



Extent and Determinants of Child Labour in Uganda


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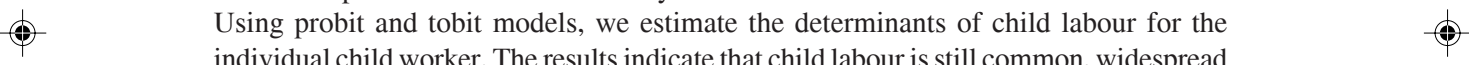
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Abstract

Despite the prevalence and the many dangers associated with child labour, the phenomenon has received the attention of researchers, academicians and policy makers only recently, and not until International Labour Organization (ILO) estimates showed a large and increasing number of working children worldwide. It is now recognized that in order to combat child labour effectively, policies should be grounded in an informed understanding of its causes, roles and implications. This study uses data from the 1992, 1999 and 2002 Uganda National Household Surveys to explore the extent, determinants and forms of child labour in a poor but growing economy. Of note here is that over this period Uganda introduced universal and compulsory primary education.



The study highlights the extent, characteristics and determinants of child labour in Uganda and their evolution over the decade. The theoretical framework is a standard household production model that analyses the allocation of time within the household. Using probit and tobit models, we estimate the determinants of child labour for the individual child worker. The results indicate that child labour is still common, widespread and starts at an early age in Uganda, although it has reduced significantly over the years. Education and formal employment of the household head significantly decrease the probability that a child will work. Household welfare is another indicator of child labour, as poor households are more likely to have working children. A comparison of the three data sets reveals an increase in the percentage of children combining work and study over time. Nevertheless, the likelihood of child labour increases with the age of the child. The findings provide important results for informing policies to reduce, and possibly eliminate, child labour in the country.





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Appendixes

Table A1: Probit model estimates for 1992 data set
Dependent variable: working kid

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	11.388*** (9.42)	10.980*** (9.03)	12.445*** (8.96)	11.051*** (8.99)	11.264*** (9.09)
Log kid age sq.	-2.246*** (8.71)	-2.151** *(8.30)	-2.450*** (8.27)	-2.159*** (8.24)	-2.199** *(8.32)
Biological kid	-0.146** *(4.95)	-0.290** *(9.74)	-0.123** *(3.49)	-0.240*** (7.80)	-0.265*** (8.52)
Distance to school	-0.086** *(14.73)		-0.074** *(11.27)	-0.084*** (14.32)	-0.077*** (12.97)
Share of young kids	0.242** *(2.57)	0.449*** (4.70)	-0.096 (0.87)	0.215** (2.21)	0.215** (2.18)
Head female	-0.151*** (4.77)	-0.110*** (3.13)	-0.012 (0.34)		
Rural location		0.207*** (6.10)		0.302*** (8.96)	0.149*** (3.99)
Head educ lower prim		-0.209** *(5.43)			
Head educ upper prim		-0.338*** (8.97)			-0.223** *(6.63)
Head educ sec		-0.536*** (11.58)		-0.321*** (7.13)	
Head educ post sec		-0.367** *(5.15)			-0.067 (0.92)
Log cons per cap		-0.191** *(9.13)		-0.249** *(11.68)	-0.156*** (6.65)
Log asset				-0.154*** (17.37)	
Head divorced				-0.110* (1.67)	-0.148** (2.35)
Head widow				-0.068 (1.34)	-0.140*** (3.17)
Eastern region				-0.025 (0.64)	-0.055 (1.38)
Western region				-0.034 (0.87)	-0.095** (2.36)
Northern region				0.025 (0.63)	-0.091** (2.09)
Head farmer					0.106*** (2.78)
Head sales					0.149*** (2.70)
Dwelling ironsheet					-0.332*** (9.75)
Dwelling floor				0.101 (0.66)	
Constant	-14.896*** (10.59)	-12.515*** (8.75)	-14.326*** (8.85)	-12.264*** (8.47)	-13.095*** (8.96)
Observations	12,541	12541	12,541	12,541	12,541

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A2: Probit model estimates for 1999 data set
Dependent variable: working kid

