Household Size and Composition as Correlates of Child Labour in Urban Nigeria

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Abstract

This paper draws on interviews with 1,535 parents and their children to examine the relationship between child labour and various household variables in urban Nigeria, where child labour studies have been very limited. We provide a comprehensive overview of the household factors and residential dynamics through which child labour evolves. Our findings demonstrate the usefulness of the household production theory in explaining the socio-economic ramifications and household context of child labour. Our findings indicate that although child labour is mostly caused by poverty and the need to prepare children with skills and training useful for future occupations, the size of the household, number of children in the household, number of children contributing to the household income, child's age, and age at which child started working – are all significantly and positively correlated with children's hours of work. However, gender compositions of the children or of the household head and age of the household head have little or no relationship with children's hours of work. Additionally, parental socio-economic status and family structure variables are associated with fewer hours of children's work. The findings have implications for policies aimed at regulating child labour in Nigeria.

Résumé

Cet article est basé sur des entretiens avec 1.535 parents et leurs enfants, et vise à examiner la relation entre le travail des enfants et les variables domestiques dans le Nigeria urbain, où les études sur le travail des enfants sont jusque là très limitées. Nous offrons un aperçu exhaustif des facteurs domestiques ainsi que des dynamiques locatives à travers lesquels évoluent les données sur le travail

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des enfants. Nos résultats démontrent comment la théorie sur la production domestique permet d'expliquer les ramifications socioéconomiques ainsi que le contexte domestique de l'exploitation des enfants. Nos résultats montrent également que même si le travail des enfants a pour principale source la pauvreté, ainsi que le besoin de préparation et de formation des enfants à un futur travail, il convient également de noter que la taille du foyer, le nombre d'enfants au sein du foyer, le nombre d'enfants contribuant au revenu du foyer, l'âge de l'enfant et l'âge auquel l'enfant a commencé à travailler, sont autant d'éléments qui influent sur les heures de travail des enfants. Cependant, la caractéristique genre des enfants ou du chef de famille, de même que l'âge du chef de famille n'ont que très peu ou pas d'incidence sur les heures de travail des enfants. Ces résultats revêtent un bon nombre d'implications pour les politiques publiques visant à réglementer le travail des enfants au Nigeria.

Introduction

The 2002 publication of the International Labour Organisation reports that worldwide, approximately 211 million children between the ages of five and fourteen are employed, and Africa has the highest rates of child labour force participation. Despite Africa's high rate of child employment, which average at 28.8 percent, much of the literature on child labour tends to focus on the regions of Asia and Latin America. Thus, there appears to be a neglect of child labour in African scholarship (Bass 2004; Grier 2004).

Some of the studies that examine the determinants of child labour in Latin America (Binder and Scrogin 1999; Levison, Moe, and Knaul 2001; Connelly, DeGraff, and Levison 1996; Patrinos and Psacharopolous 1997), in Asia (Cochrane, Kozel, and Alderman 1990; Degraff, Bilsborrow, and Herrin 1993; Sharif 1994; Kanbargi 1988), and in Africa (Becker and Lewis 1973; Canagarajah and Nielsen 2001; Canagarajah and Coulombe 1998; Nielsen 1998; Munroe and Munroe 1971) have produced useful analyses of household factors and their influences on child labour. However, most concentrate on only a small number of variables and attempt to explain child labour through an economic lens, by focussing on the household variables of income, thereby precluding a comprehensive knowledge of the household dynamics and social context of child labour. Furthermore, of the few studies that address child labour in Africa, many do not specifically address the household environment through which this phenomenon evolves. In fact, we have uncovered no study that discusses how household size, structure, and composition correlate with child labour in the Nigerian context. This limited methodological coverage, coupled with the disregard for the phenomenon of Africa's child labour in the literature, has resulted in an inadequate description of the phenomenon. In an effort to extend the realm of understanding, we have chosen in this paper, to examine correlates of child labour through a

more holistic approach, integrating the multiple facets of household size and composition, by using recently collected household data from urban Nigeria.

