

Understanding the Relationship Between Poverty, Education & Child Labor: An Analysis  
of Child Labor in Nigeria

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**ABSTRACT**

Two major ideas dominate past literature on child labor. First, past literature continues to support the well-developed relationship between poverty and rates of child labor. Second, past literature continues to associate school attendance as the primary opportunity cost of child labor and juxtaposes the two variables as a mutually exclusive trade off. The following project investigates both these ideas. By conducting several logit regression models between school attendance and participation in family-affiliated agricultural practices in Nigeria, the paper investigates a specific aspect of poverty (school attendance) while also providing empirical evidence to support the assumed relationship that education and child labor represent a trade off. The findings support the notion that school attendance correlates with a decreased likelihood of participation in moderate forms of child labor. Children in Nigeria who attend school are less likely to also have worked in a family affiliated agricultural capacity. The project concludes by discussing the potentially positive policy implications for eliminating exploitative child labor. By framing moderate agricultural labor as the most engrained form of child labor, the theoretical implications of the impact of school attendance on child labor becomes even greater.

## **Table of Contents**

Table of Contents	iii
Chapter 1: Introduction	1
Chapter 2: Research Question	5
Chapter 3: Review of Literature	7
Chapter 4: The Problems of Poverty & Education	15
Chapter 5: Theory	20
Chapter 6: Empirical Analysis of Nigeria	27
Chapter 7: Conclusion	46
References	49

## Chapter 1: Introduction

*“...168 million children worldwide are in child labour, accounting for almost 11 percent of the child population as a whole.” ~ ILO<sup>1</sup>*

Child labor persists throughout the globe. While progress has been made in combatting the practice worldwide, the numbers are staggering. While it is commonly accepted (sometimes with very little hesitation) that solving certain global issues may take years or even generations, the international community cannot afford to accept such an attitude with child labor. Future generations need to be enabled to the greatest capacity, and child labor represents a truly inter-generational problem. Child labor hinders development and improvement of standard of living in low-income states, which will continue to disadvantage current and future generations. Yet, understandings of the problem are contested or even cursory.

The majority of past research on child labor focuses on explaining the practice. Explanations stem from theoretical and empirical frameworks. Kaushik Basu states theories of child labor serve to directly influence policy.<sup>2</sup> However, Basu also states, “The literature on child labor is enormous, but it is scattered across the social sciences and piecemeal, lacking a common theoretical foundation.”<sup>3</sup> I show that two common ideas persist throughout past research. The first idea supports the understanding that poverty correlates with child labor. Blunch and Verner state, “The link between poverty and child labor has traditionally been regarded as well established fact.”<sup>4</sup> Yet poverty reflects a diverse set of social, political, and economic variables that theoretically impact

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<sup>1</sup> International Labour Organization, “Marking Progress Against Child Labour” vii

<sup>2</sup> Kaushik Basu, “Child Labor: Cause, Consequence, and Cure, with Remarks on International Labor Standards,” 1084

<sup>3</sup> Basu, 1084

<sup>4</sup> Blunch & Verner, “Re-Visiting the Link Between Poverty and Child Labor: The Ghanaian Experience,” 1

child labor in different ways. For instance, households in impoverished areas not only have low income, but also decreased access to education (and therefore decreased rates of school attendance). I ask, *what specific factors of poverty correlate with the persistence of child labor?* The immediate response argues child labor is for household economic gain. Put differently, child labor increases household income in impoverished areas. However, only addressing household income does not allow for a comprehensive understanding of the numerous socio-political factors entangled in impoverished areas. If the international community is to take strong steps against child labor, then such efforts may be aided by investigating others factors involved in the practice.

The second idea commonly cited in past literature reveals an implicit relationship between child labor and education. In terms of fighting child labor, high-income states encourage children worldwide to foster and cultivate human capital *through education*. A contemporary and increasingly unchallenged understanding, states and NGOs argue that children should not immediately enter the labor market; instead, children should attend school. High-income states argue bolstering education can solve child labor. Advocacy organizations, governments, and scholars promote an understanding of education and labor as mutually exclusive (discussed further in Chapter 4).

In order to contribute to forming a consistent theoretical and empirical understanding on the causes of child labor, I present the following research project. This project not only advances scholarship on the factors that allow for the continuation of child labor, but also informs policy. Specifically, I investigate both commonly observed ideas of past literature. Chapter 2 highlights the primary research question - *does school attendance for households in Nigeria affect rates of moderate child labor?* Chapter 3

reviews past literature on child labor to provide a strong understanding of the practice. I show that the review of literature highlights the two previously stated ideas. The first idea is a *finding* of past literature. The finding states that poverty and child labor highly correlate. The second idea is *theme* of the literature. The theme perpetuates an implicit understanding of education as a trade off of child labor.

Chapter 4 problematizes each of these ideas. First, while the finding that poverty and child labor highly correlate is true, I show that the realities of impoverished areas necessitate further investigation of specific factors that may cause child labor. Second, I show that understanding child labor and education as mutually exclusive creates problematic unstated assumptions. Chapter 5 reviews the theoretical framework of the project. Specifically, I engage in rational choice theory to highlight the incentives and constraints households face when deciding whether or not to have their children work. Chapter 6 then provides an empirical analysis of rates of child labor and school attendance throughout Nigeria. The empirical analysis contributes to research focusing specifically on child labor and education in developing states. Furthermore, the analysis provides results important for understanding the two major ideas of past research.

Ultimately, I show that children who have attended school are significantly less likely to have also worked on a family-affiliated agricultural setting. Even when controlling for other factors, the relationship between school attendance and child labor remains strong and statistically significant. This is important because school attendance has a strong impact on the most traditional form of child labor – agricultural work. The results demonstrate that school attendance correlates with decreased likelihood of

participation in moderate agricultural work. Chapter 7 concludes on the overall strengths and limitations of the project, while highlighting the direction of future research.

## Chapter 2: Research Question

“Unpacking” poverty is empirically and theoretically difficult. Donna Beegle states, “In the literature, there is no consistent definition for the concept of poverty (Levine & Nidiffer, 1996). Criteria used in the determination vary.”<sup>5</sup> I propose a broad conceptualization of poverty as representative of one’s lack of social, economic, and political ability in society. In *Development as Freedom* (1999) Amartya Sen shows that focusing strictly on financial measurements of poverty (GDP, income, etc.) results in a narrower view of development. Instead, “unfreedoms”<sup>6</sup> represent individuals’ lacking capacity to fully enable themselves in their pursuits. Those who have “little access to health care, to sanitary arrangements or to clean water... [or] lack basic opportunities of health care, or functional education, or gainful employment,”<sup>7</sup> all face unfreedoms. Sen shows the benefit of focusing on poverty as the deprivation of capabilities, where the establishment of freedoms becomes both the *means to* and *end of* poverty.<sup>8</sup> In accordance with Sen’s argument, throughout the paper I refer to “manifestations of poverty” to recognize understandings of studying poverty not limited to income or financial measurements. The problem is far more pervasive than a measurement of wealth. For the purpose of this project, decreased school attendance rates represent a further additional consequence of poverty.

Efforts against child labor (either through eradication or regulation) often attempt to foster sympathy with the notion that children should not work; instead, children ought to attend school and foster positive life experiences. As I discuss in the review of

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<sup>5</sup> Beegle, 5

<sup>6</sup> Sen, “Development as Freedom” 15

<sup>7</sup> Sen, “Development as Freedom” 15

<sup>8</sup> Sen, “Development as Freedom” 20



literature, this argument parallels advocates of fostering children's accumulation of human capital. However, families do not always have immediate access to an educational environment for their children. Furthermore, one can imagine how the degree of access to education impacts child labor. For example, children from poor families may work *since there are no other available options*, i.e. school attendance is not an available option.

Therefore, I propose the following research question:

*Does school attendance for households in Nigeria affect rates of moderate child labor?*

This research question guides the project by focusing on a specific consequence of poverty – school attendance. The question considers education as a factor in the persistence of child labor, and therefore responds to the first common idea of past literature. Children's advocacy groups promote investing in educational opportunities for children in developing countries. Investment in education is part of accumulating human capital (as defined in the next section) and subsequently increasing future quality of life. The opportunity cost of a child being in the labor market is furthering her education. Yet, a linear understanding of this concept presumes the ability to attend school remains constant for all children. In reality, school attendance likely varies. Additionally, investigating “moderate” child labor (as defined in the next section) allows for discussing the impact of school attendance on the most engrained form of child labor. Understanding the relationship between school attendance and rate of moderate child labor in Nigeria provides a better understanding of each idea observed in past literature: (1) that poverty is the primary indicator of child labor and (2) that child labor is a trade off to education.

