Article

Unmasking wealth flows, fertility, and parental engagement of children in labor in the Ashanti region of Ghana

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Abstract: Background: In high-fertility contexts, evidence suggests that children produce more than they consume and therefore provide net wealth to parents. **Objective:** Based on this, the study attempts to examine whether wealth flows in families and fertility influence parents to engage their children in labor in the Ashanti Region of Ghana. **Methods:** A cross-sectional descriptive study design with a four multistage sampling technique was used for the study. Primary data were collected from 682 respondents through structured questionnaires administered in the field and were processed with SPSS version 27. Frequency distribution, chi-squared test, and binary logistic regression were used to summarize the data. The binary logistic regression was used to assess the influences of the IVs on the DV. **Results:** The majority of parents (75.0%) engaged their children in labor. Parents who believe that children should contribute financially to the household income had increased odds of engaging children in child labor. Parents who endorsed that they would stop a child from working when financial support is readily available, parents who do not know whether they would stop a child from working when financial support is readily available, and fertility were associated with decreased child labor. **Conclusion:** The findings underscore the need for a multifaceted response to child labor that goes beyond legal prohibition alone. Strengthening and enforcing existing legal frameworks, raising public awareness of the long-term consequences of child labor, and expanding social protection mechanisms to support vulnerable households are essential.

Keywords: children; engage; families; fertility; labor; parents; unmasking; wealth flows

1. Introduction

Today, nearly 1 in 10 children worldwide are engaged in labor that denies them their basic human rights and jeopardizes their well-being [1–6]. Globally, estimates indicate that approximately 160 million children have been forced into child labor since 2020 [7–9]. Among these children, 63 million are girls, and 97 million are boys, and about half (79 million) are engaged in hazardous work highlighting that for every three children in child labor, one is out of school [8]. Roughly, 70% (112 million) of these children work in agriculture including farming, and livestock herding [8,10].

It has been established that globally, sub-Saharan Africa, has the highest (86.6 million) number of children in labor, followed by Central and Southern Asia with 26.3 million [11,12] of which Ghana is not exempted, and this is evident that the child labor prevalence of Ghana stands at about 22% of the childhood population [4]. Additionally, over 1.1 million children age between 5 and 17 years are engaged in some form of work, representing 10% of all the children in this age group [13,14]. Almost 900,000 of these children are involved in a paid labor [15,16], about half

(458,443) are not attending school, more than sixty thousand (68,500) never attended school, and those that attended school in the past are about four hundred thousand (389,943) [15,16]. Further, among the children, more than half (56%) are males [13].

Geographically, the evidence estimated a complex geographical picture. For instance, urban areas accounted for over a quarter (309,199; 28%) of all the working children, while rural areas had the higher proportions, with almost three-quarters (795,175; 72%) [14–16]. From a regional perspective, Ashanti (13.6%) accounts for the highest percentage of children working, followed by Bono East (12.1%), and then Northern (11.8%) [15–17]. No matter where or how it occurs, child labor restricts children from their most fundamental rights [9,18,19].

John Caldwell's wealth flows theory proposes a direct link between fertility and prosperity [20]. In "primitive" and "traditional" societies with net upward wealth flows, the economically rational decision is to have as many surviving children as possible because each additional child adds positively to a parent's wealth, security in old age, and social and political well-being [21]. This theory suggests that in high-fertility contexts, children produce more than they consume and therefore provide net wealth to parents [21–23]. However, empirical tests of this hypothesis have not found evidence to show that children are net providers to parents in high-fertility contexts [21,23–29]. Based on this assertion, the current study attempts to examine how wealth flows in families and fertility influence parents to engage their children in labor in the Ashanti Region of Ghana.

Specifically, the study seeks to: analyze if wealth flows in families influence parents to engage their children in labor in the Ashanti Region of Ghana; and ascertain whether fertility influences parents to engage their children in labor in the Ashanti Region of Ghana.

The study further hypothesized that there is no statistically significant relationship between wealth flows in families, fertility, and parental engagement of children in labor in the Ashanti Region of Ghana.

2. Methods

2.1. Study area and population

Ashanti Region provides an appropriate context for this study due to its prevalence (14%) of children engagement in labor in Ghana [15–17]. Further, the region was chosen based on its substantial role in the cocoa industry, and small-scale mining due to poverty, inadequate educational opportunities, and cultural norms. Furthermore, while cocoa production is vital to the region's economy, it also depends largely on children as laborers, with children performing hazardous tasks [4]. The Region has a population of 5,440,463 in 2021 of Ghana's total population and a total household of 1,523,101 which refers to a person or a group of two or more persons (related or unrelated) who live together, share housekeeping arrangements (eating and sleeping), and recognize one person as the head [30]. The population of interest in the study is 1,523,101 households in the region.

2.2. Research design and data source

A cross-sectional descriptive study design was utilized for the study. The design was adopted because it aims at describing generalized relationships between distinct elements and conditions. Furthermore, it allows data to be collected at once and as well permit multiple variables to be assessed simultaneously [31–33]. Primary data were collected from 682 respondents through structured questionnaires administered in the field.