Knowledge concerning the correlation between household variables and child labour, especially, in Nigeria is important considering that Nigeria is Africa's most populous country with the highest prevalent rate of child labour participation. And since household size is an index of the national population size and growth, perhaps policy aimed at regulating child labour could have implications for controlling population growth in Nigeria.

In this paper, our major goal is to identify the various household characteristics that may be associated with various measures of children's work, such as time use. In addition, we aim to address the following questions: (i) what are the types and characteristics of the household that these children come from (for example, monogamous or polygynous; nuclear or extended; two-parent family or single parent family; (ii) what is the size of the household and how many household members (including children) are working; and (iii) how does the family size or age composition of children influence the amount of time children spend at work. More precise information at the household level on questions such as these is needed both for a proper understanding of child work and of contributions of urban household members in a developing economy such as that of Nigeria.

Theoretical framework

Issues relating to household welfare, children's time use, and decision-making processes are generally guided by the household-production framework, developed by economists. The household production theory (Becker 1965, 1968, 1991; Becker and Lewis 1973; Becker and Tomes 1976) emphasises that parents, due to resource constraints, attempt to maximise household wealth. Guided by deliberate decision-making, parents seek to pursue altruistic goals for their children (for instance, education) by encouraging the maximisation of the resources of every family member. According to this model, in situations where local markets generate significant opportunities for children to make money when the household is faced with limited resources, the participation of children in such income earning ventures become a mechanism or common strategy for meeting the household's survival needs. This framework has been tested in many research studies. The paragraphs that follow discuss the subsequent findings.

The household production theory assumes that the quantity of children in a household is a decisive determinant of child labour. Studies of Mexican households have found a significant negative relationship between quantity of children and quality of their lifestyle (Levison, Moe, and Knaul 2000; Binder and Scrogin 1999; Christenson and Juarez 1987). Similarly, Patrinos

and Psacharopolous (1997) cite a positive relationship between a large number of siblings and child employment. Furthermore, the distribution of the children's age within the family has been found to be related to the likelihood of child employment. Older children repeatedly face an increased rate of labour, especially when younger children are accounted for (DeGraff, Bilsborrow, and Herriman 1993; Binder and Scrogin 1999; Levison, Moe, and Knaul 2001).

General components of the household structure are also considered under this theoretical framework. Christenson and Juarez report in their 1987 publication that a female-headed household commonly results in an increased rate of employment among the children of the family. A similar positive relationship is found between the nuclear family structure and child labour (Binder and Scrogin 1999). However, the biological relationship of a child to the head of the household is found to have a negative effect on child labour; that is, child participation decreases as the degree of kinship increases (Levison, Moe, and Knaul 2000).

Canagarajah and Nielsen (2001), in a comparative review of child labour studies based on only five African countries, tested the utility of the household production framework. The comparison of the five studies – Grootaert (1998); Coulombe (1998); Canagarajah and Coulombe (1998); Bhalotra and Heady (1998); and Nielsen (1998) – lends further credence to the significance of household factors in the explanation of child labour. For example, the presence of siblings within the household influences a child's employment status in the household (Grooteart 1998). The child's relationship to the household head is found to be related to child labour participation (Coulombe 1998; Nielsen 1998). Additionally, a female-headed household tends to result in an increased rate of child employment (Grooteart 1998; Coulombe 1998; Bhalotra and Heady 1998). Moreover, both the educational attainment and occupational status of the household head show a negative relationship with child labour participation (Grooteart 1998; Coulombe 1998; Canagarah and Coulombe 1998; Nielsen 1998). Finally, both age and gender patterns of the household have a significant negative effect on children's employment (Coulombe 1998; Bhalotra and Heady 1998; Grooteart 1998; Nielsen 1998).