### Chapter 3: Review of Literature

#### *Defining Child Labor, Exploitative & Non-Exploitative*

International discourse and policy debates regarding child labor predominately focus on ongoing *harmful or exploitative* practices. Subsequently, research continually defines child labor based upon current socio-economical circumstances and their relation to *exploitative* practices. However, such a common trend necessitates differentiating between exploitative and non-exploitative practices of child labor. Defining harmful child labor as based upon legality does not account for the specific labor practices themselves. Put differently, defining exploitative practices as those that have been made illegal does not allow for a consistently applicable definition. Laws and labor standards vary dependent upon the state in question, and in many developing states laws are not able to be enforced. Alternatively, a broader conceptualization of exploitative child labor allows for consistent theoretical application. For example, Blunch and Verner define harmful child labor as “labor that conflicts with human capital accumulation of the child.”<sup>9</sup> Additionally, Blunch and Verner continue to perpetuate an inherent relationship between education and labor by asking (in regards to Sub-Saharan Africa):

However, especially when it comes to young children, there exists an (intertemporal) trade-off: should the children work now, and thus instantly contribute to household income or should they attend school, thus accumulating human capital, while foregoing incomes in the meantime, eventually leading to even higher incomes in the future? (2)

The quote highlights an understanding that “human capital” (as defined by Blunch and Verner) represents educational attainment. Furthermore, the quote illustrates the second theme observed in much of the literature on child labor – that there is a “mutually exclusive” trade off between child labor and educational attainment. For instance, the

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<sup>9</sup> Blunch & Verner, “Revisiting the Link Between Poverty and Child Labor: The Ghanaian Experience” 16

definition of harmful child labor lends itself to a categorization on amount and nature of the labor that impedes the human capital accumulation (i.e. educational attainment) of a child. First, if a child is to devote the majority of her available time to work she consequently cannot accumulate human capital in other manners (such as attending school). Second, and arguably the greatest recipient of international effort and policy, hazardous work “leads to adverse effects on the child’s safety, health and moral development.”<sup>10</sup> The International Labour Organization defines hazardous work as “dangerous or unhealthy conditions that could result in a child being killed, injured and/or made ill as a consequence of poor safety and health standards and working arrangements.”<sup>11</sup> Therefore, exploitative child labor inhibits the accumulation of human capital or places the child’s health in risk.

Non-exploitative child labor therefore refers to any form of child labor that does not inhibit the long-term human capital accumulation of children or place them in danger. Alternatively, it may bolster the human capital accumulation of children – such as apprenticeships. Apprenticeships allow for children to participate in an educational environment directly related to future employment opportunities. Alternatively, non-exploitative labor may also consist of moderate amounts of familial agricultural or domestic work that trains children in skills necessary in adulthood. Children have the capacity to accumulate human capital that can transfer into adulthood such as education, agricultural techniques, or apprenticeships. However, as I discuss later on, this project shows that legal “non-exploitative” child labor also seems to limit school attendance – a potential form of human capital accumulation.

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<sup>10</sup> ILO, “Making Progress Against Child Labour,” 20

<sup>11</sup> ILO, 20

### *Poverty and Child Labor*

Previous literature develops the relationship between poverty and child labor. First, Blunch and Verner state, “The link between poverty and child labor has traditionally been regarded a well established fact.”<sup>12</sup> As of 2000, other literature began to surface questioning the relationship between poverty and child labor; however, Blunch and Verner’s research continued to support the traditional understanding and contribute new alternatives. For instance, Blunch and Verner discovered “a gender gap in child labor linked to poverty, since girls as a group as well as across urban, rural and poverty sub-samples consistently are found to be more likely to engage in harmful child labor...”<sup>13</sup> Jean-Marie Baland and James Robinson conclude similar findings of the relationship between poverty and child labor. Baland and Robinson argue wealthier families (households with high income) simply do not send children into the labor market, as opposed to impoverished families (households with low income).<sup>14</sup>

### *Alternative Explanations: Social & Economic*

Much of the highlighted literature also carries implications for additional explanations of child labor focusing on broader economic and social variables. For instance, discussions of economic equilibrium continually surface in literature on child labor. Seemingly, unregulated child labor exists in equilibrium. For instance, Baland and Robinson argue, “some firms may benefit from child labor and have (or have adopted) technology in which human capital is not highly valued...”<sup>15</sup> An unregulated firm that does not value the human capital of its workforce chooses the most economically

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<sup>12</sup> Blunch & Verner, 1

<sup>13</sup> Blunch & Verner, 16

<sup>14</sup> Blunch & Verner, 678

<sup>15</sup> Baland & Verner

efficient option; in this case, children. Despite children's potential unproductivity, they remain a cheap source of labor. The underlying implication seemingly argues child labor exists *because it can*. Depending on the industry, firms benefit from paying children less than an adult workforce, and in an unregulated economic environment will choose the most efficient option. Basu and Pham Hoang Van propose a similar scenario in regards to economic equilibriums. Basu and Van argue that assuming parents promote child labor not due to inherent maliciousness, but for "concern for the household's survival" fundamentally alters discussion on banning child labor.<sup>16</sup> Child labor assists in reaching an economic equilibrium that decreases a household's concern for survival; yet, it is not the only possible equilibrium. Basu and Van argue that the alternative equilibrium is one where "adult wage is high and children do not work."<sup>17</sup> However, the reality is that such an equilibrium is rare on the international stage, especially in developing states. Given *all wages* (both children and adults) are low in impoverished areas, household decision models assume every additional source of income increases chances of survival. Therefore, child labor persists.

Thomas Palley illustrates other strictly economic variables related to child labor in "The Child Labor Problem and the Need for International Labor Standards," (2002). Palley argues a state's level of economic development affects the rate of child labor. Furthermore, Palley proposes, "Labor market dysfunction and under-development are the root causes of exploitative child labor."<sup>18</sup> Palley argues certain economic environments, i.e. those lacking regulation, encourage parasitic industries to exploit child labor. In this sense, the "race to the bottom" economic explanation as to why states de-regulate labor

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<sup>16</sup> Basu & Pham Hoang Van, "The Economics of Child Labor," 412

<sup>17</sup> Basu & Pham Hoang Van, "The Economics of Child Labor," 412

<sup>18</sup> Palley, "The Child Labor Problem and the Need for International Labor Standards" 604

requirements in an attempt to cultivate foreign investment also illustrates the persistence of child labor.<sup>19</sup>

The research of Blunch and Verner in addition to Baland and Robinson also contributes to social explanations of child labor. For instance, Baland and Robinson state that, “even if parents are altruistic and child labor is socially inefficient, it may arise in equilibrium because parents fail to internalize its negative affects.”<sup>20</sup> In this case, parents are clearly not encouraging children to work due to malicious intent; instead, they fail to recognize the potentially negative ramifications. Furthermore, Blunch and Verner cited a gender difference in child labor in their study, “Re-Visiting the Link Between Poverty and Child Labor: The Ghanaian Experience,” (2000). The authors state that a gender difference that results in girls being more susceptible to child labor does not necessitate gender discrimination, but instead a difference in cultural norms.<sup>21</sup> Boys are more likely to attend school than girls; therefore, girls “subsidize” the human capital accumulation of their siblings by engaging in labor.<sup>22</sup> Therefore, a breakdown of social profile variables clarifies the relationship between poverty and child labor. However, I argue in this case gender differences rooted in cultural norms may still be discriminatory.

