

ECON 511 – TIME SERIES ANALYSIS — PROJECT IDEAS
NOVEMBER 11, 2015

Here are some project ideas you can look into. These are just guidelines. You can of course choose to do whatever you like, but the ideas below may motivate you. I am looking for a thoughtful analysis from your projects. At the very minimum, I want you to demonstrate that you understand the concepts we have studied in class and that you can replicate them in either a theoretical or empirical framework. Your projects should of course aim above this and should look at using the concepts we have covered to propose novel ideas or analyze previously studied ideas under a new light. The best projects will propose research ideas and methodologies that will result in a paper, hopefully to be published in a decent journal. A safe approach for a decent project would be to replicate the analysis of one of the papers presented below. If you decide to do so, make sure you provide all codes and graphs / tables presented in the original paper, and make sure you present the analysis in your own words.

Here are some ideas you may be motivated by:

- 1) Replicate an empirical paper on the relationship between interest rates and GNP. Has the monetary policy any effect on production?
- 2) Analyze global warming effects on the economy by studying the relationship between Temperature, CO₂, and GNP.
- 3) The relationship between PPP and Unit Roots: “Real Exchange Rate Behavior: The Recent Float from the Perspective of the Past Two Centuries”, by J. Lothian and M. Taylor, *Journal of Political Economy* 1996, vol 104.
- 4) Impulse Response Functions: “Estimation and Inference of Impulse Responses by Local Projections”, by Oscar Jordà, *American Economic Review*, 95(1), 161-182.
- 5) Forecasting: “Approximately Normal Tests for Equal Predictive Accuracy in Nested Models”, by Todd E. Clark and Ken West.
- 6) Forecasting and Unit Roots: “Unit Root Tests are Useful for Selecting Forecasting Models”, by Diebold, F.X. and L. Kilian, *Journal of Business and Economic Statistics* (2000), 18, 265-273.
- 7) Exchange Rates, Unit Roots and Cointegration: “Exchange Rates and Fundamentals”, by Charles Engle and Kenneth D. West, *Journal of Political Economy* 113, June 2005, 485-517.
- 8) Time Series and Growth Models: “Time Series Tests of Endogenous Growth Models”, by Charles Jones, *The Quarterly Journal of Economics*, 1996.
- 9) Are Explosive Processes in the Economy?: First design a test for explosive processes versus I(1) or I(2) processes and second find which economic variables may follow an explosive process.
- 10) Unit Root Tests with changes in the variance: Investigate how robust are different unit root tests to different types of changes in the error variance.
- 11) Estimation of Trends: Global Warming.
- 12) “Macroeconomics and Reality”, by Christopher A. Sims *Econometrica* Vol. 48, No. 1 (Jan., 1980), pp. 1-48.
- 13) “Estimation and Inference of Impulse Responses by Local Projections”, by Oscar Jordà, *American Economic Review*, 95(1), 161-182.
- 14) “The Dynamic Effects of Aggregate Demand and Supply Disturbances”, by Olivier Jean Blanchard and Danny Quah, *The American Economic Review*, Vol. 79, No. 4. (Sep., 1989), pp. 655-673.
- 15) “Business cycle analysis without much theory: A look at structural VARs”, by Thomas Cooley and Mark Dwyer, *Journal of Econometrics* (1998), 83.
- 16) “Explaining The Great Moderation: It Is Not The Shocks”, by D. Giannone, M. Lenza and L. Reichlin (2007), CEPR working paper.
- 17) “Output fluctuations in the United States: what has changed since the early 1980s?”, by McConnell, M., and G.Perez-Quiros (2002), *American Economic Review*, 90(5), 1464-1476.