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## Perverse Consequences of Well-Intentioned Regulation

### Evidence from India's Child Labor Ban

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Legal interventions are a common tool used by societies seeking to bring about equality and justice. Bans against child marriage, racial segregation in schooling, and discriminatory hiring practices are prime examples of legal action intended to improve overall welfare and bring about equality of opportunity. While legal interventions have undoubtedly been effective in many situations, the possibility that well-intentioned laws can have perverse or self-defeating consequences is a central concern in the economic analysis of laws and regulations. This possibility is crucial to recognize when evaluating the consequences of legal action taken against a controversial yet pervasive aspect of developing societies: child labor.

Despite facing near-universal opposition for decades, child labor is endemic. According to a recent report by the International Labor Organization, there are nearly 168 million child laborers, of whom 85 million work under hazardous conditions. While many policy options exist to address this, laws banning or regulating child labor remain the predominant response. However, the effect of these laws on child labor and household welfare is theoretically ambiguous. The obvious

mechanism is that when enforced, bans increase the cost to employers of hiring children, thereby deterring their use. A less obvious mechanism pushes in the opposite direction: if only the poorest families use child labor to reach subsistence, a fall in child wages due to the ban may actually lead them to supply more child labor. Given the theoretical ambiguities in academic studies, what do rigorous empirical studies have to say about the impacts of such bans? In a comprehensive review, Dartmouth economist Eric Edmonds concludes, “Despite all this policy discussion, there does not appear to be any study of the effectiveness of restrictions on work that would meet current standards of evidence.”

Our research sets out to fill this critical gap in the literature by examining the impact of India's flagship legislation against child labor, the Child Labor (Prohibition and Regulation) Act of 1986. Most recent articles in the press cite this law as the starting point for legal action against child labor in India. Our results are important for understanding the impacts of such bans in settings where people live at the margin of subsistence and where legal enforcement is weak. Given the dearth of rigorous evaluations of child labor bans in such settings, we offer several novel results.

First, we develop a simple model to show that child labor bans can increase child labor in multiple sectors, even if the ban applies to only one sector (as was the case with the 1986 ban). In a one-sector model created by Cornell economist Kaushik Basu, an imperfectly enforced ban lowers child wages, which forces families reliant on child-labor income for subsistence to further increase levels of child labor. Our two-sector extension of this model gives rise to three possible cases, depending on the level of labor market frictions. The main insight is that as long as there are labor market frictions that prevent free movement of labor from one sector to another, a ban may increase child labor in both sectors. If there are no labor market frictions across sectors, a child labor ban in one sector results in a reallocation of child and adult labor between sectors but has no effect on overall levels of child labor.

Second, we test the predictions of the theory using nationally representative data from India. We estimate a model using detailed data on employment from the 1983, 1987, and 1993 rounds of the National Sample Survey.

We classify the 1983 round as the “pre-ban” period and the 1987 and 1993 rounds as the “post-ban” period. To account for other factors that may have affected wages and employment over time, we compare the changes in employment and wages of children below age 14 to the changes of those above age 14—before and after the law came into effect in 1986—because the Child Labor Act applied only to those under age 14. To tie the empirical work closely to the theoretical model, we also examine how the employment of children under age 14 changes when their sibling is under or over the age of 14. The idea is that if the adult labor supply is inelastic and the child labor ban applies only to children under the age of 14, depressing their wages, the siblings of affected children are pushed into work.

We find that child wages fall relative to adult wages after the ban; this relative decline occurs in the manufacturing sector targeted by the ban. We also find that a child below age 14 is more likely to work after the ban relative to someone just above age 14. Using a more refined empirical approach, our results show that a child between the ages of 10 and 13 with a sibling below age 14 significantly increases his or her labor force participation, by 0.8 percent compared to a child of the same age with a sibling over age 14, which is approximately 5.6 percent over the pre-ban average participation for that age group. We find that young children between the ages of 6 and 9 are significantly less likely to be in school, so the increase in child labor likely comes at the cost of human capital investments. A key aspect of the theory is that only very poor households supply child labor because in general households would prefer to not make their children work. Empirically, we use education of

the household head and nonstaple share of calories consumed as proxies for income and subsistence levels and find that most of the child labor increase comes from poorer families.

Third, we examine the consequences of the ban on broader household outcomes. This is important because if an increase in child labor raises household consumption or wealth accumulation, then the welfare effects of the ban are harder to evaluate. We use linked expenditure and consumption surveys to show that household-level total expenditure and food expenditure remain unchanged, and the nonstaple share of foods consumed and asset holdings decline significantly (although the magnitudes are small) after the ban. Combined with our findings for child labor and human capital, we take this as evidence that the ban makes these households worse off along multiple dimensions without any clear benefits.

Our work highlights the importance of careful economic analysis of laws in a context in which multiple market failures are possible. There is a rich tradition of research at the intersection of law and economics in developed countries; however, considerably less empirical work has been done in developing countries. The effects of laws could be quite different in developing countries when they are not fully enforced because of weak institutions. Our analysis is broadly applicable to child labor bans in other developing countries where weak enforcement combined with a subsistence motive creates the potential for perverse effects. Hence, our research speaks to the idea that optimal policymaking in developing countries should take into account an environment of weak enforcement and nonstandard behavior at the margin of subsistence.

Finally, we would like to highlight that recent research has shown the importance of cash transfers in alleviating child labor in families. Eric Edmonds and Norbert Schady show that cash transfers in Ecuador result in large declines in the number of children involved in paid employment. In that context, one of the central models of child labor, created by Kaushik Basu and Pham Hoang Van, shows that policies based on alleviating poverty are extremely likely to have an effect on reducing the incidence of child labor. The broader point of our work suggests that bans *alone* are unlikely to solve the problem of child labor because they simply do not address the main reason children work in the first place: poverty.

## NOTE:

This research brief is based on Prashant Bharadwaj, Leah K. Lakdawala, and Nicholas Li, “Perverse Consequences of Well-Intentioned Regulation: Evidence from India’s Child Labor Ban,” October 2013, <https://prbharadwaj.wordpress.com/papers/>.