

Child Labor Measurement in Agricultural Households: Seasonality, Proxy Respondent and Gender Information Gaps in Ethiopia

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Systematic underestimation of girls' work due to gender stratification of work in rural Ethiopia

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Topic at a Glance

Child labor continues to be an economic necessity for millions of children in the developing world with the agricultural sector accounting for by far the largest share of child labor. Despite the increasing availability of sources of information on child labor, and a large body of research on its main determinants, there is not much evidence on the validity of data collection methods for child labor. Unlike adult work, child labor statistics are mainly generated by proxy reporting, which could lead to measurement bias due to social values, asymmetries of information due to the gendered segmentation of labor markets, or the seasonality of the agricultural production. This study examines the extent to which seasonality and reliance on proxy respondents affects child labor statistics in Ethiopia. Specifically, our survey design intervention consists of the random manipulation of the survey respondent in the application of the same survey instrument to 1200 Fairtrade coffee households in three different seasons, which enables us to capture variation in the demand for child labor.

Table 1: Child-Proxy Reporting Differences in Household Farm Work

	Pooled Experiments	Main Rainy Season (July - August 2015)	Short Raining Season (April - May 2016)	Harvest Season (Dec 2016 - Jan 2017)
Boys	0.005 (0.018)	0.022 (0.034)	0.004 (0.029)	-0.016 (0.027)
Girls	0.076*** (0.019)	0.103*** (0.032)	0.050* (0.031)	0.071** (0.029)

New Insights

Child labor statistics are highly sensitive to the timing of the field surveys

While there is a growing body of work on the impact of seasonality on rural labor markets, there is scant evidence on how seasonality affects the measurement of child labor statistics. By implementing three similar survey design experiments in three different agricultural seasons in rural Ethiopia, this study uncovers substantial variation in child labor statistics with rates of participation ranging from 45 to 76 percent in the rainy and harvest seasons, respectively. The commonly reported boy/girl gaps in child labor participation also show substantial variation as this gap ranges from 20 percentage points in the rainy season to 5 percentage points in the harvest season.

Proxy-based reports of child labor show significant under-reporting of work for girls

Unlike adult work statistics, child labor statistics are mainly generated by proxy reporting. There is little evidence, however, on how this practice affects estimates of child labor. Random allocation of our the survey to either the child or a household head proxy respondent shows the work of girls in agricultural settings is systematically underreported by proxy respondents relative to the child's reports. These reporting differences range from 5 to 10 percentage points and are also sensitive to the timing of the survey. No reporting differences are found for boys across all seasons.

Gender mismatch explains the underreporting of work for girls

In East Africa the gender stratification of work and social lives permeates the measurement of child labor statistics. Girls' work is seen as an extension of, and subordinate to, women's work. As such, self/proxy reporting gaps are mainly explained by the gender mismatch between the child (girl) and the proxy (male) respondent. Indeed, no significant differences are observed across all seasons for boys when the proxy respondent is a male. Supporting evidence shows that self/proxy reporting gaps for girls are observed only in households that have mixed gender

composition of children but not in households with homogeneous gender composition.

Active engagement of female proxy respondents is important for girls

Since information constraints may be present in contexts where farms are mostly owned and operated by families and monitoring is costly due to gender stratification of work and social lives, self/proxy information gaps on girls' child labor participation is halved and loses statistical significance when the selected proxy respondent is the spouse of the male household head.

Replication of survey design interventions in agricultural settings is needed

Had we implemented only one survey design experiment and picked the short rainy season for that purpose, we would have concluded that respondent type is not a source of variation in child labor statistics. Yet, the replication of the same survey design experiment in three agricultural seasons shows substantial variation in child labor statistics associated to the type of respondent survey design. Replication of the same survey design in different agricultural seasons is shown to be important for the (external) validity of the results.

In sum, substantial variation in child labor participation ranging from 45 to 76 percent emerges depending on the timing of the survey in rural Ethiopia. Random allocation of the survey to either the child or a head of household proxy respondent shows the work of girls in agricultural settings is systematically underreported by proxy respondents relative to the child's reports. Underreporting is explained by the child/proxy gender mismatch as differences in child labor reports ranges from 5 to 10 percentage points for girls when the proxy respondent is male. No reporting differences are found for boys across all seasons when the proxy respondent is a male.

Policy Recommendations

Timing of survey data collection matters

Assessing the extent and scope of child labor in agricultural settings is highly dependent on the seasonality of agricultural production. Thus, choosing the timing of the survey data collection is as important as the survey design itself for measurement and analysis. At a minimum, studies of child labor in agricultural settings should explicitly acknowledge and discuss the seasonality of their results for a better understanding of its determinants and conditions, and for the design of social protection programs and policy.

Enhancing survey design comparability across time and space

Understanding the fluctuating nature of child labor statistics in agricultural settings requires the comparability of survey design

instruments and methods over time within the same population of interest. This implies targeting harmonized surveys that use the same wording, questions type, length of labor modules, and reference periods.

An expanded role for female proxy respondents

Important reductions in child/proxy reporting gaps for girls in agricultural settings can be achieved by selecting the spouses of the (male) household heads as the proxy respondents. Proxy reporting of child work is typically based on male household heads which leads to significant underreporting of girls' work. This study calls for an expanded role for female proxy respondents in the application of survey questions related to girls' outcomes in areas that are intrinsically affected by gender segmentation in work and social lives.

More effort is needed to assess the 'external validity' of survey design intervention results

This study vividly highlights the importance of assessing the (external) validity of results by implementing the same survey design in three different agricultural seasons. Interventions in areas that are strongly affected by the seasonality of productive activities and income, should make efforts to incorporate this contextual reality in their design, implementation and in the analysis of results.

Limitations

In this study we do not test whether children provide more accurate information compared to that provided by proxies since we do not have the true value of work status. Administrative information, a validation study or a respondent debriefing would be required to know the true classification of a child's work. Moreover, this study is based on a specific sample of farmers which is not representative of all rural households in Ethiopia.

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