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	0.376*** (6.93)	2.061** (2.13)	2.021** (2.08)	1.777 (1.54)	1.277 (0.51)
Log kid age sq.		-0.308 (1.48)	-0.297 (1.43)	-0.302 (1.23)	-0.222 (0.42)
Biological kid	-0.007 (0.23)		-0.065** (2.48)	0.043 (1.40)	0.042 (0.65)
Distance to school	0.004 (1.06)		0.002 (0.51)	-0.016 (1.43)	
Share of young kids	0.355*** (3.80)	0.488*** (6.02)	0.440*** (5.37)		0.891*** (4.25)
Orphan1		0.119*** (3.70)			
Head female		0.093*** (3.46)	0.064** (2.39)	0.029 (0.95)	
Head educ lower prim					-0.107** (3.23)
Head farmer			-0.090*** (3.32)	-0.028 (0.85)	-0.150** (2.10)
Head sales			0.059 (1.29)	0.142*** (2.74)	-0.030 (0.25)
Rural location				0.216*** (5.67)	0.665*** (7.39)
Dwelling ironsheet					-0.118 (1.35)
Head widow					0.117 (1.35)
Head divorced					0.235** (2.20)
Head clerk				-0.023 (0.16)	-0.092 (0.51)
Injury shock					-0.114* (1.86)
Job shock					-0.375 (1.53)
Eastern region					-0.078** (2.24)
Western region					-0.352*** (8.05)
Northern region					-0.317** (9.06)
Head educ upper prim					-0.140*** (4.48)
Head educ sec					-0.176*** (4.58)
Head educ post sec					-0.276*** (5.82)
Log cons per cap					-0.116*** (6.57)
Observations	14,850	14,850	14,850	14,850	8,986

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A3: Probit model estimates for 2002 data set
Dependent variable: working kid

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	1.578*** (30.25)	0.015* (1.78)	0.119 (0.13)		1.104 (0.11)
Log kid age sq.	-0.346* (1.69)	-0.382* (1.85)		0.353*** (30.58)	-0.334 (1.61)
Biological kid	0.072** (2.45)		0.072** (2.40)	0.075** (2.48)	0.094*** (3.07)
Share of young kids	-0.044 (0.49)	-0.154* (1.68)		-0.015 (0.16)	
Head female	-0.016 (0.58)	0.000 (0.01)	0.018 (0.63)	0.040 (1.38)	
Rural location		0.371*** (13.42)	0.384*** (12.36)	0.337*** (10.56)	0.391*** (12.01)
Head educ lower prim		0.006 (0.18)			
Head educ upper prim		-0.048 (1.32)			
Head educ sec		-0.049 (0.99)			
Head educ post sec		0.029 (0.41)			
Head farmer			0.126*** (4.18)	0.100*** (3.33)	0.123*** (4.01)
Head professional			-0.053 (0.99)	-0.001 (0.031)	-0.056 (1.03)
Head sales			-0.106** (2.57)	-0.064 (1.53)	-0.075* (1.77)
Dwelling floor				-0.001 (0.02)	0.012 (0.35)
Eastern region				-0.189*** (5.56)	-0.191*** (5.47)
Western region				0.078** (2.03)	0.016 (0.38)
Northern region				-0.242*** (6.99)	-0.203*** (5.83)
Log cons per cap			0.156*** (8.09)		0.186*** (8.80)
Head married					-0.092** (2.54)
Head divorced					-0.108* (1.87)
Head clerk					0.143 (0.99)
Head transport					-0.204** (2.04)
Dwelling ironsheet					-0.139*** (3.82)
Log asset			0.073*** (7.15)		
Constant	-4.850*** (37.12)	-3.297** (3.16)	-4.908*** (4.59)	-4.471*** (20.91)	-5.234*** (4.84)
Observations	18,537	18,537	18,537	18,537	18,537

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A4: Tobit model estimates for 1992 data set
Dependent variable: hours worked per day (hrs worked)

