A Four Country Comparative Study of Child Labor

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Harry Anthony Patrinos
World Bank

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A Four Country Comparative Study of Child Labor

**Countries:** Côte d’Ivoire, Colombia, Bolivia, Philippines

**Co-authors:** K. Cartwright, C. Sakellariou, A. Lall

**Reference:** C. Grootaert and H.A. Patrinos, eds., Policy Analysis of Child Labor (St. Martin’s Press, 1999)
## Update

<table>
<thead>
<tr>
<th>Country</th>
<th>Children working (%, 5-14 yr olds, 2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>26</td>
</tr>
<tr>
<td>Colombia</td>
<td>$6^b - 8^c$</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>49</td>
</tr>
<tr>
<td>Philippines</td>
<td>17</td>
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</tbody>
</table>
Outline

• Key factors that affect child labor:
  – household size and composition
  – education and employment status of the parents
  – household’s ability to cope with income fluctuations; functioning of the labor market and the prevailing production technology
Model

- Supply-side factors
- Household decision about child’s time is seen as sequential decision making process
- School attendance is preferred option
Model (cont’d)

- Schooling ($P_1$)
  - All other options
- Wage work ($P_2$)
  - Work in home enterprise ($P_2$)
  - All other options
- No work ($P_2$)

Sample for estimation:
- All children
- Children not in school
- Children not in school and not working for wages
Surveys

- Multipurpose household surveys served as the database for each case study
- Surveys included information about employment of adults and children in household
Variables

• Five sets of explanatory variables:
  – characteristics of the child
  – characteristics of the parents
  – socioeconomic characteristics of the household
  – cost of schooling
  – location
Key Findings

• Child’s age and gender
• Education and employment of parents are most important of household characteristics
• Having siblings reduces likelihood of child work but effects of age and gender of siblings are country specific
• Owning household enterprise or farm is most important economic attribute of household in determining child labor
Key Findings (cont’d)

• Poverty status exerts influence beyond that of household characteristics controlled for -- constraints for the poor (to borrow, to insure) increase child labor

• Weak evidence that direct cost of schooling (tuition, fees and other charges) and distance to school affect child labor

• Location has strong effect on child labor
### Determinants of Child Labor—Summary of Estimation Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Côte d’Ivoire</th>
<th>Colombia</th>
<th>Bolivia</th>
<th>Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
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<tr>
<td><strong>Child characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Gender</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Parent characteristics</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Mother</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Employment</td>
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<td></td>
</tr>
<tr>
<td>Father</td>
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<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Mother</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Household characteristics</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Age of head</td>
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<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Gender of head</td>
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<td>—</td>
<td>—</td>
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<tr>
<td>Siblings</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Boys (ages)</td>
<td>6-17</td>
<td>6-17</td>
<td>0-5,10-16</td>
<td>All ages</td>
</tr>
<tr>
<td>Girls (ages)</td>
<td>6-15</td>
<td>10-15</td>
<td>0-5,10-16</td>
<td>0-5,10-16</td>
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<tr>
<td>Farm</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Business</td>
<td>Yes</td>
<td>Yes</td>
<td>—</td>
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<tr>
<td>Poverty</td>
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<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Cost of schooling</strong></td>
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</tr>
<tr>
<td>Cost</td>
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<tr>
<td>Distance</td>
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<tr>
<td>Location</td>
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</tbody>
</table>
New Empirics

- Philippines: two new results confirm findings (replication and 1999 update)
- Sequential probit performs well: Mexico and Venezuela (Freije and Lopez-Calva 2000), Brazil (Emerson and Portela 2000)
A Strategy for Eliminating Child Labor

• Apply a gradual policy approach
• Provide home business support and enrollment incentives
• Target children of parents with low education
• Target locations where child labor is concentrated
• Poverty programs target characteristics of poverty that contribute to child labor
1. Apply a gradual policy approach

- Legislation against child labor consistent with enforcement capacity
- Measures to protect working children
- Facilitate school/work combination
- Alleviate income constraints of households with working children through transfers
2. Home business support & enrollment incentives

- Child work associated with home enterprise
- Policy measures to support development of enterprises are frequently part of poverty alleviation programs
- Danger that promoting enterprises will increase parents’ demand for child work
- Counteract by providing enrollment incentives
3. Target children of parents with low education

- Less educated parents, more child labor
- Parental schooling can be used to target
- Gradual approach of first promoting the school-work combination is especially important for households in which parents’ educational attachment is low
4. Target locations where child labor is concentrated

- Child labor concentrated in specific regions
- Concentrate policy interventions in those areas
- Supply constraints in education and health services
5. Target characteristics that contribute to child labor

- Child labor correlated with poverty, but need to identify characteristics
- Household’s size, human capital and asset base
- Many children in household
- Low levels of human and physical capital in household result in low levels of income
- Programs needed to provide credit to poor households without collateral
Original Conclusions

• Gradual approach is realistic
• Ensure working children are protected
• Such policy likely better accepted
• Schooling incentives
Policy Restatement

- Schooling incentives (demand-side financing) – more widespread; and works
- Reduce income constraints of households with working children
- Multiple solutions, for different families, in different circumstances
Schooling Incentives

- Reduce indirect (opportunity) costs
- With vouchers, scholarships, stipends
- Examples: Brazil (bolsa escola), Mexico (Progresa), Bangladesh, Guatemala
Guatemala: Eduque a la Niña

Increase girls’ access at primary level
• Scholarship (equivalent to US$4)
• Cover school-related costs
• Experimental alternatives
  – Outreach worker
  – Educational materials
  – Parent committees
Guatemala: Eduque a la Niña

<table>
<thead>
<tr>
<th>Intervention Package</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarship, outreach worker, parent Committee</td>
<td>84.1</td>
<td>87.9</td>
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<tr>
<td>Outreach worker, parent committee</td>
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<td>Educational materials</td>
<td>88.9</td>
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<td>Comparison</td>
<td>90.3</td>
<td>71.4</td>
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</table>
Guatemala: Eduque a la Niña

Dropout Rate

<table>
<thead>
<tr>
<th>Intervention Package</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarship, outreach worker, parent committee</td>
<td>4.8</td>
<td>5.3</td>
</tr>
<tr>
<td>Outreach worker, parent committee</td>
<td>4.1</td>
<td>7.8</td>
</tr>
<tr>
<td>Educational materials</td>
<td>5.9</td>
<td>7.6</td>
</tr>
<tr>
<td>Comparison</td>
<td>9.3</td>
<td>9.7</td>
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