Abstract

Trade efficiency facilitates transactions and economic activities that flourish due to tariff relaxations. However, climate change has been exacerbated from excessive extractions, trade flaws and spatial redistribution of emissions. This research examined the influence of trade efficiency on environmental quality across 20 SSA countries, from 1990 to 2023 through dynamic panel GMM. A 1% increase of balance of payments contributed to rising carbon emissions and was statistically significant. Given the statistical insignificance of GDP per capita and squared GDP per capita on L1.ihs_CO2, L1.ihs_AQI and L1.ihs_EFPRD variables, the Environmental Kuznets Curve theory was not supported. Moreover, significant AR (1) at 0.05, insignificant AR (2), and valid Hansen tests validated the models. This paper recommends governments and policymakers to initiate green economy trade agreements for sustainable export production and inward investments. Sustainable bioeconomy regulations should also be developed for agricultural stakeholders to improve on the balance of payments and environmental quality.