Classroom Etiquette

• No reading the newspaper in class (this includes crossword puzzles).

• Limited talking – No Texting.

• Attendance is NOT REQUIRED.

• Do NOT leave in the middle of the lecture.
From the CBO (yesterday)

What is this??
Three key developments in academic macroeconomics have shaped macroeconomic policy analysis: the *Lucas critique* of policy evaluation due to Robert Lucas (1976), the *time inconsistency critique* of discretionary policy due to Finn Kydland and Edward Prescott (1977), and the development of quantitative dynamic stochastic general equilibrium models following Finn Kydland and Edward Prescott (1982).

The broad consensus on the conduct of policy is:

1. *Monetary policy should be conducted so as to keep nominal interest rates and inflation rates low.*
2. *Tax rates on labor and consumption should be roughly constant over time.*
3. Capital income taxes should be roughly zero.
4. Returns on debt and taxes on assets should fluctuate to provide insurance against adverse shocks.
There are many different aspects to fiscal policy. For example,

1. Stabilization (countercyclical) fiscal policy.

2. Political business cycle – political economy.

   The latter is at the interface between economics and political science – how do interest groups influence policy decisions? We will not discuss this.
Stabilization (countercyclical) fiscal policy.

This is certainly relevant for an economics class – but we will not discuss this either. Why?

The majority of the economics profession is in agreement that countercyclical fiscal policy is best left to the automatic stabilizers rather than discretionary policy.

Automatic stabilizers – the countercyclical nature of taxes and transfer payments that affect aggregate demand.

Examples: income taxes and unemployment benefits.

We will return to this next week in discussing the current situation.
Problems with discretionary fiscal policy:

1. Uncertain lags – by the time policy is implemented, already out of recession.

2. Changing fiscal policy, i.e. tax rates on investment and/or income, increases uncertainty in the economy. Not a proper role for government.

3. Monetary policy can react more quickly and more effectively (but there are limits (maybe)).
Dave Backus, prof. at NYU (letter to Mankiw) – skeptical about fiscal policy:

- Bad timing. Right now, most forecasts call for continued shrinkage in the first half of 2009, modest growth in the second half, when the stimulus starts to come online, and faster growth in 2010, when spending hits high gear. This is, of course, the classic argument against countercyclical fiscal policy: it’s hard to get the timing right.

- Small multiplier. Let us say that for every dollar of extra government spending, GDP goes up m dollars, where ”m” is the multiplier. Undergraduate textbooks, including your favorite, sometimes suggest m is large. The evidence is fuzzy, to be sure, but to me it suggests a multiplier around one, maybe smaller. Even stimulus cheerleader Paul Krugman only claims 1.1. If that’s the case, the impact of government spending (say 700b over two years) is barely enough to reverse the decline in GDP we expect to see over the next two quarters.

- Long-term budget issues. I don’t spend much time in Washington, but I thought the mainstream view among government economists was that our retirement and health-care programs were likely to bust the budget over the next 2-3 decades. Recent directors of the CBO under both Republican and Democratic Congresses have made this point, and I hope I wasn’t the only one listening. The US is not Argentina, but it still seems a little incongruous to advocate massive increases in spending when the long-term problem is paying for spending already on the books.

- It’s the financial system, stupid. Japan in the 1990s is a Rorshach test for macroeconomists, so I can’t claim everyone sees this as I do. But my take (borrowed from Anil Kashyap) is that Japan demonstrated that the real issue in financial crises is the financial system. If we don’t fix it, no amount of fiscal stimulus will make much difference. That’s one of the reasons I’m optimistic about the US right now: unlike Japan, we faced our problems, ugly as they were, and have acted decisively to correct them.
What are (perhaps) the most pressing fiscal policy issues facing the US today?

- Social Security
- Medicare
Before discussing these, first some look at historical trends in fiscal policy (article by Auerbach)

- Spending – discretionary and entitlement programs
- Revenues - corporate and individual income tax
- Deficit – on-budget, total

**ALL MEASURED AS % OF GDP**
Expenditures have remained relatively constant.
But: composition has changed dramatically.
Revenues have remained relatively constant. But: composition has changed dramatically.
Deficits as a Percentage of GDP

![Graph showing deficits as a percentage of GDP from 1960 to 2005, with fiscal years on the x-axis and percentage of GDP on the y-axis. The graph includes lines for On-budget deficit, Deficit, and Social Security.](image)
Automatic Stabilizers
(tax increases in 1993)
The following graphs and information are from the article by Hakkio and Wiseman

First – a little background on Social Security
Known as: OASDI

OAS(I) = Old Age Survivors Insurance (about 2/3 of program)

DI = Disability Insurance (about 1/3 of program)

In 2004:

47.5 million beneficiaries received $497.1 Billion.

Initial benefits are indexed to wages (to reflect inflation AND productivity) and then indexed to inflation.
Two dedicated sources of revenue for Social Security:

1. Payroll taxes: 12.4% paid equally by employers and employees. Earnings are taxed up to maximum amount ($94,200 in 2006).

2. Income tax on Social Security benefits. Up to 85% of benefit income is subject to tax.

IF Revenues (i.e. taxes) exceed Expenditures (i.e. benefits), then money goes into the Social Security Trust Fund.

Important to note: This is simply an accounting entry. If Social Security is running a surplus (as is the case currently), then this money is used by the Federal Government and the Social Security Trust Fund is credited with Government Securities. These represent future liabilities of the U.S. Government.

