

STUDY ON INEQUALITY OF GLOBAL ELECTRICITY CONSUMPTION

Shuangjiao Xue^{1*}, Qiaosheng Wu^{1*}, Jinwei Wang^{1*}

¹*China University of Geosciences, School of Economics and Management, Wuhan*

*Corresponding Author: sylvia9306@163.com, qshwu@cug.edu.cn, wjwcfok@126.com

Abstract: Inequality in electricity consumption across countries intuitively exists in global, but we do not exactly know the extent of inequality. There are kinds of mathematical tools to describe the characteristics such as the Lorenz curve, Gini and Zenga indices are used in analyzing the inequality of the distribution of income. For the convenience to analysis contrastive, two nonparametric statistics of Gini and Zenga indices respective were chosen to analyze the inequality of electricity consumption based on the per capita electricity consumption data of 109 countries from 1971 to 2009. The data of electricity consumption in this paper comes from International Energy Agency. The main contribution of this study is that while Gini index is used as a reference point, currently this is the first application of Zenga (2007) index which has analyzes inequality of per capita electricity consumption in the literature history. Through these two measures we found the extent and the trace it varied of inequality of per capital electricity consumption in global. In line with previous research, this paper analyzes the samples to prove that inequality of electricity consumption does exist between the nations. Our findings do support decline the fluctuations of inequality in electricity consumption in recent years.

keywords: Electricity consumption; Gini index; Zenga index; Inequality