

## The Analysis of Interval-censored Data

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We propose a novel method to analyze interval-censored data. The modeling framework follows a multiple imputation approach based on a Heteroskedastic Interval regression. The proposed model aims to obtain synthetic datasets that can be used to implement standard regression analysis. We present three applications to show the performance of our method. First, we run a Monte Carlo Simulation to show the method's performance under the assumption of conditional normality. Second, we analyze income inequality using the Current Population Survey - Annual Social Economics Supplement, comparing estimates for imputed and observed data when the assumption of normality might not hold. Finally, we apply the proposed methodology to analyze labor income data in Grenada for 2013-2020, where the salary data are interval-censored according to the salary intervals prespecified in the survey questionnaire. The results obtained are consistent across all three exercises.