Economics Bulletin

Volume 30, Issue 1

An Empirical Illustration of Positive Stigma towards Child Labor

Harry A Patrinos
The World Bank

Najeeb Shafiq
Indiana University at Bloomington

Abstract

This empirical note complements the qualitative and theoretical research on positive household stigma towards child labor. We use data from Guatemala and two instruments for measuring stigma: a child's indigenous background and household head's childhood work experience. We then adopt binomial probit regression methods to illustrate that positive stigma has a large effect on child labor practices, and a modest effect on school enrollment.

Patrinos is Lead Education Economist at the World Bank and Shafiq is Assistant Professor of Education Policy Studies (Economics of Education) at Indiana University. We are deeply appreciative to John Conley and two anonymous referees for extremely useful comments. We have also benefitted from discussions with Eric Edmonds, Henry Levin, Mun Tsang, Francisco Rivera-Batiz, Joseph Shapiro, and Miguel Urquiola. Finally, we thank participants at the Comparative and International Education Society's 51st Annual Conference, Baltimore, MD, 2007. All views expressed in this paper are those of the authors and should not be attributed to the World Bank Group.
Citation: Harry A Patrinos and Najeeb Shafiq, (2010) "An Empirical Illustration of Positive Stigma towards Child Labor", *Economics Bulletin*, Vol. 30 no.1 pp. 799-807.
Submitted: Jun 04 2009. **Published:** March 25, 2010.

1. Introduction

The conventional assumption on child labor stigma (or norm) is that households feel embarrassment, anxiety, guilt, or shame towards their children working (Edmonds, 2008; Grootaert and Patrinos, 1999). What about a situation where a different stigma prevailed? A positive stigma could approve of child labor, or at least it could approve of select forms of child labor (López-Calva, 2003). Indeed, some households in developing countries might take pride in their children working in a household business or farm, especially if this work is combined with schooling and safe. Such a positive stigma of child labor has been identified in qualitative studies of indigenous households in Latin America, with households valuing work not only as a tool for income but as a worthwhile activity in its own right (Heckt, 1999). For example, Guatemala's National Statistics Institute and the International Labor Organization (2003) conducted a series of interviews with Guatemalan leaders that elicited several comments emphasizing the role of child labor in indigenous households and communities:

> "In general, (indigenous) leaders discussing child labor mixed together comments of an economic character with other comments on an educational character such as learning from one's father, the relation between learning and working, and being disciplined and respected. This is to say, the work of children is a way of training children to lead a responsible life… Work in household businesses was valued as having a role in education and training, incorporating the concept and practice of living. Values like honor, dignity, development and learning were expressed as connected to the work of children within a family atmosphere."

There is some theoretical research on positive household stigma towards child labor. López-Calva (2002) models a positive household stigma towards certain types of child labor, such that households practice those types of child labor despite income per household member exceeding a subsistence level; this model differs from the seminal model in Basu and Van (1998), which examines child labor in general (often involving hazardous work) and assumes that households have negative stigma towards child labor, and that low household income is the key determinant of child labor. Bowles and Gintis (2004) and Pal (2009) further suggest that that positive household stigma is an attempt for indigenous households to preserve their culture and heritage and thus to stay away from the modern way of life. Despite qualitative and theoretical research, there is a lack of empirical evidence on household stigma towards child labor.

In this note, we provide an empirical illustration of the effects of positive household stigma towards child labor in Guatemala. Specifically, we control for several child- and household-level characteristics and use two instruments for measuring stigma: a child's indigenous background and household head's childhood work experience. Thus we attempt to show that there could be a positive stigma associated with child labor related to cultural preferences that associate work at a young age with overall development of the person and preservation of ethnic identity. This study therefore complements existing qualitative and theoretical studies of positive stigma towards child labor with an

empirical illustration, and more generally contribute to understanding household child labor decisions in Latin America (Hall and Patrinos, 2006; Psacharopoulos and Patrinos, 1994).[1]

