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RESEARCH ARTICLE

An investigation into the anthropogenic nexus among consumption of energy, tourism, and economic growth: do economic policy uncertainties matter?

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Abstract

Global warming has been a pressing issue for the past decade as various economic activities have been flagged and are expected to reduce emissions. While previous studies have examined the energy consumption-emissions-economic growth nexus in significant detail, attention is yet to be given to the role of economic policy uncertainties and human activities such as tourism in a carbon function. Thus, this study aims to investigate the long-run relationship between energy consumption, tourists' arrivals, economic policy uncertainty, and ecological footprint in the top ten earners from international tourism over the period 1995 to 2015. The fully modified ordinary least square and dynamic ordinary least square estimation techniques and the Dumitrescu and Hurlin causality tests were used in the study. Empirical results suggest that economic policy uncertainties in addition to tourism and energy consumption are drivers of environmental degradation. However, the contribution of energy consumption to ecological footprint is significantly moderated by economic policy uncertainties such that a 1% increase in the latter reduces environmental damage by 0.71%. This study suggests that policy uncertainties matter a great deal for energy and environmental policies. Also, green economic growth is possible if the proper implementation of environmental protection policies can restrict the harmful impact of economic activities on the quality of the environment. Based on the empirical findings, vital energy policy recommendations are suggested.

Keywords Economic policy uncertainties · Tourist arrivals · Energy use · Ecological footprints · Economic growth

Introduction

The availability of energy resources is generally perceived to be one of the major drivers of economic growth and development in many industrialised economies. This draws from the evidence that energy consumption actively contributes to economic growth (Adedoyin et al. 2020a, b; Kirikkaleli et al. 2020; Udi et al. 2020; Nathaniel et al. 2020c); hence, countries which are impoverished in terms of energy resources are potentially faced with the syndrome of negative economic growth. However, the continuous exploitation of energy resources by man is putting the ecological environment on terrific pressure. Consequently, there have been several cases of ecological impediments such as environmental pollution, ecological degradation, and global warming, and a host of other complications that serve as threats to the survival of humans as well as economic growth and development of the global economy (Nathaniel and Khan 2020). In this regard, pollution from non-renewable sources such as fossils, fuels, coal, and firewood and a host of others have caused terminal illnesses as

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