### *Child Labor in Nigeria*

While broader frameworks and understandings of child labor allow for global application, specific states are unique in their social, political and economic environments. In terms of understanding the local dynamics that correlate with child labor, I conduct an empirical analysis on rates of child labor through a household

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<sup>19</sup> Palley, 604

<sup>20</sup> Baland & Robinson, 663

<sup>21</sup> Blunch & Verner, 16

<sup>22</sup> Blunch & Verner, 5

questionnaire conducted by the National Bureau of Statistics of Nigeria (specific information highlighted in Chapter 6). In terms of currently understood trends in Nigeria, state reports and international advocacy information have little discrepancy on child labor. For instance, the ILO, UNICEF, and the United States Department of Labor’s Bureau of International Labor Affairs report similar findings in Nigeria. Reports indicate roughly 13-15 million children engage in the labor market.<sup>23</sup>

The US Department of Labor’s Bureau of International Labor Affairs reports the following statistics on children’s work and education rates<sup>24</sup>:

<b>TABLE 1. U.S. Department of Labor's Bureau of International Labor Affairs Statistics on Child Labor in Nigeria</b>		
Children	Age	Percent
Working	5-14 years	31.1
Attending School	5-14 years	76.2
Work & School	7-14 years	26.8
Primary Completion Rate of 76.0%		

Source: <http://www.dol.gov/ilab/reports/child-labor/nigeria.htm> (2015)

While predominately a report on the “Worst Forms of Child Labor”<sup>25</sup> the U.S. Department of Labor’s report sheds light on numerous forms of child labor. For instance, children from northern Nigeria are sent to urban areas to work for (and ideally learn from) Islamic teachers. *Almajiri* describes children who have migrated for religious and educational purposes to receive a Koranic education. Nigeria hosts nearly 10 million children who would be identified as *almajiri*; however, such a connotation carries

<sup>23</sup> UNICEF, “Information Sheet: Child Labour in Nigeria.”

<sup>24</sup> United States Department of Labor, “2014 Findings on the Worst Forms of Child Labor,” 1

<sup>25</sup> The phrasing of which is quite intentional. The “Worst Forms of Child Labor” are the target of international action and policy across numerous states. However, the language of which remains vague and therefore problematic when enacting new labor regulations.

negative implications. While once a desired and regulated practice aimed at fostering Islamic religious education, the practice has grown in controversy. Whereas *almajiri* once originated from wealthier families, now children from the most impoverished areas are sent to unregulated educational environments.<sup>26</sup> In some cases, children are also encouraged or forced to work in hazardous conditions, such as begging on the street. Evidence of these practices remain predominately anecdotal.<sup>27</sup>

Of primary concern to this project, Nigeria has ratified all major conventions relevant to child labor (as seen in Table 2); however, their internal laws and regulations remain ambiguous or conflicted.<sup>28</sup> For instance, Article 59 of the Nigerian Labor Act mandates a minimum age of 12 to be eligible for employment across all 36 Nigerian States. Alternatively, the 2003 Nigerian Federal Child Rights Act (CRA) legally supersedes the Labor Act, but mandates a minimum age of 18 for employment. Therefore, it remains unclear at which age children can legally work. Each law allows for “light work alongside a family member in agriculture, horticulture, or domestic service.”<sup>29</sup> Additionally, specific states have enacted certain prohibitions on child labor. Abia, for instance, enacted the Child’s Right Law which prohibits any children under the age 18 from engaging in labor outside the household.<sup>30</sup> Lastly, despite compulsory universal education (as defined in the 2004 Compulsory Free Universal Basic Education Act), not all children regularly attend school. As seen in Table 1, nearly 24% of the population ages 5-14 does not attend school. The lack of enforcement capacity behind the Compulsory Education Act hinders the ability to reduce children’s participation in labor

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<sup>26</sup> The Economist, “Mixing the Modern and the Traditional”

<sup>27</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,” 2

<sup>28</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,” 3

<sup>29</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,” 3

<sup>30</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,” 4



practices.<sup>31</sup> Furthermore, as discussed in the theory chapter, many of the educational environments simply are not well supported. Therefore, if a household is near a poorly supported school, then the opportunity cost of working is low.

<b>TABLE 2. Nigeria's Ratified Conventions on Child Labor</b>	
Organization	Convention
International Labour Organization (ILO)	ILO C. 138, Minimum Age ILO C. 1382, Worst Forms of Child Labor
United Nations (UN)	CRC CRC Optional Protocol on Armed Conflict CRC Optional Protocol on the Sale of Children, Child Prostitution and Child Pornography
Palermo	Protocol on Trafficking in Persons

Source: <http://www.dol.gov/ilab/reports/child-labor/nigeria.htm> (2015)

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<sup>31</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,” 4

## Chapter 4: The Problems of Poverty & Education

The review of past literature on child labor highlights two major ideas. The first idea illustrates strong support for a correlation between poverty and child labor. The second idea illustrates continual discourse on the relationship between education and child labor as nearly mutually exclusive variables. I problematize each idea as depending upon numerous unstated assumptions.

First, I propose a broad conceptualization of poverty that aims to unpack a specific manifestation (education) and recognize alternative conceptualizations. Poverty manifests in a variety of social, political and economic ways (Sen's concept of "unfreedom"). Yet, most of the literature focuses on poverty in relation to child labor, which creates problems when discussing other factors related to the practice. For instance, empirically studying poverty as a proxy for other variables in regards to child labor obfuscates broader applications. Given many researchers cite *income* as a measurement of poverty, any subsequent research comparing poverty and child labor likely compares *financial resources* and child labor. Put differently, research on poverty as a proxy for any specific "manifestation of poverty" relating to child labor actually compares *income* and child labor. This is problematic for numerous reasons.

Consider the following example regarding food insecurity. One can imagine scenarios where household market income remains low, and food security remains high. For instance, geographical location may allow subsistence farming to continually provide a relatively reliable and consistent source of food for an otherwise low market-income family. Yet, the children in the family participate in the labor market. Studying this example under the presumption that poverty serves as a proxy for food insecurity

obfuscates the causal factors. The children in this example do not work in response to food insecurity, because reliable subsistence farming provides a consistent source of food. Another factor, potentially low market income, affects their participation in the labor market. Yet if an analysis were conducted with poverty serving as a proxy for food insecurity (given food insecurity *is* highest in impoverished areas) – there would likely be a positive and statistically significant relationship. Yet, in this context food insecurity is *not* causing child labor. Similar examples could be construed for other manifestations of poverty – such as school attendance. Few empirical analyses explore the relationship between alternative conceptualizations of poverty and child labor.

Second, past research perpetuates an assumed relationship between education and child labor. Scholars and researchers likely ground the relationship as an “ideal type” where children attend school and do not work until having reached an “appropriate” age.<sup>32</sup> Advocacy efforts and academic literature against child labor directly and indirectly refer to engagement in the labor market as the primary inhibitor of promoting education. Blunch and Verner’s definition of human capital as reflecting educational attainment stands as an example of *directly* referring to the relationship. The above quote (p. 7) highlights an understanding of child labor where children choosing to engage in labor seemingly disqualifies them from any participation in an educational environment. Participating in the labor market “immediately” yields economic benefits, whereas attending school negates any present economic benefits in favor of higher income in the future. Clearly, such an understanding of the relationship between education and child labor poses numerous problems.

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<sup>32</sup> Such “ideal types” may be grounded in preference towards developed states.

First, children do not necessarily participate in the labor market to directly contribute to household market income. Instead, such as the case of working on family farms, there may be an indirect benefit to children working. The heads of households do not need to use already scarce income on additional workers; therefore, children are indirectly contributing to household income. Second, positing that education provides a “return on investment” in future income and employment opportunities relies on three major unstated assumptions. First, the position assumes that children have access to educational environments (either by geographical location, financial means, or admission). Second, the position assumes that the educational environments have the infrastructure and support necessary to positively impact the children. Third, the position assumes that even if (1) and (2) are true, that there will be additional employment opportunities in the future. Education does not necessitate increased employment opportunities, at least on a larger scale. Geographic location and dominant forms of labor may play a large role. Children attending school in rural areas, and who intend to remain in rural areas, may not be able to fully take advantage of their educational attainment as opposed to their urban-resident peers.

