Comments on

　"Nature of Oil Price Shocks and Monetary Policy: A Case of Korea"

by Junhee Lee, Joon H. Song

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Lee and Song's paper analyzes the effect of oil shocks on the Korean economy and examines the role of monetary policy in dealing with oil shocks. In doing this, they employ two analytical tools out of the standard macroeconomists' toolbox, structural VAR and Dynamic Stochastic General Equilibrium model (DSGE). However, their analytical tools are particularly constrained in this case for two reasons. First, the Asian currency crisis in the late 1990s caused serious turmoil and significant structural changes for the Korean economy. Hence, in addition to dividing the sample around the Asian currency crisis, Lee and Song dropped the observations in 1998 and 1999. This limits the sample size for the post-Asian crisis period to less than forty observations of quarterly data. It is obviously a very small data set for an application of time-series techniques.

Second, oil price movements in the 2000s exhibit large swings relative to the post-crisis sample period. Like Japan's asset price bubble episode in the late 1980s, the existence of a large one-time fluctuation in asset prices often spoils sophisticated econometric techniques that rely on asymptotic methods. I am particularly afraid that the nature of estimated VAR system for the post-Asian crisis sample might be dominated by the effect of volatile oil price movements toward the end of the sample period as documented in Figure 1 of their paper.

Even though the small sample size imposes serious constraints, Lee and Song have presented a worthy analysis of the issues addressed in their paper using the tools employed. As a conclusion to the first half of the paper, the authors argue that the persistent increase of the oil price in the 2000s is induced by the increase in demand for oil, in contrast with the oil price fluctuations in the pre-crisis period that are mostly caused by supply-side disturbances. While this conclusion seems reasonable, their VAR analysis obviously suffers because of the limited sample size. For example, in Figure 5, impulse response functions of most of the variables exhibit rather unusual wave shapes. I suspect that this reflects the effect of wild fluctuations of the oil price in 2008 and 2009. A related minor point is that because the authors included the interest rate variable, which is available only for the period after

1987, in their VAR analysis, their pre-crisis sample does not contain important information about the first and second oil crisis episodes. Therefore, we have to be particularly careful in interpreting the VAR results presented here.

I also have some comments on the DSGE results. First, while the relative size of the price stickiness parameters makes sense, I am not very comfortable with the fact that the estimated wage stickiness parameter (0.539) is lower than any other price stickiness parameters, even lower than oil price stickiness (0.685). The result is even more surprising with pre-crisis estimates, with the wage stickiness parameter being 0.149 and the oil price stickiness parameter being 0.464. I hope that the authors provide some discussion about this problem.

Second, in simulating the effects of different monetary policy rules in Table 6, they use five benchmark values (10^{th}Per, -Mode, Zero, Mode, 90thPer) for $\rho_{\pi non}$. However, why is the negative value of the mode (-Mode) used? Is there any justification for this, or has any previous study used this value?

Third, from the simulation results reported in Table 6, the authors conclude that the monetary policy rule, which accommodates oil price inflation, generally works well, except for the case of very persistent technology shocks. However, exactly how costly is it for the Central Bank to deviate from the optimal policy rule? The numbers reported in Table 6 seem to suggest that the cost might not be very large. I would like to see the authors discuss the economic significance of the numbers reported in Table 6, as well as their implications for monetary policy in practice.