

A Review of Alessandro Cigno and Furio Rosati's *The Economics of Child Labour* (Oxford University Press, 2005) for *The Journal of Economic Literature*, December 2006

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The interest of economists in child labor has proliferated in recent years. An Econlit search of keywords "child lab*r" reveals a total of 6 peer reviewed journal articles between 1980 and 1990, 65 between 1990 and 2000, and 143 in the first five years of the present decade. This growth in academic interest stems from both an increase in available data and the rise of child labor as one of the most prominent policy issues in developing countries. The time seems right for a comprehensive survey of the literature on child labor to date.

One might expect a book from Alessandro Cigno and Furio Rosati entitled "The Economics of Child Labour" to be exactly that – a comprehensive survey of applied and theoretical research in economics about child labor. The first three chapters of the book appear to head in that direction. They provide a unified theoretical framework that can incorporate most of the important theoretical contributions in the economics of child labor. However, primarily, "The Economics of Child Labour" collects research that Cigno, Rosati, and co-authors have been involved in over the last several years into one convenient volume. It does not attempt to be a thorough review of existing empirical work by other economists that might be relevant to child labor. That said, the body of research summarized in this book is impressive in its scope, and many important research questions in the literature are touched upon in this volume. This book is invaluable for any child labor researcher. The papers drawn upon are scattered across websites and journals that many researchers might have trouble accessing. Hence, the convenience and archival value of this book is considerable, but despite its title, the book should not be read as a survey of the economics literature on child labor.

What is child labor?

The picture on the cover of the book jacket is of two young children hitting rocks with a hammer. The image is meant to convey the idea that the subjects of the studies in this book are often very young and the work they do is arduous. One typically hears statements about there being upwards of 200 million child laborers in the world. The most recent estimates by the International Labour Organization put the number at 218 million children aged 14 and under (ILO 2006). Most of these 218 million working children are helping in their family farm or business. Is this child labor?

The introduction of this book succinctly reviews the policy debate over how to define child labor. Cigno and Rosati distinguish between child labor and child labor for abolition. They argue that this later category of work should be reserved for work that seems to be clearly against ILO conventions 138 (minimum age) and 182 (worst forms of child labor). The classification of an activity depends on the child's age and the perceived impact of the work on the child's well-being.

Whether an activity has a negative impact on child well-being depends on what children would be doing if they were not in that activity. Thus, how would one know whether a type of work should be considered child labor or child labor for abolition? There is little consensus

about what tasks are most likely to negatively impact child well-being in the economics literature. In fact, the emphasis on distinguishing between child labor and child labor for abolition is dropped in all of the rest of the book, and it is unfortunate that more discussion is not present in the book about how to define child labor in practice. There are considerable differences between child labor studies in how child labor is defined.

This challenge of defining child labor is evident throughout this book, though it is rarely mentioned outside of the introduction. There is a lot of heterogeneity between chapters in what types of activities are considered. For example, chapter five looks at data from rural India and considers work inside the home, family business, reciprocal work with neighbors, and domestic chores. In chapter eight, children working full time in household chores are explicitly not considered working. In chapter 7, paid work and work in the family farm is considered in Vietnamese data while domestic work is not. Researchers often apply arbitrary cuts in hours worked to define work as child labor, and this practice also appears in this book. For example, in chapter 6, when domestic work is considered, it is only defined as work when children are performing at least 28 hours of it a week.

Though this point is not made in the book, combining studies with different definitions of child labor into one book really helps a careful reader conclude that perhaps the best approach in child labor studies is to consider as wide a range of activities as possible in as disaggregated a format as feasible. Put another way, the book does not explain why the child labor literature should be viewed separately from child time allocation more broadly, and it accidentally makes a strong case for why different uses of child time should be considered together. Of course, differences in the type of information collected on child time allocation between surveys is a considerable complication for this goal of a broad understanding of child time allocation.

Note that the types of activities that are the focus of this book are not what the public at large tends to think of when they hear the phrase "child labor." Children involved in trafficking, the sex trade, bondage, or sweatshops are challenging to capture in randomized surveys. We know very little about these children, and this lack of knowledge, this disconnect between the focus of policy and that of research, should have been emphasized more in this book. The back jacket of the book poses the question: "Should we only be concerned about the worst forms of child labor?" It is a pity that this question is posed with so little understanding of the worst forms of child labor.

What factors influence child time allocation?

Child labor research can be grouped loosely into questions on the determinants of work and on the consequences of work. The first three chapters of this book present an integrated model that includes most of the theoretical contributions in the modeling of the determinants of child labor over the last 15 years. This contribution is valuable even if such a comprehensive approach requires a bit more complexity than is ideal. This approach helps guide some of the empirical work in the remaining chapters, and by integrating theories, it is clear how challenging it is to distinguish between competing theories of the determinants of child labor with empirical work.

After a chapter on why there is little connection between trade and child labor (chapter 4), the empirical work on the determinants of child labor highlights the importance of water and electricity access (chapter 6) and insurance-cum-credit market failures (chapter 8) as factors influencing how and why children work. Focusing only on utilities and insurance might create the impression that other factors are not important. Other studies have considered how child

time allocation is influenced by factors such as the returns to schooling, schooling costs, the family's marginal utility of income, local institutions, cultural traditions, and labor demand. In this book, these influences on child time allocation are only mentioned in passing. Most likely, these passing references reflect that Cigno and Rosati were not involved in the research directly—the lack of emphasis is not meant to assert that these other factors are irrelevant for child time allocation.

