

Year: 2013
Volume: 58
Issue: 2

STUDIA
Universitatis Babes-Bolyai
OECONOMICA

AN EMPIRICAL ANALYSIS OF ENERGY CONSUMPTION AND ECONOMIC GROWTH IN INDIA: ARE THEY CAUSALLY RELATED?

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Abstract. In this paper an attempt is made to present the energy scenario of India in terms of energy consumption, energy security and energy efficiency. Growth trends and the changes in growth trends of these variables have been estimated for the period 1981 to 2010. In addition, the study makes an attempt to study the causal relationship between energy consumption and GDP both at aggregate and disaggregate levels using cointegration and Vector Error Correction (VECM) methods. The empirical results reveal that India is energy insecure, in spite of an increase in energy efficiency. It seems energy consumption and GDP are bidirectional related at the aggregate level. In view of these findings some policy suggestions have been provided.

JEL Classification: Q42, Q43, Q50, Q56

Keywords: Energy security, energy efficiency, causality, cointegration, VECM model, holistic approach, sustainable economic growth

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