Syllabus for

Macroeconomic Consequences of Uncertainty Shocks

Short Course tought at the EUI

Christian Bayer

Winter Term 2014

Time

The course is organized in 5 sessions of two hours each. The sessions take place on November 3, 10, 17, 24 and on December 8, always from 11.00 to 13.00.

Course Description

Economic uncertainty has recently been discussed by academic economists, by policy makers and in the public press as an important driver of business cycles in general and in particular as an important factor in the Great Recession and the European (Debt) Crisis.
This course aims at giving an overview over the recent literature on the impact of uncertainty shocks on macroeconomic outcomes. It starts with an overview over the literature describing the empirical uncertainty-business cycle relationship and then continues with a discussion of the main theoretical mechanisms through which uncertainty can affect macroeconomic outcomes. It concludes with a review of the literature that assesses the quantitative importance of these channels and hence sheds light on the causal uncertainty-business cycle relationship.

Requirements

Students are required to have the compulsory reading list for each session well prepared such as to actively participate in the discussion in class.
Students should develop a research proposal, to be presented in a 15 minutes presentation on December 8 and to be handed in written (up to 5 pages) by the last week before the Christmas break taking the discussion in class into account.

Topics/Sessions/Reading List

We will first discuss empirical questions regarding the measurement of uncertainty, then turn to the mechanisms through which uncertainty might influence aggregate activity and finally revisit them discussing their quantitative importance.

The literature marked with asterisk [*] is compulsory as a preparatory reading. The split up in sessions is only indicative and the allocation of topics to sessions might change depending on the length of discussions. Literature might appear twice in the list when different aspects of a paper are covered in different sessions.

Session 1

1. **Introduction**

   * Bloom, Nick (2014): "Fluctuations in Uncertainty", *Journal of Economic Perspectives*, Vol. 28(2), 153 – 176

2. **The Empirical Uncertainty Business Cycle Relationship**

   a) Aggregate Measures of Uncertainty

      * Alexopoulos, Michelle, and John Cohen (2009): "Uncertain Times, Uncertain Measures." *Working Paper 352*, University of Toronto, Department of Economics.

      Baker, Scott R. and Bloom, Nicholas and Davis, Steven J. (2013): "Measuring Economic Policy Uncertainty". *Chicago Booth Research Paper* No. 13-02.

      * Bloom, Nicholas. (2009). "The Impact of Uncertainty Shocks." *Econometrica*, 77(3): 623–85. (compulsory: empirical part)

      Scotti, Chiara. (2013): "Surprise and Uncertainty Indexes: Real-time Aggregation of Real-activity Macro Surprises." *International Finance Discussion Paper 1093*, Board of Governors of the Federal Reserve System.

      * Jurado, Kyle, Sydney C. Ludvigson, and Serena Ng. (2013): "Measuring Uncertainty." *NBER Working Paper 19456.*

b) Cross-Sectional Measures of Uncertainty

* Bachmann, R., S. Elstner, E. R. Sims (2013): "Uncertainty and Economic Activity: Evidence from Business Survey Data," *American Economic Journal: Macroeconomics*, 5(2), 217–49.

Bachmann, Rüdiger, and Christian Bayer (2014): "Investment Dispersion and the Business Cycle." *American Economic Review* 1392–1416..

* Bachmann, Rüdiger, and Christian Bayer. (2013): "Wait-and-See Business Cycles?" *Journal of Monetary Economics* 60(6): 704–719. (compulsory: empirical parts)

* Bloom, Nick, Stephen Bond, and John Van Reenen. (2007): "Uncertainty and Investment Dynam- ics." *Review of Economic Studies*, 74(2): 391–415

Bloom, Nick & Max Floetotto & Nir Jaimovich & Itay Saporta-Eksten & Stephen J. Terry, (2014): "Really Uncertain Business Cycles," Working Papers 14-18, C*enter for Economic Studies, U.S. Census Bureau.*

Kehrig, Matthias (2012): "The Cyclicality of Productivity Dispersion" US Census Bureau Center for Economic Studies Paper No. CES-WP-11-15.

Leahy, John, and Toni Whited. (1996): "The Effect of Uncertainty on Investment: Some Stylized Facts." *Journal of Money, Credit and Banking*, 28(1): 6483.

Meghir, Costas, and Luigi Pistaferri. (2004): "Income Variance Dynamics and Heterogeneity." *Econometrica* 72(1): 132.

* Storesletten, Kjetil, Chris I. Telmer, and Amir Yaron. (2004): "Cyclical Dynamics in Idiosyncratic Labor Market Risk." *Journal of Political Economy*, 112(3): 695–717.

3. **Theoretical Mechanisms A: Investment and Uncertainty**

a) Oi-Hartman-Abel Effects

*Abel, Andrew B. (1983): "Optimal Investment Under Uncertainty." *American Economic Review* 73(1): 228–33.

Hartman, Richard (1972): "The Effects of Price and Cost Uncertainty on Investment." *Journal of Economic Theory*, 5(2): 258–66.

Oi, Walter Y. (1961): "The Desirability of Price Instability under Perfect Competition." *Econometrica*, 29(1): 58–64.

b) Real Option Effects

Bernanke, Ben S. (1983): "Irreversibility, Uncertainty, and Cyclical Investment." Quarterly *Journal of Economics* 98(1): 85–106.