The reports on Nigeria contain numerous examples of indirectly or *implicitly* referring to the relationship between education and child labor. The US Department of Labor’s Bureau of International Labor Affairs on children’s work and education rates are part of a larger document on the “2013 findings on the worst forms of child labor.”<sup>33</sup> A document that serves to discuss the “worst forms of child labor” (forced labor, armed conflict, industry, etc.) opens the report on school attendance rates. The implicit understanding seemingly argues that if children are not participating in these worst forms

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<sup>33</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,”

of labor, then they will instead attend school. UNICEF reports on child labor in Nigeria continue the same understanding. Education rates and explanations as to how “millions [of children] are losing out on education” open a document that otherwise serves to report on child labor.<sup>34</sup>

While implicitly assuming that education and child labor are inter-connected can create problems, clearly the two *are connected*. Scholars, state officials, and advocacy organizations alike cite education as a primary tool in combatting poverty. For instance, the National Poverty Eradication Program (NAPEP) in Nigeria “launched a conditional cash transfer program that will provide funds to households under the condition that their children remain in school.”<sup>35</sup> Education can alleviate inter-generational poverty and provide stronger employment opportunities. However, implicitly referring to education as either (A) always present or (B) a sort “of silver bullet” promotes an idealistic framework of the educational services and infrastructure in developing states.

Other scholars have cited the need to differentiate between the role of poverty, education, and child labor. For instance, G.B. Nkamleu and A. Kielland studied rates of child labor and educational attainment in the cocoa sector. Their report argues simply removing children from the labor market can create more problems than it solves; instead, “the best solution will depend on the particular circumstances of the child and the family, considering factors such as the child’s age, educational opportunities, family composition, and economic situation.”<sup>36</sup> Nkamleu and Kielland suggest that where strong educational facilities exist, children ought to attend school (either part time or full time). However, in areas where educational facilities are “poor or nonexistent, training or

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<sup>34</sup> UNICEF, “Information Sheet: Child Labour in Nigeria.”

<sup>35</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,” 1

<sup>36</sup> Nkamleu, Guy B., and Anne Kielland, 332

apprenticeship arrangements might have a better long-term effect.”<sup>37</sup> In order to contribute to understandings of poverty and education in regards to child labor, I provide a theoretical understanding of their importance as causal factors fueling the practice.

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<sup>37</sup> Nkamleu, Guy B., and Anne Kielland, 332

## Chapter 5: Theory

The two dominant ideas of past literature – that (A) poverty causes child labor and that (B) child labor and education are trade offs – rely on the assumption that individuals and households make rational choices regarding child labor. Therefore, the theoretical framework of the project engages in rational choice theory. Rational choice theory relies upon methodological individualism as a condition and epistemic norm in its explanatory mechanisms for greater social outcomes. I posit that rational choice theory can assist in micro-level explanations of child labor.

Rational choice theory (RCT) provides a strong framework in which to approach *micro-level dynamics* of child labor. Specifically, RCT allows researchers to substantiate possible rationalizations involved in parents' decisions to allow, encourage, or prohibit their children to certain kinds of work. Friedman and Hechter state, "That there is no theory of preference formation has implications not only for the behavior of individuals and groups, but also for social outcomes. The nature of any social outcome clearly depends upon the set of underlying preferences."<sup>38</sup> I argue that households ultimately seek to maximize the long-term standard of living for members of the household while also minimizing their concern for immediate survival. The desire to maximize standard of living while minimizing concern for survival impacts households' decisions on having children participate in the labor market. However, households face differing incentive structures and constraints that alter their actions.

### *Household Background Information*

I formulate my understanding of incentives and constraints based upon the households in the Nigerian GHS-Panel. The following incentives and constraints

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<sup>38</sup> Friedman & Hechter, 214

represent the variables in the empirical analysis. Therefore, the households in this formula share two key characteristics that impact their decision making process.

First, I theorize the following preferences for households working in agriculture in Nigeria. I theorize the preferences of this population to represent the empirical analysis. The analysis comes from a survey conducted by the National Bureau of Statistics of Nigeria and the Federal Ministry of Agricultural and Rural Development with the purpose of contributing to agricultural statistics. The households represent a range of incomes (for other household descriptions see dataset breakdown in Chapter 6). Second, child labor refers to children's participation in agricultural practices. As discussed in the empirical analysis, this project investigates the variables that impact households' decisions regarding children's participation in "light to moderate" agricultural work.

#### *School Attendance*

Children's school attendance is both a method of improving the long-term standard of living for households and daily alternative to children working. While the penalty of not adhering to compulsory education may incentivize households to send children to school, the reality is the government lacks enforcement. Therefore, it is unlikely households are concerned about that penalty. Instead, households encourage children to attend school with full capacity to do otherwise. Households are more likely to prioritize children's education in the following conditions. First, if a household is near a strong school, then the opportunity cost of children working is high. Alternatively, if a household is not near a strong school or the nearby school is poorly supported, then the opportunity cost of children working is low. Second, households prioritize school attendance if they view education as an investment in long-term opportunities for their



children. Given the weak enforcement capacity of compulsory education on behalf of the federal government, households encourage children to go to school not because of direct external forces. Put differently, the government does not have the capacity to mandate and *enforce* that all children attend school. Instead, children attend school because households view educational opportunities as investments in children's long term employment possibilities. In accordance with maximizing long term standard of living, bolstering the employment opportunities of children will improve the overall standard of living of the household. Therefore, I theorize that households will send children to school if the educational facilities are (A) able to be accessed (in a broad sense, i.e. geographically and financially) and (B) are well supported.

### *Gender*

According to past literature, households have differing preferences for female and male children. Blunch and Verner cited a gender difference in child labor in their study in Ghana. Their study showed girls are more susceptible to child labor due to a “difference in cultural norms.”<sup>39</sup> Boys are more likely to attend school than girls; therefore, girls “subsidize” the human capital accumulation of their siblings by engaging in labor.<sup>40</sup> However, given this project focuses on *moderate* agricultural work, I do not theorize a gender difference in child labor. I argue that households are relatively equally likely to encourage male children and female children to assist in light agricultural tasks. While not tested by this analysis, I theorize that a difference in gender *may* arise dependent on other types of labor. If there are domestic demands and responsibilities that need to be satisfied, households will first encourage female children to address those needs. Put

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<sup>39</sup> Blunch & Verner, 16

<sup>40</sup> Blunch & Verner, 5

differently, households will encourage female children to *first* partake in domestic responsibilities and male children to partake in agricultural responsibilities. Following Blunch and Verner's research, I theorize gender may still have an impact in school attendance. Households may prioritize male children attending school over female children.

### *Age*

Age of children impacts the household incentive structure. Age has a positive effect on productivity of labor. For example, the product of labor of children ages 5-7 is drastically smaller than for teenagers ages 15-17. Older children can not only engage in more difficult tasks with increased effectiveness, but they can also do so more efficiently. Older children can do a better job in a shorter amount of time. However, age and productivity do not represent a strictly linear relationship. I theorize that the effect of age on productivity diminishes with age. For example, the difference in productivity between ages 7-8 is larger than between ages 15-16. At some point (I theorize around ages 10-12) the benefit of children working outweighs the benefit of their school attendance. At that time, they become an integral factor in maximizing the long term standard of living and minimizing the immediate concern for survival. Therefore, as children grow older households are increasingly more likely to encourage them to work instead of attend school – however it is a not a strictly linear relationship. As discussed in the empirical analysis, it is important to account for the relative difference of productivity between younger and older children.

### *Rural*

Lastly, environment plays an important factor in the actions of households in regards to child labor. Households in rural areas are more likely to be dependent upon agricultural work as a mode of living. If the household is in a rural area, then the opportunity cost of working is low. Encouraging children to work on a family farm helps families improve long term standard of living and minimize concern for survival at a relatively low absolute cost. However, households in rural areas that encourage children to attend school do so at a higher absolute cost. Schools may be harder to access in rural areas, which lowers the opportunity cost of work. By virtue of being in a rural area, households are incentivized to have their children work.

### *Preferences*

Past literature promotes an understanding that the relationship between child labor and education is mutually exclusive. The incentives and constraints highlighted above impact households' actions regarding child labor, where households ultimately seek to improve long-term standard of living for household members and decrease their immediate concern for survival. Differing incentive structures may explain scenarios where households encourage children to work, attend school, or engage in both practices. For instance, households are more likely to send younger children to school. Younger children may not be able to effectively contribute to agricultural labor; therefore, their work does little to minimize a household's concern for survival. However, they may be able to foster individual capacities in school that can improve future employment opportunities (for instance: language, literacy, or writing skills). Instead, school attendance (investment in present individual capacities) may result in improved future

employment outcomes. Therefore, young children attending school coincides with households' desire to maximize long term standard of living. If young children are able to secure better paying jobs in the future, then the long-term standard of living for the household will improve.

