

**THE DETERMINANTS OF CHILD LABOUR AND
CHILD SCHOOLING IN GHANA**

by

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Abstract

This paper investigates the main determinants of child labour and child schooling in Ghana, with special reference to the interaction between the child labour and adult labour markets. This paper proposes a test of the link between household poverty and child labour hours, and provides Ghanaian evidence. The quality of schooling in the neighbourhood is found to have a strong impact on child labour hours. The results show that the impact of adult male wages on child labour hours is quite different from that of adult female wages. The Ghanaian data confirms the positive role that adult education can play in improving child welfare.

1. Introduction

There has been, in recent years, growing interest in the subject of child labour among academics, professionals and the media. There are few topics in the core of the development literature today that enjoy as much importance and evoke as much passion as that of child labour. The subject has moved from the national to the international arena. The prominence accorded to the subject of child labour at the recent WTO meeting in Seattle is a reflection of its pivotal importance in the international policy arena. Basu (1999b) provides a lucid exposition of the policy implications of child labour for the setting of international labour standards in an era of rapid globalisation. Fallon and Tzannatos (1998) discuss ways in which the World Bank can assist member nations in reducing child labour.

Though the ILO (1996a)'s estimates on labour force participation rates for children aged 10-14 years show a declining trend, in absolute terms the size of the child labour force is and will continue to be large enough to be of serious concern. There is no universal agreement on the magnitude of the child labour force, reflecting differences in the definition of child labour and in their measurement. Kebebew Ashagrie was the first person to put together an international data set on child labour. His initial figure of 79 million children around the world who did regular work [see Ashagrie (1993, p.16)] has since been revised upwards to 120 million children between the age of 5-14 years doing full time paid work [ILO (1996b), Ashagrie (1998)]. If one includes part time work as well, then the ILO (1996b) estimate goes up to 250 million working children. The estimate of child labour would vary depending on how we define work, how we define a child, and how we collect the data, but few would disagree that this is a problem of

gigantic proportions. In this paper, we follow the ILO definition of child labour [see Ashagrie (1993)] in classifying a child as a 'labourer' if the child does full time, paid work. While this limits our analysis to only a subset of child work, it makes our study comparable with others in the literature.

Notwithstanding almost universal agreement that child labour is undesirable, there is wide disagreement on how to tackle this problem. The formulation of policies that are effective in curbing child labour requires an analysis of its key determinants, namely, identification of variables that have a significant effect on child employment. Such an awareness has been lacking in the recent debate on international labour standards involving attempts to initiate trade sanctions against the use of child labour. There has been, in recent years, a rapidly expanding literature on Child Labour – see Grootaert and Kanbur (1995), Basu (1999a) for surveys. While some of these studies [for example, Knight (1980), Horn (1995)] discussed mainly the qualitative features of child labour, the recent literature has focussed attention on the quantitative aspects taking advantage of the increasing availability of good quality data on child employment. Within the empirical literature on child labour, there has been a shift in emphasis from mere quantification to an econometric analysis of its determinants. Example include the studies of Psacharopoulos (1997), Cartwright and Patrinos (1998) on Bolivian data, Grootaert (1998) on Cote d' Ivoire, Tienda (1979), Boyden (1988, 1991), Patrinos and Psacharopoulos (1997) on Peru, Psacharopoulos (1997) on Venezuela, Salazar (1988) on Colombia, Patrinos and Psacharopoulos (1995), on Paraguay, Myers (1989) on South American survey data, Bonnet (1993) on Africa as a whole, Jensen and Nielsen (1997) on Zambia, Addison, et. al (1997) on Pakistan and Ghana, Chaudhuri (1997) on India,

Diamond and Fayed (1998) on Egypt, Ray (1999a, 1999b) on Pakistani and Peruvian data, and Ravallion and Wodon (1999) on Bangladeshi data¹.

