

Human Capital Development and its Impact on Environmental Sustainability in OIC Nations: A Panel Data Approach

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Abstract

Education plays a vital role in reducing a country's carbon dioxide emissions and other environmental problems by fostering a sense of social responsibility. However, in some developing countries, increasing education levels may lead to a slight rise in carbon emissions due to greater economic expansion and productivity. Twenty countries from the Organization of Islamic Cooperation (OIC) were studied to determine the impact of human capital on carbon dioxide emissions between 1990 and 2019. The study was conducted using a panel static approach. The findings reveal a significantly positive correlation between CO₂ emissions, gross domestic product, and trade openness. At the same time, education, foreign direct investment, and the interaction between the country dummy and year of schooling are negatively related to CO₂ emissions in OIC countries. Policymakers can leverage these results to devise strategies that incorporate environmental education to reduce CO₂ emissions. As carbon taxes and renewable energy subsidies are two policy changes that aim to reduce CO₂ emissions,

educating more people about them can help these policies to be better understood. Supporting these adjustments will help persuade governments and businesses to combat climate change.

Keywords: CO₂ emission, education, GDP, FDI, trade openness, OIC countries

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