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	0.047 (1.33)	0.561* (1.85)	1.600** (2.45)	1.704** (2.54)	1.834** (2.58)
Log kid age sq.		0.282 (0.18)	0.282 (0.37)	0.345 (0.52)	0.369 (0.55)
Biological kid	0.042 (0.59)	0.205*** (2.90)	0.116 (1.40)	0.142** (1.99)	0.168** (2.35)
Distance to school	0.024*** (2.94)		0.009 (0.98)	0.017** (2.06)	0.018** (2.16)
Share of young kids	-0.259 (1.14)	-0.166 (0.74)	0.097 (0.38)	-0.197 (0.87)	-0.113 (0.50)
Head female		-0.030 (0.41)	0.243*** (2.98)	0.029 (0.34)	
Rural location		-0.341*** (4.53)		-0.425*** (5.72)	-0.344*** (4.21)
Head educ lower prim		-0.120 (1.25)			
Head educ upper prim		-0.113 (1.24)		-0.039 (0.50)	
Head educ sec		-0.326*** (3.15)		-0.264*** (2.79)	
Head educ post sec		-0.096 (0.63)		-0.128 (0.85)	
Log cons per cap		0.620** *(12.90)		0.490** *(10.28)	0.466*** (8.90)
Log asset			0.160*** (7.90)		
Head divorced				-0.143 (0.94)	-0.152 (1.09)
Head widow				0.084 (0.72)	0.071 (0.70)
Eastern region			0.081 (0.75)	0.107 (1.22)	0.168* (1.88)
Western region			0.560*** (5.77)	0.695*** (7.72)	0.726*** (8.03)
Northern region			-0.544*** (5.39)	-0.470*** (5.04)	0.327*** (3.31)
Head farmer					-0.190** (2.27)
Head sales					-0.190* (1.68)
Dwelling ironsheet					0.290*** (3.76)
Dwelling floor					0.099 (0.30)
Constant	6.766*** (18.99)	1.430 (0.39)	6.705 (1.59)	4.007 (1.07)	4.339 (1.16)
Observations	10,468	10,468	10,468	10,468	10,468

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table A5: Tobit model estimates for 2002 data set
Dependent variable: hours worked per day

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	0.904** *(20.15)	-2.460*** (3.88)	-2.487*** (3.95)	-2.529*** (4.02)	-2.226*** (3.51)
Log kid age sq.		0.764***** (5.28)	0.774 (5.39)	0.782*** (5.45)	0.721*** (5.85)
Biological kid	-0.177*** (6.14)		-0.190*** (6.56)		-0.172*** (5.85)
Share of young kids	0.275 (3.17)				0.318*** (3.26)
Head female		-0.076*** (2.65)	-0.090*** (3.25)	-0.153*** (4.28)	
Rural location		0.274*** (9.93)	0.286*** (9.92)	0.257*** (8.53)	0.293*** (10.08)
Head educ lower prim		-0.067** (2.26)	-0.066** (2.23)		-0.049 (1.61)
Head educ upper prim		-0.095*** (2.70)	-0.083** (2.39)		-0.060* (1.7)
Head educ sec		-0.093* (1.93)	-0.096** (2.00)		-0.070 (1.43)
Head educ post sec		-0.075 (1.06)	-0.019 (0.27)		-0.005 (0.07)
Head farmer		-0.039 (1.33)	-0.046 (1.55)	-0.053* (1.95)	
Head professional		-0.361*** (6.78)	-0.331*** (6.21)	-0.352*** (6.81)	
Log head age		0.028 (0.63)			0.046 (0.98)
Log cons per cap		0.117*** (9.93)	0.130*** (6.17)	0.173*** (7.88)	0.146*** (6.70)
Eastern region		-0.224*** (7.01)	-0.244*** (7.39)	-0.225*** (6.86)	
Western region		0.056 (1.46)	0.040 (0.91)	0.038 (0.89)	
Northern region		0.214*** (6.43)	0.181*** (5.41)	0.226*** (6.81)	
Head divorced					-0.164* (1.66)
Head married				-0.297*** (3.30)	-0.071 (1.64)
Head widow				-0.143 (1.51)	-0.036 (0.67)
Dwelling ironsheet				-0.002 (0.06)	-0.038 (1.13)
Head sales				0.032 (0.85)	0.035 (0.92)
Dwelling floor					-0.161*** (4.92)
Constant	0.357*** (3.23)	2.472*** (3.34)	2.649*** (3.68)	2.439*** (3.36)	1.987*** (2.60)
Observations	13,916	13,916	13,916	13,916	13,916