Despite the voluminous nature of studies (in both developed and developing countries) supporting this framework, it has been criticised by some scholars (Bowman 1984; Fapohunda and Todaro 1988; Montgomery et al.1995), especially when applied to the situations of less developed countries. The household production theory is based on the premise that family members consider their long-term welfare in their decision-making. However, critics argue that this assumption makes the household production theory

less appropriate, because traditional households in most less developed coun-
tries are often faced with high levels of risks and uncertainty which invari-
ably compel them to make economic choices that could meet the immediate
needs of the household, rather than planning for long-term welfare.

While we do not totally dispute the criticisms levelled against the house-
hold production theory, we will argue as did Rosenzweig (1977) that chil-
dren's role in household production is of great importance in relation to child
labour, especially in the context of developing countries such as Nigeria.
Our argument is that household size, for example, could be a measure of
pressure on household consumption and resources. And since in most devel-
oping countries such as Nigeria, a large proportion of households live at a
low level of consumption due to high rate of unemployment and inadequate
incomes of parents, many households use the labour of their children in or-
der to avert the risk of living below subsistence level. Furthermore, since
family welfare takes precedence over individual welfare in most less devel-
oped countries, this model seems to be relevant to the African situation be-
cause of the tendency for children to provide old age support for their par-
ents in the absence of formal welfare programmes.

In the light of the synthesis presented in the preceding paragraphs, it is
clear that studies that address child labour in Africa are few. And for the
Nigerian case, such studies are rare. Our goal is to bridge the knowledge gap
in the literature regarding how household size and composition are associ-
ated with child labour in Nigeria. It is also our goal to apply the household-
production framework to the Nigerian case. With interview data from 1535
households, we investigate the relationship between household variables and
child labour.

Data source and methodology

The data for this paper come from a 2002 survey of the causes, patterns, and
consequences of children's economic activities in Abeokuta, capital of Ogun
State, Nigeria. Abeokuta is one of the major Yoruba cities in the South-West-
ern part of Nigeria. A two stage, stratified sampling technique was used in
order to provide a representative survey sample. First, the stratification was
based on four zones, determined by residential makeup: the elite zone (high
income residents), the migrant zone (migrant workers with a medium to low
income), the mixed zone (both migrant and non-migrant workers with a
medium to low income), and the traditional zone (the city's native popula-
tion). The second step of the sampling process systematically chose house-
holds on randomly selected major streets, within the four zones. Interviews
were conducted by the author and a team of thirteen trained research assist-
ants.

In an effort to maintain consistency and to elicit the required information, the selected households were only interviewed if they met a series of prerequisites. First, a working child between the ages of eight and fourteen must have lived in the household for at least one year. For the purpose of our study, child employment was considered to be any type of work, undertaken either in the home or outside, in which the child was generating income. Additionally, the child had to be enrolled in school. A household head, most often the child's mother, was interviewed to provide both the basic characteristics of the household (size, structure, income, type of household) and information on the child's labour force participation. Upon the parent's consent, the child was then interviewed concerning their individual characteristics and economic activities.

The social-demographic and economic information provided by both the mother and the child allows for a comprehensive data set to be compiled. Such information enables us to examine the effect of household factors – number of children in the household, age at which the child started working, and the parental characteristics– on child labour (as measured by the child's number of hours of work per day).

Our analytical strategy begins with background information on the socioeconomic and demographic characteristics of both the parents and children, as shown in Table 1. We then proceed in Table 2 to evaluate how specific household variables are correlated with children's hours of work. Furthermore, we utilize the Comparison of Means technique to explain how differences in the children's average hours of work per day vary by various household characteristics. Significant results are tested by invoking the one-way Analysis of Variance (ANOVA).

