Extended Abstract

Purpose

Natural resources, as a gift from God, due to their limitation, non-renewability, and intergenerational nature, should be exploited with caution and proper management so that their reserves are not depleted, and their consumption does not lead to the destruction of the environment's quality. Institutional quality and government performance are among the factors that affect the depletion of resources and the environment's quality. The aim of this article is to investigate the role of institutional and environmental quality on the relationship between resource depletion and happiness in 11 selected oil-producing countries during 2013-2021. So, the government effectiveness and carbon dioxide emission index were used as the institutional and environmental quality indices, and DOLS method was used to estimate. The results indicated a negative effect of resource depletion and carbon dioxide emissions on happiness. Government effectiveness had a positive effect on happiness. The interactive effect of government effectiveness and resource depletion on happiness is positive, and the calculation of the final effect indicates the existence of a threshold equal to 0.61 for the government effectiveness. Before government effectiveness reaches threshold, the final effect of resource depletion on happiness is negative, and after that, the final effect becomes positive. The interactive effect of carbon dioxide emissions and resource depletion on happiness is negative, and the calculation of the final effect indicates that there is no threshold for the carbon dioxide index. So, at all levels of carbon dioxide emissions, the final effect of resource depletion on happiness is negative.

The aim of this research is analyzing the role of institutional quality in the relationship between resource depletion and happiness with regard to environmental quality in 11 selected oil-rich countries during the period from 2013 to 2021. Also the interaction effect of institutional quality and environmental quality on the relationship between resource depletion and happiness was also analyzed.

Methodology

To achieve the goal of this article the dynamic panel least squares (DOLS) method was used. The first model is specified to analyze the role of institutional quality in the relationship between resource depletion and happiness. The second model evaluates the role of environmental quality in this relationship.

$$\mathrm{Happy}_{it} = \theta_0 + \theta_1 \mathrm{NRD}_{it} + \theta_2 \mathrm{GDPP}_{it} + \theta_3 \mathrm{RLE}_{it} + \theta_4 \mathrm{CO2}_{it} + \theta_5 (\mathrm{NRD}_{it} \times \mathrm{RLE}_{it}) + \varepsilon_t \quad (1)$$

$$\mathrm{Happy}_{it} = \rho_0 + \rho_1 \mathrm{NRD}_{it} + \rho_2 \mathrm{GDPP}_{it} + \rho_3 \mathrm{RLE}_{it} + \rho_4 \mathrm{CO2}_{it} + \rho_5 (\mathrm{NRD}_{it} \times \mathrm{CO2}_{it}) + \zeta_{it} \quad (2)$$

.In models (1) and (2), Happy represents happiness. The happiness index is derived from data reported in the World Happiness NRD is the index of resource depletion, This index is extracted from World Bank data and is calculated as a percentage of that country's national income (World Bank website, 2024).GDPP represents per capita Gross Domestic Product (GDP), obtained by dividing GDP at constant prices (2015) by that country's population.GE is the government effectiveness index considered as an indicator of institutional quality. Data are sourced from the World Bank website.CO2 represents carbon dioxide emissions considered as an environmental quality indicator. This index is also extracted from World Bank data. (GE×NRD) is an interaction variable representing the interactive effect of government effectiveness and natural resource depletion.(CO2×NRD) is an interaction variable representing the interactive effect of environmental quality and natural resource depletionθ_0 and ρ_0 represent the intercepts of the models; θi s and ρi are estimated coefficients; εit and ζit are error terms; i indicates countries; and t indicates time.

Finding

The estimated results in both models indicated that the variables of resource depletion and carbon dioxide emissions had a negative and significant effect on happiness in the selected countries at the 95% confidence level. The variables of economic growth, government effectiveness, the interaction effect of government effectiveness and resource depletion, and the interaction effect of carbon dioxide emissions and resource depletion had a positive and significant impact on happiness at the 95% confidence level.

Also the threshold effect of government effectiveness on the relationship between resource depletion and happiness was found to be 0.61. Thus, until the government effectiveness index reaches 0.61, resource

depletion negatively affects happiness in the selected oil-rich countries, meaning it leads to a decrease in happiness. However, once the government effectiveness index surpasses 0.61, the final effect of resource depletion on happiness becomes positive. This indicates that as government effectiveness improves, people become less concerned about the increased use of natural resources and have greater confidence that the exploitation of these resources, even though it may lead to a reduction in their reserves and thus their depletion, is not primarily for the benefit of rent-seeking individuals or at the expense of a significant portion of the population. Instead, it is consumed in alignment with the maximum benefits for society as a whole. The threshold effect of environmental quality on the relationship between resource depletion and happiness was found to be -0.33. Since carbon dioxide is normalized as an indicator of environmental quality between zero and one, and the obtained value is lower than the lower limit of this index's numerical range, it indicates that there is no threshold for the effect of environmental quality on the impact of resource depletion on happiness in the countries under study. In other words, at all levels of carbon dioxide emissions that lead to a decrease in environmental quality, the pollution caused by the emission of this gas has intensified the negative effect of resource depletion on happiness.

Conclusion

Given the positive impact of government effectiveness on happiness and its moderating effect on natural resource depletion's impact on happiness, it is recommended that appropriate policies be implemented to improve the efficiency and effectiveness of government.

Considering the negative impact of natural resource depletion on happiness, it is advisable to adopt suitable policies to prevent the waste of natural resources, such as the development of modern technologies, monitoring and supervision, community-based management, and reforming the natural resource exploitation system. Additionally, since environmental pollution is another issue arising from excessive extraction of natural resources, it is recommended that the use of renewable energy sources and the development of low-carbon technologies are prioritized in national agendas.