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A6: Probit model estimates, gender specific, for 1992 data set
Dependent variables: working male kid (1-3)/working female kid (4-6)

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Log kid age	13.425*** (7.67)	13.066*** (7.42)	12.790*** (7.16)	10.297*** (6.15)	9.769*** (5.78)	10.370*** (6.01)
Log kid age sq.	-2.738*** (7.33)	-2.662*** (7.08)	-2.592*** (6.80)	-1.977*** (5.53)	-1.846*** (5.12)	-1.959*** (5.33)
Biological kid	-0.051 (1.13)	-0.131*** (2.94)	-0.094** (2.03)	-0.206*** (5.14)	-0.399*** (9.76)	-0.407*** (9.50)
Distance to school	-0.072*** (9.79)		-0.066*** (8.93)	-0.092** (10.65)		-0.088*** (9.91)
Share of young kids	-0.219 (1.57)	-0.062 (0.44)	-0.380*** (2.63)	0.530*** (4.10)	0.784*** (5.98)	0.482*** (3.56)
Head female	-0.106** (2.42)	-0.187*** (4.01)		0.016 (0.40)	-0.103** (2.37)	
Rural location	0.263*** (5.23)	0.219*** (4.02)		0.168*** (3.63)	0.138*** (2.70)	
Head educ lower prim		-0.162*** (3.00)			-0.241*** (4.37)	
Head educ upper prim		-0.368*** (6.72)			-0.325*** (6.18)	
Head educ sec		-0.532*** (7.86)			-0.535*** (8.38)	
Head educ post sec		-0.444*** (4.00)			-0.336*** (3.53)	
Log cons per cap		-0.143*** (4.71)	-0.165*** (5.10)		-0.270*** (9.09)	-0.249*** (7.82)
Head farmer			0.161*** (3.05)			0.157*** (3.12)
Head divorced				-0.110* (1.67)		-0.148** (2.35)
Head sales			0.172** (2.08)			0.146** (2.04)
Head divorced			-0.043 (0.49)			-0.181** (2.04)
Head widow			-0.084 (1.35)			-0.069 (1.15)
Eastern region				-0.190*** (3.30)		0.059 (1.08)
Western region				-0.105* (1.87)		-0.027 (0.48)
Northern region				-0.250*** (3.98)		0.010 (0.48)
Head farmer						0.106*** (2.78)
Head sales						0.149*** (2.70)
Dwelling ironsheet			-0.346*** (7.08)			-0.339*** (7.19)
Constant	-17.003*** (8.36)	-15.200*** (7.35)	-14.666*** (6.99)	-13.781*** (7.07)	-10.488*** (5.26)	-11.488*** (5.64)
Observations	6,345	6,345	6,345	6,258	6,258	6,258

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A7: Probit model estimates, gender specific, for 1999 data set
Dependent variables: working male kid (1-3)/working female kid (4-6)

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Log kid age	0.644*** (9.98)	2.570* (1.87)	2.759** (1.99)	0.613*** (9.43)	1.637 (1.19)	1.508 (1.09)
Log kid age sq.		-0.411 (1.40)	-0.449 (1.52)	-	-0.216 (0.73)	-0.188 (0.64)
Biological kid	-0.031 (0.83)		0.002 (0.04)	-0.078 (2.16)		-0.079** (2.13)
Share of young kids	0.393*** (3.37)	0.298** (2.54)	0.254** (2.11)	0.566*** (4.98)	0.531*** (4.65)	0.541*** (4.67)
Head female	0.100*** (2.73)	0.069* (1.83)		0.128*** (3.49)	0.098*** (2.63)	
Head educ lower prim		-0.085* (1.82)			-0.136*** (2.86)	
Head educ upper prim		-0.106** (2.41)			-0.143*** (3.24)	
Head educ sec		-0.143*** (2.67)			-0.166*** (3.04)	
Head educ post sec		-0.358*** (5.11)			-0.190*** (2.95)	
Log cons per cap	-0.055** (2.20)	-0.085*** (3.16)			-0.113*** (4.52)	-0.121*** (4.65)
Head married			-0.075 (1.18)			-0.062 (0.97)
Head widow			-0.063 (0.84)			0.029 (0.39)
Injury shock			0.140* (1.81)			-0.001 (0.02)
Head farmer			-0.243*** (5.67)			-0.178*** (4.14)
Head professional			-0.640*** (7.54)			-0.453*** (5.82)
Head sales			-0.076 (1.12)			-0.027 (0.41)
Head clerk			-0.262 (1.11)			-0.109 (0.60)
Eastern region			-0.125*** (2.80)			-0.115** (2.57)
Western region			-0.169*** (3.16)			-0.061 (1.17)
Northern region			-0.298*** (6.76)			-0.200*** (4.52)
Constant	-2.516*** (15.56)	-4.224*** (2.61)	-3.932** (2.41)	-2.422*** (14.86)	-2.360 (1.45)	-1.941 (1.18)
Observations	9,045	9045	9,045	8,794	8,794	8,794

