

Estimation in Repetitive Surveys: The Case of Employment Data

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A Special Problem Submitted to the
School of Statistics
University of the Philippines
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In Partial Fulfillment of the Requirements for
The Degree of Master of Statistics

December 2014

ABSTRACT

We estimated employment indicators using auxiliary variables via ratio and regression estimation and compared these estimates with the design-unbiased estimates of Labor Force Survey using coefficient of variation and relative coefficient of variation. Auxiliary variables used were the values from the past quarter of previous year and the variables from 2007 Census of Population. Regression and ratio estimator are better than the design-unbiased estimate at the national level. Ratio and regression estimators are still better even at the regional level, provincial level and municipal level estimates. Regression estimator performs best in employment and underemployment rate while ratio estimator performs best in unemployment rate. Bootstrap estimation was used to account for the bias that will result to using small number of matched samples in ratio estimation.

keywords: ratio and regression, auxiliary variables, coefficient of variation, relative coefficient of variation