Introduction to Macroeconomics

Vivaldo Mendes

\textsuperscript{a} ISCTE–IUL — Department of Economics

October 2015
I – Useful information
Useful information

- **Lecturer:** Vivaldo Mendes (vivaldo.mendes@iscte.pt)
- **Office:** Room 519 (Building II)
  - Tuesdays: 10 to 11.00h.
- **Phone numbers:** internal (795191), external (217903959)
- **Course homepage:** with news and materials online already working
  - address: [http://cm.de.iscte.pt/](http://cm.de.iscte.pt/)
**Grading**

- **Grading**: this process includes two alternatives:
  - **Option A**
    - Midterm test (30%): There will be one midterm test on a date to arrange
    - Final test (40%): The final test will be on December 2015
    - A group essay (30%): on a subject discussed in the course
  - **Option B**
    - Final test (100%): The final test will be on December 2015 or January 2016

- **Active participation**: in classes is welcome, it’s very useful for learning and grading
Teaching approach

- **A step ladder approach** to teaching:
  - If you miss one step, it’s more difficult to put your feet on the next ...

- Oriented towards "how to do":
  - students are expected to master practical tools ...
  - not just descriptive general knowledge

- **Some topics**:  
  - will be covered in just one week
  - Some topics: require two or more weeks
Teaching approach (cont.)

- **Computers**: they will be used as much as possible *(Matlab)*
- **Good knowledge of mathematics**: it helps, however it is not enough
- The course is intended to be "**self–contained**"
- Mathematics that matters are **basic knowledge of**:
  - Derivatives
  - Difference equations
  - Optimization (Lagrangian)
  - Matrices
The textbook

- **No textbook**: there is no adopted textbook
- **Publicly available lecture notes**: will be provided (topic by topic)
- **Main reasons**:
  - Students save time
  - Lecture notes are "tailored" to each topic
  - Major available textbooks require a much lengthier course (not just 30 hours course)

Some major postgraduate macro textbooks available:

Major graduate textbooks

Some major postgraduate macro textbooks available:

Prerequisites

1. Basic knowledge of the fundamental concepts in macroeconomics:
   1. The IS/LM model
   2. The Phillips curve
   3. Central banks and monetary policy

2. Introduction to Matlab (covered in the prep week). See courses’ website for slides and bibliographic references

3. A two period economy (no classes). See site for slides and bibliographic references in the course’s website
A quick guided tour

1. The current state of macro: a brief characterization (1 class)
2. Major stylized facts about business cycles (2 class)
3. Solution to models with rational expectations (4 classes)
4. The Real Business Cycle model (3 classes)
5. Credibility and time consistency in economic policy (2 classes)
6. The optimal choice of policy instruments (the Poole model) (2 classes)
7. The New Keynesian Model: optimal monetary policy (4 classes)
8. Central banks, commitment, credibility and the financial crisis (2 classes)
II - The current state of macro
The terrible importance of macroeconomics

“The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.”

John Maynard Keynes
The First (Old) Neoclassical Synthesis

- **Young subject**: macroeconomics was "born" in the mid 1940’s
  - 1946: the first time the term "macroeconomics" were used in one title (vide Fig 1)

- **Keynesian ideas** dominated macroeconomics until early 1970’s

- **The first Neoclassical Synthesis**: Keynesian/Classical dichotomy
  - The economy *is* Keynesian in the short term: there is a **permanent trade-off** between inflation and unemployment that can be exploited by policy makers
  - The economy *is* Classical in the long term: no such permanent trade-off exists

- **In the late 1960’s**: serious problems with the Synthesis became evident: empirically and conceptually
MACROECONOMICS AND THE THEORY OF RATIONAL BEHAVIOR

By LAWRENCE R. KLEIN

I. THE PROBLEM

Many of the newly constructed mathematical models of economic systems, especially the business-cycle theories, are very loosely related to the behavior of individual households or firms which must form the basis of all theories of economic behavior. In these mathematical models, the demand equations for factors of production in the economy as a whole are derived from the assumption that entrepreneurs collectively attempt to maximize some aggregate profit; whereas the usually accepted assumption is that the individual firm attempts to maximize its own profit. For example Evans, Keynes, Hicks, and Pigou all have in their systems marginal-productivity (i.e., profit-maximizing) equations for the total economy or for some very large subsections.
Conceptual problems with the Old Synthesis

