ECONOMICS 154A
INTERMEDIATE MACROECONOMICS

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September 1, 2003

INTRODUCTION: MECHANICS AND THE BIG PICTURE

1. Overview of the course
   (a) mechanics
   (b) goals
   (c) facts, theory, and policy

2. A stroll through the data
   (a) six figures

COURSE MECHANICS

• This class will be team-taught: lectures and sections.
• There will be one mid-term and a final. The final exam will be cumulative. The final exam for this course is on Wednesday, December 15 at 9AM. An early final will not be given.
• There will be about 9 problem sets (about one a week). In general I will post them on the course web page on Monday. They will be due at the start of class the following Monday. The TAs will go over them in section that week.
• Your course grade will be determined by your performance on the two exams, your problem sets and section participation. The weights are: 30 percent for the midterm; 50 percent for the final; 20 percent for the problems sets and section participation.

OUTSIDE OF LECTURES

• The rest of the team
  – Rudha Kauppalii
  – Manuel Lecour
  – Marek Weretka
• TA sessions start the week after next.
• Please fill out questionnaire.
• My office hours will be Wednesdays 1-3 PM. You may also set up an appointment with me if that time is not good for you. E-mail is perhaps the best way to get in touch with me.
TEXTBOOKS

- The textbook we will be using is Andrew Abel and Ben Bernanke *Macroeconomics*. It is available from the Yale Bookstore. You can also buy it from amazon.com.
- There is also a course packet that is required for this course. It is available from Yale Repographics and Imaging Service (RIS), 155 Whitney. You can order from [www.yale.edu/ris/sub_docsvcs_coursepkts.html](http://www.yale.edu/ris/sub_docsvcs_coursepkts.html).

THE MATH REQUIREMENT FOR THE CLASS

- One semester of calculus is a prerequisite for the course. I will take derivatives in this course. And a couple of times during the semester, you will see a lot of equations in this class.
- But THIS IS NOT A MATH CLASS.
- Here's the deal. I post all the overheads up on the web, so you will have all the equations in front of you before class. Stop me and ask questions if you don't understand something.
- The TAs and I are your allies in this class.
- The exams will emphasis economic intuition over mathematical ability.

ECON 153: A CLOSE SUBSTITUTE

- Professor Giuseppe Moscarini is teaching Econ 153 in the spring. Econ 153 will cover the same material as in this course but with more rigor.
- In general, Econ 154 will be less mathematically rigorous than Econ 153.

MORE STUFF

- The textbook now refers students to the St. Louis Fed's FRED database: [http://research.stlouisfed.org/fred2/](http://research.stlouisfed.org/fred2/).
- I hope that you do ask questions in the class.
- This course has a web page: [http://www.econ.yale.edu/~gjh9/econ154a/](http://www.econ.yale.edu/~gjh9/econ154a/). On this web page I will post announcements about the class and sections. I recommend that you check it regularly.
- I also post my overheads on the web page a day or two before lecture. This is designed to help you get more out of lectures. But it is not a substitute for lectures.
GOAL OF COURSE

• This is a course on macroeconomics – in other words, this is a course on how resources such as time and goods get allocated in the aggregate.
• Macroeconomics primarily studies economic growth and business cycles.
• Explanations for the overall upward trend in standards of living are the subject of economic growth analysis.
• Explanations of variations in growth over shorter time horizons are the subject of business cycle analysis.
• The course is centered around three markets
  1. The labor market
  2. The goods market
  3. The money or asset market

FACTS

• To study these questions, we are going to look at variables such as:
  1. GDP – Gross Domestic Product – our best measure of the economy’s total level of production.
  2. Inflation – the rate of change in the overall price level.
  3. Interest rates – the relative price of goods today versus goods in the future.
  4. Unemployment – what fraction of the labor force is out of work and currently looking for a job?

THEORY

• We are going to be asking questions like:
  1. What determines the wealth of nations?
  2. Why do some countries grow faster than others.
  3. What causes a nation’s economic activity to fluctuate?
  4. Why is there unemployment?
  5. What determines the value of a country’s currency?
  6. How does being part of a global economic system affect a nation’s economy?
• To answer these questions we are going to need to learn some economic theory.
THE NEED FOR MODELS

- Now the U.S economy of course consists of millions of people engaging in many activities – buying, selling, working, hiring, manufacturing, servicing, ...
- And we can't run experiments on people.
- So what we are going to have to do is make some simplifying assumptions and work with models.
- Since models are simplifications of how the world works, different models are often appropriate for answering different questions.
- Bowling balls and beach balls
- Optimization and equilibrium
- Don't be an "Accidental Theorist"
- The discipline of science is being explicit about the assumptions one makes and carefully working through the implications of those assumptions.

POLICY

- With theory in hand, we can address a wide variety of contemporary policy issues.
  1. What can (and should) governments do to increase the economic growth rates of their respective countries?
  2. How should the Fed set interest rates?
  3. Does it make sense to privatize social security?
  4. What is the best thing the government can do to get the economy really moving again? Perhaps sit on its hands ...
  5. What should the new government in Iraq do to get that economy moving?

QUICK STROLL THROUGH THE DATA - SIX FIGURES

Figures 1.1 - GDP
- Real (inflation-adjusted) growth in the United States is about 3.3% per year.
- You need to know how to compute percentage changes in a time series
  \[
  \frac{\Delta Y}{Y} = \frac{(Y_{t+1} - Y_t)}{Y_t} \times 100
  = \frac{[Y_{t+1}/Y_t - 1]}{100}
  = \log Y_{t+1} - \log Y_t
  \]
- There are fluctuations around the trend. These are business cycles and we will discuss them in more detail during the second half of the class. Note that they do not occur at regular intervals.
- Population growth is about 1.5% per year. This implies that per capita economic growth is about 1.8% per year.
- “Rule of 69” implies a doubling of per-capita income every 40 years (Rules of 69: divide 69 by the growth rate to get doubling time: 69/1.8 = 38.3.)
  Fun Fact: Say two countries are at the same level. If country A has a 1.8% growth per year, and country B has a 3.6% per year growth rate, than in 76.5 years (one person's lifetime) country B will be 4 times richer.
  These calculations really emphasis the importance of economic growth.
- Slower growth since 1973 (hard to see because of scaling) figure 1.1
**FIGURE 1.2 – AVERAGE LABOR PRODUCTIVITY**

- Labor productivity = real output per worker hour.
- Slower growth in output per man-hour – oil, computers?
- It is very difficult to measure productivity. We are going to discuss some of the reasons why.
- Japan, Germany also saw falling productivity growth
- Has new technology led to slower (measured?) productivity growth.

**UNEMPLOYMENT RATE**

- Figure 1.3
  - Great Depression
  - more volatile prior to World War II
  - unemployment high during 70-90's, especially in Europe, low now.
  - July 2004 5.5%

**INFLATION**

- Figure 1.4 Inflation rate is the percentage change of the price index
  \[ \pi = \left[ \frac{P_{t+1}}{P_t} - 1 \right] \times 100 \]
- Pre-WWII – long periods of inflation and deflation
- Post-WWII – 50 years of inflation

**INTERNATIONAL TRADE**

- Figure 1.5 – International trade
  - hit low point around WWII, increasing ever since.
  - now at all-time high
  - US exporting less than importing in recent years, reversing the past situation
U.S. FEDERAL GOVERNMENT SPENDING AND TAX COLLECTIONS

- Figure 1.6
  - Growth in government during World War II
  - For awhile in the late 1990s tax collection exceeded spending
  - Tax cuts, increased spending, reduced economic growth, fall of the stock market since 2000 have reversed this