2.3. Sample and sampling procedure

A sample of 682 respondents was recruited for the study with the help of Cochran's [34] sample size formula for estimating sample size. With the help of this formula, sample size was estimated at 310 as follows:

$$n = \frac{z^2 \times p \times (1-p)}{d^2}$$

n = sample size
Confidence level set at 95% (1.96)
The *p*-value set at 0.05.
z = standard normal deviation set at 1.96
d = degree of accuracy desired at 0.05
p = proportion of households was 28%. This was obtained by dividing total households by the population in the region which is 1,523,101 by 5,440,463 gives 0.28. Mathematically, 1,523,101/5,440,463 = 0.28.

$$n = \frac{1.96^2 \times 0.28 \times (1-0.28)}{0.05^2}$$

= 309.7866 approximately 310. After the calculation, the sample size was 310. Assuming 10% non-response rate, design effect of 2, (to compensate the design effect) the sample size is: $N = 310 \times 2 + 10\%$ *of* $620 = 620 + 62 = 682$. The estimated sample for the study is 682.

A multistage sampling technique was employed. The first stage was the grouping of the districts into strata. With the strata, we used urban and rural classifications where urban served as stratum 1 and rural as stratum 2. The second stage was the selection of 4 districts two (2) each from each stratum to serve as the study site. The selected districts were Offinso North, Bosome Freho, Kumasi Metropolitan, and Ahafo Ano North Municipal. The third stage was proportional allocation / equal allocation (25%) to the stratum. This was done equally since a specific data regarding districts with high prevalence of child labor is not readily available in the region. The stage four was where a systematic sampling technique was used to reach the participants. The method was used because it allows respondents to be selected from a population at regular intervals after a random starting point thereby ensuring an even distribution and reducing potential bias.

In the first study site (Bosome Freho) we calculated the regular interval by dividing the population of the district (62, 259) [30] by the sample needed for the study which is 62259/682 = 91.28 approximately 91. Based on the proportion obtained, numbers between 1 to 91 were generated. Out of these numbers, number 15 was

selected to represent the first house for the study. So, starting from Bosome Freho police station and following a *serpentine order* the fifteenth house was selected, and in that house, an eligible household head present and willing to participate in the study was randomly selected to represent the first respondent for the study followed by 15 + 91 = 106th, followed by 15 + 106 = 121st, followed by 15 + 121 = 136th and so on and so forth. However, in each selected house, only one interview was conducted. A house selected with no eligible respondent, the procedure was repeated by starting from an identical feature or landmark till all the sample needed was obtained. This procedure was used in the rest (Offinso North, Kumasi Metropolitan, and Ahafo Ano North Municipal) of the study sites to reach the respondents.

2.4. Inclusion and exclusion criteria

To be eligible for inclusion in the study, respondents were required to be parents aged 27 years or older, resident in the selected study sites, have at least a child with age limit of 5, be present at the selected study sites as of the time of the study, and be willing to participate in the study. The study excluded parents who did not meet the above criteria.

2.5. Variables and measurements

The Independent Variables (IVs) in the study are wealth flow and fertility [20,21,35,36]. Wealth flow has (family income and expenditure, wealth flow & resource distribution, and perceptions and social dynamics) as indicators while fertility has (number of children born, and children desire) as indicators [37,38]. The Dependent Variable (DV) is child labor. For the purposes of Sustainable Development Goals (SDG) reporting, two indicators are used for measuring child labor, the first is based on the production boundary set by the United Nations System of National Accounts (SNA) and the second is based on the general production boundary. They are as follows: Indicator 1: Proportion and number of children aged 5–17 years engaged in economic activities at or above age-specific hourly thresholds (SNA production boundary basis), which includes: (a) children aged 5–11 working at least 1 hour per week in economic activity; (b) children aged 12–14 working for at least 14 hours per week in economic activity; and (c) children aged 15–17 working for more than 43 hours per week in economic activity. Indicator 2: Proportion and number of children aged 5–17 years engaged in economic activities and household chores at or above age-specific hourly thresholds (general production boundary basis), which includes: (a) children aged 5–11 working at least 1 h per week in economic activity and/or involved in unpaid household services for more than 21 h per week; (b) children aged 12–14 working for at least 14 h per week in economic activity and/or involved in unpaid household services for more than 21 h per week; and (c) children aged 15–17 working for more than 43 h per week in economic activity [39–41].

However, in Ghana, the minimum labor requirements for age 5-12 is "no work", 13–14 is "light work (not to exceed 2 hours during the school day and not exceed 3 hours outside the school day)" while age 15–17 is either "medium work (<18 h per week)" (be fewer than 3 h each day on school days if enrolled in school) or "full-time work (<43 h per week)" for those not enrolled in school. It is inappropriate for children

<18 years of age to engage in risky labor [42–46]. In this study, the SDG indicators were used to measure child labor. Altogether, *indicator 1* and *indicator 2* items sum up to give six (6) items. For easy reporting, the items were assigned yes or no, so, parents that responded in the affirmative to three (3) or more of the six (6) items were considered to have engaged a child in labor.

2.6. Data collection procedure

Data collection commenced on 15th January, 2025 and ended on 5th February, 2025 with the help of five research assistants. In all, 18 days were used to collect the data. In the field, research assistants were assisted with computer tablets to collect the data. Primary data were collected from 682 respondents through structured questionnaires administered in the field. The questionnaire used to gather the data was developed from previous standardized survey instruments and the literature.

