The Power of Macroeconomics

Lecture Six:

The Warring Schools of Macroeconomics

Presented By:
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LECTURE SIX - PART TWO

New Classical Economics

- Rooted in the Classical Economics tradition.
- A strong influence on macroeconomic theory.
- Played a pivotal role in the 1992 defeat of George Bush by Bill Clinton.

New Classical Economics

- Based on the controversial theory of "*rational expectations*."
- Provides a sharp contrast to the notion of "*adaptive expectations*."

Robert Lucas

Thomas Sargent

Robert Barro

Adaptive Expectations

- People assume inflation will continue to be what it already is.
- If inflation was 3% last year, adaptive expectations predict inflation will be 3% next year.

Rational Expectations

- People take into account ALL available information.
- This includes any future effects from activist fiscal and monetary policies such as more demand pull inflation.

Key Point

You can fool the people with activist Keynesian policies for a while but not over the longer term.

Rational Expectations Neutralize Keynesian Activism!

- Because people learn from their experiences, you can't fool them.
- Policy implication: Rational expectations render activist Keynesian policies completely ineffective so they should be abandoned!!!

An Example: Activist Monetary Policy

- Suppose the Fed expands the money supply to close a recessionary gap.
- Repeated experiences with such “easy money” have taught people to rationally expect more inflation.
- Businesses immediately respond by raising prices and workers demand higher wages.

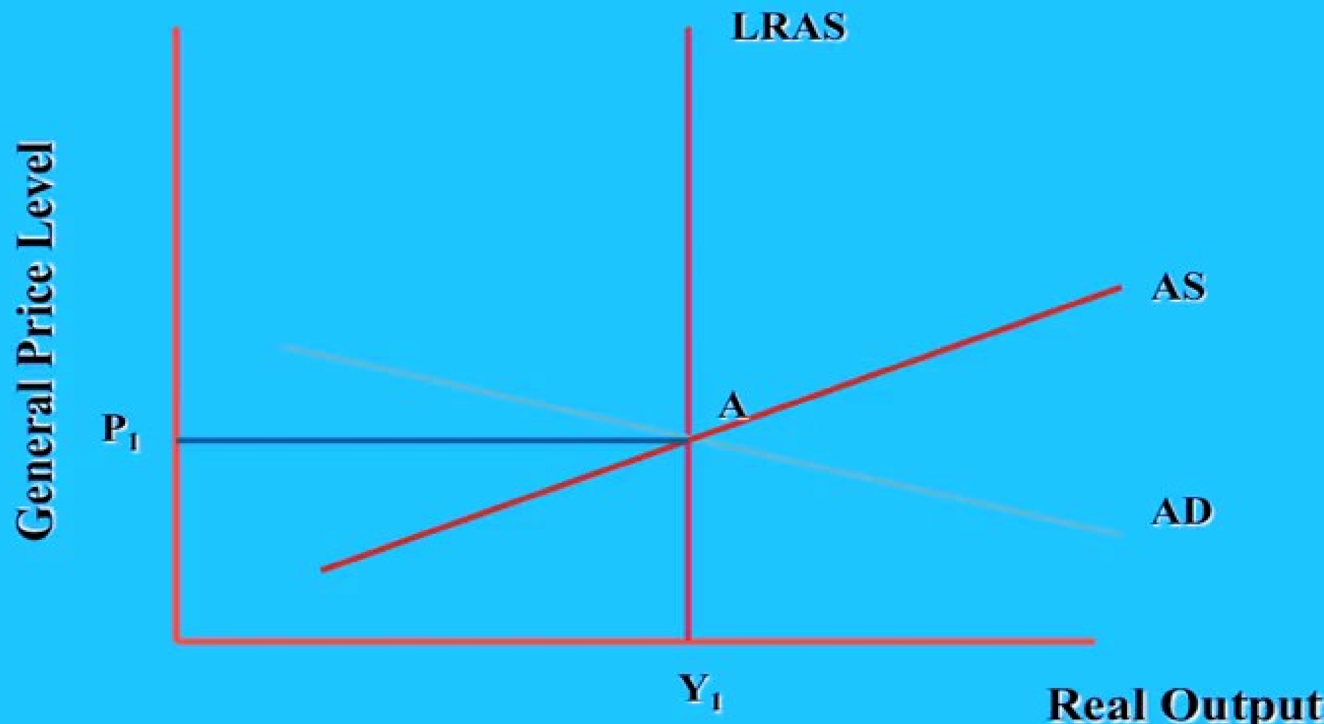
Key Point

The attempted expansionary monetary stimulus is completely offset by inflation’s contractionary effects!