Results

Table 1 indicates that the average age of the children interviewed is 12.3 years. The gender distribution of the child respondents is quite equal, although slightly more females were interviewed. The majority of children enter the labour market at a young age, averaging 9.37 years old; mostly due to the constant financial struggle of the family and the need to supplement parental income. Children's hours of work range from two to six hours per day with an average of about four hours. The economic activity of the children is predominantly in sales, whereas only ten percent are engaged in the service sector. Over half of the children make at least 2,000 Naira per week, while a slightly smaller, yet still significant percentage, had a weekly earnings of less than 1,000 Naira.

Regarding parental characteristics, as reflected in Table 1, the majority of their educational achievement is at the primary or elementary level (42

percent). This may serve to explain why parental income is overwhelmingly low. The parental occupation, when examined according to sectors, show little disparity, although the largest majority of mothers are engaged in services.

Table 1: Socioeconomic and Demographic Characteristics of the Respondents

Child's Age by Years*	Frequency	Percent
8	40	2.6
9	68	4.4
10	166	10.8
11	119	7.8
12	283	18.4
13	337	22.0
14	522	34.0
* Average age of child = 12.3 years		
Age When Child Started Working**		
7	373	24.3
8	296	19.3
10	408	26.6
11	233	15.2
12	172	11.2
13	37	2.4
14	16	1.0
** Average age when work started = 9.37 years		
Sex of Child		
Male	674	43.9
Female	861	56.1
Child's Hours of Work per Day***		
1	18	1.2
2	165	10.7
3	391	25.5
4	660	43.0
5	188	12.2
6	113	7.4
*** Average hours of work per day = 3.76 (approximately 4 hours)		
Kinds of Children's Economic Activities		
Service (domestic servant, carwash, etc.)	153	10.0
Sales (selling, hawking of food stuffs, etc.)	1382	90.0

Table 1: (Continued)

Child's Income per Week#	Frequency	Percent
< #1,000/not applicable/unknown/unstated	515	33.6
#1,100–1,500	82	5.3
#1,501– 1,900	116	7.6
> #2,000	822	53.6
# denotes Nigeria's Naira currency		
Size of the Child's Household*		
0–4	272	17.7
5–9	1187	77.3
10+	76	5.0
* Average household size = 6.09 persons		
Total Number of Children in the Household**		
1	42	2.7
2	167	10.9
3	360	23.5
4	458	29.8
5	282	18.4
6	152	9
7	48	3.1
8	14	0.9
9	6	0.4
12	6	0.4
** Average number of children = 4.0 children		
Number of Children Working in the Household***		
1	769	50.1
2	509	33.2
3	197	12.8
4	46	3.0
5	14	0.9
*** Average number of children working = 1.7 (approximately 2)		
Child's Type of Household		
Monogamy	1035	67.4
Polygyny	500	32.6
Child's Parent Family Structure		
Nuclear	1124	73.2
Extended	411	26.8

Table 1: (Continued)

Parent's Reasons Why Child is Working	Frequency	Percent
Training child for future occupations	155	10.1
Financial contribution to the household	1380	89.9
Child's Reasons For Working		
Make Additional money		
(for parent/food/education)	1007	65.6
Working is training for me	528	34.4
Household's Income per Month		
Below #20,000	1243	81.0
#21,000 – 40,000	178	11.6
#41,000+	114	7.4
Parental Education		
Primary/Elementary	617	40.2
Modern school/Secondary	266	17.3
Post secondary/Grade two/Polytechnic/		
NCE/College Education	405	26.4
Drop out/ No education	247	16.1
Parental Occupation		
Trading/Business	507	33.0
Services (hairdressers, tailors etc.)	592	38.6
Admin/Management/Professional/Teachers	436	28.4

The average size of the 1535 household's surveyed is 6.09 persons. The number of children within the households range between one and twelve; while the average number is four. Not surprisingly, family structure is predominantly nuclear, largely because of the urban context of this study. The marriage type within the household is mostly monogamous, although polygynous relationships are common as well. Although the number of children who are working range from one to five, on average, there are two child workers per household.