2.7. Data processing and analysis

Data were processed with SPSS version 27 and analyzed with frequency distribution, Pearson's chi-squared test of independence and binary logistic regression. The frequency distribution was used to summarize respondents' responses into proportions. The Pearson's chi-squared test of independence was used to test the hypotheses postulated in the study, either to accept or reject the null hypotheses. Statistical significance was primarily assessed at the 5% level ($p < 0.05$), with additional reference to the 1% ($p < 0.01$) and 10% ($p < 0.10$) levels where appropriate. The binary logistic regression was also used to assess the influences of the IVs on the DV. With the binary logistic regression analysis, we employed the "Enter" method, and p-value of 0.05 was considered as significant.

2.8. Ethical consideration

Though the study did not seek ethical reviewed approval but ethical practices were adhered to in the field. Particularly, respondents were told that information they will provide will be kept confidential and will strictly be used for academic purposes thus adding to academic literature and that no any third party would have access to the information. With anonymity, anything that could identify a respondent to a data was devoid. On privacy, respondents were allowed to choose the befitting place they deemed appropriate for the study themselves. To climax it, an oral consent was sought from them before participation and they were told that participation is voluntary, and that they can withdraw from the study anytime they feel uncomfortable. They were told to feel free without any coercion to decide either to participate or not. So, those willingly owned out to take part were giving the opportunity to be part of the sample.

3. Results

The study comprised 44% males and 56% females. Whereas 37.9% belong to 50–59 age group, 12.6% were in the 27–29 age group. Nearly 44% had secondary school education while 6.5% had post-secondary education. Half of the sample had only one member who earns income for the family while 19% had 2 earning members. Half of the sample were urban dwellers (see **Table 1**).

Table 1. Sociodemographic characteristics of respondents.

Variable	Frequency	Percentage
Sex		
Male	298	43.8
Female	382	56.2
Age in group		
27-29	86	12.6
30-39	126	18.5
40-49	210	30.9
50-59	258	37.9
Level of Education		
No education	126	18.5
Basic	212	31.2
Secondary	298	43.8
Higher	44	6.5
Number of earning members in the family		
1	340	50.0
2	130	19.1
2+	210	30.9
Place of residence		
Urban	340	50.0
Rural	340	50.0
Total	**680**	**100.0**

Source: Fieldwork (2025).

In pursuit of ascertaining the proportion of parents who engage children in labor, prompted us to adopt The SDGs indicators for measurement. The SDGs have two indicators for measuring child labor, the first is based on the production boundary set by the SNA and the second is based on the general production boundary. They are as follows: Indicator 1: Proportion and number of children aged 5–17 years engaged in economic activities at or above age-specific hourly thresholds (SNA production boundary basis), which includes: (a) children aged 5–11 working at least 1 hour per week in economic activity; (b) children aged 12–14 working for at least 14 hours per week in economic activity; and (c) children aged 15–17 working for more than 43 hours per week in economic activity. Indicator 2: Proportion and number of children aged 5–17 years engaged in economic activities and household chores at or above age-specific hourly thresholds (general production boundary basis), which includes: (a) children aged 5–11 working at least 1 hour per week in economic activity and/or involved in unpaid household services for more than 21 hours per week; (b) children aged 12–14 working for at least 14 hours per week in economic activity and/or involved in unpaid household services for more than 21 hours per week; and (c) children aged 15–17 working for more than 43 hours per week in economic activity [40–42]. Altogether, indicator 1 and indicator 2 items sum up to give six (6) questions. So, for easy reporting, the items were assigned *yes or no*, so, parents that responded in

the affirmative to three (3) or more of the six (6) questions were considered to have engaged a child in labor. After analysis, the results revealed that 510 (75%) of the participants engage children in labor while 170 (25.0%) do not.

Table 2. Wealth flows in families.

Variable	Frequency	Percentage
Most contributor to household income		
Father	382	56.2
Mother	130	19.1
Children	168	24.7
Household's average monthly income		
GHS<1000	298	43.8
GHS1000–1999	86	12.6
GHS2000–2999	126	18.5
GHS3000–3999	170	25.0
Controller of household spending decisions		
Father	298	43.8
Mother	126	18.5
Elder child	168	24.7
Both parents and children	88	12.9
Should children contribute financially to the household		
No	170	25.0
Yes	510	75.0
Amount of money, a child contributes towards family expenses in a month		
GHS1000	384	56.5
GHS1500	86	12.6
GHS2000+	210	30.9
Purpose of child's financial contribution		
Education of siblings	84	12.4
Household food and rent	298	43.8
Health expenses of elders	212	31.2
Savings/loans repayment	86	12.6
Would stop child from working when financial support is readily available		
No	300	44.1
Yes	168	24.7
Do not know	212	31.2
Children are respected when they contribute to family income		
More respected	170	25.0
Less respected	340	50.0
No change	170	25.0
Experienced any changes in the pattern of resource flow over generations		
No	170	25.0
Yes	510	75.0
Total	**680**	**100.0**

Source: Fieldwork (2025).

To answer research objective one which is "analyze if wealth flows in families influence parents to engage their children in labor in the Ashanti Region of Ghana" made us asked questions spanning from "income contributors, monthly income, spending decisions maker, children mandated to contribute to family income, child contribution percentage, child's income contribution purpose, stop child from work when financial support is readily available, children are respected when they contribute to family income, and pattern of resource flow." The results are presented in **Table 2**.

Regarding the most contributor to household income, the results revealed that 56.2% of the participants reported fathers while 19.1% indicated mothers (see Table 2). Nearly 44% reported that their household's average income is <GHS 1000 while 12.6% said it ranges from GHS 1000-to-1999 (see **Table 2**). Concerning the controller of the household spending decisions, the results revealed that more than forty per cent (43.8%) indicated fathers, while 12.9% reported that it is both parents and children (see **Table 2**).