2. Data

Our data source is Guatemala's Living Standards Measurement Survey (ENCOVI) from the year 2000. Guatemala's National Statistics Institute carried out interviews for the nationally representative ENCOVI with 7,276 households, including 37,771 individuals of all ages from urban and rural areas. The survey is statistically representative of Guatemala nationally and of Guatemala's urban and rural areas. It is also one of Latin America's only surveys designed to be statistically representative of non-indigenous groups, Mayan indigenous, and of the Ki'che, Kaqchikel, Mam and Q'eqchi' indigenous groups. Because the sample of non-Mayan indigenous groups is about one percent, we jointly consider Mayan and non-Mayan indigenous groups collectively as "indigenous". As discussed in the Introduction, Bowles and Gintis (2004) and Pal (2009) suggest that activities such as child labor may be an attempt for indigenous households to preserve their culture and heritage. The second instrument for measuring stigma is constructed using a recall question from Guatemala's recent household survey allows estimation of the change in child labor over time. Again, heads who worked as children may want to preserve a culture and heritage which they believe teachers children honor, dignity, discipline, development, and respect. ENCOVI asked respondents, "At what age did you begin working?" The adult is deemed to have been a child laborer if they report working at age fourteen or earlier.

ENCOVI asks respondents about whether children engage in paid market work, unpaid market work, or unpaid household work such as chores and work on the family farm or enterprise. However, we are unable to separately consider different types of child labor because of significant share of non-responses. Specifically, of the 32.3 percent of all children who are child laborers, 1.8 percent is reportedly paid child laborers, 5.2 percent are reportedly unpaid child laborers, and 25.3 percent of households did not specify the nature of work. The dependent variable is therefore a dummy and equal to one if a child engages in any type of child labor and zero if the child does not engage in child labor.[2]

3. Empirical Illustration

[1] Though we examine the stigma within the household, we recognize that household stigma is also a product of social stigma. The López-Calva model, for example, posits that negative stigma in the economy entails a cost for households practicing stigmatized child labor.

[2] Of the 43.8 percent of all indigenous children engaging in child labor, 9.5 percent are reportedly unpaid child laborers, 2.5 percent are reportedly paid child laborers, and 31.8 percent did not report on whether their children engaged in paid or unpaid work. Of the 24.0 percent of all non-indigenous children reportedly engaged in child labor, 2.1 percent are reportedly unpaid child laborers, 1.4 percent is paid child laborers, and 20.5 percent did not specify the type of child labor.

Table 1 presents the descriptive statistics and binomial probit estimation results. Of all children in the 7 to 14 age-group, 32.3 percent engage in child labor, and 78.7 percent are enrolled in school. Regarding our instruments, 41.9 percent are indigenous, and 76.9 percent of children's household heads used to work as children. Though not shown, there is a large difference between child labor rates, school enrollment rates, and household head's engagement in child labor between indigenous and non-indigenous children. Child labor rates are 43.8 percent for indigenous children and 34.0 percent for non-indigenous children. School rates are 71.3 percent for indigenous children and 84.1 percent for non-indigenous children. Among indigenous children, 83.6 percent have heads who were child laborers, and among non-indigenous children, 72.1 percent have heads who were child laborers.

[Insert Table 1 around here]

The binomial probit regression estimation results in Table 1 show positive and statistically significant coefficients on both instruments for social stigma. In the case of being indigenous, there is a 0.15 greater probability of being a child laborer, holding all else constant. The results also indicate that having a head who worked as a child increases the probability of being a child laborer by 0.15.

A second set of binomial probit regression in Table 1 illustrate the effect of a stigma towards child labor on school enrollment. In this case, both the instruments have negative and statistically significant coefficients. Being indigenous, for instance, reduces the probability of being enrolled in school by 0.02. Having a household head who worked as a child reduces the probability of being enrolled by 0.04, holding all else constant.

Table 2 presents the predicted probabilities of a child engaging in child labor and being enrolled in school by degree of household stigma towards child labor. The predicted probabilities are calculated by modifying the values for the stigma dummy variables (whether the child is indigenous and whether the household head was a child laborer) and assigning the mean values to every other explanatory variable. We denote strong positive stigma in a case where a child is both indigenous *and* has a household head who engaged in child labor. We denote medium positive stigma towards child labor if a child is either indigenous or has a head who worked as child. Lastly, we denote a weak (perhaps zero or negative) stigma towards child labor if a child is not indigenous and has a head who did not work as a child. The results indicate that a strong positive stigma towards child labor is associated with a 0.42 probability of engaging in child labor; this figure is higher than the 0.24 to 0.25 probability range found in households with medium stigma, and higher than the 0.12 probability found in households with weak stigma.