In Table 2, the household correlates of child labour are presented. Based on this study, it is discernible that a weak, but significant positive relationship exists between household size and a child's hours of work per day. Furthermore, the number of children in the household and the number of children contributing to the household income are positively and significative correlated with a child's hours of work. These findings lend further credence to the assertion made in Table 1 that child labour is largely compelled by the

Table 2: Household Correlates of Child Labour

Household Variables	Hours of Work
Number of persons in the household	.062*
Number of children in the household	.185*
Age of the household head	0.007
Number of children (aged 8-14) contributing to household income	.265**
Age child started working	.053**
Child's age	.089*
Number of boys in the household	0.035
Number of girls in the household	0.026

** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)

need to contribute financially to the maintenance of the family. Older children report a significant amount of added hours, due to their experience and physical capabilities. Surprisingly, the age at which the child begins working is positively correlated with the hours of work. Table 2 further demonstrates that neither the number of boys nor the number of girls within the household has a significant impact on the time spent working. Unlike the finding of Grooteart (1998) and Nielsen (1998), the age of the household head has little or no relationship to the child's hours of work.

Table 3 presents the child's average hours of work per day according to household characteristics. In female-headed households, children tend to work the same amount of hours as those headed by males, contradicting the general finding in the literature (Canagarajah and Nielsen 2001; DeGraff, Bilsborrow, and Herriman 1993; Binder and Scrogin 1999) that women heads of households are more likely to need the economic contribution of their children than males. The occupation of the mother, be it trade, service, or professional work, also shows no significant difference in child's hours of work. On the other hand, mother's education has a significant relationship to hours of work, with hours of work declining as mother's education increases. The most striking difference is between mothers without educationand those with post-secondary and university education. Similarly, a significant difference in average hours of work is noted among the income brackets, as fewer hours are worked as the household's income increases.

A comparison of the parent's place of birth – rural versus urban – demonstrates no significant difference in the child's hours of work per day. How-

Table 3: Differences in the Mean (Average) Hours of Child Work Per Day According to Household Characteristics

Variables	Mean
Sex of household head	
Male	3.76
Female	3.77
Occupation of Mother	
Trading/Business	3.78
Services	3.77
Management/Professional	3.76
Education of Mother*	
Primary/Secondary	3.75
Modern/Secondary	3.72
Post Secondary/College	3.70
No Education	3.88
Income**	
Below #20,000	3.99
#21,000- 40,000	3.85
#41,000+	3.72
Parent's place of birth	
Rural	3.82
Urban	3.73
Type of household*	
Nuclear	3.67
Extended	3.79
Type of marriage*	
Monogamy	3.68
Polygyny	3.80
Parent's Religion*	
Muslim	3.84
Christian	3.71
Traditional Religion	3.92
Child's type of economic activities**	
Sales (selling, hawking, etc.)	4.11
Service (domestic servant, carwash, etc.)	3.73
*Significant at $p < .05$, **Significant at $p < .01$	
Sales (selling, hawking, etc.)	4.11
Service (domestic servant, carwash, etc.)	3.73
*Significant at $p < .05$, **Significant at $p < .01$	

ever, hours of work differ significantly between nuclear and extended family households. Likewise, children of monogamous marriages tend to work lesser hours than those from polygynous homes. When religious background is taken into consideration, the Table shows that children from Christian households work the fewest hours, followed by the Muslim and then the practising Traditionalists. Furthermore, our study demonstrates that the boys and girls that are active in the labour market work for approximately the same number of hours per week. Finally, children who engage in service occupations tend to work fewer hours than their counterparts in sales, although most children in this study are involved in the sales, not the service, sector.