When asked whether children should contribute financially to the household income or not, the results revealed that 75% of the participants answered in the affirmative (see **Table 2**). Regarding the amount of money children contribute towards family expenses in a month, the results revealed that more than half of the sample reported GHS 1000, while 12.6% indicated GHS 1500 (see **Table 2**).

When asked about the purpose of child's income contribution in the family, the results revealed that a little above forty-three per cent (43.8%) reported provision of food and rent, while 12.4% indicated education of siblings (see **Table 2**). When participants were asked if they would stop children from working when financial support is readily available or not, the results revealed that 44.1% indicated that they would not stop the children from work, while 24.7% said they would stop the children from work (see **Table 2**).

When participants were asked to indicate whether children are respected or not, when they contribute to family income, the results revealed that 50.0% indicated children are less respected, while 25.0% reported it does not change anything about the children (see **Table 2**). Whereas 75.0% of participants reported that family has experienced changes in the pattern of resource flow over generations, 25.0% said family has not experienced changes in the pattern of resource flow over generations (see **Table 2**).

Among the 510 participants who indicated family has experienced changes in the pattern of resource flow over generations were further asked to indicate the pattern of flow, the results found revealed that 56% of them indicated downward wealth flow, while 19% reported upward wealth flow.

Table 3 has Pearson's chi-squared test of independence on wealth flow in families and parents' engagement of children in labor. This analysis was conducted to test the hypothesis that there is no statistically significant relationship between wealth flows in families and parental engagement of children in labor. Statistically significant relationships were found in almost all the variables studied under wealth flow in families namely: Most contributor to household income [$\chi^2 = 157.387$, $p < 0.001$], household's average monthly income [$\chi^2 = 75.018$, $p < 0.001$], controller of household spending decisions [$\chi^2 = 162.649$, $p < 0.001$], children should contribute financially

Table 3. Relationship between wealth flows in families and parental engagement of children in labor.

Variable	No (%)	Yes (%)	Total n (%)	χ^2	*P*-value
Most contributor to household income				157.387	<0.001
Father	42(11.0)	340(89.0)	382(100.0)		
Mother	86(66.2)	44(33.8)	130(100.0)		
Children	42(25.0)	126(75.0)	168(100.0)		
Household's average monthly income				**75.018**	**<0.001**
GHS<1000	84(28.2)	214(71.8)	298(100.0)		
GHS1000–1999	44(51.2)	42(48.8)	86(100.0)		
GHS2000–2999	0(0.0)	126(100.0)	126(100.0)		
GHS3000–3999	42(24.7)	128(75.3)	170(100.0)		
Controller of the household spending decisions				162.649	<0.001
Father	44(14.8)	254(85.2)	298(100.0)		
Mother	84(66.7)	42(33.3)	126(100.0)		
Elder child	42(25.0)	126(75.0)	168(100.0)		
Both parents and children	0(0.0)	88(100.0)	88(100.0)		
A child should contribute financially to household income				79.158	<0.001
No	86(50.6)	84(49.4)	170(100.0)		
Yes	84(16.5(	426(83.5)	510(100.0)		
Amount of money a child contributes towards family expenses				296.595	<0.001
GHS1000	0(0.0)	384(100.0)	384(100.0)		
GHS1500	44(51.2)	42(48.8)	86(100.0)		
GHS2000+	126(60.0)	84(40.0)	210(100.0)		
Purpose of a child's income contribution to the family				102.475	<0.001
Education of siblings	0(0.0)	84(100.0)	84(100.0)		
Household food and rent	42(14.1)	256(85.9)	298(100.0)		
Health expenses of elders	84(39.6)	128(60.4)	212(100.0)		
Savings/loans repayment	44(51.2)	42(48.8)	86(100.0)		
Would stop a child from working when financial support is readily available				**46.756**	**<0.001**
No	42(14.0)	258(86.0)	300(100.0)		
Yes	42(25.0)	126(75.0)	168(100.0)		
Don't know	86(40.6)	126(59.4)	212(100.0)		
A child is respected when he or she contributes to family income				0.031	0.984
More respected	42(24.7)	128(75.3)	170(100.0)		
Less respected	86(25.3)	254(74.7)	340(100.0)		
No change	42(24.7)	128(75.3)	170(100.0)		
Family has experienced changes in the pattern of resource flow over generations				75.556	<0.001
No	0(0.0)	170(100.0)	170(100.0)		
Yes	170(33.3)	340(66.7)	510(100.0)		

Note: Row percentages in parenthesis, Chi-square significant at (0.001), (0.05), (0.10)
No: do not engage child in labor Yes: engage child in labor
Source: Fieldwork (2025).

to the household income [$\chi^2 = 79.153$, $p < 0.001$], amount of money a child contributes towards family expenses [$\chi^2 = 296.595$, $p < 0.001$], purpose of a child's income contribution in the family [$\chi^2 = 102.475$, $p < 0.001$], would stop a child from working when financial support is readily available [$\chi^2 = 46.756$, $p < 0.001$] as well as family has experienced changes in the pattern of resource flow over generations [$\chi^2 = 75.556$, $p < 0.001$] and parental engagement of children in labor. However, statistically significant relationship was not found in children are respected when they contribute to family income [$\chi^2 = 0.031$, $p = 0.984$] and parental engagement of children in labor.

