CONSTRUCTION OF A COMPOSITE INDEX TO MEASURE CONSUMPTION POVERTY AND ITS COMPARISON WITH THE CONVENTIONAL INDICATOR

By

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ABSTRACT

The present poverty line and the relevant poverty measurements that are based on total expenditure assume that all the expenditure dimensions have equal importance. In this approach, although all the dimensions of consumptions have been taken into account, allocation of equal weights to all the expenditure dimensions does not reflect the true poverty situation. However, so far all the poverty-aimed policies are based on this total consumption based approach. This may be one of the reasons for being consumption poverty is a continuing problem in Sri Lanka despite various poverty alleviation programs implemented in successive governments in Sri Lanka. Therefore, the expenditures on various dimensions to produce an index using in scientific basis to identify the genuine poor has become an urgent need. Against this background a new poverty indicator with scientific weighting for each consumption variable was developed using the data obtained from Sri Lanka Integrated Survey (SLIS) (1999/2000).

The new average composite index of multidimensional expenditure was constructed by combining expenditure values of 11 dimensions (variables) which formed three major groups. In order to construct Average Composite Consumption Poverty Indicator, Weighted Principal Component Factor Analysis was used. At first, the data set was processed to create monthly per capita expenditure of 11 variables for 7479 households.

At the first step of construction of composite poverty index, each variable was rescaled by applying weights decided for the set that it belonged. Square root of eigen value of the first Principal Component (PC) is used as the reciprocal of the weight for each set by employing Principal Components Analysis for each set of variables separately. Then rescaled variables were used for Factor Analysis using covariance option to affect the weights into the factors. As two factors are significant in this study each household takes two factor scores, and values of poverty index was obtained by taking the mean value of factor scores multiplying by their corresponding eigen value of the factor. Then the poverty line is a value of factor scores (new poverty indicator) that is used to categorize persons into the poor and the non-poor. So a modification for a derived poverty line was made in this study to make it appropriate for the model of new poverty indicator.

Using the new poverty indicator and modified poverty line, Forster-Greer-Thorbecke Indices, Head Count Ratio, Poverty Gap Index, Squared Poverty Gap Index were estimated and compared with the conventional total expenditure poverty indicator, and differences were evaluated. Further, various characteristics of the poor on which considerable attention should be made in order to absorb efficient policies and strategies to combat the poverty were examined based on HCI under new index. Therefore, undoubtedly the new Composite Index and the findings in this study may be very useful for the government in the process of development.