Research proposal

The Effects of Oil Price Shocks on the Ukrainian Economy

Diana Obarianyk

Motivation

Oil price shocks are one of the main sources of fluctuations in aggregate economic activity and any particular shock in oil prices can have a significant effect on government revenue and the economy. Ukraine suffers from shortage of internal oil resources, so it's dependent on the other countries to satisfy all internal needs. Understanding the consequences of oil price shocks on macroeconomic aggregates is important and relevant for Ukraine for several reasons. It can have important policy implications especially in assessing the effect of large unexpected oil price shocks and the associated response of monetary authorities. It is useful for policy makers in order to maintain stable economy and stable inflation rate. Furthermore, evaluating these potential asymmetric effects is crucial to correctly model oil prices and selecting among alternative theories of the transmission mechanism behind oil price shocks. Investigating the impact of oil price fluctuations on the Ukrainian macroeconomy can serve as the key to understanding the formation of macroeconomic parameters which predetermine social and economic development.

Methodology

A common view in the literature is that the effect of oil price shocks on macroeconomic aggregate are asymmetric. The initial proposal to focus only on oil price increases was defined by Hamilton (1983), who introduced the net oil price increase. The literature proposed several linear and nonlinear measures of oil price shocks attempting to understand relationship between oil price shocks and macroeconomic variables. The asymmetric response of output to oil price shocks of different sign has been motivated by different theoretical models. However linear, symmetric models of the transmission mechanism of oil price shocks have not been able to account for environments where responses to shocks are, potentially, asymmetric or nonlinear. One of the most common measures is the threshold model proposed by Mork (1989) accounting for positive and negative oil price shocks which has been employed in various studies.

The goal is to study the effects of oil price shocks within a threshold vector autoregression (TVAR) and to estimate the impact of oil price shocks on Ukrainian macroeconomic variables, such as real GDP, inflation level, exchange rate and unemployment rate. By employing simulation methods, I want to trace the effects of positive and negative oil price shocks on the macroeconomic variables through the Impulse Response Function (IRF). Fact that output may respond differently to positive and negative oil price shocks motivates to test the symmetry of the economy's dynamic responses to oil price increases and decreases for Ukrainian economy.

Expected Results

I would like to investigate the question how oil price fluctuations could influence the Ukrainian macroeconomy and to analyze the impact of possible changes in world oil prices on the main Ukrainian economic indicators, such as GDP, unemployment, and inflation. Using a threshold VAR model, I want to investigate the presence of asymmetry in shocks in oil prices and identify different regimes of uncertainty for estimation the effects of oil price shocks. I would like to check if response of output growth to positive oil price shocks is larger than its response to negative oil price shocks and the reduction in inflation due to a negative oil price shock is larger than the increase in inflation following a positive oil price shock.

References

Kilian, L., Vigfusson, R.J., 2011b. Are the responses of the U.S. economy asymmetric in energy price increases and decreases? Quantitative Economics.

Luiggi Donayre & Neil A. Wilmot, 2016. "The Asymmetric Effects of Oil Price Shocks on the Canadian Economy," International Journal of Energy Economics and Policy, Econjournals.

Moayad Al Rasasi & Mustafa Yilmaz, 2016. "The Effects of Oil Shocks on Turkish Macroeconomic Aggregates," International Journal of Energy Economics and Policy, Econjournals.

Troug, Haytem & Murray, Matt, 2015. "The Effects of Asymmetric Shocks in Oil Prices on the Performance of the Libyan Economy," MPRA Paper 68705, University Library of Munich, Germany.

Van Robays, Ine, 2012. "Macroeconomic uncertainty and the impact of oil shocks," Working Paper Series 1479, European Central Bank.