

2026/27 Cohort



Sugarcoated Lives, Bitter Truths
**Child Labor In Kenya's Sugarcane Industry:
Ethical Violations and Economic Inefficiencies**

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I. Introduction

An estimated 8.5% of Kenyan children (1.3 million) are engaged in child labor, with over 96% employed in agriculture (UNICEF, 2021; U.S. Department of Labor, 2024).

Quantitative evidence from Kenya indicates that household poverty significantly increases children's likelihood of being out of school, which can be attributed to the fact that they have to engage in child labor to provide for their families. (Kenya National Bureau of Statistics & UNICEF Kenya, 2017).

Unfortunately, social attitudes further worsen this problem: "Many parents hardly understand the importance of education and see no reason for taking their children to school." (Muriuki, 2018). This parental mindset strongly shapes children's perceptions, leading them to accept labor as a mandatory responsibility rather than question it (Abdullah et al., 2022).

This is even more true in the context of the sugarcane industry, which faces the "Salient issue": Due to volatile prices and increasing costs, farmers often do not cover their cost of production, and thus do not earn a living income, leading to negative coping mechanisms, including relying on hazardous child labor (Fairtrade International, 2024).

Notably, when Kenya is compared with other major sugarcane-producing countries, particularly Brazil, there exists a clear abnormality in the data. Despite both countries cultivating sugarcane at scale, Brazil's sector has evolved into a technologically advanced industry, leading to a positive rise in the average number of skilled workers (Tiema et al., 2024). In contrast, in Kenya, only around 20% of sugar revenue remains within local communities, primarily through wages and salaries, while smallholder farmers remain vulnerable to exploitation by contracting factories that provide inputs on credit and deduct repayments at high effective interest rates (Utafiti Sera, 2016). This divergence indicates that similar agricultural production does not yield uniform developmental outcomes, leaving a gap for further investigation.

From my perspective as a student of Economics and Philosophy, I approach problems through two guiding questions: "Is it just, and if so, is it efficient?" Applying this perspective, I aim to understand how family financial hardship shapes parental expectations, which pushes children into forced labor. Furthermore, this study assesses economic efficiency to inform child-protection policy and sustainable development in Kenya and other underdeveloped countries.

II. Research Question

What underlying factors lead to the targeting of children for labor in the sugarcane industry, from both economics and philosophical perspective? What are the long-term impacts of child labor on human capital accumulation and productivity, and how might these effects contribute to a persistent economic cycle?

III. Methodology

This study adopts a mixed-methods approach, combining quantitative economic analysis with normative philosophical inquiry.

1. Economics Component: Quantitative Analysis

1.1. Data Sources

The primary dataset used for the quantitative analysis is the **Kenya Demographic and Health Survey (KDHS) 2022**, conducted by the Kenya National Bureau of Statistics. This dataset provides nationally representative, household-level data on children's school attendance, household socioeconomic conditions, and demographic characteristics.

1.2. Key Variables and Proxies

1.2.1. Monetary Poverty

Using "Household Wealth Index" as a proxy for long-term economic status.

1.2.2. Educational Access

- Primary Variable: Current school attendance rate
- Secondary Indicators: School level (pre-primary, primary, secondary)

These variables capture whether children are actively participating in formal education, and highlight variation in school exclusion across educational levels and age groups.

1.2.3. Child Labor Pressure

Child labor is examined indirectly through: school non-attendance among poor households; prolonged school absence; and household characteristics associated with labor demand.

1.3. Econometrics Model

The quantitative analysis employs multivariate regression models and descriptive statistics to examine the association between poverty and school attendance.

To assess the long-run economic inefficiency, I employ a dynamic modeling approach, combining time series and panel data techniques, to capture the effects on human capital accumulation and subsequent impact on future productivity and economic output.

2. Philosophy Component: Normative Analysis

2.1. Analytical Framework

The philosophical component adopts a normative approach to evaluate the ethical dimensions of child labor and educational deprivation. The analysis draws primarily on: Theories of Distributive Justice, Intergenerational Justice, Narrative Normalization, and Adaptive Preference.

2.2. Normative Focus

Children's Fundamental Rights: Child labor is normatively problematic because it deprives children of a basic right and constrains their ability to develop meaningful life choices.

Parental Choice versus Structural Constraint: While some parents may perceive child labor as child's mandatory responsibility, the analysis distinguishes between voluntary preference and choices made under severe structural constraints imposed by poverty and limited public provision.

Social Norms and Moral Internalization: When children come to view labor as a moral obligation, this raises ethical concerns regarding meaningful consent and autonomy under parental dependency.

3. Research Plan

PRE-RESEARCH PERIOD (MAY 18th - JUNE 14th)		
MAY	<i>Week 3</i>	Literature review; refinement of research questions and analytical framework
	<i>Week 4</i>	
JUNE	<i>Week 1</i>	Finalization econometric strategy in consultation with supervisor
	<i>Week 2</i>	
RESEARCH PERIOD (JUNE 15th - JULY 24th)		
JUNE	<i>Week 3</i>	Data collection and cleaning
	<i>Week 4</i>	Descriptive statistical analysis; pattern identification
JULY	<i>Week 1</i>	Econometric analysis I: Estimation of baseline regression models
	<i>Week 2</i>	Econometric analysis II: Interpretation of results with supervisor feedback
	<i>Week 3</i>	Philosophical and normative analysis
	<i>Week 4</i>	Synthesis and writing; begins deliverables
POST-RESEARCH PERIOD (JULY 27th - AUGUST 8th)		
JULY	<i>Week 5</i>	Revisions based on supervisor's feedback; Put together all final deliverables
AUGUST	<i>Week 1</i>	

Figure 1: Research Plan

4. Ethics Review

This study does not involve human participants, or the collection of personal information and relies exclusively on secondary, publicly available data. As such, this research is exempt from Research Ethics Board (REB) review in accordance with the University of Toronto's guidelines on human research ethics.

IV. Potential Impacts

1. Interdisciplinary and international focus of the research

As indicated by its title, this proposed research addresses an Economics–Philosophy question through the application of statistical methods, which strongly aligns with my intended majors of Financial Economics, Statistics and Philosophy.

Although the research is based on a specific country - Kenya, the implications of the findings can extend beyond a single national context as countries across Eastern Africa share key structural characteristics, making child labor a continental, even international, challenge.

2. Outcomes

The study aims at highlighting potential long-term economic inefficiencies for both the sugarcane industry and the broader economy.

Based on these findings, the research will provide policy-oriented insights that can support policymakers to produce a replicable model that can be adapted to other agricultural sectors and geographical contexts, contributing to initiatives to reduce child labor while fostering sustainable economic growth.

V. Research Supervisor

The research will be conducted under the supervision of *Professor Jiaying Gu*, Associate Professor of Economics in the Department of Economics at the University of Toronto, who will provide academic and methodological support throughout the project. Professor Gu will advise on refining research questions, developing the analytical framework and designing the econometric strategy through regular meetings.

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