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A8: Probit model estimates, gender specific, for 2002 data set
Dependent variables: working male kid (1-3)/working female kid (4-6)

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Log kid age	1.545*** (21.42)	0.469 (0.40)	0.520 (0.40)	1.637*** (21.46)	0.231 (0.17)	0.523 (0.38)
Log kid age sq.		0.443 (1.56)	0.462 (1.62)	0.320 (1.04)		0.253 (0.83)
Biological kid	-0.020 (0.47)	-0.019 (0.45)	0.004 (0.08)	0.157*** (3.70)	0.176*** (4.03)	0.186*** (4.28)
Share of young kids	0.125 (0.98)		0.193 (1.37)	-0.155 (1.19)		-0.029 (0.20)
Head female	-0.113 (2.90)	-0.076* (1.91)		0.092** (2.32)		0.136*** (3.35)
Log head age		0.070 (1.13)	0.123* (1.81)		0.142** (2.11)	0.074 (1.03)
Head educ lower prim		-0.034 (0.80)			0.029 (0.66)	
Head educ upper prim		0.038 (0.77)			-0.175*** (3.24)	
Head educ sec		-0.021 (0.30)			-0.104 (1.45)	
Head educ post sec		-0.022 (0.21)			0.064 (0.69)	
Head farmer		0.105** (2.53)	0.118*** (2.81)		0.137*** (3.13)	0.138*** (3.25)
Head professional		-0.123 (1.54)	-0.133* (1.67)		0.028 (0.39)	
Head sales		-0.084 (1.45)	-0.037 (0.64)		-0.116* (1.94)	-0.103* (1.76)
Rural location		0.416*** (9.61)	0.429*** (9.85)		0.353*** (7.83)	0.368*** (8.11)
Eastern region			-0.223*** (4.64)			-0.100** (2.08)
Western region			0.178*** (3.40)			-0.004 (0.08)
Northern region			-0.203*** (4.19)			-0.209*** (4.19)
Log cons per cap		0.156*** (5.94)	0.188*** (7.02)		0.168*** (5.84)	0.368*** (8.11)
Head married			-0.045 (0.37)			-0.179*** (2.81)
Head widow			-0.088 (0.69)			0.037 (0.48)
Constant	-4.632*** (25.78)	-4.544*** (3.08)	-5.014*** (4.59)	-5.138*** (20.91)	-6.195*** (4.84)	-6.001*** (3.70)
Observations	9,014	9,014	9,014	9,523	9,523	9,523

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A9: Probit model estimates for 1992 data set
Dependent variable: working kid 6 to 9 years old