The challenge in empirical work on child labor is establishing causation. For example, to identify the impact of having electricity in a home on child time allocation, researchers either need random variation in electricity access or that access to electricity is effectively random given the other controls included in the analysis. The later route of including controls with the hope that variation in variables of interest is effectively random is more prevalent in this book. Chapters 6 and 8 employ propensity score matching techniques to control for observable differences in the placement of utilities or insurance and credit failures. The propensity score is a nice dimension reduction technique, because it summarizes a large set of covariates with a single index. However, it is no magic bullet. It does not make up for imperfect or incomplete data, and it cannot allay the reader's concerns about the non-random nature of utility choices (chapter 6) or differences in the incidence of self-reported shocks (chapter 8). That said, the findings reported herein are largely consistent with what has been observed elsewhere. Children are more likely to work when the value of the time is high or the family's valuation of their economic contribution is likely to be great. The important task of understanding the exact mechanisms through which utility access or uninsured shocks might influence child time allocation is left for future research.

One critical issue in understanding child labor is that child time allocation decisions may be made by children, their parents, or others. This point is central to understanding child labor, but it is largely absent from this book. When children are not making their own time allocation decisions, agency issues arise that are at the heart of why there is so much policy attention to child labor. The agency issue raises questions about exploitation, whether child welfare is being considered in their work decisions, and how to design policy to discourage child labor. Hence, agency problems should be central to the economics of child labor.

What are the consequences of working?

The case for policy attention to a particular type of work is based on that work's consequences for participants. This volume includes chapters on the impact of work on nutrition and education (chapters 5, 7, and 9). To assess the impact of work, we have to understand what child time allocation would be in the absence of work. Establishing the counterfactual of what children would be doing in the absence of work can be aided by looking at the determinants of work. However, ultimately, time allocation decisions are made jointly with all household decisions and separately identifying the impact of one endogenous decision on another is a really hard problem.

The authors approach this problem of estimating the direct impact of work on some other aspect of child wellbeing in two ways. Both are evident in chapter 7. One approach is to assume that entry into work is effectively random conditional on several regression controls. Another approach is to identify characteristics that are assumed to affect work status without having an influence on the child's environment aside through work. These two types of assumptions (randomness or excludability) are difficult, and the authors' attempts to validate the assumptions

in data from Guatemala and Vietnam are consistent with the state of the art in tackling the impossible problem that work is chosen endogenously with all household decisions.

An alternative approach to attempting to build the counterfactual of what children would do in the absence of one type of work is to see how schooling and child labor co-move with other more plausibly exogenous factors. This approach is employed in chapters 5 and 9 of the book. In both chapters they also include fertility, an aspect of investments in children that is too often ignored in the child labor literature. The advantage of this approach is that it is not necessary to parameterize the relationship between work and these other factors. The cost is that it is not possible to identify the precise mechanisms at work in the underlying data.

The evidence throughout this book is strongly consistent with the view that even the common forms of work that most children participate in can be associated with long-term costs in terms of education and health. Factors that affect an increase in work also tend to be associated with a decline in schooling. In the Indian data used in chapters 5 and 9, many children are also reported as neither working nor in school, and this so called "idle" status appears elastic as well so that the schooling – work trade offs are not 1 to 1. Moreover, in general, a wide range of covariates seem to affect both child labor and schooling. This points to the difficulty in estimating a direct connection between work and schooling as there are too many potential omitted factors. It is unclear whether all of these covariates work separately to influence child labor and schooling or they reflect their general endogeneity to all household decisions. Thus, the challenge of identifying the impact of various factors on child labor and schooling also arises in trying to understand work's consequences.

Policy Implications

The main thesis of this book is that "patient policy intervention on a number of fronts, guided by a good understanding of the theory and supported by sound empirical evidence, can substantially reduce child labour ahead of other features of underdevelopment" (page 4). It is unfortunate then that there is virtually no direct consideration of any policy interventions towards child labor or schooling in the empirical work in this book, only some discussion in the theoretical parts of the book.

This unfortunate absence is a missed opportunity. Most of the work in this book was funded under a UNICEF-ILO-World Bank project called "Understanding Children's Work." This unique, multi-agency project generated a large amount of incredibly useful descriptive work on working children. Unfortunately, this inter-agency project did not experiment with child labor related policies. Experimentation has the potential to simultaneously build our understanding of why children work and improve the effectiveness of all of the policy attention now directly aimed at child labor. This missed opportunity is perhaps most important for the worst forms of child labor, where most policy is targeted but which are barely discussed in existing research on child labor. If the resources and energy that went into the observational studies partially summarized in this book had been directed towards experimenting with policies aimed to influence child labor supply, given the considerable talents of this book's authors, it is possible that a description of that work could have produced a seminal "Economics of Child Labour."

Reference:

ILO, "The End of Child Labour: Within Reach," Geneva, 2006.