While most of the individual country studies on child labour have used Latin American data, the corresponding literature on African child labour has been relatively limited. And, yet, as Basu (1999a, Table 2) and Fallon and Tzannatos (1998, Annex) both report, the labour force participation rates for children, aged 10-14 years, is the highest in Africa (26% in 1995) by a long margin. According to the ILO (1996a)'s projections, this dismal picture is likely to prevail in the year 2010 as well. The chief motivation of our study is to contribute to the African child labour literature by examining on Ghanaian data the key determinants of child labour hours and years of child schooling, with special reference to the interaction between child employment and child education.

The present study has the following features.

- (i) We seek to answer, on Ghanaian data, the important question of whether poverty is the key determinant of child labour, as is widely believed. There is a widespread view among social scientists that households in developing countries put their children into paid employment if they slip into poverty. Such a view underlines, for example, the Luxury Axiom of Basu and Van (1998, p. 416)² and reflects the belief that, in developing economies, in the absence of a satisfactory credit market, households, especially in rural areas, react to temporary income short falls by increasing their dependence on child labour earnings. That the inverse link between child labour and economic prosperity clearly exists at the aggregate country level is evident from the fact that over the period 1950-1995, with economic growth and rising affluence, the participation rates for children, aged 10-14 years, have fallen quite sharply from 27.57% to 13.02% [ILO (1996a)]. The ILO figures, also, confirm that regions/countries with higher growth rates have experienced steeper decline in child labour. However, there exists relatively little evidence in the large child labour literature at the individual household level on the nature of the link, if any, between child labour and household poverty. The present study proposes a test of this association and applies it to Ghanaian data. The policy implication of such a test is considerable for, if such a link is not found to be strong, it would negate the view that simply relying on rising household

¹ See, also, the volumes edited by Bequele and Boyden (1983), Myers (1991) and Grootaert and Patrinos (1998).

² See, also, Bardhan and Udry (1999, p. 28-32).

prosperity would suffice in reducing child labour. The study extends the previous mixed findings in this regard on Peruvian and Pakistani data, reported for child participation rates in Ray (1999a) and for child labour hours in Ray (1999b).

- (ii) Special attention is paid in our empirical investigation to the interaction between the adult and child labour markets, namely, the responsiveness of child labour hours to movement in adult wages. Moreover, unlike the analytical literature on child labour [see Basu and Van (1998), Bardhan and Udry (1999)], we distinguish between adult male and adult female wages in studying their impact on child labour. A key empirical result, discussed later, is that the nature of interaction between adult male and child labour markets is different from that between adult female and child labour markets. The case for distinguishing between male and female labour in their interaction with child labour can be traced to Grant and Hamermesh (1981) who found that youths and white women were substitutes, while youths and white men were complements in production in the U.S.³
- (iii) Another significant feature of this study is the attempt to investigate the interaction between child labour and child schooling. The Ghanaian data provides information on the quality of schooling in a locality that allows us to investigate the key policy question of whether improvements in the quality of child schooling can prove effective in reducing child labour. Bonnet (1993) argues, in the African context, for example, that poor quality of child schooling and their lack of apparent relevance to the child's employment skills encourage parents to take their children out of schools and put them into employment. We, also, investigate the responsiveness of child labour hours to child wages. Besides its obvious importance in attempts to reduce child labour, the magnitude of the own wage elasticity provides a test of the "target income" hypothesis of Bhalotra (1999).

The rest of this paper is organised as follows. Section 2 describes the Ghanaian data set, and discusses some summary features of the data. Section 3 contains the results of estimating the child labour supply and child schooling equations. Section 4 summarises the principal findings, discusses the possible implications and suggests directions for further research.

³ See Diamond and Fayed (1998) for more recent evidence in favour of the distinction between male and female labour.