Households view older children differently. As discussed above, at a certain age children's participation in labor practices becomes integral to minimizing concern for household survival. Even if families view educational attainment as valuable, the trade off of older children attending school becomes too costly. When children are younger, the payoff tilts towards school attendance. When children are older, the payoff tilts towards work. Therefore, households will eventually encourage older children to work.

While much of the past literature perpetuates an implicit understanding of work and school attendance as mutually exclusive, numerous reports acknowledge many children engage in both practices. For instance, in Nigeria 26.8% of children combine work and school.<sup>41</sup> Dependent on nature of the work, educational facilities, geographical location, and individual characteristics of the children – households may encourage children to both work and attend school. For instance, households that have access to well-supported educational facilities but also rely on agricultural work may encourage children to participate in both practices. Furthermore, some schools are based around agricultural cycles of planting and harvesting in order to allow students to work. In scenarios where children work and attend school, each likely bring benefits to the children and household.

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<sup>41</sup> United States Department of Labor, "2013 Findings on the Worst Forms of Child Labor," 1

### *Limitations of Rational Choice Theory*

The purpose of engaging in rational choice theory is to investigate the two themes of past literature. I recognize the limitations of the framework in accounting for macro-level dynamics or factors in child labor. Specifically, critics of rational choice theory are skeptical of methodological individualism. By focusing on the individual as the sole actor responsible for producing social and political outcomes, other important dynamics are neglected. Tim Luke states that, “if asked to step outside of their [rational-choice theorists] choice-theoretic models, some practitioners usually would concede that macro-social units or phenomena, such as the state, society, culture, religion, revolution, or racism, are *sui generis* phenomena.”<sup>42</sup> Put differently, a strictly methodologically individualistic approach to understanding socio-political phenomena *cannot* account for the unique impact of macro-level actors; such as the state, culture and civil society. Alternatively, a strictly rational-choice theoretical perspective would respond that macro-level phenomena are necessarily products of individual decisions. However, given the empirical analysis of this project focuses on household survey responses, an individual framework provides a strong theoretical basis for understanding the micro-level factors involved in child labor.

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<sup>42</sup> Luke, “Methodological Individualism” 344

## Chapter 6: Empirical Analysis of Nigeria

Past literature has prioritized the relationship between poverty and child labor – a trend that scholars have observed globally. As Palley argues, a state’s level of economic development serves as a primary indicator of rates of child labor.<sup>43</sup> However, ending the discussion at the correlation between poverty and child labor does not account for the differing ways in which poverty impacts households. Where poverty represents a lack of social, political, and economic capacities – a state’s level of economic development primarily represents an economic measurement. While specific analyses have been conducted to investigate other political or social explanations, additional research allows for determining if factors vary globally. Therefore, I present the following analysis of child labor in Nigeria with the goal of contributing to the understanding of local dynamics that fuel the practice.

### *Why Nigeria?*

I choose Nigeria as a state for analysis based upon three factors. First, as stated in the review of literature, child labor is a pressing issue in Nigeria. According to UNICEF, upwards of 15 million children engage in labor of some form.<sup>44</sup> In terms of *types* of labor in which children engage, government reports illustrate many children work in agricultural settings (see lit review).<sup>45</sup> Others work in harmful or exploitative environments. Second, Nigeria has ratified international child labor conventions and instituted domestic laws regarding education. In the framework of posing school attendance against child labor, Nigeria has made strong efforts towards improving school attendance rates alongside laws aimed at curbing child labor. Put differently,

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<sup>43</sup> Palley, 604

<sup>44</sup> UNICEF, “Information Sheet: Child Labour in Nigeria.”

<sup>45</sup> United States Department of Labor, “2013 Findings on the Worst Forms of Child Labor,”

governmental efforts to improve school attendance rates have the benefit of fewer children participating in the labor market. For instance, Nigeria has ratified major international conventions that seek to eliminate the “worst forms of child labor,” (see Table 2). Nigeria has also mandated compulsory education and enacted several laws that mandate a minimum working age. Yet enactment of laws and regulations clearly necessitates the *capacities to enforce* said laws and regulations. Third, the federal laws on labor and education allow for moderate or light work in domestic or family-affiliated agricultural responsibilities.

*Nigeria General Household Survey (GHS) – Panel 2012/2013*

In order to conduct the analysis, I created a dataset from the Nigerian General Household Survey (GHS) Panel (2012-2013). The GHS-Panel was conducted by the National Bureau of Statistics (NBS) of the Federal Republic of Nigeria. The NBS worked with the Federal Ministry of Agricultural and Rural Development (FMA & RD), the National Food Reserve Agency (NFRA), the Bill and Melinda Gates Foundation (BMGF), and the World Bank.<sup>46</sup> Specifically, the GHS-Survey is a cross-sectional survey of 22,000 households located throughout the entire country. The GHS-Panel is a subset of the GHS-Survey and contains 5,000 households with the goal of “collecting additional data on agricultural activities, other household income activities, and household expenditure and consumption.”<sup>47</sup> The GHS-Panel is the NBS’ first panel survey, and “drew heavily on the Harmonized Living Standards Survey and the National Agricultural Sample Survey.”<sup>48</sup> Furthermore, the GHS-Panel is one portion of a larger project in order to improve agricultural statistics for Sub-Saharan Africa. The GHS-Panel Wave 2

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<sup>46</sup> "Basic Information Document: Nigeria General Household Survey-Panel 2012/2013." 5

<sup>47</sup> "Basic Information Document: Nigeria General Household Survey-Panel 2012/2013." 5

<sup>48</sup> "Basic Information Document: Nigeria General Household Survey-Panel 2012/2013." 5

consisted of two surveys conducted at different times: the post planting and post harvest visits. For this project, I use the GHS-Panel Wave 2 Post-Planting Visit.

### *GHS-Panel Wave 2 Post Planting Visit & Setting up the Dataset*

Within the GHS-Panel Wave 2 Post-Planting Visit, I used the “GHS-Panel Household Questionnaire,” to create the dataset. The household questionnaire contained three sections of importance to this project: individual characteristics (roster), educational status, and labor participation. The roster surveyed the head of the household (or spouse of the head of the household) for the “roster of individuals living in the household, relationship to the household, gender, year of birth, age...”<sup>49</sup> Sections two (education) and three (labor) surveyed individuals age five and above on factors related to educational attainment and labor market participation. The combination of these three sections allowed for the creation of a dataset that focuses specifically on children and teenagers. I merged each section into a new dataset, where individuals were accounted for by matching their household ID and individual ID across all sections. After merging the three sections, the dataset contained 26,410 entries. However, the dataset included two populations of no interest to this study: children too young to feasibly participate in the labor market (ages 1- 4), and adults (ages 18+).

In order to create an age range to analyze, I refer back to previous reports and legislation in Nigeria. In terms of labor standards in Nigeria, Article 59 of the Nigerian Labor Act enacts a minimum age of 12 to be eligible for employment. However, the 2003 Nigerian Federal Child Rights Act (CRA) legally supersedes the labor act and enacts a minimum age of 18 for employment. In terms of past statistical analyses and reports, the U.S. Department of Labor’s Bureau of International Labor Affairs reports on ages 5-14.