Summary and conclusions

Utilising the household production framework, this paper draws on interviews with 1535 parents and their children to examine the relationship between child labour and various household variables in urban Nigeria, where child labour studies have been very limited. We argue that knowledge concerning the correlation between child labour (measured by child's hours of work) and household variables is crucial, particularly in a rapidly growing population such as Nigeria where child labour prevalence is estimated to be the highest in Africa. And unlike previous studies that are most often restricted to economic variables, we expand information about this phenomenon in our study by considering other notable household characteristics – size of household, gender composition, number of children working, number of children in the household, age of the household head, child's age, family types and structure and parental socio-economic status – and their relationship to children's hours of work. Our goal is to provide a comprehensive understanding of the household dynamics and residential context through which child labour evolves.

The findings regarding the patterns of children's work indicate that the average age of the working children is twelve years but some begin working as early as seven years old; and average about four hours of work per day. Given that Nigeria is a relatively high fertility society, the average household size consists of six people, of which two children are involved in economic activities. Because of the urban setting, most children come predominantly from monogamous and nuclear family households. Furthermore, a dominant proportion is involved in petty trading as street hawkers, and others are engaged in services as apprentices. Not surprisingly, most working children come from households with low parental socio-economic status.

Our findings demonstrate the usefulness of the household production theory in explaining the socio-economic ramifications and household context of child labour. Indeed, we find through direct interviews that child la-

bour is mostly caused by poverty. Both parents and children reported that child labour is a necessity, compelled by the need for supplementary income for the survival of the household. Additionally, child labour is regarded as a socialisation process, and a means of preparing children with skills and training useful for future occupations. Aside from pinpointing the reasons for child labour, further testimony to the applicability of this theory is revealed by the results of the Correlation Analysis, which indicate that household size, number of children in the household, child's age, the number of children contributing to the household income, and age child started working, are all significantly and positively correlated with children's hours of work. However, gender composition of the children in the household and age of the household head have little or no relationship with child's hours of work.

Additional insights into the dynamic relationship between household factors and child labour is obtained by using the Analysis of Variance technique to detect if significant differences exist in children's average hours of work across a range of household characteristics. Again, our results lend credence to the importance of household variables. Children who come from both monogamous and nuclear households work fewer hours than their counterparts in polygynous and extended family systems. Similarly, children of Christian background seem to work fewer hours than those from Islamic and Traditional religions. One possible explanation for the relatively fewer hours of work associated with children from nuclear, monogamous and Christian households is that parents with those characteristics tend to mostly comprise the higher educated ones, whose children are more likely either not to work or wo k fewer hours. This line of reasoning is buttressed by our finding that shows that children whose parents have higher education and higher income are significantly and more likely to work fewer hours. However, children's hours of work are not significantly different by sex of the household head, sex of the child, and parent's place of birth. Not surprisingly, children who are engaged in sales work longer hours than those in service sector.

At this juncture, it is important to highlight the policy implications of our findings. First, those demographic household factors that show a positive relationship with children's hours of work – number of persons in the household and number of children – suggest the need for policy makers to initiate meaningful programmes such as family planning education and provision of contraception for men and women at affordable prices in order reduce fertility levels, and consequently the population growth rate in Nigeria. A reduction in fertility levels at the household level could reduce the financial pressure of feeding a large family, and consequently lead to less demand for child labour. In addition, although it would be a difficult task to maintain

compliance with child labour law because of the economic necessity of child labour, the Nigerian government should enforce the minimum working age (of sixteen years) as specified by the Nigerian Labour code by imposing monetary fines to parents who violate the child labour law. Furthermore, since parental socio-economic status is inversely related to children's hours of work, it implies that governmental efforts to boost education and parental earnings would significantly create less need for child labour. But some household variables such as Christian religion, monogamy and nuclear family systems, found to be linked with reduced children's hours of work, are not amenable to policy manipulation by the government, as they reflect norms and cultural values of members of society.

To conclude, we believe that we have made a significant contribution to the research on child labour in Nigeria by providing a robust picture of a phenomenon that has generated so much controversy not only because of the economic justification for its prevalence but also because of the moral distaste generated by its consequences.

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