Asymmetric effect of real exchange rates and oil prices into inflation: empirical evidence in ASEAN-5

ABSTRACT

Inflation is the rate at which the cost of goods and services is rising over time. This study investigates the asymmetric inflationary impact of oil prices and real exchange rates in ASEAN 5 (Indonesia, Malaysia, Philippines, Singapore, and Thailand). The study applies the NARDL (Nonlinear Autoregressive Distributed Lag) method to answer the hypothesis. The data consists of monthly data on consumer price index (CPI), oil prices, real exchange rates from 1979 until 2019. In all sample countries, the findings showed that there is a long-term co-integration between study variables. The findings revealed evidence of a long-run asymmetric inflationary impact of the oil prices in Indonesia, Malaysia, Singapore, and Thailand, whereas short-run asymmetry occurs in Indonesia, Malaysia, and the Philippines. Furthermore, the results showed that an increase in oil prices appears to increase inflation significantly, but the impact of oil prices becomes less or insignificant when oil prices fall in the long run. Meanwhile, the long-run asymmetric inflationary impact of exchange rates only occurs in Thailand, whereas only Singapore has no evidence of short-term asymmetry. Surprisingly, in the case of Thailand, further analysis revealed that an appreciation of home currency seems to increase the local inflation implying that the cost reduction of the imported goods and services were not passed through the consumers. These results offer an alternate interpretation of how inflation responds to exchange rates and oil prices that are useful to the relevant parties in developing an effective mitigation strategy to monitor inflation rates. Future research needs to include the demand-pull factors in the model with structural break.