Oil price surges and stock market cycles: evidence from a regime-switching model

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Abstract
The causal relationship identification between crude oil shocks and stock market returns is one of the most commonly discussed issues in economic theory. Such effects should potentially be modeled and analyzed by taking into account major properties of financial time series. Due to its ability to capture important stylized facts, a more sophisticated regime switching model has been adopted in this paper to investigate whether net oil price increases (NOPI) have an impact on the stock market returns of five main oil dependent countries: US, Germany, Japan, Canada and UK over the years 1989-2007. Our study yields new results. In one hand, we find coincidence between periods of economic downturns and major stock market crashes for UK, Canada and Japan all over the sample period. However, just a single bear market phase occurred between 1998/2000 and 2004 seems to coincide with the recent US and German economic collapses. On the other hand, we generally find that NOPI for WTI significantly contributes to US and German stock market instabilities either during recession (insignificant for U.S.) or expansion whereas it is the Brent NOPI that tends to increase Japanese and Canadian stock market turbulences. Otherwise, the stock markets remain stable. The U.K. stock market shows different reactions to the NOPIs during each regime where it reacts positively to Brent during turbulent times and negatively to WTI during stable times. Inspired by some recent studies and some real world economic events, we provide new interesting explanations for these findings.

Keywords: oil shocks, stock market cycles, regime switching