New Insight Into Environmental Quality In Luxembourg

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Abstract

There have been ongoing debate regarding the causal link between environmental degradation nad its main determinants. The aim of this study is to investigate and deliver fresh insight into the causal link between environmental degradation and its main determinants, such as economic growth, renewable energy consumption, non-renewable energy consumption, population and geopolitical risk in Luxembourg over the time period of 1970-2021. Recently developed causality tests, namely the frequency domain causality test proposed by Breitung-Candelon (2006) and the time-varying causality test developed by Shi et al. (2018, 2020), are employed for the main purpose of the study. The empirical results verifies the existence of causal link to be apparent over varying spans and frequencies. Empirical findings have significant implications for policy generation to promote environmental quality in Luxembourg. According to the empirical findings, appropriate policies should be designed considering dynamic link between the indicators to be able to improve environmental quality in Luxembourg, thus, the economic and social structural changes at country and global levels should be taken into account.

Keywords: environmental degradation, Luxembourg, frequency domain causality, time-varying causality