Introduction to Modern Macroeconomics

August 27, 2015

Sources Used in This Presentation

- VROEY and MALGRANGE (2011)
- Goodwin et al. (2007)

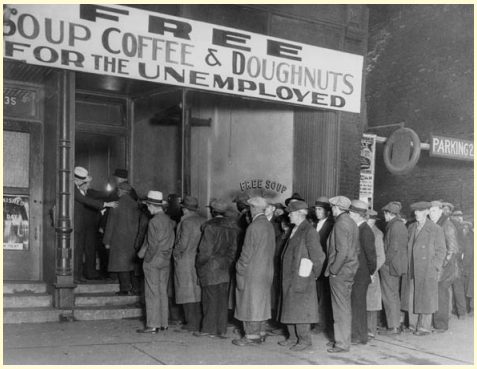
Microeconomics vs. Macroeconomics

- Microeconomics
  - Object of analysis is a single market: are car prices driven by supply or demand changes?
  - Behavior of individual consumers and firms: decisions about what to buy, sell, or produce
  - applications in trade, industrial organization, labor economics, public finance, and welfare economics
- Macroeconomics:
  - Object of analysis is overall economy: what causes inflation?
  - Behavior of aggregate variables: GDP, interest rates, inflation, etc.
  - Monetary/fiscal policies and their effects on economy

Great Depression and Birth of Macroeconomics

- Classical economic analysis assumes that markets return to equilibrium: if demand increases faster than supply, prices rise and firms respond by increasing supply
- For a long time, it was assumed that the macro economy behaved in the same way as described in micro economic analysis
- In the 1930s, economies were clearly not in equilibrium: high unemployment, output was below capacity
- Classical economics didn't really have an explanation for this disequilibrium, which from a micro perspective, shouldn't have occurred

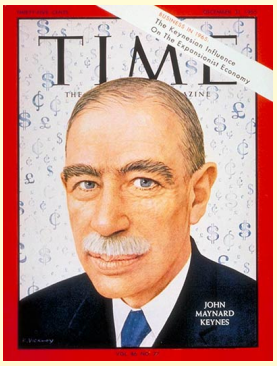
Great Depression and Birth of Macroeconomics



Great Depression and Birth of Macroeconomics

- Keynes (1936): *The General Theory of Employment, Interest and Money*
- It examined why we can be in a state of disequilibrium in the macro economy
- Keynes observed that microeconomic principles of markets clearing, didn't necessarily apply to macro economics
- He argued that under-employment and under-investment are likely to be the natural state unless active measures are taken

Great Depression and Birth of Macroeconomics



Great Depression and Birth of Macroeconomics

- Keynes argued that the key to getting out of a slump is to increase aggregate demand for goods and services in the national economy
- He suggested a number of ways to achieve this:
  - People could be encouraged to consume more
  - The government could buy more goods and services
  - **Businesses could be encouraged to spend more**
- While Keynes believed that increasing investment spending would be the key to getting out of a depression, he thought that low interest rates alone would be insufficient
- He suggested that government should be taking more direct control of the level of national investment

Getting out of Depression

- In actuality, it was the high government spending associated with national mobilization for World War II that finally brought the Great Depression to an end
- So Keynes was right but not completely
- While followers of Keynes retained his emphasis on deficiencies in aggregate demand, they tended to emphasize the use of fiscal policy **to keep employment rates up**
  - *Fiscal policy* is the manipulation of levels of government spending and taxation to raise or lower the level of aggregate demand

Post-WWII and Monetarism

- While Keynesian economics was greatly supported, there were economists who didn't agree with Keynes
- Milton Friedman, University of Chicago:
  - Argued that bad government monetary policies were how economies tend to get into bad situations
  - Monetarists believed that it was primarily the U.S. government's poor use of its monetary policy tools, such as banking regulations and the issuance of currency ("printing money"), that led to the Great Depression
  - They argued that governments should focus on keeping the money supply steady, and not try to take an active role in directing the economy, even when unemployment is high

Back to Keynes

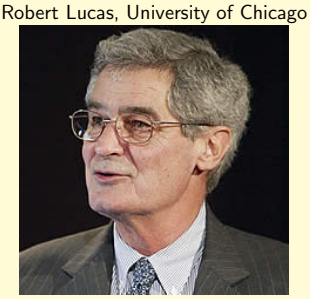
- As time went on, the Keynesian approach was expanded to also include a role for monetary policy
- This approach had a strong influence on macroeconomic policy-making in the United States and many other countries up through the 1960s
- The idea was that the government could choose to "trade off" unemployment and inflation by letting the economy suffer a little more inflation to get the unemployment rate down, or vice versa.

1970s

- But, in the early 1970s many industrialized countries began to experience **both rising unemployment and rising inflation**
- To explain this, many macroeconomists began combining elements of both classical and Keynesian economics
- First mention of **a distinction between the long-run and the short-run**:
  - In the short run (months or years) we are in a primarily Keynesian world where fiscal and monetary policies can be effective
  - In the long run, however – after such a period of time that even "sticky' markets can adjust – we are in a classical world, where money only affects prices

1980s: New Classical Macroeconomics

Robert Lucas, University of Chicago



"The most influential macroeconomist of the last quarter of the 20th century"

– N. Gregory Mankiw

1976: Lucas Critique

- In Lucas's opinion macroeconomics started off on the wrong foot by being Keynesian
- Lucas (1976) argued that Keynes should have tried to make Walras's static model dynamic, instead of demonstrating the existence of unemployment in a static framework
- The most influential of Lucas's judgments about Keynesian theory is the famous Lucas critique:

