Review of *Bootstrapping a Regression Equation: Some Empirical Results*
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In this paper, the authors applied bootstrap in econometric equation standard error estimation. The author is concerned with estimating standard errors using conventional asymptotic methods like constrained generalized least squares with an estimated covariance matrix. The estimation of standard errors using conventional method is too optimistic and may not apply with finite samples. The bootstrap is an empirical method which could estimate standard errors by resampling the data. The authors applied bootstrap method in Regional Demand Forecasting Mode (RDFOR) study. Here, the authors resampled the residuals to preserve the stochastic structure so that the standard errors follow the model's assumptions. They demonstrated that the standard errors estimated using bootstrap is more accurate than the conventional asymptotic standard errors. This is probably because of the lack of data when estimating the parameters and covariance matrix with both time and region variables.

Bootstrap is a very useful nonparametric tool for variance estimation. It resamples the original data with replacement and generates pseudo samples so that we can make inference as for the original sample. This approximation measures the statistical uncertainty of the parameter estimates. Since the introduction of bootstrap, several papers have evaluated its performances in different fields like logistic regression, survival analysis and so on. With the large computation power nowadays, it is much easier to set up bootstrap. It is also very flexible to use this in complicated settings as bootstrapping does not make assumptions about the distribution of the data. However, we also need to be careful that bootstrap can only be used to make inference about the original sample as we might not be able to know any new information about the real population.

Question:
1. In the paper, the author mentioned that there are also problems with bootstrap as its estimation of standard errors is still biased downwards. I am wondering what would be the problems here and how to solve it?