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Recall Bias Revisited: Measure Farm Labor Using Mixed-Mode Surveys and Multiple Imputation

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Smallholder farming dominates agriculture in low-income countries. Yet, collecting high-quality data on smallholder farm labor in these countries with traditional recall-based surveys remains a challenge due to difficulties with capturing large seasonal variations, survey costs, poor record-keeping, and technical capacity constraints. We offer the first study that employs a less-costly, imputation-based alternative using mixed modes of data collection to obtain estimates on smallholder farm labor. Using data from Tanzania, our analysis suggests that parsimonious imputation models based on small samples of benchmark measures from a weekly in-person survey can offer estimates that lie within the 95 percent confidence intervals – or in many cases, even within one standard error – of the true figures. Furthermore, less accurate, but also less expensive, imputation-based measures using a weekly phone survey may partially substitute for a weekly in-person survey. If replicated in other contexts, including for other types of variables that suffer from similar recall bias, these results could open up a new and cost-effective way to collect more accurate data at scale.

Key words: farm labor, multiple imputation, missing data, survey data, Tanzania JEL: C8, J2, O12, Q12