper therefore illustrates that—while regression analyses can be useful—descriptive data analysis can be at times at least as informative and valuable for policy formulation purposes.

Tackling child labor will require greater demand-side policy measures that help eliminate the indirect and opportunity costs of schooling. Especially in rural and northern areas of the country, subsistence farming livelihoods and extreme poverty help determine school (non-)participation, often even in those areas where relatively low direct costs for schooling exist. The removal of cost barriers alone, although a vital step, often does not amount to an adequate incentive for most falling into this group whose opportunity costs of schooling are comparatively high. The issue of opportunity costs was highlighted in the interview with the Minister of Education, who stated that "most of the parents do not think that it is easy for them to [...] do away with the services [...] even at that tender age of 5 to 6 years, some of them [parents] receive services, petty-petty services, from these little children". In light of the financial and opportunity costs associated with going to school, very disadvantaged parents make considerable sacrifices at times to be able to send their children to school, even for very young ones. Where and when work demand and rewards at home or within the community are high, the opportunity costs of going to school for those in subsistence farming families and for the poorest of the poor are also high. Participating in school can be seen by some households as a luxury. In such situations it can come down to how the investment risk in education and the opportunity costs are weighed. In terms of two critical direct school costs beyond registration fees, it will be important to provide respective children with free school uniforms and textbooks, for which political consensus already exists (CDD 2010). Yet, if child labor is to be tackled and basic education is to be truly free and universal, (all) direct and indirect fees and opportunity costs need to be identified and offset by means of public intervention.

The interlocking nature is evident: eliminating child labor will not be possible without nearing universal basic education and universalizing basic education will not be possible without minimizing child labor—while international literature indicates that access to a good and free basic education has proven to be the most effective protection against child labor

(UNICEF 2007; Overhoff 2006). This interlocking relationship is not a 'catch 22' given that public intervention in other countries has been able to simultaneously link large reductions in child labor to large increases in schooling, particularly through policy schemes such as cash transfers to households.

A number of existing policy tools need to be reformed to better mitigate child labor and offset the opportunity costs of schooling. For one, Livelihood Empowerment Against Poverty (LEAP) is a cash transfer program adopted in 2008 conditional on no child labor involvement, health visits and school attendance, although field research indicates that conditionalities are not truly enforced. LEAP is aimed at positively discriminating selected poor families within the lowest quintile with income substitution, since these children are very often economic assets for their parents. There is however room for improved targeting efficiency by scaling up the program especially in the North (for an analysis of the program see: World Bank 2010a). Two, the capitation grant which was a key policy in stimulating school enrolment growth between 2004/05 and 2007/08 needs to improve its targeting mechanism by transferring funds to Northerners as they are the most disadvantaged (instead of nationwide allocations). This reform would help achieve the policy's objective of universal attendance and it would require no additional funding as grant allocations would simply be redistributed (for an in-depth analysis of the capitation grant see: Krauss 2012). Three, a reformed School Feeding Program that actually targets (i) poor, (ii) malnourished and (iii) out-of-school children (none of which are currently targeting criteria) is also a necessary and viable policy approach to help reduce direct school costs and mitigate the types of child labor that interfere with schooling. Overall, the policies and programs that currently have the largest potential at the micro-level to reduce child labor either have a limited scope (LEAP), are spatially blind (capitation grant), are very poorly—if not inversely—targeted (school feeding program) or suffer from a combination of these (ibid.).

Should school calendars be matched to farming calendars in rural communities? Given that almost all child laborers are active in rural agricultural activities, educational policies that do not consider local community needs can inadvertently have negative effects on rural livelihoods insofar as they may oblige some households to choose between either working or schooling. Since child labor may be at times a way to cover schooling expenses and appears to be largely accepted in society as long as it occurs under safe, non-hazardous circumstances, it can be useful to identify policy options that can synthesize working with schooling. In raising the question during the interview about changing the school calendar to accommodate harvest times, the Minister of Education responded that:

> "This idea of making the school terms match the farming seasons of the country has been examined. [...] the first NDC [National Democratic Congress] Government even asked that we look at the vacation periods; and even if we should have four terms, four academic terms within the year, so that the farming seasons—the minor season and the major season—will be set free for schools to release their students for work on the farms; [then] we should do so. But, then you also look at the other aspect of it. This kind of staggering the vacation period to meet farming seasons should not affect schools, where you have children between the ages of four and eighteen. [...] And, at any rate, we have land preparation periods and all sorts of periods related to farming".

The Minister acknowledges the benefits of child labor in terms of socialization (see page 4) while also noting that Ghanaian children and youth ideally should not be formally employed as for example wage workers. In an ideal world child labor should not impact schools. But given that 15.6 percent of 6-14 year old children are employed and about half of these children are not in school, measures need to be taken to accommodate for their needs if basic education is to be universalized. An option could be for education authorities to adopt a flexible school calendar, adjusting starting dates and holiday periods to better reflect farming

seasons, although it should, if adopted, only affect relevant communities: those mainly in the rural North with school age children who are out of the system, or go in and out of school during agricultural periods, due to engagement in farming activities.[5]

Promoting schooling and livelihoods in the North: the School For Life program. This community-based program in Northern Ghana acknowledges the social and economic need for children's labor assistance within rural communities and therefore ensures its schooling schedule does not conflict with the livelihood needs of households. School hours, which are agreed upon with the community so that children can help their parents with chores or work, are typically afternoons for up to 3 hours per day for 5 days a week. Its school year has a nine month cycle, from October to June, and thus operates during the dry season allowing children to assist their parents on the farm during rainy seasons (Akyeampong 2004). Field research indicates that the program's volunteer teachers who generally have some secondary schooling are hired locally and communities remunerate them with (at times called) 'soap money', implying the equivalent of a few cedis per month or enough to purchase soap. Tens of thousands of children in the North have been reached through the program who otherwise would have remained excluded from schooling (Akyeampong 2004). Scaling up this program particularly in the North, whilst ensuring its sustainability (at present almost entirely donor-driven), is a viable policy approach with very low operational costs to increase attendance among out-of-school children especially child laborers.