Table 4 has binary logistic regression results on wealth flows in families and parents' engagement of children in labor. This analysis was conducted on nine (9) items (income contributors, monthly income, spending decisions maker, children mandated to contribute to family income, child contribution percentage, child income generation purpose, stop child from work when financial support is readily available, children are respected when they contribute to family income, and pattern of resource flow) to ascertain the influences each of them exerts on parents' engagement of children in labour.

Table 4. Binary logistic regression results on wealth flows in families and parental engagement of children in labor.

Variable	B	Wald	Sig.	Exp(B)	95CI	
Children should contribute financially to the household income (No = 1.0)						
Yes	1.428	50.381	0.000	4.172	2.812	6.189
Would stop a child from working when financial support is readily available (No = 1.0)						
Yes	−0.568	5.010	0.025	0.567	0.345	0.932
Don't know	−1.111	23.482	0.000	0.329	0.210	0.516
Constant	**0.682**	**9.191**	**0.002**	**1.977**		

Source: Fieldwork (2025). Significant at 0.05.

After processing the data, only two variables (children should contribute financially to the household income, and would stop a child from working when financial support is readily available) were significant. Those that were not significant were removed from the model (see **Table 4**). Overall, the logistic regression model was significant at -2LogL = 667.883; Nagelkerke R^2 of 0.197; $\chi^2 = 96.893$; $p < 0.001$ with correct prediction rate of 75.3%. More importantly, the Model Summary which shows a Nagelkerke R^2 of 0.197 suggests that the model explains 19.7% of variance in the likelihood of parents engaging their children in labor in the Ashanti Region of Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict parental engagement of children in labor in the Ashanti Region of Ghana.

Table 4 revealed that parents who believe that children should contribute financially to the household income was significantly related to child labor at $p < 0.001$, (OR = 4.172, 95%CI ([2.812–6.189]). This variable identifies those parents to have 4.2 times more likely to engage their children in labor compared with their counterparts that reported they do not believe that a child should contribute financially to the household income (see **Table 4**). Further, parents who endorsed that they would stop a child from working when financial support is readily available was statistically

significant related to child labor at *p* = 0.025, (OR = 0.567, 95%CI ([0.345–0.932]). This factor labels those parents to have 0.6 times less likely to engage their children in labor compared with their counterparts that intimated they would not stop a child from working when financial support is readily available (see **Table 4**). Furthermore, parents who do not know whether they would stop a child from working when financial support is readily available was significant at *p* < 0.001, (OR = 0.329, 95%CI ([0.210–0.516]). This variable revealed those parents to have 0.3 times less likely to engage their children in labor compared with their counterparts that reported they would not stop a child from working when financial support is readily available (see **Table 4**).

In an attempt to answer research objective two which is "ascertain whether fertility influences parents to engage children in labor in the Ashanti Region of Ghana" ignited questions ranging from "number of children born, children desire, and many children increases the likelihood of child labor." The results are presented in **Table 5**.

Table 5. Fertility in the Ashanti Region.

Variable	Frequency	Percentage
Number of children		
3	424	62.4
1	130	19.1
4	84	12.4
5+	42	6.2
Number of children desire		
5	384	56.5
4	227	33.4
6	69	10.1
Having many children increases the likelihood of child labor		
No	468	68.8
Yes	84	12.4
Not sure	128	18.8
Total	**680**	**100.0**

Source: Fieldwork (2025).

With respect to the number of children parents have, the results revealed that 63.4% of parents have 3 children, while 6.2% have more than 5 children (see **Table 5**). Whereas 57% of parents desire 5 children, 10% desire 6 children. On whether having many children increases the likelihood of child labor or not, the results revealed that 69% of parents reported that it cannot while 12% indicated that it can (see **Table 5**).

Further analysis was run with Pearson's chi-squared test of independence to determine whether relationship exists between fertility and parental engagement of children in labor. This analysis was substantial to test the hypothesis that there is no statistically significant relationship between fertility and parental engagement of children in labor. Statistically significant relationships were found in all the variables namely: number of children [x^2 = 165.514, *p* < 0.001], number of children desire [x^2

= 42.334, $p < 0.001$] as well as having many children increases the likelihood of child labor [$x^2 = 33.546$, $p < 0.001$] and parental engagement of children in labor (see **Table 6**).

Table 6. Relationship between fertility and parental engagement of children in labor.

Variable	No (%)	Yes (%)	Total *n* (%)	χ^2	*P*-value
Number of children				165.514	<0.001
3	84(19.8)	340(80.2)	424(100.0)		
1	44(33.8)	86(66.2)	130(100.0)		
4	0(0.0)	84(100.0)	84(100.0)		
5+	42(100.0)	0(0.0)	42(100.0)		
Number of children desire				42.334	<0.001
5	128(33.3)	256(66.7)	384(100.0)		
4	42(18.5)	85(81.5)	227(100.0)		
6	0(0.0)	69(100.0)	69(100.0)		
Having many children increases the likelihood of child labor				33.546	<0.001
No	128(27.4)	340(72.6)	468(100.0)		
Yes	0(0.0)	84(100.0)	84(100.0)		
Not sure	42(32.8)	86(67.2)	128(100.0)		

Note: Row percentages in parenthesis, Chi-square significant at (0.001), (0.05), (0.10)
No: do not engage child in labor Yes: engage child in labor
Source: Fieldwork (2025).

Table 7. Binary logistic regression results on fertility and parents' engagement of children in labor.

