

## Abstract

This study investigated the hypothesis that socio-economic development affects carbon productivity on a sample of 18 countries covering the time period from 1990 to 2019. Top 18 CO<sub>2</sub> emitters that are contributing about 82.14% of the total world's CO<sub>2</sub> emissions have been selected for empirical analysis. For testing this hypothesis, various econometric tools have been used such as CD tests, CIPS stationarity test and panel cointegration techniques namely CCEMG and AMG. The findings revealed that GDP per capita, trade and FDI increased the carbon productivity. On the other hand, energy consumption and urbanization decreased the carbon productivity. So, it is recommended that necessary policies should be designed to tackle this issue to obtain maximum benefits from socio-economic development.

**Keywords:** Carbon productivity, CCEMG, AMG, CIPS, and CD