The Relationship between Thailand Stock Prices and Crude Oil Prices

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ABSTRACT

This paper tries to investigate empirical results of the relationship between stock prices and oil prices over the period from January 2000 to December 2017 using the daily Thailand stock market index (SET) and West Texas Intermediate spot oil prices (WTI). We perform the unit root and cointegration tests for a long run relationship between these two variables. Next, we perform the causal relationship tests between stock prices and oil prices. Due to the limited power of traditional linear Granger causality test, the results may be misleading. We, then, conduct both the tests of linear Granger (1969)'s Granger and nonlinear Granger causality developed by Hiemstra and Jones (1993) and Diks and Panchenko (2006) to identify the possible nonlinear causality between stock prices and oil prices. The results show nonexistence of long run relationship between stock prices and oil prices, but there are both linear and nonlinear Granger causal relationship. Additionally, linear and nonlinear Granger causality tests show significant unidirectional causality from spot oil prices to stock prices. The results support the conservation hypothesis that oil prices lead stock prices, especially for the oil-importing country as in our case. Furthermore, the nonlinear causality test implies the structure breaks caused by some significant economic events which cannot be identified from linearity causality test.

Keywords: Cointegration; Granger Causality; Linear; Nonlinear; Oil-Importing Country