2. The Data Set and Its Principal Features

The child labour data for the study came from the Ghana Living Standards Measurement Survey (GLSS) in 1988/89. The GLSS was conducted by the World Bank as part of the Living Standards Measurement Study (LSMS) household surveys in a number of developing countries⁴. The purpose of the LSMS surveys is to provide policy makers and researchers with individual, household and community level data needed to analyse the impact of policy initiatives on living standards of households. The 1988/89 GLSS covered 3192 households involving 14924 individuals. These households lived in 170 clusters, of which 87 were in the urban and semi-urban areas, and 83 in the rural. The 1988/89 GLSS contained information on child labour and child schooling of 5245 children aged 7-17 years. Some of these observations could not be used, however, because of poor quality. An overwhelmingly large proportion of Ghanaian child labour involved household agricultural work. The construction of child wage data involved the combination of income and work information from a number of sources. The wage and labour hours relate to children involved in full time labour pursuits outside the home, and receiving direct or indirect cash payments for their labour. The wages of children, who worked on their family farm, were calculated from the information on farm income and on the corresponding adult, child labour hours contained in the surveys. Since the central motivation of this exercise is to investigate the economic determinants of child labour, for example, the household's poverty status and, especially, child wages, we do not consider child work that involves purely household chores nor do we study other forms of child labour that do not attract, explicitly or implicitly, cash re-numeration. This limits the

⁴ See Grosh and Glewwe (1995) for an overview and general description of the LSMS data sets.

scope of our analysis somewhat, but makes this study consistent with the ILO definition of child labour which identifies it with “economically active” children [see Ashagrie (1993)].

Table 1 presents the age specific participation rates of Ghanaian children in the labour market and in schooling. The following remarks apply. First, child labour participation rates increase with child age. In case of schooling, however, the enrolment rate peaks around 11 years, which is the same age as in Pakistan but earlier than the corresponding peak age of 13 years recorded in the Peruvian LSMS data sets [see Ray (1999b, Tables 1,2)]. Second, the gender differential in child employment in the form of higher participation rates of boys in the earlier age groups narrows sharply in case of the older children. In other words, the labour force participation rate of girls increases quite sharply with age, more than that of boys, in case of the older children. In contrast, the school enrolment rate of girls drops quite sharply, in relation to boys, in the later age groups. Consequently, from age 14 onwards, a sizeable gender differential in favour of boys schooling is exhibited by the data. This suggests that, with increasing age, a lot more girls than boys drop out of schooling to enter the labour market. This feature of Ghanaian children is shared with that of Pakistan but not with Peru [Ray (1999b)]. It is worth pointing out here that since we have omitted unpaid domestic work, which is a significant component of girl child labour, the actual labour force participation rates of the older girls will exceed the rates presented in Table 1. Third, if one compares the child labour participation rates for Ghanaian children aged 10-14 years, reported in Table 1, with those estimated by ILO (1996a) for Africa in the late ‘80s, the latter would appear to be a serious underestimate of the true size of the child labour force.

Table 2 presents the sample means of some key variables in the Ghanaian data. To keep the Ghanaian magnitudes in comparative perspective, we present the corresponding sample means from the 1991 Pakistan LSMS survey used in our earlier studies [Ray (1999a, 1999b)]. The following points are worth noting. First, a typical Pakistani household contains more children than the Peruvian family. However, the higher child labour participation rate in Ghana compared to Pakistan shows that the direct link between high fertility and high incidence of child labour is, at best, a weak one. In other words, Bardhan and Udry (1999, p. 27)'s claim that "if the economy is characterised by small families, ... families keep children out of the labour force" is not necessarily true. This does not, however, constitute a test of this hypothesis – we do so later. Second, since a much greater percentage of children live in poverty in Pakistan than in Ghana, Table 2 does not provide support, either, for a strong positive link between household poverty and child labour. We report a more formal test of this link later in the child labour regressions. Third, the percentage of children who have not experienced any schooling in Ghana is shockingly high, even higher than the Pakistani sample mean. That children in Ghana are missing out on schooling because of child labour is evident from the fact that, on average, a working child experiences only 50-60% of the schooling of the non working child. Note that notwithstanding the difference in child labour participation rates, the ratio of child labour hours to that of the adult male is quite comparable between the two countries. However, in relation to an adult female, a child works much longer hours in Pakistan than in Ghana.