- **No microeconomic foundations**: most functions in the model were totally ad-hoc

- **Backward looking expectations**: private agents produce systematic mistakes in their forecasting exercises

- **Irrationality**: policy makers were fully-rational agents and knew how the economy works; private agents were "irrational" with little knowledge of how the economy works

- **Total nonsense**: admitting that the Central Bank could manage monetary policy to **permanently** exploit the trade-off between inflation and unemployment

- **Vulnerable to the Lucas critique**: if policy makers intervene in the economy, private agents react by changing their choices, so the structure of the economy changes and the public intervention has perverse effects
Empirical problems with the Old Synthesis

1. **Real wages**: are countercyclical in the model, but procyclical in the economy

2. **Stagflation:**
   - the early 1970’s put in evidence a very unpleasant reality to which the model could provide no remedy
   - higher and higher unemployment and inflation rates (stagflation)

3. **Monetary aggregates**: Central Banks lost the control of these aggregates

4. **Basic stylized facts from the business cycles**: the model could hardly reproduce these facts (variances, covariances, etc.)
30 years of revolutions and counter-revolutions

- **The Old Synthesis:** stand for the 1950’s and the golden 1960’s
- **Sargent and Lucas:** launched the **New-Classical model** (early 1970’s)
  - Macro with microeconomic foundations
- **Real Business Cycles (RBC):** problems with New-Classical model led to the RBC model in the early 1980’s
- **New Keynesian Model:** problems with the RBC led to the development of the **NKM** (or the New Synthesis) in the mid 1990’s:
- **Now we have a financial crisis:** problems for the New Synthesis
- **So far:** no clear theoretical answer to the crisis
Main ingredients of the New Synthesis

- **Built upon** the Old Keynesian framework
  - ... with the usual nominal/real rigidities in price setting
  - ... without the problems that pushed the model to serious problems in the early 70s
- **The same functions:** IS, LM, Aggregate Supply
- **Some new arguments:** "forward looking or rational expectations" instead of "adaptive expectations", "Calvo pricing", maximization of utility, and so on ...
- **General equilibrium framework:** built upon sound microeconomic principles
- **Quantitative simulations:** relies a lot on simulations like the RBC literature
- **Contrary to RBC:** has a *key role to monetary policy* and a less relevant role for fiscal policy
Major predictions of the New Synthesis

- **Four basic predictions**: (very important)
  - the instrument of monetary policy ought to be the short term interest rate,
  - policy should be focused on the control of inflation
  - inflation can be reduced by aggressively increasing short term interest rates
  - the central bank should conduct monetary policy adopting a strategy of commitment in a forward-looking environment, instead of discretion

- The Old model’s predictions up-side-down!!!
- See Figure 2.
- **Problems of the new synthesis**: the current financial crisis
Active interest rate policy by central banks

The FED now reacts much more aggressively to inflation than in the "old times"

(Vivaldo Mendes)
A picture of the success of the receipt (I)
Doubts about the success of the receipt (I)

Real Gross Domestic Product, 1 Decimal (GDPC1)
Source: U.S. Department of Commerce: Bureau of Economic Analysis

Shaded areas indicate US recessions.
2012 research.stlouisfed.org
Doubts about the success of the receipt (II)
Some influential opinions

- Ricardo J. Caballero (2010). Macroeconomics after the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome, MIT, Massachusetts.


- Paul Krugman, Macroeconomists at War, New York Times, August 29, 2013
  http://krugman.blogs.nytimes.com/2013/08/29/macroeconomists-atwar/?_r=0
Some influential opinions

Simon Wren-Lewis, Macro workers and macro wars, 28 August 2013

Stephen Williamson, Rottenness, December 17, 2012,
http://newmonetarism.blogspot.co.uk/2012/12/rottenness.html