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Master's Thesis Presentation

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Bias In Food Stamps Participation Estimates In The Presence Of Misreporting Error

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ABSTRACT

This paper focuses on how survey misreporting of food stamp receipt can bias demographic estimation of program participation. Food stamps is a federally funded program which subsidizes the nutrition of low-income households. In order to improve the reach of this program, studies on how program participation varies by demographic groups have been conducted using census data. Census data are subject to alot of misreporting error, both under-reporting and over-reporting, which can bias the estimates. The impact of misreporting error on estimate bias is examined by calculating food stamp participation rates, misreporting rates, and bias for select household characteristics (covariates).

This paper finds that the biases in estimates are limited due to certain characteristics of the misreporting errors. The misreporting errors are often correlated with the covariates, so that the impact of the error on biases does not follow the rules of classic error. Given correlated misreporting errors, the estimate biases can be limited if all or some of these conditions are fulfilled

1. there is low participation within each demographic group and low over-reporting,

2. the demographic group more likely to be on food stamps is more likely to over-report and,

3. the demographic group less likely to be on food stamps is more likely to under-report.

We will explore the data using univariate linear model for each selected covariate as it will allow us to break down the components of misreporting errors to see whether these conditions are fulfilled. The results will help us understand how the errors bias in estimates. Finally, we will generalize the behavior of misreporting errors from the univariate model to a multivariate model, with all the covariates included.

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