

Course Title: Themes in Applied Macroeconomics

Course Type: Core

Course Instructor: Suman Das

Course Level: Ph.D.

Credits: 4

Lectures hours: 4 hours/week

Pre-requisite: Knowledge of Econometrics, Macroeconomics and Open Economy Macroeconomics as taught at the MA level.

Evaluation: Mid-term (40%); Assignment (20%); End-term (40%)

Course objective: The course intends to introduce advanced topics in applied macroeconomics including open economy macroeconomics that are of contemporary interest and relevance. The course will cover various econometric methods used in these applied macroeconomic models.

Learning outcome: Students will be exposed to advanced econometric tools used in applied macroeconomic analysis. This will help them in their future career, either as academic researchers or as corporate analysts engaged in applied macroeconomic modelling to judiciously use advanced econometric methods and interpret the results appropriately.

Course Content: This course elucidates the various topics of macroeconomics and open economy macroeconomics that have gained importance from policy perspective. The course is an extension on the empirical front of macroeconomics for closed and open economies. The topics broadly include the effect and transmission of various macro policy shocks in the economy, current account and exchange rate dynamics, cointegrating behavior of macroeconomic variables, assessment of the impact of news announcements and financial crisis on the macroeconomy, and finally an overview of real time macroeconomic data. These topics will be discussed in the light of advanced econometric methods that are used to explain the changing pattern of macroeconomic indicators during different phases of macroeconomic events occurring overtime.

1. Introduction

This module will present an overview of the econometric methods used in analyzing macroeconomic variables, highlight the fundamentals of the methods and discuss their appropriateness in carrying out applied macroeconomic analysis.

2. Assessing the macroeconomic policy shocks: Some empirical underpinnings

This module presents the various monetary policy shocks that impact the economy overtime. The effects of these policy shocks will be evaluated in a VAR framework to show how these policies affect the other macroeconomic indicators in the economy. The module also includes understanding of the dynamics of current account with changing regimes of exchange rates. Lastly, it would cover information on the evidence of long-run relationships among macroeconomic variables.

2.1 Identification and transmission of macroeconomic policy shocks

Suggested Readings:

- Bagliano, F. C., & Favero, C. A. (1998). Measuring monetary policy with VAR models: An evaluation. *European Economic Review*, 42(6), 1069-1112.
- Musthafa, Muhammadu Theseem, Thanh Le, and Sandy Suardi. "Monetary policy transmission in Sri Lanka." *Applied Economics* (2023): 1-18.
- Bernanke, B. S., Boivin, J., & Eliasziw, P. (2005). Measuring the effects of monetary policy: A Factor-Augmented Vector Autoregressive (FAVAR) Approach. *The Quarterly Journal of Economics*, 120(1), 387-422.
- Mumtaz, H., & Surico, P. (2009). The transmission of international shocks: A Factor-Augmented VAR Approach. *Journal of Money, Credit and Banking*, 41, 71-100.

Additional Readings:

- Fung, B. (2002). *A VAR analysis of the effects of monetary policy in East Asia* (No. 119). Bank for International Settlements.
- Jacobson, T., Jansson, P., Vredin, A., & Warne, A. (1999). *A VAR model for monetary policy analysis in a small open economy* (No. 77). Sveriges Riksbank Working Paper Series.

2.2 Current account and exchange rate dynamics

Suggested Readings:

- Gervais, O., Schembri, L., & Suchanek, L. (2016). Current account dynamics, real exchange rate adjustment, and the exchange rate regime in emerging-market economies. *Journal of Development Economics*, 119, 86-99.
- Arghyrou, M. G., & Chortareas, G. (2008). Current account imbalances and real exchange rates in the euro area. *Review of International Economics*, 16(4), 747-764.
- Chinn, M. D., & Wei, S. J. (2013). A faith-based initiative meets the evidence: does a flexible exchange rate regime really facilitate current account adjustment?. *Review of Economics and Statistics*, 95(1), 168-184.
- Freund, C. (2005). Current account adjustment in industrial countries. *Journal of International Money and Finance*, 24(8), 1278-1298.

Additional Readings:

- Lee, J., & Chinn, M. D. (2006). Current account and real exchange rate dynamics in the G7 countries. *Journal of International Money and Finance*, 25(2), 257-274.
- Lee, J., & Chinn, M. D. (1998). The Current Account and the Real Exchange Rate: A Structural VAR Analysis of Major Currencies. *NBER Working Paper*, (w6495).

2.3 Long-term cointegrating behaviour in macroeconomic variables

Suggested Readings:

- Kunst, R., & Neusser, K. (1990). Cointegration in a macroeconomic system. *Journal of Applied Econometrics*, 5(4), 351-365.
- Kwon, C. S., & Shin, T. S. (1999). Cointegration and causality between macroeconomic variables and stock market returns. *Global Finance Journal*, 10(1), 71-81.
- Humpe, A., & Macmillan, P. (2009). Can macroeconomic variables explain long-term stock market movements? A comparison of the US and Japan. *Applied Financial Economics*, 19(2), 111-119.
- Khan, M. K., Teng, J. Z., & Khan, M. I. (2019). Cointegration between macroeconomic factors and the exchange rate USD/CNY. *Financial Innovation*, 5(1), 1-15.