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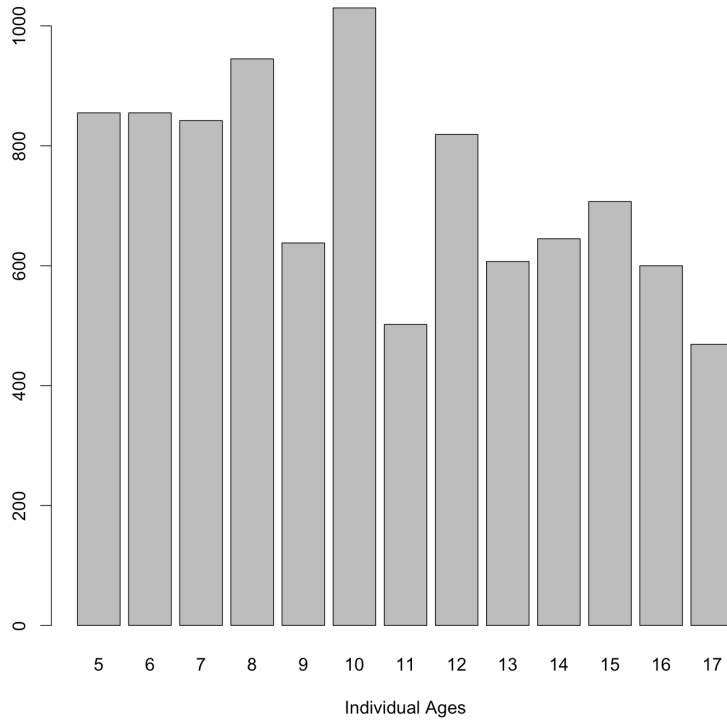
<sup>49</sup> "Basic Information Document: Nigeria General Household Survey-Panel 2012/2013." 7



Therefore, in order to account for the entire possible age range of children engaging in labor, I created a subset of the dataset for individuals ages 5-17 (inclusive). Not only does the age range coincide with the highest national law regarding age and labor (CRA), but the GHS-Panel does not provide survey responses for individuals below the age of 5. After accounting for age, the dataset contained 9,514 entries. The children represented in the dataset comes from the entire country. The following figures and tables account for the primary descriptive statistics in terms of the population. Furthermore, these descriptive statistics represent the control variables in the logistic regression analyses. The dataset represents a relatively even distribution of male and female children across all ages. While there are more children represented in the age bracket of [5-11] than [11-17], all ages are represented. Nearly 75% of the children live in households located in rural areas. Furthermore, households from northern Nigeria are better represented than their southern counterparts; however, southern households represent roughly a third of the dataset.

<b>TABLE 3. Sex</b>	
Male	5007
Female	4507

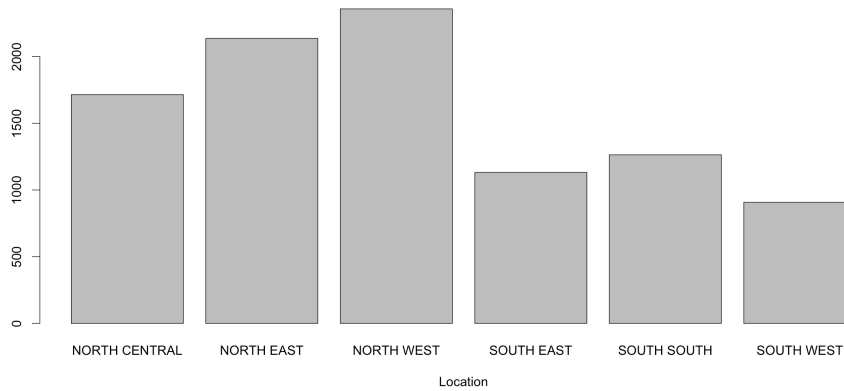
**Figure 1: Age**



**TABLE 4. Sector**

Urban	2391
Rural	7123

**Figure 2: Region**



### *Research Question & Hypothesis*

In order to investigate the relationship between child labor and school attendance, I use rational choice theory as a framework to analyze the household decision making process. As discussed previously, if scholars assume education stands as the opportunity cost of child labor then households have three logical options: encourage children to work, encourage children to attend school, or encourage children to engage in both practices. Much of the past literature focuses on the first two options. Put differently, past research and advocacy efforts promote a discourse that informs an understanding of the two variables as mutually exclusive. There is an important secondary unstated assumption. When organizations promote a relationship between child labor and school attendance as seemingly mutually exclusive, then by the definition of a “mutually exclusive relationship,” if children attend school *they will cease to work* (in any capacity). I seek to test this implicit assumption. I return to the research question:

*Does school attendance for households in Nigeria affect rates of moderate child labor?*

The research question investigates the correlation between child labor and what is often referred to as the opportunity cost of child labor – education. I hypothesize:

*Increased education for children in Nigeria negatively affects rates of child labor.<sup>50</sup>*

In order to answer the research question, I conduct a series of logistic regression analyses. Education represents the primary independent variable, and is reflected by the variable in the questionnaire that asks respondents “Have you ever attended school?” School

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<sup>50</sup> Where increased school attendance represents increased education, and moderate agricultural labor represents child labor.

attendance reflects education in that households cannot send their children to school without access to an educational environment. Furthermore, analyzing whether or not children have ever attended school gives insight on the effectiveness of compulsory education in Nigeria. Lastly, school attendance represents another manifestation of poverty in that impoverished areas are less likely to have increased opportunities to participate in educational environments. Table 5 highlights the breakdown of the independent variable. Before conducting the analysis, I recoded the variable in order for “0” to reflect “NO” and “1” to reflect “YES.”

<b>TABLE 5. Have you ever attended school?</b>	
No	1940
Yes	7531

Given the legality of “moderate” household child labor in combination with the the fact that the questionnaire does not account for *exploitative* or *harmful* child labor, I measure the dependent variable in terms of participation in family-affiliated agricultural work. The dependent variable asks the respondents, “During the past 7 days, have you worked on a farm owned or rented by a member of your household, either in cultivating crops or in other farming tasks, or have you cared for livestock belonging to yourself or a member of your household?” The dependent variable allows for investigating the rate at which children engage in “legal moderate household labor” as defined by the Nigerian Federal Child Rights Act. Table 6 highlights the breakdown of the dependent variable. I recoded the dependent variable in order for “0” to reflect “NO” and “1” to reflect “YES.”

**TABLE 6. During the past 7 days, have you worked on a farm owned or rented by a member of your household, either in cultivating crops or in other farming tasks, or have you cared for livestock belonging to yourself or a member of your household?**

No	7988
Yes	1436

**TABLE 7. Mean & Standard Deviation**

	Mean	St. Dev
Have you ever attended school?	.795	.404
Have you worked on a family farm? <i>(Paraphrased)</i>	.152	.360

The IV and DV (Table 7) allow for directly investigating the two main ideas commonly observed in past literature. First, education represents a manifestation of poverty. Therefore, by analyzing rates of school attendance I am contributing to a better understanding of how poverty impacts rates of child labor. Second, analyzing school attendance allows for directly testing the implicit assumption that education and child labor are “mutually exclusive.” An analysis between school attendance and participation in family-affiliated agricultural responsibilities allows for investigating whether or not school attendance correlates with a decrease in “moderate” labor legalized by the state. Determining the impact of school attendance on moderate child labor (predominately agriculturally based responsibilities) will help to establish or critique the implicit understanding observed in past literature.

I control for the following variables: gender, age, sector (urban or rural), region, and state. Each control variable represents a factor that may alter the understanding of the relationship between school attendance and rates of moderate child labor. Gender and age represent factors that may uniquely impacts a household's decision making process on whether individual children work or attend school. For example, older children may be more likely to work. Sector (urban/rural), region, and state represent geographical factors that that may uniquely impact a household's decision making process on whether children work or attend school. The geographical control variables theoretically impact both individual children or all children in a certain household. For instance, households in urban areas may be more likely to send all their children to school due to increased opportunities for education.

### *Results*

A cross tabulation of the independent and dependent variable illustrates a preliminary understanding of the correlation between the two variables. For example, 9.73% of those who had attended school had also worked within seven days of the questionnaire. Alternatively, 36.9% of those who had never attended school had also worked within seven days of the questionnaire. The crosstabs highlight the proportions of children who have either A) attended school or B) never attended school against having worked in the past week. The crosstabs show that a larger percentage of those who have never attended school have also worked, as opposed to those who have attended school.

**TABLE 8. Crosstabs of School Attendance & Labor**

	Never Attended School	Attended School
Never Worked on a Family Farm	1209 <i>63%</i>	6753 <i>90%</i>
Worked on a Family Farm	706 <i>37%</i>	728 <i>10%</i>
Total	1915 <i>100%</i>	7481 <i>100%</i>

Percentages reflect column distribution.