Variable	B	Wald	Sig.	Exp(B)	95CI	
Number of children (3 = 1.0)						
1	−1.619	35.427	0.000	0.198	0.116	0.338
4	19.584	0.000	0.996	320046902.829	0.000	0.000
5+	−22.822	0.000	0.997	0.000	0.000	0.000
Having many children increases the likelihood of child labor (No = 1.0)						
Yes	20.601	0.000	0.996	884737793.590	0.000	0.000
Not sure	−0.902	12.726	0.000	0.406	0.247	0.666
Constant	**1.619**	**91.876**	**0.000**	**5.048**		

Source: Fieldwork (2025). Significant at 0.05.

Table 7 has binary logistic regression results on fertility and parents' engagement of children in labor. This analysis was conducted on three (3) variables (number of children, number of children desire, and having many children increases the likelihood of child labor) just to unravel the effect each of them has on parents' engagement of children in labor.

After processing the data, only two variables (number of children, and having many children increases the likelihood of child labor) were significant. Therefore, the variable that was not significant was removed from the model (see **Table 7**). Overall, the logistic regression model was significant at -2LogL = 511.811; Nagelkerke R^2 of 0.460; $\chi^2 = 252.965$; $p < 0.001$ with correct prediction rate of 81.2%. More

importantly, the Model Summary which shows a Nagelkerke R^2 of 0.460 suggests that the model explains 46% of variance in the likelihood of parents engaging children in labor in the Ashanti Region of Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict parents' engagement of children in labor in the Ashanti Region of Ghana.

It emerged in **Table 7** that parents who had just a child (one) was significantly related to child labour at $p < 0.001$, (OR = 0.198, 95%CI ([0.116–0.338]). This indicator categorizes those parents to have 0.2 times less likely to engage their children in labor compared with their counterparts that reported that they have three (3) children (see **Table 7**). Further, parents who were not sure whether having many children increases the likelihood of child labor was statistically significant related to child labor at $p < 0.001$, (OR = 0.406, 95%CI ([0.247–0.666]). This factor tags those parents to have 0.4 times less likely to engage their children in labor compared with their counterparts that intimated having many children will not increase the likelihood of child labor (see Table 7). However, the "number of children desire" was not significant which could be as a result of chance.

4. Discussion

The study attempted to unmask whether wealth flows in families and fertility influence parents to engage their children in labor. In this regard, the analysis of wealth flows in families revealed that fathers (56.2%) are the most contributor to household income. Providing finances in families has been a key aspect of fathering through the ages making them the principal income contributors in the family. This finding corroborated with previous studies conducted in America, and Nigeria [47,48] respectively which also found that fathers still tend to be seen as the "breadwinners" of the family, while mothers routinely take on most of the childcare [47,48]. On the other hand, some significant proportion of the participants (24.7%) reported children as the most contributor of household's income. The reason for this finding could be that these participants have realized that breadwinners of those households were struggling to make ends meet and are experiencing hunger making them desperate which invariably led them to rely on income from child labor to cover basic needs like food. Though it is uncommon for children to be the primary income source for a household but they can contribute significantly, especially in low-income households. Children can contribute through various means, including paid work, unpaid work like household chores, or even by simply being able to reduce the net cost of rearing them, thus increasing the demand for more children. This finding agrees with previous studies conducted in Southeast Asia, and Canada, UK, and US [49,50] respectively which also found that children often take on the role of family "breadwinner," providing financial support and sharing family responsibilities [49,50]. However, the 19.1% participants who indicated that mothers were the most contributor of household's income reason could be that they have witnessed that most mothers make a major contribution to their family's household budget. This finding corroborated with previous studies, which found that one third of British working mothers are main breadwinners [51,52].

In terms of households' income, a varied average income for households were

found stemming from GHS <1000 (43.8%), GHS 1000-1999 (12.6%), GHS 2000–2999 (18.5%) while 25.0% earn GHS 3000-3999. This finding signifies that households' income is often prone to significant seasonal variations especially in the rural areas where people's income is determined by the sale of their harvest and seasonal employment. This finding corroborated with previous study which found that household annual income was distributed as follows: 35% reported ≤$45,000; 30% reported $50,000 to ≤$95,000; and 35% reported ≥$100,000 [53].

Fathers were noted to be the most controller of household's spending decisions, indicating that in many cultures, traditional gender roles have led fathers to be seen as the primary financial providers, and therefore, the primary decision-makers regarding household spending. This finding is in line with a study which found that traditionally, fathers are expected to contribute financially to the family [54]. However, the participants that reported both parents and children reason could be that they have realized that children in this modern era are the major influencing factor that impacts parents' purchasing habits and influences their decision-making. This finding agrees with a previous study, which found that parents and children adopt a range of negotiation or bargaining tactics for resource allocation and enhanced family value [55].

Children were found to be financial contributors to household income. This finding suggests that involving children in discussions about household finances and allowing them to contribute in small ways can be beneficial for their financial literacy and responsibility. Hence, giving them pocket money and discussing family finances with them can enable them understand the concept of budgeting and saving. This finding corroborated with a previous study which found that children who sold for their families, earned between GH$7 and GH$15 per day to support household income [56].

