ABSTRACT

Environmental degradation is the core reason for climate variations that may be result of negative externalities of economic activities. On the other side, human capital has emerged as a key driving force to boost economic growth. In this work, an effort is made to analyze the nature of the relationship between CO_2 and human capital with other economic variables for developing countries. In this regard, the data is extracted for 46 developing countries from all over the world for the time period of 1970-2019. For statistical analysis different econometric techniques i.e. FMOLS, DOLS, CCR, MG and CCEMG are applied with second- generation preliminary estimations as CIPS and CADF unit root tests and Westerlund cointegration test. All the techniques except DOLS report the highly elastic and negative association between the carbon emission and the human capital in presence of slope heterogeneity and structural breaks for the long-run period. While a positive relationship exists between GDP and energy consumption and carbon emission is highly responsive to energy consumption as compared to GDP. The trade is positively related to environmental degradation with less influence. The association of physical capital and population proxied by the share of urban population to total population to carbon emission is ambiguous and insignificant.

Key Words: human capital, CO_2, developing countries, second-generation unit root test, CSD, FMOLS, DOLS, CCR, MG and CCEMG