Using Gini Coefficient as a Tool for Including Income Inequality into Human Development Index

Vladimir Verner, Petra Holikova, Jiri Pacesny

Czech University of Life Sciences Prague, Institute of Tropics and Subtropics, Czech Republic

Abstract

Human (or socio-economic) development, as the ultimate goal of the development process, is recently widely measured by Human Development Index (HDI), which is annually calculated by UNDP in Human Development Report for approximately 180 countries. This indicator consists of three different categories: quality of life, achieved education and descent standard of living. The level of life standard is expressed by Gross Domestic Product (GDP) per capita in US-dollars and purchasing power parity, but this indicator is not able to line up how is income distribute between the population. It makes difficult to measure human development in countries, where GDP per capita is very high, but major part of population is still very poor as field studies always shows. If HDI went beyond GDP per capita in developing countries classification in 1990s, the challenge now is to go beyond HDI and find out the tool that help us to classify developing countries more detachedly. Gini Coefficient seems to be a good tool. Question is how to include its value into HDI formula. Two ways are presented in this study: via exponent function, which seems to be more appropriate or by creating complex indicator together with GDP per capita, where the calculation is more difficult as the weight of Gini Coefficient on Life Standard indicator could be disputable and not just the question of mathematics. The presumption is, the Gini Coefficient and GDP per capita should play equal role in the indicator for measuring Life Standard. There is also one critical point, namely Gini Coefficient data collection, which seems to be still very difficult. However, results shows, that Gini Coefficient including into HDI provide us with better numbers for developing countries classification.

Keywords: Economic growth, Gini coefficient, human development, income inequality

Contact Address: Vladimir Verner, Czech University of Life Sciences Prague, Institute of Tropics and Subtropics, Nachod, Czech Republic, e-mail: vernerv@its.czu.cz