**TABLE 9. Odds Ratios of Agricultural Based Child Labor**

	1	2	3	4	5	6	7
School Attendance	0.185 (.164-.208)	0.178 (.157-.201)	0.117 (.101-.134)	0.114 (.099-.130)	0.140 (.122-.161)	0.163 (.140-.190)	0.175 (.149-.206)
Female		0.609 (.539-.688)	0.584 (.515-.662)	0.580 (.511-.657)	0.577 (.508-.655)	0.545 (.479-.624)	0.521 (.454-.598)
Age			1.188 (1.167-1.209)	1.507 (1.343-1.693)	1.500 (1.334-1.688)	1.508 (1.335-1.705)	1.524 (1.344-1.731)
Age Squared				0.989 (.984-.994)	0.990 (.985-.995)	0.990 (.985-.995)	0.990 (.984-.995)
Rural					4.869 (3.872-6.202)	4.625 (3.638-5.955)	4.644 (3.583-6.096)
Region Dummies?	No	No	No	No	No	Yes	No
State Dummies?	No	No	No	No	No	No	Yes

*95% Confidence Intervals in Parentheses*

Table 9 shows the odds ratios and 95% confidence intervals (in parentheses) from the logistic regression analyses. For each model, I included an additional control variable to account for other factors that may impact the expected relationship between the independent and dependent variable. Model 1 highlights that children are 5.4 times *less* likely to work on a family farm if they have also attended school (where  $1/.185 = 5.4$  and odds ratios  $< 1$  imply decreased likelihood). The relationship is statistically significant, and restates the correlation observed in the crosstabs. Therefore, the regression supports

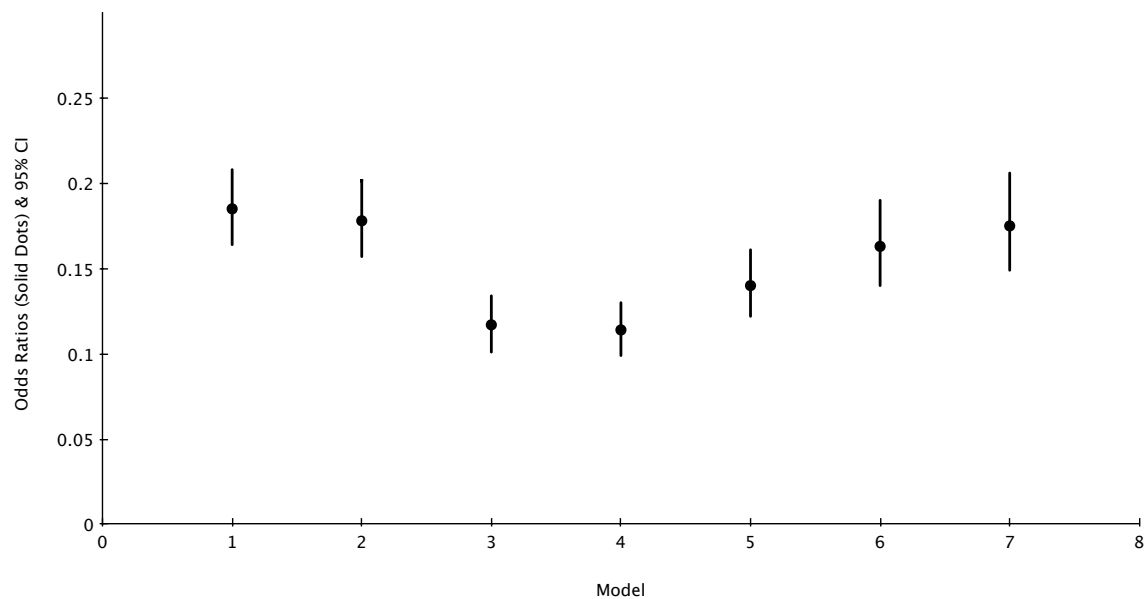


the hypothesis. The odds ratios of school attendance vary across the seven models, from a low of .185 (5.4) to a high of .114 (8.8). The fact that school attendance correlates with odds ratios ranging from 5.4 to 8.8 times less likely to also engage in labor represents a strong relationship.

When controlling for the additional variables, school attendance remains statistically significant. Additionally, the control variables are statistically significant with varying degrees of importance. Female children range from 1.6 (where  $1/.609 = 1.6$ ) to 1.9 (where  $1/.521 = 1.9$ ) times less likely to engage in agricultural labor. While I had not theorized a specific gender difference, the analysis shows a discrepancy between male and female children. Furthermore, the analysis accounts for differences in the ages of children. Given age is not binary, for every unit increase in age children are roughly 1.5 times *more* likely to engage in agricultural labor (where odds ratios  $> 1$  imply increased likelihood). As discussed in the theory chapter, age and productivity do not represent a linear relationship. In order to properly account for the fact that age likely does not have a linear effect, the analysis also controls for age-squared. After having accounted for age-squared, both variables remain statistically significant with consistent odds ratios (where age squared confidence intervals do not overlap with 1, and therefore are statistically significant). Lastly, model 5 controls for urban or rural location. Specifically, children in rural areas are roughly 4.7 times more likely to engage in agricultural labor. Model 5 supports the theoretical argument that households in rural areas are more likely to encourage children to work. Lastly, I included dummy variables for both region and state. Controlling for region allows for discerning any differences based upon geographical factors. Controlling for state allows for discerning any

differences based upon state-specific labor standards or factors. Ultimately, the models corroborate the primary hypothesis. Even when controlling for all additional independent variables the primary correlation between school attendance and labor remains strong and statistically significant. With the exception of gender, the models also support the theoretical framework established in Chapter 5.

**FIGURE 3. Graph of Odds Ratios of School Attendance**



Of importance (as displayed by Figure 3) is the variation between school attendance throughout the models. School attendance has the largest negative effect on likelihood of working in models 3 and 4. The odds ratios of school attendance vary from a low of .185 (5.4 times less likely, model 1) to a high of .114 (8.8 times less likely, model 4). Put differently, according to model 4 children who have attended school are 8.8 times less likely to have also worked on a family farm in the past week. All possible values of school attendance (including the 95% confidence intervals) are statistically significant (where confidence intervals  $\neq$  1).

## *Discussion*

The results allow for directly discussing the two main ideas commonly observed in past literature: (1) that child labor and poverty are highly correlated and (2) that education and child labor are implicitly connected. Decreased school attendance represents a manifestation of poverty and is represented by the IV “school attendance.” By analyzing rates of school attendance, I am contributing to a better understanding of how poverty impacts rates of child labor. Focusing on school attendance also tests the unstated assumption that education and child labor are “mutually exclusive.” As stated previously, a model analyzing school attendance and participation in family-affiliated agricultural responsibilities investigates whether or not education correlates with a decline in “moderate” labor legalized by the state.

As discussed in Chapter 4, the empirical analysis seeks to investigate two problems of past research (each associated with the two previous ideas). The first problem represents a surface-level understanding of the relationship between poverty and child labor. Little research has been conducted specifically on manifestations of poverty (education, food insecurity, employment opportunities, etc.) and their relation to child labor. As a manifestation of poverty, attendance rates correlate to child labor. Furthermore, the relationship is strong and statistically significant. Therefore, simply studying educational rates *in lieu* of traditional measurements of poverty (income) likely yields similar results. This finding is not surprising. Whereas scenarios can be constructed that highlight how high food security can coincide with low household market income, educational variables are more likely to closely reflect financial variables. Impoverished or low income areas have less access to education. Less money

results in poorly supported educational facilities, staff, and resources. Especially when educational facilities are dependent upon state-funding, a developing government does not have the same means to bolster a strong educational system across the state.

The second problem reflects the “implicit relationship” between child labor and education. Either directly or indirectly, organizations, governments and scholars continually juxtapose education and child labor. Direct examples include mutually exclusive understandings of school attendance as a trade off of child labor. Such understandings approach idealistic frameworks, where if children simply choose to attend school *today* they will have better employment opportunities *tomorrow*. As I mention above, there are numerous unstated assumptions in this position. Setting education up as an opportunity cost of child labor assumes that education was a choice from the outset. Arguing that education *will* improve future employment opportunities assumes that the educational facilities are strong or well-supported. Clearly, both assumptions are susceptible to critique. The more common juxtaposition of education and child labor reflects an indirect relationship between the two variables. When scholars assume school attendance stands as the opportunity cost of child labor then households have three logical options: encourage children to work, encourage children to attend school, or encourage children to engage in both practices. Much of the past literature focuses on the first two options. Put differently, past research and advocacy efforts promote a discourse that informs an understanding of the two variables as mutually exclusive, i.e. as a “trade off.” Placing rates of child labor against school attendance rates along side hooks that read “millions are losing out on education”<sup>51</sup> creates an immediate understanding of the

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<sup>51</sup> UNICEF, "Information Sheet: Child Labour in Nigeria."

two variables as mutually exclusive. Millions of children are losing out on education *because of child labor*.