  > *The econometric models of the time could not serve their purpose of comparing alternative economic policies because the coefficients of the models were estimated by econometric methods (rather than being derived from theory), and their numerical values were independent of any changes in institutional regime*

New Classical Macroeconomics

- The challenge Lucas set himself was to construct an equilibrium theory of the business cycle, where the fluctuations of economic variables can be traced back to optimizing decisions made by economic agents
- Economic agents ought to be depicted as comparing the wage rate at one point in time with the wage rate they expect to prevail later in time
- If the former is more advantageous than the latter, they will decide to work more today and less tomorrow – **intertemporal substitution phenomenon**
- A totally different picture of the business cycle emerged

New Classical Macroeconomics

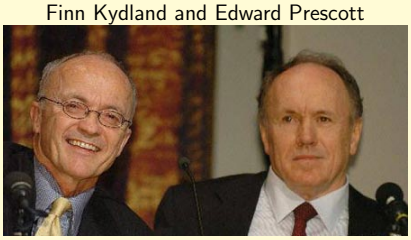
- Earlier, the business cycle was viewed as the disequilibrium phenomenon par excellence, the manifestation of a market failure
- In the new approach, the business cycle expresses the optimizing reactions of agents to outside shocks affecting the economy
- In other words, business fluctuations were no longer viewed as market failures
- Conclusion: governments should refrain from trying to prevent their occurrence

Real Business Cycles

- Started with Kydland and Prescott (1982)
- Tried to model business fluctuations as the result of real shocks to the economy (rather than monetary shocks, as in Lucas's model)
- Kydland and Prescott's paper had an additional feature of wanting to move from the model to the facts
- They were able to successfully mimic several important empirical traits of the fluctuations in the US economy over a quarter of a century, on the basis of the most rudimentary possible model
- **Before their paper appeared, the general opinion was that such an enterprise was impossible!**

Real Business Cycles

Finn Kydland and Edward Prescott



Received Nobel Memorial Prize in Economics in 2004
"for their contributions to dynamic macroeconomics: the time consistency of economic policy and the driving forces behind business cycles"

New Keynesian Macroeconomics

- Many Keynesian economists admitted that some of Lucas's criticisms were well founded
- This was the standpoint of the so-called 'new Keynesian' economists
- They wanted to rehabilitate Keynes's insights, while accepting the central tenets of the new views
- Within a decade, several such new models blossomed
- These models shared the same purpose of amending, if not reversing, new classical conclusions, thereby reviving Keynes's mitigated view of the market system

1990s: DSGE Modeling

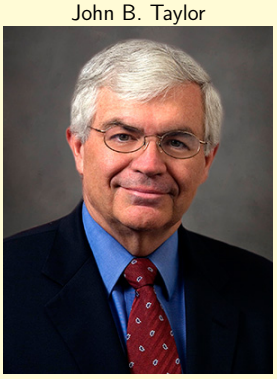
- The methodological "fight" between New Classical and New Keynesian economists continued until the 1990s
- They came to agree upon adopting a workhorse model that both considered appropriate – *Dynamic-Stochastic General Equilibrium (DSGE) model*
- New Keynesians contributed the following to the model:
  - imperfect competition and sluggishness
  - focus on the role of the central bank
- And New Classicals contributed:
  - exogenous shocks
  - the dynamic stochastic perspective, the equilibrium discipline
  - intertemporal substitution and rational expectations

1990s: Monetary Policy and Taylor Rules

- Taylor (1993) proposed picking the interest rate taking into account three objectives:
  1. *price stability*, measured by the difference between the observed and the targeted rate of inflation
  2. *the output gap*, the deviation of effective from potential output (i.e. the output level that would have occurred had the economy been competitive)
  3. *an economic policy shock*, a purely residual shock uncorrelated with either inflation or output.

1990s: Monetary Policy and Taylor Rules

John B. Taylor



2000s: Enriching Macro Models

- Most economists agree on workhorse theoretical macro models
- Arguments are mostly policy-related
- Developing microeconomic foundations for macro models based on the behavior of the individual households and firms that seek to optimize their conditions
- Quantitative methods of solving DSGE models – computers become very powerful
- Everybody is more or less on the same page until ...

The Great Recession

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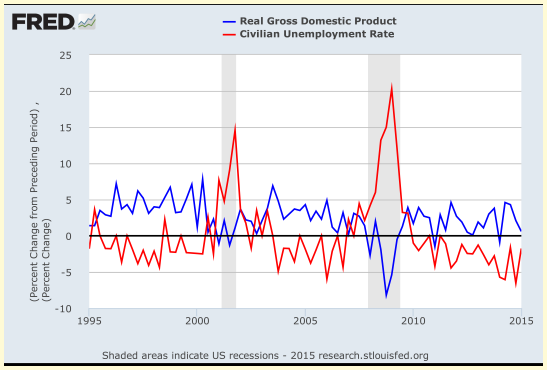
The Great Recession and Financial Crisis



The Great Recession and Financial Crisis

- These events brought out at least two blind spots in the DSGE models:
  1. Limited attention that had been given to the financial sector
  2. Exclusion in advance of the possibility of any pathology in the working of the market system
- Macroprudential policy arguments:

  How to mitigate the systemic risk, i.e. the risk of the financial system as a whole?
- New wave of macroeconomic research: macroprudential regulation
- Who will be the next Kydland and Prescott?

2010s...

is a very exciting time to be a macroeconomist!

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