

CO2 emission and economic growth in Algeria

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Algeria is one of the most important CO₂ emitters among developing countries and the third among African countries. It pledged to curb carbon emissions by at least 7% by 2030. However, complying with this target may be a difficult task without compromising economic growth. The aim of this paper is to analyze the relationship between CO₂ emissions and economic growth in Algeria, taking into account energy use, electricity consumption, exports and imports. The validity of the EKC hypothesis, throughout the period from 1970 to 2010, is tested by using the Autoregressive Distributed Lag model extended to introduce the break points. Results confirm the EKC for Algeria. Nevertheless, the turning point is reached for a very high GDP per capita value, indicating that economic growth in Algeria will continue to increase emissions. Results also indicate that an increase in energy use and electricity consumption increase CO₂ emissions, and that exports and imports affect them negatively and positively, respectively. Therefore, it is necessary to promote renewable energies and energy efficiency policies. Regulatory reforms are needed to facilitate foreign investments with which to carry out these policies. Likewise, it may be appropriate to decrease subsidies in energy prices to encourage energy efficiency. © 2016 Elsevier Ltd.

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