3. Estimation Method and Empirical Results

The estimation method was based on the two step procedure, discussed in Maddala (1983, Sec. 6.11), for estimating labour supply equations after correcting for selectivity. The results were obtained using the LIMDEP program written by Greene (1995, p. 653-659) which implements this procedure. We ensured that the child labour and child schooling equations, that were estimated, are pure reduced form equations with none of the variables on the right hand side likely to suffer from endogeneity.

Table 3 presents the estimates of the selectivity corrected regression of child labour hours in Ghana on the various determinants. These have been classified under: (i) child characteristics (ii) family characteristics, and (iii) community characteristics. The variables underlying some of the key hypotheses, that are tested here, include: (i) the child wage, (ii) household's poverty status, (iii) education levels of the parents, (iv) adult wages, (v) quality of schooling in the neighbourhood, and (vi) the extent of poverty and inequality in the cluster that the child resides in. The poverty status of a household was defined with respect to a poverty line that is set at 50% of the sample median of the distribution of per adult equivalent non child household income. The quality of schooling was measured by the parent's willingness to pay for their child's education, namely, the tuition and non tuition costs in schools in the cluster of residence of the child. Keeping in mind the possibility that the supply of child labour depends on the gender of the child, Table 3 reports the results of separate estimation of child labour hours for boys and girls.

The following features are worth noting from the table.

- (i) The insignificance of the poverty coefficient provides little support to the hypothesis that household poverty is a significant determinant of child labour. This is consistent with the Peruvian evidence, presented in Ray (1999b), and supports the observation of Bhatta (1998), in the context of Indian child labour,

that “income and related variables do not seem to have any direct significant effect on children’s work input”. Nor is it the case that children residing in “poor” communities, as measured by their head count poverty rate, are more prone to child labour, possibly reflecting the limited opportunities for child employment that exist in such regions. In contrast, a deteriorating community infrastructure, as reflected in a worsening of its water storage and sewerage disposal, leads to a significant increase in the labour hours of Ghanaian boys. The inverse relationship between inequality in the cluster and the girl child’s labour hours, though difficult to explain, is of interest.

- (ii) Older children work longer hours than younger children. However, the negative coefficient estimate of the squared age variable suggests that the positive effect of age on child labour hours weakens in the later age categories.
- (iii) The statistical insignificance of the coefficient estimate of the variable, “number of children”, provides little support to the hypothesis of a positive association between child labour hours and fertility rate. It is worth recalling that Ghana, notwithstanding having fewer children in the household than in Pakistan, registered a higher rate of child participation in full time, paid employment. Neither of the fertility/child labour equilibria, discussed by Basu and Van (1998) and Bardhan and Udry (1999, p. 27), seems to exist in case of Ghana.
- (iv) The impact of wage movement on child labour hours has generated considerable interest in the literature. The results confirm that child labour hours respond positively to child wage. However, their responsiveness to adult wages varies with the gender of the adult. Child labour appears complementary with adult male labour, though the negative estimate of the squared, male wage coefficient suggests that such complementarity weakens in case of high wage earning, skilled male adult workers. In contrast, movement in female wages has little impact on child labour hours. The close complementarity between girl child and adult female labour hours, witnessed in case of Pakistan [Ray (1999b)], is clearly missing in the present study. The Ghanaian evidence does not provide much ground for optimism in the effectiveness of minimum wage legislation via reductions in adult minimum wage in curbing child labour.
- (v) Rising education levels of parents contribute significantly to reducing child labour. This result is consistent with previous evidence on other data sets. Boys in male headed households work longer hours than their counterpart in female headed households. While the child gender differential is quite noticeable in this regard, this reflects the omission of domestic child hours from our estimations.
- (vi) From a policy viewpoint, one of the most significant results of this study is the negative impact of improved quality of schooling in the cluster, as viewed by the parents, on the child labour hours of both boys and girls. Ravallion and Wodon (1999) have recently observed that the subsidy on school enrolment reduced the incidence of child labour in Bangladesh. These results suggest that improvements in the quality of schooling and provision of means tested subsidy to enable greater access to schooling by children from poor households are likely to prove effective in reducing child labour.