Finally, it is important to note that participatory observations of children living on the streets in the capital city suggest that nationally-representative household data sets may possibly underestimate the prevalence of child labor, as the surveys generally collect data from households and their heads (not from children living alone on the streets who may not have any parents). Analysis on street children—and possibly child trafficking (known to be practiced on Lake Volta)—is an area that warrants further research, although some research has initially been conducted (see Kwankye *et al.* 2007). Through the Ghana Statistical Service, the government should consider assessing the feasibility of collecting nationally representative data on street children by possibly including relevant variables in the major national surveys or including an additional module, for example in GLSS, to gather data from non-household units. This would help gain an even richer comprehension of all the causes and consequences of the urban phenomenon and therefore help formulate coherent and efficient policies for urban areas.

6. Conclusion

Why is it so important to gain a better understanding of the specific sources driving child labor in Ghana and to outline policy reforms needed for its reduction? This is because children's engagement in labor activities often constrains their choices and freedoms and their completion of a basic cycle of education, impeding thereby equitable human and economic development and the living conditions of Ghanaians. It should be of prime policy importance for the government that about 317,000 children between 6 and 14 years of age are working (15.6 percent of this population), making child employment the leading alternative to schooling. By exploring structural, institutional, geographic, monetary, demographic and cultural factors affecting household decisions about child labor, the main purpose of the paper

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[5] Also, a study of African countries by Eagle (2006) finds that some children would not mind attending school on weekends in exchange for being able to take off on the market day, questioning also the appropriateness of the conventional Western weekend for all school contexts.

has been to identify the conditions and characteristics of working children, the root causes of their vulnerability, and thus help to inform decision-makers and actors who draft and implement public policy of possible ways to tackle child labor in Ghana. It is therefore hoped that this paper, by taking stock of the underlying risk- and enabling-factors of working children and thus by determining priority areas for resource mobilization, makes a contribution on how to best utilize public resources and catalyze efforts towards reducing child labor in the country.

The underlying causes of child labor can be complexly interdependent, multifaceted and cross-sectoral. They vary from factors as wide-spread in their influence as the structure of the economy (which is largely shaped by family farming), demographics and relevant social norms to those as specific in their manifestation as the geographic isolation of particular groups in the North, a lack of higher returns to schooling up to the basic education level in rural areas, and low priority and capacity to enforce anti-child labor laws.

The regression results show that geographic location in the North has the largest explanatory value—much larger than variables like welfare—in determining labor participation of children among control variables at the child, parent, household, regional and cluster level. Specific policy responses outlined above to reduce the various sources of demand for child labor and to offset the opportunity costs of schooling need to place a particularly strong focus on the North. Reducing the need for children to be engaged in work in the longer term will continue to largely rely on how rapidly agricultural productivity rises and how rapidly the economic structure shifts away from subsistence farming as well as the strong economic dependency on cocoa and gold. Because reducing child engagement in labor activities would in turn help improve the quality of the country's labor force, make the economy more diversified and competitive, promote social and economic development, reduce poverty and empower individuals, the government needs to take a much more concerted effort to tackle child labor in the country.

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Annex

Figure 2: Labor participation rates for 6-14 year old children by quintile levels and North/South residency, 2005/06
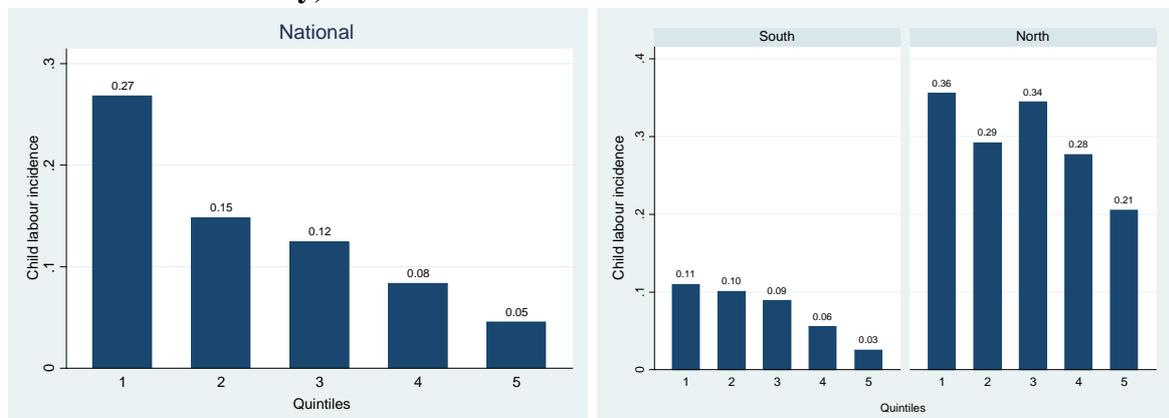
Source: Author's illustration based on calculations of data from GLSS. Note: The survey sample for the group of children covers 7,695 observations nationally, with 5,264 observations for the South and 2,367 observations for the North.