Example: Activist Fiscal Policy

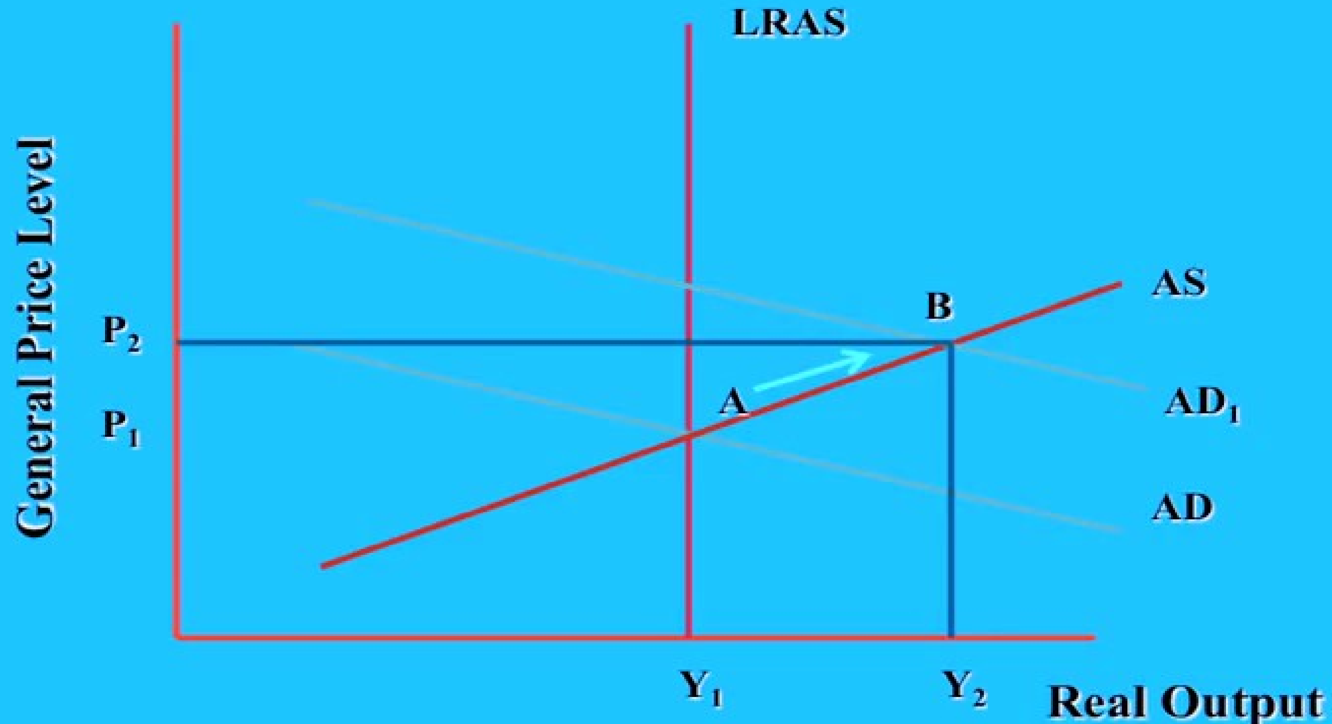
- Suppose the government increases spending to close a recessionary gap.
- People will anticipate a future tax hike to pay for the resultant budget deficit so they will save more and consume less.
- Reduced consumption will thereby offset the Keynesian government spending stimulus!
- Or so the New Classical argument goes

Example: We Start At Full Employment



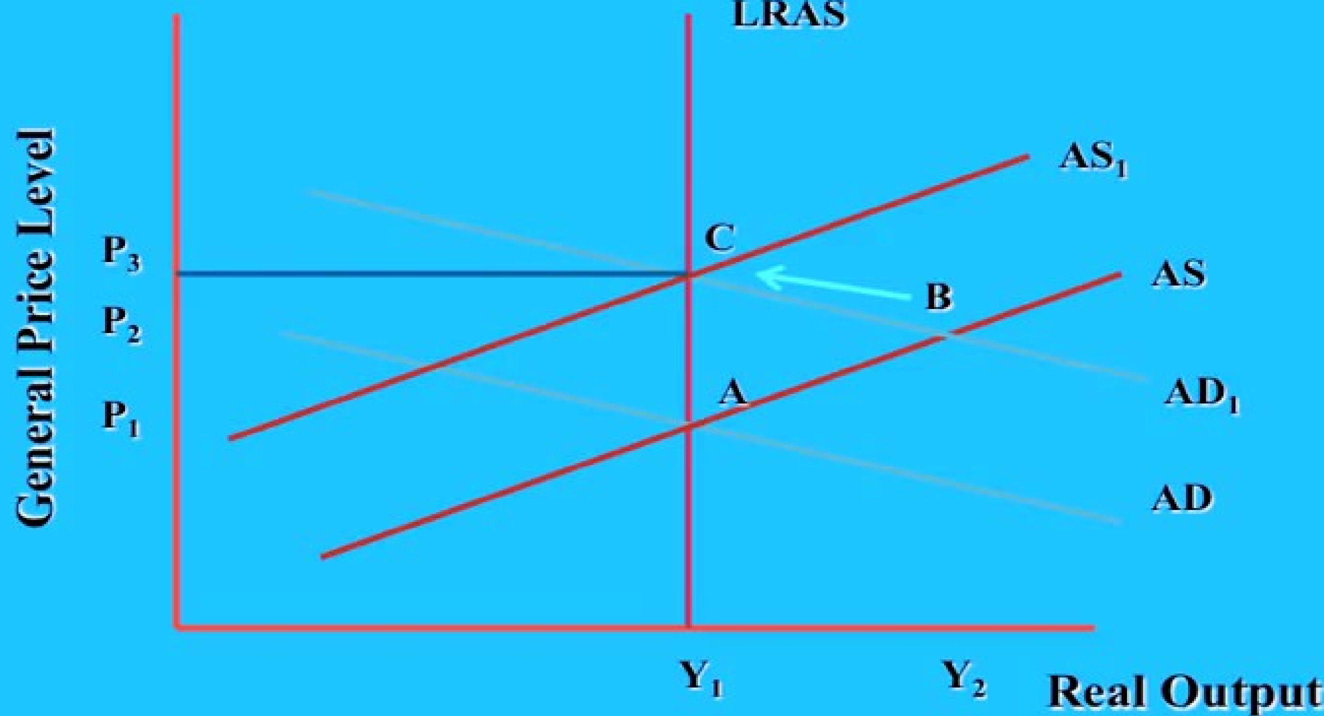
Suppose the government undertakes expansionary fiscal policy to increase output above the full employment rate.