Table 4 presents the estimated regression coefficients of years of child schooling on the various determinants. In case of boys, and analogous to the result on child labour, changes in the household's poverty status have little impact on the schooling experience of its children. In contrast, in case of girls, the effect is negative and statistically significant. When a household improves its economic status and crosses the poverty line from below through its adults, especially the adult female, working longer hours, the girl child is withdrawn from schooling to do domestic duties in their place. The fact that this is not reflected in the estimated poverty coefficient in the girl child labour regression reflects the omission of domestic hours from the ILO based definition of child labour used in this study. The gender differential between boys and girls is quite significant in this regard.

Most of the other estimated coefficients have the expected sign. The sign and statistical significance of the child age and age square variables suggests that there is an inverted U relationship between a child's schooling experience and her/his age. This is consistent with the summary statistics presented in Table 1. The smaller magnitude of the child age coefficient in the girl schooling regression, compared to the boys, suggests that, controlling for other variables, the school enrolment rate for girls peaks much earlier than for boys. Children from female headed households and/or households with older heads stay longer in schooling. Similarly, the more educated the parents, the greater is the schooling experience of their children. The number of children in the household has a strong, positive impact on the schooling experience of girls. Children in households with fewer adults are likely to stay enrolled in schooling for a longer period. Neither child wages nor adult wages has much of an impact on child schooling. The impact of the

community infrastructural variables on child schooling is quite significant, though ambiguous in their direction. Increasing inequality among households in a cluster causes children, especially boys, to drop out of schooling. However, it is not the case that children in clusters with above average poverty rates necessarily enjoy less schooling. Quite significantly, improvements in the quality of schooling in the neighbourhood lead to a significant increase in the schooling experience of children in that locality. *Ceteris paribus*, urban children in Ghana experience greater schooling and work smaller hours than the rural children. In other words, rural children are substituting schooling by employment to a greater extent than their urban counterpart. This suggests the need to target the rural areas in Ghana for initial policy initiatives aimed at improving child welfare.

4. Summary and Conclusions

This paper provides evidence on the main determinants of child labour and child schooling on Ghanaian data. We have tested several key hypotheses including the link between child labour hours and child schooling, on one hand, and household poverty, household size and quality of schooling on the other. We pay special attention to the interaction between the child labour and adult labour markets by investigating the size and direction of impact of movement in adult wages on child labour hours. The results deny any significant link between household poverty and child labour, nor do they provide evidence of a strong positive association between child labour hours and the number of children in the household. The variables that are found to have a significant impact on child labour hours include the educational level of the adults in the household,

and the quality of schooling in the neighbourhood. The latter result suggests that one of the main reasons for the prevalence of high child labour participation rates and the shockingly low school enrolment rates in Ghana, especially in the older age categories, is the perceived low quality of schooling, and its apparent lack of relevance to the child's "needs" as viewed by the parents. Policies aimed at improving the "quality" of schooling, and increases in school enrolment subsidy should prove effective in encouraging parents to keep their children in schooling rather than put them in paid employment. The Ghanaian evidence, also, suggests that simply relying on improved household prosperity, or on reductions in household fertility or on reductions in minimum adult wages, is unlikely to make a significant dent on the problem of child labour. Clearly, more direct policy interventions, of the sort mentioned above, aimed at the root causes of child labour are required.

