

A dynamic analysis of output, energy consumption, and CO₂ emissions in Malaysia

ABSTRACT

Present paper analyzes the interrelations between output, energy consumption, and carbon emissions in light of Malaysia's development experience from a commodity-based economy to an industrial-based economy by means of a vector autoregression (VAR) framework. The results suggest substantial interactions among the three variables. Moreover, manufacturing output tends to exert persistent influences on carbon emissions, energy consumption, and non-manufacturing output. Meanwhile, the significant causal relations from non-manufacturing output to energy variables are found for first few years. These results are robust to the inclusion of additional variables – namely, trade openness, investment, and population – in the system.

Keyword: CO₂ emissions; Causality; Energy–macroeconomy relations; Impulse–responses; Malaysia