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	131.289*** (25.11)	130.819*** (25.19)	143.130*** (22.99)	135.083*** (25.15)	136.752*** (25.21)
Log kid age sq.	-30.301*** (25.05)	-30.212*** (25.13)	-32.991*** (22.92)	-31.188*** (25.08)	-31.579*** (25.13)
Biological kid	-0.033 (0.71)	-0.141*** (2.98)	-0.023 (0.40)	-0.123** (2.46)	-0.142*** (2.83)
Distance to school		-0.110*** (9.67)	-0.096*** (7.48)	-0.115*** (9.80)	-0.106*** (8.98)
Share of young kids	0.224 (1.60)	0.462*** (3.43)	0.008 (0.14)		
Head female	-0.155*** (3.14)	-0.190*** (3.43)	0.008 (0.14)		
Rural location	0.316*** (6.02)			0.435*** (8.23)	0.290*** (5.00)
Head educ lower prim		-0.208*** (3.00)			
Head educ upper prim		-0.293*** (5.16)			-0.183*** (3.63)
Head educ sec		-0.442*** (6.32)			-0.237*** (3.47)
Head educ post sec		-0.459*** (3.73)			-0.166 (1.31)
Log cons per cap		-0.258*** (7.90)		-0.313*** (9.44)	-0.224*** (6.17)
Log asset			-0.190*** (13.52)		
Head divorced				-0.149 (1.44)	-0.183* (1.83)
Head widow				-0.204** (2.42)	-0.249*** (3.34)
Eastern region				-0.042 (0.69)	-0.062 (1.01)
Western region				-0.090 (1.46)	-0.138** (2.21)
Northern region				0.093 (1.54)	0.008 (0.13)
Head farmer					0.172*** (2.91)
Head sales					0.133 (1.49)
Dwelling ironsheet			-0.346*** (7.08)		-0.231*** (4.42)
Constant	-142.593*** (25.30)	-139.578 (24.95)	153.235 (22.86)	-143.793*** (24.88)	-146.212*** (25.03)
Observations	12,603	12,603	12,603	12,603	12,603

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A10: Probit model estimates for 1992 data set
Dependent variable: working kid 10 to 14 years old

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	70.454*** (12.90)	72.540*** (13.28)	70.222*** (11.17)	71.049*** (12.88)	73.230*** (13.06)
Log kid age sq.	-13.454*** (12.42)	-13.850*** (12.79)	-13.356*** (10.72)	-13.553*** (12.39)	13.967*** (12.57)
Biological kid	-0.221*** (5.87)	-0.372*** (9.74)	-0.193*** (4.28)	-0.314 (8.01)	-0.329 (8.21)
Distance to school		-0.073*** (11.32)	-0.085*** (10.09)	-0.071*** (10.95)	-0.063*** (9.64)
Share of young kids	0.123 (0.97)	0.325** (2.54)	-0.254* (1.70)	0.093 (0.71)	0.011 (0.08)
Head female	-0.108*** (2.65)	-0.067 (1.46)	0.023 (0.48)		
Rural location		0.123*** (2.77)		0.210*** (4.75)	0.073 (1.48)
Head educ lower prim		-0.204*** (4.00)			
Head educ upper prim		-0.379*** (7.57)			-0.302*** (6.47)
Head educ sec		-0.595*** (9.70)			-0.418*** (6.79)
Head educ post sec		-0.379*** (4.23)			-0.132 (1.41)
Log cons per cap		-0.148*** (5.40)		-0.221*** (7.89)	-0.133*** (4.28)
Log asset		-0.137*** (11.82)			
Head divorced				-0.079 (0.94)	-0.106 (1.30)
Head widow				-0.027 (0.42)	-0.060 (1.09)
Eastern region				0.029 (0.57)	-0.009 (0.17)
Western region				0.041 (0.79)	-0.034 (0.64)
Northern region				0.033 (0.61)	-0.173*** (2.93)
Log Head age					-0.209*** (2.96)
Head farmer					0.028 (0.56)
Head sales					0.194*** (2.76)
Dwelling ironsheet					-0.369*** (8.04)
Constant	-92.566*** (13.46)	-93.689*** (13.63)	-90.880*** (11.50)	-91.355*** (13.16)	-93.818*** (13.29)
Observations	12,603	12,603	12,603	12,603	12,603

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table A11: Probit model estimates for 1999 data set
Dependent variable: working kid 6 to 9 years old