However, the proportion that refuted the idea that children should contribute financially to household income reason could be that they see children as minors, and that their primary focus should be on their education and development. Parents with this idea in mind, no matter how poorly they are paid, they will always prefer to send their children to school and borrow against their future earnings, rather than to send children to work. This finding corroborated with a previous study which found that if children are begging, the blame is put squarely on their parents because they can stop them from engaging in it, if they so desire [57]. On the contrary, the finding disagreed with a study which found that despite the passage of new laws and policies to curb child labor, parents still engage their children in work [58].

Most parents declared that they would not stop children from working even if financial support is readily available. The reason for this finding could be that those parents consider child labor as normal, and that sometimes they presume it is good for children to work for their own survival, and that of their family. This finding is in line with previous studies which found that in a poor economy, even if overall household income rose on balance, the rise would not be sufficient to make parents happy with not sending children to work [59,60]. However, the proportion that reported they would stop children from working when financial support is readily available reason could be that they are aware that in the short run, putting children to work may increase immediate household income and in the long run hinders their long-term human

capital development, which might invariably reduce future family income and overall economic well-being. Hence, child labor often interferes with child's access to education and the necessary skills development thereby impacting their future income earning potentials. This finding agrees with a previous study, which found that cash transfers are a popular and successful means of tackling household vulnerability and promoting human capital investment. Further, the study stressed that they can help reduce child labor, especially when it is a response to household vulnerability, but their efficacy is very variable [61].

It emerged that children that contribute to family income, some are less respected, others are more respected while some too their financial contribution to family income does not attract any change to their person. Generally, children who contribute financially to the family income are often respected more by their families. But a situation whereby the financial contribution of the child does not make any difference in the household financial budget, it might not attract any form of respect from the parents compared with those that their contribution makes an essential impact on the household financial budget. This outcome confirmed previous studies that "decisions undermine respect" "part of culture to work" "we have to contribute to family income" "children are cheap labor" and "cocoa and fishing are family work" [62,63].

A significant proportion of the participants submitted that they had experienced changes in the pattern of resource flow over generations in the family. The reason for this finding could be that initially these participants were enjoying resource flow upwards thus from children to parents. Meaning children hustle to provide money to support their family but now it could be that it is no longer the case rather it flows from parents to children (downwards flow). Meaning parents bear all expenses of children in the family. Further, it could be that these participants have observed that there has been a shift in who provides resources in the family. This outcome corroborated with previous studies which found that there have been fundamental changes in the intergenerational family, and yet families continue to be an important part of people's lives [64-66]. However, those who reported they have not experienced any changes in the pattern of resource flow over generations reason could be that there has not been any shift in who controls and provides resources in the family. This finding refuted a study which found that changes in the intergenerational family relationships are typically seen through the prism of contemporary parents supporting their children all along [67].

The study found that relationship exists between wealth flows in the families and parents' engagement of children in labor. Therefore, the null hypothesis was rejected. A *p*-value of <0.001 found in all the variables (most contributor to household income, household's average monthly income, controller of the household spending decisions, children should contribute financially to the household income, amount children contribute towards family expenses, purpose of child income generation in the family, would stop children from working when financial support is readily made available, and family experience changes in the pattern of resource flow over generations) studied under wealth flows in families with varied degrees of freedom (2, 3, 3, 1, 2, 3, 2, & 1) respectively postulate a strong relationship which suggests that wealth flows in families strongly predict parents' engagement of children in labor. This outcome confirmed previous studies, which found that child labor is higher in families that have

access to land and livestock in rural areas and small business [68–70].

The study found that parents who believe that children should contribute financially to the household income had higher likelihood of engaging children in labor. The plausible explanation for this finding could be that these parents are unemployed, have a debt, and yet, want to ensure their children receive financial support from noncustodial parents to cover all their basic needs. This finding corroborated with a previous study which found that parents engage their children in their own occupations so as to benefit from their economic value [62].

Surprisingly, parents who endorsed that they would stop a child from working when financial support is readily available had lower odds of engaging children in labor. The plausible explanation for this finding could be that these participants believe that if financial support is readily made available, it could provide them with financial flexibility to cover the high costs of raising children, allowing them to prioritize essential needs like food, housing, and childcare. This outcome corroborated with a previous study which found that families with access to credit are considerably less likely to put children to work during a period of economic volatility [71].

Besides, parents who do not know whether they would stop a child from working when financial support is readily available had decreased odds of engaging children in labor. The plausible explanation to this finding could be that these parents do not have financial challenge which could warrant them engage their children in labor. Also, it could be that the primary wage earner of the household is gainfully employed and his or her income is able to cater for all expenses of the household, and that do not require financial support from their children for household expenses. This outcome is in line with previous studies which found that increases in income available to the household will tend to lower child participation in work and this reduction in work activities will tend to be stronger. Further, the authors postulated that rising incomes are associated with improvements in the family's ability to triage economic shocks without child labor, shifting production outside of the home, and a greater demand for education and leisure [72,73].

The study found that parents had varied average number of children with varied number of children desire. This finding suggests that fertility is predicted by countless factors which include desire for large families, prevalent of child mortality, knowledge on the reasons to use family planning, and access to quality family planning services. This finding agrees with a previous study which found that 22.3% of women stated that they want to have 1 child and equally 52.7% of men and 52.7% of women wanted to have 2 children [74].

It emerged that having many children does not increase the likelihood of child labor. The reason for this finding could be that these participants are capable of catering for their children, and that do not need them supporting with finances in the family. Further, it could be that these parents are aware that if children are engaged in labor, they are not paid, even if they are, they receive very low wages, and at times too, they are not protected. However, those parents who said having many children increases the likelihood of child labor reason could be that they do not have sustainable financial source. This outcome refuted a previous study which found that an increase in child survival probability induces unskilled workers to have more children, thus increasing the child labor supply [75].