Turning to predicted probabilities of school enrollment in Table 2, children from households with strong positive stigma towards child labor have 0.82 school enrollment probability. The probability rises to between 0.84 and 0.86 for households with medium levels of positive stigma. In households with weak stigma, children have a 0.87 probability of being enrolled. The results imply that children from households with strong positive stigma have a 0.06 lower probability of being enrolled than children from weak

stigma households. Overall, the results suggest that households with positive stigma towards child labor are careful not to undermine children's school enrollment. There may be similar or different statistical associations between stigma and other educational outcomes such as attendance, learning, and graduation rates. Likewise, the associations may vary if other measures of child labor are used such as weekly hours worked. Data limitations on the other educational outcomes and child labor measures prevent further inquiry.

[Insert Table 2 around here]

One extension of the analysis is to examine if modernization is lowering the extent of the stigma. Accordingly, we interacted head's age-cohort dummies with head being a child laborer, and kept all other variables. The results are not included here because none of the interaction coefficients are statistically significant for both child labor and school enrollment. This suggests that the level of stigma is comparable across generations in Guatemala, and that economic and social changes do not affect household stigma towards child labor for the cohort of children being considered in this study.

4. Conclusion

This study complemented the qualitative and theoretical literature on positive household stigma towards child labor in Guatemala. Controlling for several characteristics, we find that a child's indigenous background and household head's childhood work experience (our two instruments for stigma) are statistically significant predictors of child labor and school enrollment. In particular, children are considerably more likely to engage in child labor if their households have a positive stigma towards child labor. School enrollment, however, is only modestly affected by the level of stigma towards child labor in households.

The results have two main policy implications. First, households with strong positive stigma towards child labor are only slightly undermining school enrollment, and thus should not be strictly penalized by the law. Second, the results of this study suggest that the elimination of child labor in Guatemala is going to be difficult because broader economic and social changes over time appear not to have affected household stigma towards child labor. A practical policy intervention would be to focus efforts on changing positive stigma towards hazardous child labor. For example, policymakers can use informational campaigns on the health consequences of avoiding exposure to certain herbicides and insecticides while working on the family farm.

References

Basu, K. and P. Van (1998) "The economics of child labor" *American Economic Review* **88**, pp. 412-427.

Bowles, S. and H. Gintis (2004). Persistent parochialism: Trust and exclusion in ethnic networks. *Journal of Economic Behavior and Organization* **55**, pp. 1-23.

Edmonds, E. (2008) “Child labor” in *Handbook of Development Economics Volume 4* by T. P. Schultz and J. Strauss, Eds., Elsevier Science: Amsterdam, 3607-3710.
Hall, G. and H. A. Patrinos (2006). *Indigenous Peoples, Poverty and Human Development in Latin America*. Palgrave MacMillan, New York.
Grootaert, C. and H.A. Patrinos (1999). *The Policy Analysis of Child Labor*. New York: St. Martin’s Press.
Guatemala National Statistics Institute and the International Labor Organization (2003). *Estudio cualitativo sobre el trabajo infantil en Guatemala*.
Hall, G. and H.A. Patrinos (2006). *Indigenous Peoples, Poverty and Human Development in Latin America*. London, Palgrave Macmillan.
Heckt, M. (1999). Mayan education in Guatemala: A pedagogical model and its political context. *International Review of Education* **45**, pp. 321-337.
López-Calva, L.F. (2002). A social stigma model of child labor, *Estudios Economicos* 17.
López-Calva, L.F. (2003). Social norms, coordination, and policy issues in the fight against child labor, in *International Labor Standards* (Eds.) K. Basu, H. Horn, L. Roman, and J. Shapiro, Oxford, Blackwell Publishing.
Pal, S. (2009). Norms, culture and local infrastructure: Evidence from Indonesia. Working Paper No. 09-08, Centre for Economic Development and Institutions, Brunel University.
Psacharopoulos, G. and H.A. Patrinos (1994). *Indigenous People and Poverty in Latin America: An Empirical Analysis*. Washington: The World Bank.