Look at 2004 Income Statement

(First – U.S. Defense Spending = $500 billion, U.S. GDP = $1,100 billion)
Table 2
SOCIAL SECURITY INCOME AND EXPENDITURES IN CALENDAR YEAR 2004 (billions of dollars)

<table>
<thead>
<tr>
<th></th>
<th>OASI</th>
<th>DI</th>
<th>OASDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets at the end of 2003</td>
<td>1,355.3</td>
<td>175.4</td>
<td>1,530.8</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dedicated revenue</td>
<td>487.4</td>
<td>81.4</td>
<td>568.7</td>
</tr>
<tr>
<td>Payroll taxes</td>
<td>472.8</td>
<td>80.3</td>
<td>553.0</td>
</tr>
<tr>
<td>Taxation of benefits</td>
<td>14.6</td>
<td>1.1</td>
<td>15.7</td>
</tr>
<tr>
<td>Interest</td>
<td>79.0</td>
<td>10.0</td>
<td>89.0</td>
</tr>
<tr>
<td><strong>Total expenditures</strong></td>
<td>421.0</td>
<td>80.6</td>
<td>501.6</td>
</tr>
<tr>
<td>Benefit payments¹</td>
<td>418.6</td>
<td>78.4</td>
<td>497.1</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>2.4</td>
<td>2.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Net increase in assets</td>
<td>145.3</td>
<td>10.8</td>
<td>156.1</td>
</tr>
<tr>
<td>Assets at the end of 2004</td>
<td>1,500.6</td>
<td>186.2</td>
<td>1,686.8</td>
</tr>
</tbody>
</table>

Source: Table II.B1, 2005 Social Security Trustees Report

¹Benefit payments include “railroad retirement financial interchange.”
Social Security’s Long Term Prospects? Not Good!

Demographics combined with Pay As You Go System
Chart 3
LIFE EXPECTANCY AT BIRTH

ECONOMIC REVIEW • FIRST QUARTER 2006
The Fiscal Situation:

ECONOMIC REVIEW • FIRST QUARTER 2006

Chart 1
SOCIAL SECURITY REVENUES AND EXPENDITURES AS A PERCENTAGE OF GDP

Source: Table VI.F4, Table VI.F8, 2005 Social Security Trustees Report
That’s the Good News! The real problem is Medicare.

1. Aging Population

2. Increasing Cost of Health Care

Medicare has two components

HI – Hospital Insurance (Part A)

SMI – Supplemental Medical Insurance (Part B)
  (new drug coverage is Part D)
Medicare HI

Chart 2

MEDICARE HI REVENUES AND EXPENDITURES AS A PERCENTAGE OF GDP

Source: Table V.I.F4, Table V.I.F9, 2005 Social Security Trustees Report; Table II.E1, Table III.B4, 2005 Medicare Trustees Report, and authors’ calculations
ECONOMIC REVIEW • FIRST QUARTER 2006

Chart 3
MEDICARE SMI REVENUES AND EXPENDITURES AS A PERCENTAGE OF GDP

Source: Table III.A2, Table III.A4, 2005 Medicare Trustees Report, and authors’ calculations
ECONOMIC REVIEW • FIRST QUARTER 2006

Chart 5
FEDERAL REVENUE SHORTFALL FROM SOCIAL SECURITY AND MEDICARE

[Revenue from government to program = (+), revenue from program to government = (-)]

Source: Tables VI.P4 and VI.P5, 2005 Social Security Trustees Report; Tables III.A2, III.A4, III.B3, III.C6, Medicare Trustees Reports.
Government Debt = $7.4 trillion at end of 2004

The Government’s unfunded obligations for Social Security and Medicare = $35.6 trillion!!  
(assuming a 5.7% nominal discount rate)

Insolvency Issues of SS and Medicare HI

Increase SS taxes from 12.4% to 14.32%; if no action until 2041 taxes = 16.66%

For HI, increase Medicare taxes from 2.9% to roughly 6%; if no action taken until 2020, taxes = 8.79%
Something has to give: reduce benefits, raise taxes, control costs.....

To be continued!!
Optimal Fiscal Policy

Doepke, M., A. Lehnert, A. Sellgren, *Macroeconomics,*

Chapter 14
Back to our immediate concern:

We will analyze a very specific problem in optimal fiscal policy:

Question: Given a path of government expenditures, how should a benevolent government choose the path of taxes?
We will examine two cases:

**Case I: Taxes are lump-sum**

Conclusion: The path of taxes is irrelevant. This is known as (Barro) Ricardian Equivalence.

**Case II: Taxes are distortionary (excise taxes) (known as the Ramsey Problem)**

Conclusion: Government should smooth tax rates over time. (tax smoothing hypothesis).
Key Terms and Concepts:

1. Intertemporal budget constraint.
2. $\beta \equiv \frac{1}{1 + \rho}$ - subjective rate of time preference.
3. Difficulties in empirical testing of Ricardian equivalence.
4. Intertemporal utility maximization.
5. Permanent income hypothesis.
6. Real interest rate = price of current consumption relative to future consumption.
Key Assumptions

1. The path of government expenditures is exogenous.

2. The government is benevolent – cares about utility of citizens.

3. There are perfect capital markets: Both households and government can borrow and lend at interest rate $r$.