



LORENZ CURVE AND ITS APPLICATION TO INCOME OF BOTSWANA

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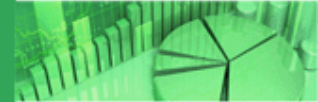
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Abstract

Lorenz curve is used frequently in Economics for income distribution. Lorenz (1893) introduced Lorenz curve for any distribution function F . Barlow and Proschan [Richard E. Barlow and Frank Proschan, Statistical theory of reliability and life testing, Probability Models, International Series in Decision Processes, Series in Quantitative Methods for Decision Making, Holt, Rinehart and Winston, Inc., New York, Montreal, Que.-London, 1975] introduced Lorenz order, and Ali [E. A. A. Ali, On testing for Lorenz ordering, *Metrika* 38(2) (1991), 117-124] proposed test statistic for testing this order. In this paper, we have considered empirical version of these and applied to disposable income of Botswana. We have computed the fraction of people ordered according their income and their fraction of income for the two periods, 1993/94 and 2002/03 [Household Income and Expenditure Survey: 1993/94 and 2002/03, Published by the Central Statistics Office (CSO), Gaborone]. The Measure of Fairness is also computed. Two period incomes are compared using Lorenz order test.

Keywords and phrases: Lorenz curve, Lorenz order, distribution function, income distribution, measure of fairness, Gini index, equal share coefficient.

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