Relationship was identified between fertility and parents' engagement of children in labor. Due to this, the null hypothesis was not confirmed. A *p*-value of <0.001 found in the variables (number of children, number of children desire, and having many children increases the likelihood of child labor) studied under fertility with varied degrees of freedom (3, 2, & 2) respectively indicate that fertility has a strong influence on parents' engagement of children in labor. This outcome was consistent with a previous study which found that the total fertility rate of mother had a positive relationship with child labor. The authors further posited that for more than two children, the relationship was positive and significant [76].

It was brought to the fore that parents who had just a child (one) had lower odds of engaging children in labor. The plausible explanation for this finding could be that these parents are aware that most children laborers are doubly disadvantaged when they reach working age. As most are denied a chance of going to school, their prospects for decent work in youth and adulthood are severely constrained. This finding suggests that parents with one child do not engage the child in labor. Hence, they see themselves as capable of taken care of the child.

Besides, parents who were not sure whether having many children increases the likelihood of child labor had a lower likelihood of engaging children in labor. The plausible explanation for this finding could be that these parents are not aware about the link between fertility and child labor. With this, parents might not see the need to engage children in labor. Further, since these parents lack understanding about the relationship between fertility and child labor, it might lead them to be more cautious and less willing to rely on child's financial contributions in the family as a means of survival or economic gains.

The study found that three-quarters of the participants do engage their children in child labor. This outcome is almost in line with a previous study conducted in Ethiopia (Amhara region), which found that 51% of children in Ethiopia were working of which the proportion reaches 64% in the Amhara region [77]. The authors further stressed that about 30% of those children were in hazardous labor. Furthermore, this outcome is almost the same as a previous study conducted in Ghana and Côte d'Ivoire which also found that 67.1% of children had worked in agriculture in the past 12 months [78]. This finding suggests that majority of parents in the Ashanti Region of Ghana engage children in labor. This underscores a targeted educational intervention to help educate parents across Ghana especially, those in the Ashanti Region in order to enlighten them of the long-term health consequences including cancer, infertility, and chronic backpain these children are likely to experience later in life coupled with poverty and lack of efficient health and social security schemes. It could be possible, for one to say that these parents are illiterate, and that are not aware of the consequences of child labor. It could also be that they are not gainfully employed, and that what they earn from the menial work they do cannot sustain the household.

However, a quarter reported that they do not engage children in child labor. This outcome refuted a previous study conducted in 221 Districts of 18 Developing Countries, which found that children whose parents are gainfully employed are significantly more likely to engage in labor, even when controlling for household wealth [79]. Further, the finding also disagrees with another study conducted in Ghana, which found that when caregivers lack time, its leads to increased child work and

reduced school attendance [80]. Furthermore, the current study's findings refuted the findings of another cross-sectional study conducted among 473 parents in Nigeria which found that 39% believed their school-aged children should work, 61% do not support child labor [81]. The implication of this finding is that a significant proportion of parents in the Ashanti Region of Ghana value education and child development, and that do allow their children to go to school in order to brighter their chances of getting better employment. So that in the future, they can enjoy better life. It is possible for one to say that these parents are rich, and that they do not lack in terms of money to warrant them to rely on child's contribution to family's income for survive.

5. Conclusion

This study found that a substantial proportion of parents in the Ashanti Region of Ghana engage their children in labor. Whether undertaken knowingly or unknowingly, child labor exposes children to a range of adverse health outcomes that may manifest later in life. Engagement in hazardous work can lead to long-term physical and psychosocial consequences, including chronic musculoskeletal disorders, infertility, and increased cancer risk, many of which may only become apparent in adulthood and are therefore difficult to detect or attribute directly. These risks are further exacerbated by persistent poverty and the limited availability of effective health and social protection systems.

The findings underscore the need for a multifaceted response to child labor that goes beyond legal prohibition alone. Strengthening and enforcing existing legal frameworks, raising public awareness of the long-term consequences of child labor, and expanding social protection mechanisms to support vulnerable households are essential. In particular, national labor laws should be reviewed to ensure that the minimum legal age for work is clearly defined and effectively enforced, in line with international standards. Addressing both the economic drivers and the normative beliefs that sustain child labor is critical to achieving meaningful and sustainable reductions in child labor in Ghana.

6. Limitations of the study

Despite efforts to ensure methodological rigor, this study has several limitations. First, the exclusive use of a quantitative cross-sectional design constrained the ability to capture the contextual depth and lived experiences underlying parental decisions regarding child labor. Complex social norms, household dynamics, and motivations may have been oversimplified through numerical indicators.

Second, the cross-sectional nature of the data limits causal inference, as observed associations cannot establish temporal or causal relationships between wealth flows, fertility, and child labor engagement. Third, reliance on self-reported data may have introduced reporting bias, particularly given the social sensitivity and legal implications surrounding child labor.

Future research would benefit from mixed-methods or longitudinal approaches to better capture the nuanced pathways through which economic conditions, fertility dynamics, and cultural norms interact to shape child labor practices over time.

Abbreviations

DV	Dependent variable
IV	Independent variable
SDGs	Sustainable Development Goals
SNA	United Nations System of National Accounts
SPSS	Statistical Package for the Social Sciences

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