

The New Keynesian Model

Harris Dellas*

Abstract

These lectures notes contain:

- An introduction to the basic NK model: Its key features (the RBC model with nominal rigidity and imperfect competition), properties and main policy implications (price stability, inflation targeting).
- An evaluation of its empirical performance (rather poor: It has trouble generating inertia in output and inflation, plausible interest rate behavior, ...).
- A discussion and evaluation of extensions (the DSGE model) that have been proposed in order to improve its performance: Real rigidities and various ad hoc price setting schemes (backward indexation, myopia,..). They work better empirically but are conceptually unsatisfactory (plus other problems).
- A presentation of alternative, competing models, such as the sticky information model (which does not work either), or models with learning (which seem to work better).
- A discussion of recent advances involving financial frictions and the recent financial crisis-recession.

We conclude that the NK model may not have lived up to expectations.

*Department of Economics, University of Bern, CEPR. Address: VWI, Schanzeneckstrasse 1, CH 3012 Bern, Switzerland. Tel: (41) 31-631-3989, email: harris.dellas@vwi.unibe.ch, Homepage: <http://staff.vwi.unibe.ch/dellas/>

Course Outline

The New Keynesian (NK) model provides a theoretical framework for studying inflation and the business cycle. It is nowadays the main vehicle for the analysis of monetary policy.

Course objective: Discussion and evaluation of the NK model

Section 1:

Introduction to the RBC model

Main features and properties

Section 2:

A. Introduction to the baseline NK model

- What are its key features?
- What are its main properties?
- What are its main policy implications?
 - What should the objectives of monetary policy be?
 - How should policy be conducted in order to attain these objectives?

B. Evaluation of its theoretical underpinnings and its empirical performance

Should the model be taken seriously as a laboratory for the study of real world issues?
How satisfying are its assumptions and how well does it fit the data?

Section 3: Extensions of the basic NK model (the DSGE model)

- Abandonment of rationality-rational expectations in price setting
 - Myopic firms/agents
 - Backward indexation
- Introduction of real rigidities

Evaluation of the extended NK (DSGE) model

How satisfying are its assumptions and how well does it fit the data?

Section 4: *The main rival to the NK model:* The sticky information model

- Key features and main properties.
- Empirical performance.
- Evaluation.
- Extensions.

Section 5:

Another rival: A model with signal extraction and learning.

Section 6:

Financial frictions and the business cycle.

References

Jordi Galí: Monetary Policy, Inflation and the Business Cycle, 2008, Princeton University Press.

Much of what we will be doing in section 1 of the course (the baseline NK model) is related to the material in the book (mostly ch. 2,3,4).

Carl Walsh Monetary Theory and Policy, 2003, MIT Press, ch. 5 (specially after p. 216), also contains related material.

In addition there are several other papers that will be discussed in class in sections 2 and 3. The following papers can be found at my web page,

<http://staff.vwi.unibe.ch/dellas/research.html>

F. Collard and H. Dellas, 2006a, Monetary misperceptions and inflation dynamics, *JMCB*, forthcoming. *

F. Collard, H. Dellas, and F. Smets, 2009, Imperfect information and the business cycle," *JME*, October. *

F. Collard and H. Dellas, 2009, Price resetting and inertia, *J. of Macroeconomics*. *

M. Canzoneri, F. Collard, H. Dellas and B. Diba, 2008, Withering government spending multipliers. * (time permitting).

F. Collard and H. Dellas, 2006b, The case for inflation stability *JME*.

F. Collard and H. Dellas, 2006c, Information updating and Inertia. *

F. Collard and H. Dellas, 2005b, Dissecting the NK model. *

Those with a * are the more important ones. Fabrice Collard's web page, <http://fabcol.free.fr/index.php?page=notes> also contains a lot of useful material on both the NK model and on numerical solution methods for such models.

Finally, the following papers may be useful.

Bernanke, Ben, M. Gertler, and S. Gilchrist, 1999, "The Financial Accelerator in a Quantitative Business Cycle Framework," Handbook of Macroeconomics, John Taylor and Michael Woodford editors.

M. Canzoneri, R. Cumby and B. Diba, 2007, Euler equations and money market interest rates: A challenge for monetary policy models, *Journal of Monetary Economics*, October 2007, 54 (7), 1863-1881.

Canzoneri, M., R. Cumby, B. Diba and D. Lopez-Salido, 2008, Monetary Aggregates and Liquidity in a Neo-Wicksellian Framework, *Journal of Money, Credit and Banking*, 40(8), 1667-1698.

Christiano, L, C. Evans, and M. Eichenbaum, 2005, "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," *Journal of Political Economy*, 113 (1),1-45.

Smets, F. and R. Wouters, 2003, "An Estimated Stochastic Dynamic General Equilibrium Model of the Euro Area" *Journal of the European Economic Association*", 1, 1123-1175.

F. Collard and H. Dellas, 2007, "Technology shocks and employment," *Economic Journal*, vol. 115, pp. 907-927.

Galí, J., 1999, "Technology, Employment and the Business Cycle," *American Economic Review*, 89(1), 249–271.