Child labour, however undesirable, is still an undeniable reality in several developing countries. Until recently, the issue did not figure in the empirical analysis of household behaviour. Given its obvious policy importance, as more data sets of the sort used here become available, the analysis of child labour will attract more attention than it has done so far.

**Table 1: Participation Rates (in Percentages)
of Ghanaian Children in Employment and in Schooling**

Age	Employment			Schooling		
	Boys	Girls	Overall	Boys	Girls	Overall
7	15.2	9.2	12.1	71.0	68.2	69.5
8	19.3	15.0	17.3	75.5	64.8	70.4
9	26.1	19.1	22.7	78.7	71.6	75.3
10	31.6	32.2	31.9	78.7	72.9	76.0
11	47.9	40.7	44.4	80.5	74.2	77.5
12	53.0	44.7	49.3	76.3	62.4	70.2
13	55.9	48.1	52.5	71.3	68.8	70.2
14	61.5	54.6	58.5	74.2	60.4	68.3
15	63.0	63.0	63.0	73.4	45.3	59.5
16	63.9	70.8	67.4	62.1	44.6	53.4
17	68.1	68.7	68.4	53.6	32.3	44.7
All	44.0	39.0	41.6	68.1	59.0	63.7

Table 2: Comparable Characteristics at Sample Mean

		Ghana	Pakistan
1	Number of children in household	2.52	5.61
2	Ratio of girls to boys	0.57	0.48
3a	Percentage of children living in households below the poverty line ^a – Boys	14.34	27.11
3b	Percentage of children living in households below the poverty line ^a – Girls	13.30	25.57
4	Ratio of the ‘most educated’ female’s educational experience ^b to that of the ‘most educated’ male in the household	0.51	0.39
5	Ratio of the child’s to the adult male’s educational experience ^b	0.16	0.68
6	Ratio of the child’s to the adult female’s educational experience ^b	0.21	1.75
7	Average age of child	10.41	13.16
8	Percentage of households that are female headed	30.00	1.87
9	Percentage of children living in urban areas	49.12	53.67
10	Ratio of child labour hours to that of the adult male	0.12	0.13
11	Ratio of child labour hours to that of the adult female	0.17	0.60
12	Percentage of children involved in some child labour	31.76	23.36
13	Percentage of children who have not experienced any schooling	44.48	31.92
14a	Ratio of the working child’s educational experience ^b to that of the non working child – Boys	0.58	na
14b	Ratio of the working child’s educational experience ^b to that of the non working child – Girls	0.50	na

^a The poverty line was set at 50% of the sample median of per adult equivalent non child household income.

^b Measured in years of schooling.

Table 3: Regression Estimates^a of Child Labour Supply Equations in Ghana

Variable	Normalised Coefficient Estimate ^b	
	Boys	Girls
<u>Child Characteristics</u>		
Age of Child	664.99 ^d (60.3)	651.29 ^d (67.8)
(Age of Child) ²	-19.90 ^d (2.54)	-19.10 ^d (2.84)
Child Wage	.000000016 ^d (.0000000026)	.0000000164 ^d (.0000000025)
<u>Family Characteristics</u>		
Poverty Status (1, if below poverty line, 0, otherwise)	-20.17 (70.26)	16.70 (83.60)
Region of Residence (1 = urban, 0 = rural)	-224.61 ^d (59.70)	-118.48 (65.50)
Number of children	-8.44 (11.0)	-15.50 (12.20)
Number of adults	36.60 (21.1)	78.03 ^d (22.6)
Gender of Household Head (0=male, 1=female)	-301.91 ^d (68.3)	30.33 (70.6)
Age of Household Head	-.789 (2.0)	.883 (2.1)
Male Education	-15.70 ^d (6.19)	-26.40 ^d (6.82)
Female Education	-14.60 ^d (6.98)	-7.31 (7.28)
Male Wage ^c	.491 ^d (.236)	.775 ^d (.272)
Female Wage ^c	.170 (.187)	-.080 (.022)
(Male Wage) ²	-.0003 ^d (.00012)	-.0003 ^d (.00011)
(Female Wage) ²	-.000008 (.00006)	.000033 (.000070)

Cont...