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	-2.044*** (28.31)	73.521*** (21.06)	73.704*** (21.04)	65.097*** (16.28)	61.794*** (3.56)
Log kid age sq.		-17.262*** (21.28)	-17.301*** (21.26)	-15.349*** (16.58)	14.670*** (3.64)
Biological kid	-0.029 (0.78)		-0.024 (0.58)	0.040 (0.84)	-0.422* (2.11)
Share of young kids	0.440*** (3.99)	0.391*** (3.33)	0.305*** (2.54)		-0.300 (0.41)
Orphan1		0.129** (2.52)			
Head female		0.078* (1.92)	0.056 (1.36)	0.028 (0.59)	
Head educ lower prim			-0.122** (2.44)		
Head educ upper prim			-0.040 (0.85)		
Head educ sec			-0.164*** (2.79)		
Head educ post sec			-0.443*** (5.71)		
Rural location				0.271*** (4.69)	1.200*** (4.01)
Log head age					-0.638* (1.95)
Head married					0.543 (0.75)
Head widow					-0.015 (0.02)
Log wage					-0.013 (0.021)
Dwelling ironsheet					0.057 (0.19)
Injury shock				0.014 (0.15)	
Head farmer			-0.130*** (3.23)	-0.086* (1.77)	
Distance to school				-0.002 (0.34)	
Head sales			-0.015 (0.23)	0.106 (1.40)	
Head clerk			-0.105 (0.46)	-0.046 (0.17)	
Job shock				-0.219*** (4.24)	
Eastern region				-0.219*** (4.24)	
Western region				-0.464*** (6.87)	
Northern region				-0.303*** (5.84)	
Log cons per cap			-0.069*** (2.77)	-0.241*** (2.64)	
Constant	3.079*** (18.70)	-79.177*** (21.14)	-78.447*** (20.82)	-69.937*** (16.26)	-62.073*** (3.36)
Observations	17,839	17,839	17,839	17,839	885

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A12: Probit model estimates for 1999 data set
Dependent variable: working kid 10 to 14 years old

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	3.054*** (36.79)	70.564*** (15.83)	71.416*** (15.94)	79.288*** (14.79)	48.634** (2.42)
Log kid age sq.	-13.552*** (15.33)	-13.718*** (15.44)	-15.375*** (14.46)	-9.033** (2.26)	
Biological kid	-0.078** (2.50)		-0.082** (2.50)	0.028 (0.73)	-0.020 (0.13)
Share of young kids	0.425*** (4.11)	0.499*** (4.63)	0.472*** (4.36)		0.955*** (2.17)
Orphan1		0.108*** (2.71)			
Head female		0.102*** (2.95)	0.068** (2.00)	0.050 (1.28)	
Head educ lower prim		-0.098** (2.29)			
Head educ upper prim				-0.197*** (4.83)	
Head educ sec				-0.183*** (3.72)	
Head educ post sec				-0.224*** (3.76)	
Rural location				0.188*** (3.80)	1.090*** (5.15)
Log head age					-0.593** (2.38)
Head married					-0.360 (0.74)
Head widow					0.116 (0.23)
Head divorced					-0.061 (0.12)
Log wage					-0.076 (1.61)
Dwelling ironsheet					-.156 (0.73)
Injury shock				0.093 (1.12)	
Head farmer			-0.053 (1.51)	0.036 (0.85)	
Distance to school				0.000 (0.03)	
Head sales			0.101* (1.70)	0.179*** (2.61)	
Head clerk			0.051 (0.29)	-0.069 (0.30)	
Job shock				-0.390 (1.27)	
Eastern region				0.022 (0.49)	
Western region				-0.258*** (4.64)	
Northern region				-0.316*** (6.94)	
Log cons per cap				-0.116*** (5.14)	-0.108 (1.35)
Constant	-8.729*** (40.74)	-92.625*** (16.51)	-92.297*** (16.38)	-103.152*** (15.29)	-62.447*** (2.46)
Observations	17,839	17,839	17,839	17,839	967

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table A13: Probit model estimates for 2002 data set
Dependent variable: working kid 6 to 9 years old