Bertola, Giuseppe, Luigi Guiso, and Luigi Pistaferri. (2005): "Uncertainty and Consumer Durables Adjustment." Review of Economic Studies 72(4): 973–1007.

Bloom, Nicholas. (2009). "The Impact of Uncertainty Shocks." *Econometrica*, 77(3): 623–85.

Cooper, Russell W., and John C. Haltiwanger. (2006): "On the Nature of Capital Adjustment Costs." *Review of Economic Studies*, 73(3): 611–33

* Dixit, Avinash. (1992): "Investment and Hysteresis." *Journal of Economic Perspectives*, 6(1): 107-132. (compulsory only pages 107–117)

Dixit, Avinash K., and Robert S. Pindyck. (1994): "Investment under Uncertainty." Princeton: Princeton University Press

c) Frequency (of adjustment) Effects

* Bachmann, Rüdiger, and Christian Bayer (2014): "Investment Dispersion and the Business Cycle." *American Economic Review* 1392–1416..

* Vavra, J. S. (2014). Inflation dynamics and time-varying volatility: New evidence and an Ss interpretation, *Quarterly Journal of Economics*, 129(1).

Berger, D., & Vavra, J. S. (2013): "Volatility and Pass-through" NBER WP # 19651

Session 2

Theoretical Mechanisms B: Other Firm Policies and Uncertainty

a) Costs of Financing

Glenn W. Boyle & Graeme A. Guthrie (2003): "Investment, Uncertainty, and Liquidity", *The Journal of Finance*, 58(5), 2143–2166.

* Gilchrist, S., Sim, J. W., & Zakrajek, E. (2014): "Uncertainty, financial frictions, and investment dynamics." *NBER WP # 20038.*

b) Precautionary Pricing

* Benjamin Born, Johannes Pfeifer (2014), "Policy risk and the business cycle", *Journal of Monetary Economics*, Vol. 68, 68-85.

* Fernández-Villaverde, J., Guerrón-Quintana, P.A., Kuester, K., Rubio-Ramírez, J.F., (2012): "Fiscal Volatility Shocks and Economic Activity". Mimeo. University of Pennsylvania.

Session 3

Theoretical Mechanisms C: Households and Uncertainty

a) Precautionary Labor Supply

* Josep Pijoan-Mas (2006): "Precautionary savings or working longer hours?", *Review of Economic Dynamics*, 9(2),326–352.

Flodén, M. (2006): "Labour Supply and Saving Under Uncertainty". *The Economic Journal*, 116: 721–737.

Basu, S., & Bundick, B. (2012): "Uncertainty shocks in a model of effective demand", *NBER WP #18420.*

b) Precautionary Savings and Portfolio Choice

* Bayer, C., Lütticke, R., Pham-Dao, L., & Tjaden, V. (2014): "Precautionary Savings, Illiquid Assets, and the Aggregate Consequences of Shocks to Household Income Risk.", *mimeo*, University of Bonn.

Storesletten, Kjetil & Telmer, Chris I. & Yaron, Amir, (2001): "The welfare cost of business cycles revisited: Finite lives and cyclical variation in idiosyncratic risk," *European Economic Review*, 45(7), 1311–1339.

* Sterk, V., & Ravn, M. (2013): "Job Uncertainty and Deep Recessions". *2013 Meeting Papers (No. 921). Society for Economic Dynamics.*

Session 4

Quantitative Models

a) How important are real options effects really?

Bachmann, Rüdiger, and Christian Bayer (2014): "Investment Dispersion and the Business Cycle." *American Economic Review* 1392–1416..

* Bachmann, Rüdiger, and Christian Bayer. (2013): "Wait-and-See Business Cycles?" *Journal of Monetary Economics* 60(6): 704–719.

* Bloom, Nick & Max Floetotto & Nir Jaimovich & Itay Saporta-Eksten & Stephen J. Terry, (2014): "Really Uncertain Business Cycles," Working Papers 14-18, C*enter for Economic Studies, U.S. Census Bureau.*

* Gilchrist, S., Sim, J. W., & Zakrajek, E. (2014): "Uncertainty, financial frictions, and investment dynamics." *NBER WP # 20038.*

b) How important is policy uncertainty?

* Benjamin Born, Johannes Pfeifer (2014), "Policy risk and the business cycle", *Journal of Monetary Economics*, Vol. 68, 68-85.

* Fernández-Villaverde, J., Guerrón-Quintana, P.A., Kuester, K., Rubio-Ramírez, J.F., (2012): "Fiscal Volatility Shocks and Economic Activity". Mimeo. University of Pennsylvania.

c) How important is precautionary labor supply?

 * Basu, S., & Bundick, B. (2012): "Uncertainty shocks in a model of effective demand", *NBER WP #18420.*

d) How important are precautionary savings?

 * Bayer, C., Lütticke, R., Pham-Dao, L., & Tjaden, V. (2014): "Precautionary Savings, Illiquid Assets, and the Aggregate Consequences of Shocks to Household Income Risk.", *mimeo*, University of Bonn.

 * Sterk, V., & Ravn, M. (2013): "Job Uncertainty and Deep Recessions". *2013 Meeting Papers (No. 921). Society for Economic Dynamics.*