Table 1: Descriptive statistics and binomial probit estimation results, Guatemalan children between ages 7 and 14

	Descriptive statistics	Binomial probit regression			
		Dependent variable: Child labor		*Dependent variable:* School enrollment	
	Mean (Standard deviation)	Coefficient (Standard error)	Marginal effect	Coefficient (Standard error)	Marginal effect
Dependent variables:					
Child labor (dummy)	0.323				
	(0.467)				
School enrollment (dummy)	0.787				
	(0.409)				
Instruments for stigma:					
Indigenous (dummy)	0.419	0.456**	0.154	-0.081**	-0.020
	(0.493)	(0.035)		(0.036)	
Head child labor (dummy)	0.769	0.491**	0.150	-0.162**	-0.038
	(0.421)	(0.043)		(0.046)	
Other explanatory variables:					
Male (dummy)	0.516	0.338**	0.113	0.180**	0.045
	(0.500)	(0.032)		(0.034)	
Age 8 (dummy)	0.135	0.209**	0.073	0.421**	0.088
	(0.342)	(0.072)		(0.063)	
Age 9 (dummy)	0.122	0.513**	0.188	0.605**	0.117
	(0.328)	(0.071)		(0.068)	
Age 10 (dummy)	0.133	0.769**	0.287	0.604**	0.117
	(0.339)	(0.068)		(0.066)	
Age 11 (dummy)	0.113	1.018**	0.383	0.569**	0.111
	(0.316)	(0.070)		(0.069)	
Age 12 (dummy)	0.130	1.272**	0.472	0.419**	0.087
	(0.336)	(0.067)		(0.064)	
Age 13 (dummy)	0.113	1.505**	0.548	0.097	0.023
	(0.317)	(0.070)		(0.065)	
Age 14 (dummy)	0.113	1.801**	0.629	-0.370**	-0.104
	(0.316)	(0.071)		(0.062	
Urban (dummy)	0.385	-0.295**	-0.097	0.112**	0.027
	(0.487)	(0.038)		(0.040)	
Log (household per-capita income)	6.313	-0.127**	-0.043	0.612**	0.157
	(0.953)	(0.031)		(0.034)	
Household size	7.113	-0.021**	-0.007	0.118**	0.030
	(2.422)	(0.010)		(0.010)	
Head male (dummy)	0.847	-0.014	-0.005	0.029	0.007
	(0.360)	(0.050)		(0.053)	
Head age 31-40 (dummy)	0.377	0.081	0.027	0.111*	0.027
	(0.485)	(0.061		(0.062)	
Head age 41-50 (dummy)	0.308	0.020	0.007	-0.032**	-0.008
	(0.462)	(0.063		(0.064)	
Head age 51-60 (dummy)	0.139	-0.036	-0.012	-0.114*	-0.029
	(0.346)	(0.068		(0.069)	
Head age 60 and above (dummy)	0.098	-0.058	-0.019	0.123	0.029
	(0.298)	(0.074		(0.075)	
Head primary education (dummy)	0.608	-0.069**	-0.023	0.303**	0.080

	(0.488)	(0.036)		(0.037)	
Head secondary education (dummy)	0.154	-0.155**	-0.051	0.168**	0.041
	(0.361)	(0.059)		(0.071)	
Head employed (dummy)	0.884	0.326**	0.102	-0.017	-0.004
	(0.321)	(0.058)		(0.058)	
Constant		-2.956**		-3.387**	
		(0.264)		(0.282)	
Number of observations	8203	8203		8203	
Pseudo R-squared		0.204		0.126	

Source: ENCOVI 2000

Notes: Entries represent regression coefficients. Test statistics appear in parentheses. Household income excludes income from child's work. ** represents significance at 5 percent level; * represents significant at 10 percent level. The omitted categories are *Age 7 (dummy)* and *Head age 17-30 (dummy)*.

Table 2: Predicted probabilities of child labor and school enrollment by level of positive stigma towards child labor in the household, Guatemalan children between ages 7 and 14

Level of positive stigma towards child labor in household	Child labor	School enrollment
Strong		
Indigenous child and head was child laborer	0.418	0.816
Medium		
Indigenous child and head was not child laborer	0.242	0.856
Non-indigenous child and head was child laborer	0.253	0.836
Weak		
Non-indigenous child and head was not child laborer	0.124	0.873

Source: ENCOVI 2000

Note: These values assume that variables other than indigenous and head child laborer are at mean values.