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	0.666*** (9.47)	44.227*** (14.50)	45.271*** (14.58)	45.963*** (14.63)	46.480*** (14.64)
Log kid age sq.		-10.910*** (14.58)	-11.168*** (14.66)	-11.351*** (14.72)	11.457*** (14.71)
Biological kid	0.173*** (3.24)		0.171*** (2.86)	0.244*** (3.79)	0.226*** (3.61)
Share of young kids	-0.421*** (3.04)	-0.137 (0.89)			0.067 (0.42)
Head female	0.110** (2.47)	0.117** (2.23)	0.172*** (3.38)	0.252*** (4.74)	
Orphan1		0.008 (0.11)			
Rural location		0.214*** (4.32)	0.325*** (5.70)	0.212*** (3.61)	0.291*** (4.82)
Head farmer			0.003 (0.05)	-0.081 (1.51)	-0.052 (0.96)
Head professional			-0.096 (0.97)	0.028 (0.29)	-0.080 (0.80)
Head sales			-0.312*** (3.99)	-0.261*** (3.28)	-0.305*** (3.81)
Dwelling floor				-0.142** (2.29)	-0.095 (1.48)
Eastern region				-0.420*** (6.67)	-0.380*** (5.88)
Western region				-0.256*** (3.68)	-0.264*** (3.40)
Northern region				-0.345*** (5.61)	-0.275*** (4.46)
Log cons per cap			0.224*** (6.22)		0.255*** (6.44)
Head married					-0.283*** (4.20)
Head divorced					-0.178* (1.72)
Head clerk					-0.568 (1.40)
Head transport					-0.480** (2.26)
Dwelling ironsheet					-0.074 (1.15)
Log head age				0.132 (1.46)	
Log asset				0.129*** (6.73)	
Head educ lower prim				0.006 (0.11)	
Head educ upper prim				0.029 (0.44)	
Head educ sec				0.134 (1.54)	
Head educ post sec				0.178 (1.45)	
Constant	-0.707*** (4.29)	-46.425*** (14.99)	-50.017*** (15.62)	-50.417*** (15.61)	-6.195*** (15.58)
Observations	20,682	20,682	20,682	20,682	20,682

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5% ; *** significant at 1%

Table A14: Probit model estimates for 2002 data set
Dependent variable: working kid 10 to 14 years old

Variable	(1)	(2)	(3)	(4)	(5)
Log kid age	3.123*** (36.60)	47.320*** (12.34)	47.044*** (12.21)	47.587*** (12.31)	47.789*** (12.33)
Log kid age sq.		-9.147*** (11.65)	-9.076*** (11.51)	-9.190*** (11.61)	-9.231*** (11.64)
Biological kid	0.052 (1.58)		0.048 (1.40)	0.045 (1.31)	0.063* (1.83)
Share of young kids	-0.065 (0.61)	-0.162 (1.46)	-0.059 (0.51)		
Head female	-0.071** (2.23)	-0.046 (1.36)	-0.041 (1.24)	-0.032 (0.96)	
Orphan1		0.022 (0.59)			
Rural location		0.419*** (13.01)	0.396*** (10.92)	0.385*** (10.33)	0.429*** (11.31)
Head farmer		0.179*** (5.04)	0.169*** (4.74)	0.190*** (5.21)	
Head professional			-0.043 (0.69)	-0.017 (0.28)	-0.048 (0.76)
Head sales			-0.017 (0.34)	0.019 (0.39)	0.020 (0.41)
Dwelling floor				0.061 (1.61)	0.062 (1.54)
Eastern region				-0.090** (2.25)	-0.102** (2.51)
Western region				0.212*** (4.69)	0.136*** (2.70)
Northern region				-0.190*** (4.66)	-0.158*** (4.46)
Log cons per cap			0.128*** (5.74)		0.156*** (6.34)
Head married					-0.022 (0.52)
Head divorced					-0.090 (1.33)
Head clerk					0.310* (1.92)
Head transport					-0.112 (0.98)
Dwelling ironsheet					-0.166*** (3.85)
Log head age				0.023 (0.43)	
Log asset				0.050*** (4.25)	
Head educ lower prim			-0.010 (0.29)		
Head educ upper prim			-0.083** (1.99)		
Head educ sec			-0.118** (2.05)		
Head educ post sec			-0.052 (0.64)		
Constant	-8.720*** (40.42)	-62.141*** (13.29)	-63.297*** (13.46)	-63.470*** (13.44)	-64.393*** (13.60)
Observations	20,682	20,682	20,682	20,682	20,682

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%