Common Pitfalls in the Gini Index Estimation and the Ginivarci Package for the Estimation and the Construction of Confidence Intervals for the Gini Index. Intervals

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Abstract:

Income inequality is a significant social and economic issue of great interest in today's society, and the Gini index is the most popular indicator used to measure this phenomenon. Accurate estimation of variances and confidence intervals for the Gini index is an important topic for assessing uncertainty and making possible comparisons across regions or over time. First, this paper describes some common pitfalls that can be observed in the existing literature on the Gini index estimation, such as the fact of ignoring a bias correction or using the standard distribution function when computing the Gini index. Second, it introduces the recent package giniVarCI, available at the popular software R. This package allows the point estimation of the Gini index and the construction of confidence intervals for this popular indicator for inequality analysis. Additionally, this package includes other useful functions for conducting inequality analysis using the Gini index.

Keywords:

Gini index, bias, inequality, confidence interval, distribution function.