



## A graphical overview of social inequality in South Africa

Tsiresy Pierre Bernard\*

Department of Statistical Sciences, University of Cape Town, Cape Town, South Africa –  
[tsiresy.pb@gmail.com](mailto:tsiresy.pb@gmail.com)

Sugnet Lubbe

Department of Statistical Sciences, University of Cape Town, Cape Town, South Africa –  
[sugnet.lubbe@uct.ac.za](mailto:sugnet.lubbe@uct.ac.za)

In this paper, social inequality is defined as differences in living conditions between households of different racial groups: differences in income levels, differences in housing conditions and access to basic services, etc. Because of its multifaceted nature, multivariate graphical tools are well suited to study this issue. Multiple Correspondence Analysis (MCA) is suitable in the analysis of datasets of categorical nature, as is the case here. To analyse household survey data, sampling weights must be included in the analysis to make the results representative of the South Africa population. The MCA technique is enhanced here with the inclusion of sampling weights. With the help of Canonical Variates Analysis (CVA) biplots, the differences in living conditions between the different racial groups are then graphically displayed using Canonical Variates Analysis (CVA) biplots. This paper uses sampling-weighted MCA and CVA biplots to obtain a concise overview of the evolution of social inequality over the post-Apartheid period. The datasets used here are the October Household Surveys (OHS) and the General Household Surveys (GHS) of Statistics South Africa.

**Keywords:** Biplot, household survey data, social inequality, sampling weights.