Table 3: Continued

Variable	Normalised Coefficient Estimate ^b	
	Boys	Girls
<i>Community Characteristics</i>		
Water Storage (1=best, 6=worst)	42.40 ^d (14.20)	43.70 ^d (14.90)
Disposal of Sewerage (1=best, 6=worst)	84.50 ^d (22.4)	-33.6 (24.90)
Electricity (1=yes, 0=no)	-149.12 (96.5)	90.08 (97.50)
Quality of Schooling A (measured by tuition costs)	-.054 (.028)	-.016 (.023)
Quality of School B (Measured by non tuition costs)	-.027 ^d (.007)	-.018 ^d (.006)
Head Count Poverty Rate of Cluster	-.119 (.109)	.139 (.118)
Gini Income Inequality of Cluster	-637.44 (374.29)	-2120.0 ^d (410.55)

^a All figures have been multiplied by 1000;

^b Standard Errors in brackets;

^c In case of households with more than one working male and/or one-working female, we take the maximum wage earned by them as a measure of the male and female wage, respectively;

^d Significant at 5% level.

Table 4: Regression Estimates^a of Child Schooling Equations in Ghana

Variable	Normalised Coefficient Estimate ^b	
	Boys	Girls
<u>Child Characteristics</u>		
Age of Child	814.39 ^d (51.2)	649.02 ^d (47.40)
(Age of Child) ²	-25.10 ^d (2.22)	-14.10 ^d (2.06)
Child Wage	.0000000031 (.0000000025)	.0000000043 (.0000000027)
<u>Family Characteristics</u>		
Poverty Status (1, if below poverty line, 0, otherwise)	-34.50 (73.40)	158.0 ^d (64.4)
Region of Residence (1 = urban, 0 = rural)	212.94 ^d (56.2)	241.16 ^d (51.7)
Number of children	6.18 (10.5)	29.20 ^d (9.67)
Number of adults	-126.87 ^d (20.10)	-132.13 ^d (18.9)
Gender of Household Head (0=male, 1=female)	282.64 ^d (58.9)	231.36 ^d (55.9)
Age of Household Head	8.80 ^d (1.82)	4.90 ^d (1.75)
Male Education	33.8 ^d (5.54)	40.40 ^d (5.15)
Female Education	56.6 ^d (5.91)	47.0 ^d (5.65)
Male Wage ^c	.086 (.151)	-.086 (1.31)
Female Wage ^c	-.051 (.183)	-.060 (1.63)
(Male Wage) ²	.0000014 (.00002)	.000016 (.00002)
(Female Wage) ²	.000024 (.000063)	.000017 (.00006)

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Table 4: Continued

Variable	Normalised Coefficient Estimate ^b	
	Boys	Girls
<i>Community Characteristics</i>		
Water Storage (1=best, 6=worst)	48.7 ^d (11.9)	22.6 ^d (11.0)
Disposal of Sewerage (1=best, 6=worst)	-115.1 ^d (21.5)	-146.7 ^d (19.6)
Electricity (1=yes, 0=no)	-99.48 (78.6)	-138.77 (75.4)
Quality of Schooling A (measured by tuition costs)	.005 (.015)	.038 ^d (.011)
Quality of School B (Measured by non tuition costs)	.066 ^d (.004)	.052 ^d (.004)
Head Count Poverty Rate of Cluster	-69.8 (98.3)	62.9 (91.7)
Gini Income Inequality of Cluster	-982.49 ^d (338.77)	-559.49 (318.2)

^a All figures have been multiplied by 1000;

^b Standard Errors in brackets;

^c In case of households with more than one working male and/or one-working female, we take the maximum wage earned by them as a measure of the male and female wage, respectively;

^d Significant at 5% level.

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