

## **The Nexus between Energy Intensity and Capital-Output Ratio in Bangladesh: An Empirical Study**

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*Energy intensity is expected to be affected by Incremental Capital Output Ratio (ICOR) as higher ICOR necessitates more energy in the production process. Although the importance of ICOR and energy intensity are discussed discretely in the empirical literature, the underlying relationship between these factors is still unexplored, which can lead to significant policy implications. Therefore, the main objective of this paper is to empirically investigate the relationship between ICOR and energy intensity in Bangladesh using annual data ranging from 1990-2018. Unit root test results show that all the concerned variables are stationary at their first difference form. Johansen cointegration test confirms the long-run association among the variables and Granger Causality test reveals unidirectional causalities from ICOR to energy Intensity and ICOR to GDP in the long run. According to the Dynamic Ordinary Least Square (DOLS) estimation results, ICOR and energy intensity are positively related in the long run, and the coefficient of ICOR is 0.16, which is highly inelastic. Furthermore, CUSUM and CUSUMSQ stability tests confirm that parameters are stable, indicating the robustness of the model. Our results are expected to guide the policymakers to formulate long-run strategic policies.*

**Field of Research:** Economics

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