

EF5162 ASSIGNMENT 2

DUE: 2020-04-13, 10AM

Submission instructions

Same as previous assignment except for the due date/time. Please re-read the submission instructions of the previous assignment carefully again.

Kilian, Lutz and Cheolbeom Park (2009) “The impact of oil price shocks on the U.S. stock market,” *International Economic Review*, Vol. 50, pp. 1267–1287.

Assignment

The assignment is to replicate the analysis in [Kilian and Park \(2009\)](#) and to check whether or how their results change with some changes in the data or statistical methodology.

The following are some suggested approaches to this replication assignment. [Kilian and Park \(2009\)](#) do not provide any summary statistics of the variables used in their four variable VAR. What are the time series properties of the four variables? In particular, are they stationary time series as assumed in the analysis?

[Kilian and Park \(2009, \(1\), p.1270\)](#) use a VAR(24) and claim that the “qualitative results [...] are not sensitive to the lag order” ([Kilian and Park, 2009, footnote 8, p.1277](#)). Check how sensitive or not the results are to the VAR lag order. Discuss how you would you select an appropriate lag order.

The monthly sample analyzed in [Kilian and Park \(2009\)](#) ends in 2006. The assignment bundle provides data updated to 2018-06 that includes the financial crisis period. Do the same results as in [Kilian and Park \(2009\)](#) hold up to the extended or more recent sample?

There is some controversy regarding the measure of real economic activity used in [Kilian and Park \(2009\)](#). The assignment bundle provides two alternative measures of real economic activity. The first is the linearly detrended shipping cost based measure as originally used in [Kilian and Park \(2009\)](#) but corrected and extended in [Kilian \(2019\)](#). The alternative is the differenced industrial production based measure as proposed in [Hamilton \(?\)](#). (The error in the original shipping cost based measure was pointed out in an earlier working paper version of [Hamilton \(?\)](#).) How robust are the results in [Kilian and Park \(2009\)](#) to alternative measures of real economic activity?

Advice

Your marks for the assignment will largely depend on how effectively you use tables and graphs to present your results. Your report should consist of a series of tables or graphs. Each table or graph should be accompanied by a detailed caption that explains which result of the [Kilian and Park \(2009\)](#) analysis you are considering and comparing.

Be sure to provide an appendix that provides *full* instructions to reproduce all of the analysis reported. If you used code written by others, be sure to indicate how and where you obtained them so that anyone reading the appendix can reproduce your analysis using the same code.

References

- Hamilton, James D. (?) “Measuring Global Economic Activity,” *Journal of Applied Econometrics*, Vol. ?, p. ?
- Kilian, Lutz (2019) “Measuring global real economic activity: Do recent critiques hold up to scrutiny?” *Economics Letters*, Vol. 178, pp. 106–110.