Additional Readings:

- Gopinathan, R., & Durai, S. R. S. (2019). Stock market and macroeconomic variables: New evidence from India. *Financial Innovation*, 5, 1-17.
- Ibrahim, M. (1999). Macroeconomic variables and stock prices in Malaysia: An empirical analysis. *Asian Economic Journal*, 13(2), 219-231.

3. Macroeconomic volatility and crises modelling

This module will cover aspects relating to the news announcements made by the monetary authorities and the dynamics of volatility in macroeconomic indicators associated with these announcements, in an econometric framework. These news announcements are a part of the policy decisions arrived at by monetary authorities considering the current state of the economy. Besides, the module will also present some evidence on the macroeconomic impact of different financial crises that have occurred overtime.

3.1 News statements and macroeconomic instability

Suggested Readings:

- Ederington, L. and J.H. Lee (1993). How markets process information: News releases and volatility. *Journal of Finance*, 48, 1161-1191.
- Jones, C.M., O. Lamont and R.L. Lumsdaine (1998). Macroeconomic news and bond market volatility. *Journal of Financial Economics*, 47, 315-337.
- Füss, R., Mager, F., Wohlenberg, H., & Zhao, L. (2011). The impact of macroeconomic announcements on implied volatility. *Applied Financial Economics*, 21(21), 1571-1580.
- Brenner, M., Pasquariello, P., & Subrahmanyam, M. (2009). On the volatility and co-movement of US financial markets around macroeconomic news announcements. *Journal of Financial and Quantitative Analysis*, 44(6), 1265-1289.

Additional Readings:

- Kuttner, K. N. (2001). Monetary policy surprises and interest rates: Evidence from the Fed funds futures market. *Journal of Monetary Economics*, 47(3), 523-544.
- Engle, R. (1982). Autoregressive conditional heteroskedasticity with estimates of the variance of UK Inflation. *Econometrica*, 50, 987-1008.

3.2 Crises and the Macroeconomy: Some Empirical Evidence

Suggested Readings:

- Summers, L. H., Minsky, H. P., Samuelson, P. A., Poole, W., & Volcker, P. A. (1991). Macroeconomic consequences of financial crises. In *The Risk of Economic Crisis* (pp. 135-182). University of Chicago Press.
- Frankel, J. A., & Rose, A. K. (1996). Currency crashes in emerging markets: An empirical treatment. *Journal of International Economics*, 41(3-4), 351-366.
- Chang R, Velasco A (1998) The Asian liquidity crisis. NBER Working Paper 6796, National Bureau of Economic Research, Cambridge
- Kaminsky, G. L., & Reinhart, C. M. (1999). The twin crises: the causes of banking and balance-of-payments problems. *American Economic Review*, 89(3), 473-500.

Additional Readings:

- Glick, R., & Hutchison, M. M. (2013). Models of currency crises. *The Evidence and Impact of Financial Globalization*, 3, 485-497.
- Breuer, J. B. (2004). An exegesis on currency and banking crises. *Journal of Economic Surveys*, 18(3), 293-320.

4. Introduction to real-time data in macroeconomics

This module presents real time data sets that are of importance to macroeconomists and policy makers. The dataset is part of the Federal Reserve Bank of Philadelphia's Research Department, and it deals with real-time macroeconomic data, surveys of macroeconomic forecasts and macroeconomic modeling for the US economy. This section will deal with the method of construction of real time data, explore the properties of variables in the data set and illustrate how data revisions might affect forecasts which have repercussions for policy decisions.

Suggested Readings:

- Croushore, D., & Stark, T. (2001). A real-time data set for macroeconomists. *Journal of Econometrics*, 105(1), 111-130.
- Croushore, D. (2006). Forecasting with real-time macroeconomic data. *Handbook of Economic Forecasting*, 1, 961-982.

- Stark, T., & Croushore, D. (2002). Forecasting with a real-time data set for macroeconomists. *Journal of Macroeconomics*, 24(4), 507-531.

Readings

- Dua, P. (Ed.). (2023). *Macroeconometric Methods: Applications to the Indian Economy*. Springer Nature.
- Campbell, J.Y., A.W. Lo and C. McKinlay (1996). *The Econometrics of Financial Markets*. Princeton University Press.
- Hamilton, J. D. (2020). *Time Series Analysis*. Princeton University Press.
- Rajan, R. G., & Zingales, L. (2004). *Saving capitalism from the capitalists: Unleashing the power of financial markets to create wealth and spread opportunity*. Princeton University Press.