

Does oil price shocks mitigate sectoral CO2 emission in Malaysia? evidence from ARDL estimations

ABSTRACT

This study provides new evidence regarding the effects of oil price shocks on sectoral environmental indicators. We used annual time series data for the period 1983–2014 and employed the autoregressive distributed lag (ARDL) modelling approach to estimate the long-run impact of oil price shocks on sectoral CO2 emissions. We found a negative relationship between oil price shocks and CO2 emissions in all sectors; namely, manufacturing and construction, agriculture, transportation, and the oil and gas sectors. This suggests that higher oil price can mitigate sectoral CO2 emissions while lower oil price can increase sectoral CO2 emissions. Generally, income exerts a positive impact on sectoral CO2 emissions, implying that an increase in the level of income invokes sectoral CO2 emissions. However, the level of capital and labour were found to mitigate sectoral CO2 emissions in Malaysia. Thus, we recommend contractionary fiscal measures on oil-related products during lower oil prices.

Keyword: ARDL; CO2 emissions; Malaysia; Oil price shocks; Sectoral analysis