Treating education and child labor as mutually exclusive implies a secondary unstated assumption. When organizations promote a relationship between child labor and education as a trade off, then logically if children attend school *they will cease to work in any capacity*. The previous models allow for empirically examining this assumption. The independent variable shows whether children have *ever* attended school, whereas the dependent variable shows whether children have worked on a family-affiliated farm. The immediate critique is to posit that “there are so many hours in the day,” and that clearly children can still fall into this “third category” of working and learning. However, the dependent variable asks if children have worked at all, regardless of amount or contribution within the past week. Therefore, when the model shows that children who attend school are 8.8 times less likely to work, that reflects working *any amount* on a family-affiliated farm. Therefore, education is able to have an impact on even moderate labor. In terms of broader applicability, there are three ways to understand this finding.

First, moderate agricultural labor represents the most engrained form of child labor in developing states. Moderate or light labor contributes to the household, and in most households is simply necessary. Furthermore, moderate or light labor introduces children to techniques, responsibilities, and skills that will be necessary in adulthood (especially true in rural areas). Nigeria ensuring the legality of moderate labor enforces this understanding – the government understands the practice to be both a reality and necessity. Therefore, if attending school has a strong impact on any amount of moderate labor (where moderate labor represents the most engrained form of child labor) then

school attendance is altering past traditions and lifestyles. Advocates in favor of eliminating *any* form of child labor would interpret this to be a positive finding. Alternatively, a cultural relativistic framework may argue that an international imposition of preference on education is altering modes of life – a negative finding.

Second, moderate agricultural labor represents a “stepping stone” towards eliminating exploitative and harmful labor. In this understanding, efforts against moderate labor are more likely to succeed. Moderate or light labor does not provide enough benefits to push households past the threshold of concern for survival, otherwise it would not be “light.” Moderate or light labor reflects more of a tradition than a necessity. School attendance having a strong impact on any amount of light labor should not prove surprising; however, the impact of school attendance on exploitative or harmful labor remains unclear. Advocates in favor of eliminating exploitative forms of child labor may interpret the findings to demonstrate that education has the potential to combat exploitative forms of labor. Well supported and funded educational opportunities (while also funding the family) may be able to curb exploitative labor. Alternatively, harmful labor is engrained in deep socio-political dynamics of exploitation. The impact of education on moderate forms of labor sheds no light on the impact of education on exploitative labor.

The third interpretation sheds light on a limitation of the research. Both school attendance and moderate agricultural labor may be influenced by an omitted variable. A potential weakness of the analysis is that the results are driven by omitted variable bias. In this case, the results may be influenced by household wealth (discussed further in limitations).

### *Policy Implication*

Each understanding carries differing implications for policy points aimed at reducing, regulating, or ending child labor. Advocates in favor of (A) ending any and all forms of child labor (i.e. to reflect an idealistic “developed” standpoint) and (B) who also view moderate agricultural labor as *engrained* in society, can cite the findings as evidence in support of funding educational programs. Children are much less likely to engage in moderate labor if they have also attended school. While not a new proposition, directing energy and resources towards education represents a different solution than directing efforts towards regulation and law. As mentioned in the review of literature, most states sign international conventions aimed at ending “the worst forms of child labor.” Yet, many states that have signed said conventions also host moderate and exploitative labor. Funding educational programs serves as a strong local alternative to combatting child labor. Advocates in favor of (A) ending any and all forms of child labor and (C) who do not view moderate labor as engrained in society can also cite the findings as evidence in support of funding educational programs. The framework in which one understands moderate or light labor does not alter the finding that attendance rates correlates with decreased likelihood of having worked on a family-affiliated farm. Therefore, as part of “ending any and all forms of child labor” education may be a necessary but not sufficient step in ending moderate or light labor practices. As discussed below, policy points become less clear for advocates strictly devoted towards ending specifically exploitative forms of child labor.

### *Strengths, Limitations & Future Work*

As discussed in the review of literature, much of past research on child labor focuses on clearly harmful or exploitative practices. This research focuses on moderate forms of child labor, which is a strength and weakness of the project. Focusing on moderate forms of child labor serves as a strength by contributing additional knowledge to past literature. There is no clear consensus on the ethical implications of moderate agricultural child labor (as opposed to clearly exploitative and harmful forms of labor); therefore, additional research or empirical findings may spur the debate. Another strength of the project is contributing to specific understandings of poverty. Instead of citing poverty as a measurement of income, this research focuses on the impact of education on a consequence of poverty – child labor.

Alternatively, this project has two major limitations. First, the possible omitted variable bias discussed above is one limitation. Not incorporating household income into the analysis may not account for external factors that influence both the independent and dependent variable. Second, the project cannot speak to harmful or exploitative forms of child labor. International advocacy and research efforts are clearly aimed at curbing and ending harmful and exploitative practices, to which this project may not provide a direct contribution. Potentially, future research would seek to include variables representative of exploitative forms of labor. In order to do so, household questionnaires may not prove ideal. Instead, datasets surveyed from areas where exploitative practices occur would be an improvement. Original field research that is able to survey for specific variables and characteristics would be ideal.



## Chapter 7: Conclusion

Two major ideas dominate past literature on child labor. The first reflects an accepted and well-developed relationship between poverty and child labor. Micro- and macro-level theories and analyses support the relationship that impoverished areas have higher rates of child labor. The second idea reflects an *implicit* relationship between child labor and education. Either directly or indirectly, scholars, governments, and advocacy organizations continue to refer to education as the universal opportunity cost of child labor. An increasingly unchallenged understanding (especially within developed states) posits that children ought to bolster individual capacities through school attendance before entering the labor market.

In response to these two ideas, this project has two major goals. The first goal represents an attempt to unpack poverty and investigate the relationship between a specific aspect of poverty and child labor. By comparing school attendance and engagement in moderate family-affiliated agricultural labor, this paper analyzes a manifestation of poverty instead of traditional measurements based upon income. While the results mirror that of traditional analyses, the logit regression models give insight crucial for the second goal of the project. The second goal represents an investigation of the implicit understanding that school attendance and child labor are mutually exclusive. Past literature continually juxtaposes rates of education with rates of child labor in a manner that seemingly implies that children in school do not work. Therefore, if educational systems are bolstered and all children attend school, then child labor rates will diminish. While this implicit understanding makes sense at first glance, questioning the access to well-supported educational facilities in developing countries casts doubt on

school attendance being a top priority for households. Whether or not households encourage children to work or attend school likely depends on a wide variety of micro-level incentives and constraints ranging from location, degree of infrastructure of educational facilities, primary labor responsibilities of the household, and so on – the list is theoretically infinite. However, the association between the variables persists.

Despite the seemingly cursory association of school attendance and child labor observed in numerous reports and articles, the evidence presented in this project supports a framework of the two variables as a trade off. The models indicate that children who have attended school are significantly less likely to have also worked on a family-affiliated agricultural setting within the past week (upwards of 8.8 times less likely). Even when controlling for other factors, the relationship remains strong and statistically significant. Specifically, the dependent variable of “family-affiliated agricultural work and responsibilities” allows for discussing the implications of education in two major ways. The first interpretation frames moderate or light agricultural labor as the most engrained form of child labor. By framing the DV as representative of the most traditional form of child labor, the impact of school attendance becomes even greater. The results demonstrate that school attendance correlates with decreased participation in a traditional form of child labor, light agricultural work. Therefore, school attendance could theoretically impact all forms of child labor. The second interpretation frames moderate or light agricultural labor as easily diminished by its very own definition. Put differently, moderate labor does not push households past the threshold of concern for survival to any great extent; therefore, it should be easy to diminish through external factors (school attendance). This interpretation argues that eliminating exploitative child

labor is either independent of moderate labor, or would require a near exponential increase in educational capacities to alter.

Policy implications vary dependent upon interpretation. While this project does not directly take a stance on the ethical implications of bolstering educational systems at the cost of traditional modes of life, advocates in favor of eliminating any form of child labor will take solace in the results. Even those in favor of focusing efforts towards strictly exploitative practices can use the results for policy implementation. If limited educational infrastructure in Nigeria can have such a strong impact on moderate labor, then truly bolstering the infrastructure in the future may have an impact on exploitative labor. Future research would be better suited to investigate the implications of education on exploitative child labor. New datasets from field work may need to be created, as state-sponsored household questionnaires likely will not shed light on such practices.

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