Applied Macroeconomics – Syllabus

Bengt Assarsson, Fall 2013

1. Organization of the course

- ✓ 10 lectures, 2 introductory lectures, 6-7 combined presentations/lectures, 1 finalizing lecture
- ✓ by students: presentations, discussants
- ✓ examination: 10 pages essay on relevant subject
- ✓ compulsory attendance at lectures (max 2 times of absence)

2. Outline & Literature

This is a topics course intended to extend the basic intermediate macro course with some major later developments in theory and applications. In Uppsala we have given macroeconomics courses on the undergraduate level as:

- ✓ introductory (Fregert and Jonung - Makroekonomi)
- ✓ intermediate, Blanchard, O. (2003)
- ✓ advanced, Carlin, W. and D. Soskice (2006)

Recently, an advanced course on the graduate level was given:

- ✓ advanced graduate monetary economics, Gali, J. (2008)

In this course I will use the introductory chapters 1-3 in Gali, J. (2008) and a list of scientific papers almost all of which are downloadable on the web. Though not necessary, students are strongly recommended to buy the book by Gali.

I. Introduction – From IS/LM/AD to the new Keynesian model

The first lectures are used to repeat the IS/LM/AD model and to introduce the 3-equation model in which the LM curve is replaced by a monetary policy rule. This could be thought of as the Keynesian model "without microfoundations". We then discuss how microfoundations can be introduced into the macro model, piecemeal as in the standard intermediate macro model or consistently as in the more coherent new Keynesian model. For the first lecture you could consult your intermediate textbook, such as Blanchard, O. (2003, Mankiw, N. G. (2003) or whatever similar text. Intermediate textbooks based on microfoundations throughout the text are Auerbach, A. J. and L. J. Kotlikoff (1998, Williamson, S. D. (2005). For the 3-equation model, see Carlin, W. and D. Soskice (2005, Romer, D. (2000).

For a more general discussion on microfoundations, see Chari, V. V. and P. J. Kehoe (2006, Colander, D., P. Howitt, A. Kirman, A. Leijonhufvud and P. Mehrling (2008, Kirman, A. P. (1992, Solow, R. (2008).

II. The real business cycle model / new Keynesian model

In the next block the new Keynesian model is described. The basic model is shown to have a form similar to the model "without microfoundations". It is based on optimizing representative agents who use rational expectations and are forward-looking. The model has three equations: a dynamic IS curve, a Phillips curve and a monetary policy rule.

Papers describing the new Keynesian model with sticky prices are Andres, J., J. D. Lopez-Salido and E. Nelson (2005, Blanchard, O. J. and N. Kiyotaki (1987, Casares, M. (2006, Dixon, H. D. and N. Rankin (1994, Kydland, F. E. and E. C. Prescott (1982, Lucas, R. E., Jr., O. F. Hamouda and J. C. R. Rowley (1997, Neiss, K. S. and E. Nelson (2003, (2005, Prescott, E. C. (1986).

III. Sticky prices in theory and practice

Keynesian models are based on sticky prices and/or wages. We ask whether prices actually are sticky and to what extent. Sticky prices are set by monopolistic firms. However, monopolistic firms by themselves do not explain business cycles. This is discussed in Blanchard, O. J. and N. Kiyotaki (1987), who also show that e.g. the presence of menu costs could generate cycles. Also, the papers by Ashley, R. A. and R. J. Verbrugge (2006, Basistha, A. and C. R. Nelson (2007, Batini, N., B. Jackson and S. Nickell (2005, Binyamini, A. (2007, Caballero, R. J. and E. M. R. A. Engel (2007, Coenen, G., A. T. Levin and K. Christoffel (2007, Dhyne, E., L. J. Alvarez, H. Le Bihan, G. Veronese, D. Dias, J. Hoffmann, N. Jonker, P. Lunnemann, F. Rumler and J. Vilmunen (2005, Fishman, A. and A. Simhon (2005, Klenow, P. J. and J. L. Willis (2007, Mankiw, N. G. and R. Reis (2002, Wang, P.-f. and Y. Wen (2006, Whelan, K. (2007) analyze price setting and the micro foundations behind sticky prices. In particular, the most popular model was developed by Calvo, G. A. (1983) who's model is described in a simplified way by Carlin, W. and D. Soskice (2006).

Empirical evidence on price stickiness is presented by Alvarez, L. J. (2006, Apel, M., R. Friberg and K. Hallsten (2005, Bils, M. and P. J. Klenow (2004, Dhyne, E., L. J. Alvarez, H. Le Bihan, G. Veronese, D. Dias, J. Hoffmann, N. Jonker, P. Lunnemann, F. Rumler and J. Vilmunen (2005).

IV. Evaluating the new Keynesian model: The new Keynesian Phillips curve

The new Keynesian model is examined in more detail. We look at the new Keynesian Phillips curve (NKPC). The basic model is based on firms in monopolistic competition, some of which are restricted not to optimize their prices in a given period, according to the Calvo model. The NKPC is based on forward-looking behavior. Alternatives are discussed, e.g. the hybrid version and the backward-looking curve based on inattentive firms.

Papers on the NKPC are Ashley, R. A. and R. J. Verbrugge (2006, Basistha, A. and C. R. Nelson (2007, Batini, N., B. Jackson and S. Nickell (2005, Binyamini, A. (2007, Cogley, T. and A. M. Sbordone (2006, Fanelli, L. (2008, Gali, J., M. Gertler and J. D. Lopez-Salido (2005, Henzel, S. and T. Wollmershauser (2006, Kuester, K., G. J. Muller and S. Stolting (2007, Leith, C. and J. Malley (2007, Mankiw, N. G. and R. Reis (2002, Rudd, J. and K. Whelan (2005, Rumler, F. (2006, Zhang, C., D. R. Osborn and D. H. Kim (2008).

For a description of a new Keynesian DSGE model used in practice, see Adolfson, M., S. Laséen, J. Lindhé and M. Villani (2007), a model used in Sveriges Riksbank.

V. Monetary policy

We start by describing the basic Keynesian model with sticky prices and monetary policy with optimal and simple policy rules. We distinguish the cases of optimal and suboptimal steady states and whether equilibrium is unique or not. We then extend the analysis to include also sticky wages or sticky foreign prices (incomplete pass-through). When not only domestic prices are sticky the policy maker faces complicated tradeoffs.

There is also a problem of defining a suitable target variable for central banks with inflation targets. We compare the actually used target variables, such as the consumer price index, to theoretically desirable measures.

Modern monetary policy is based on forecasting of, particularly, inflation and output gap. We study the scope of such a policy and the forecasting performance of macroeconomic forecasting institutions like the Riksbank. Why was the present crisis completely unforeseen?

The financial crisis of 2008 has started a development of macroeconomic theory and policy in which the relationships between financial and real conditions are analysed in more debt. Some of this is dealt with in Woodford, M. (2010, (2012) and in Buiter, W. H. (2008). See also the discussion in Svensson, L. E. O. (2012, (2012, (2012, (2013).

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