The Case of Adaptive Expectations



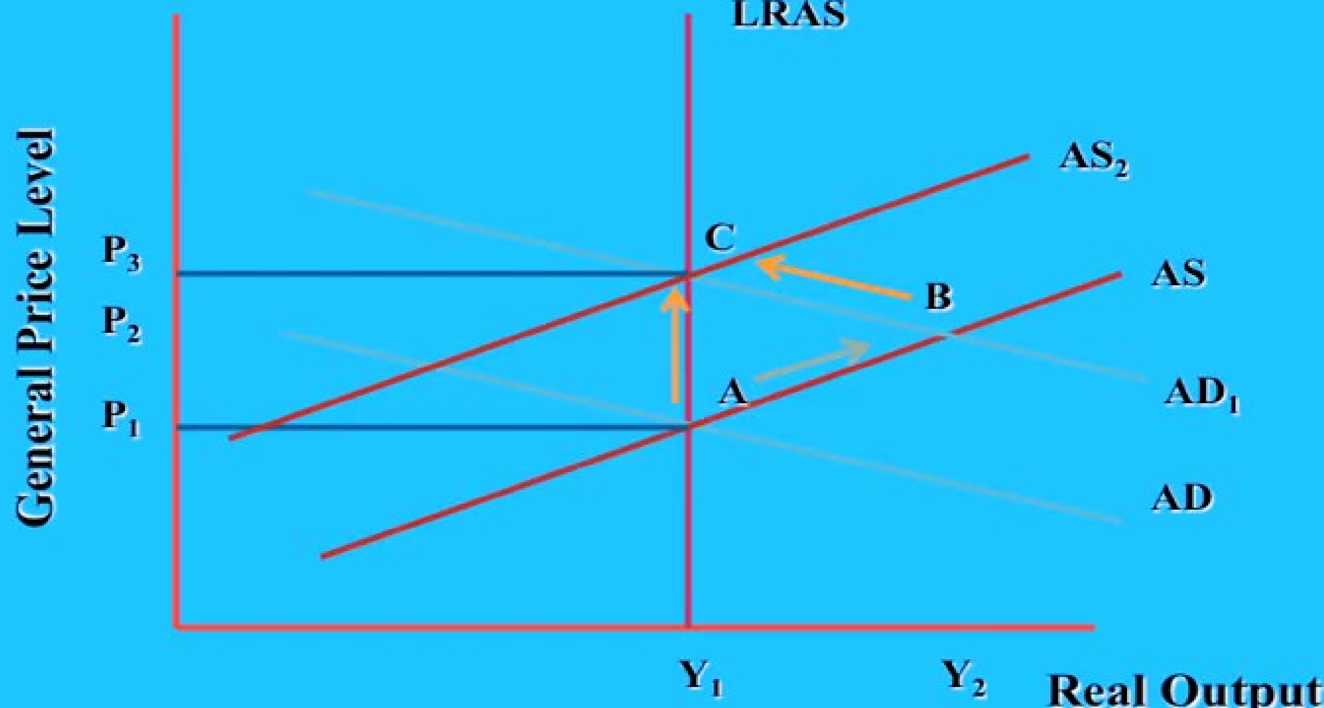
Key Point: Expansionary policy leads to a growth spurt under adaptive expectations!

The Case of Adaptive Expectations



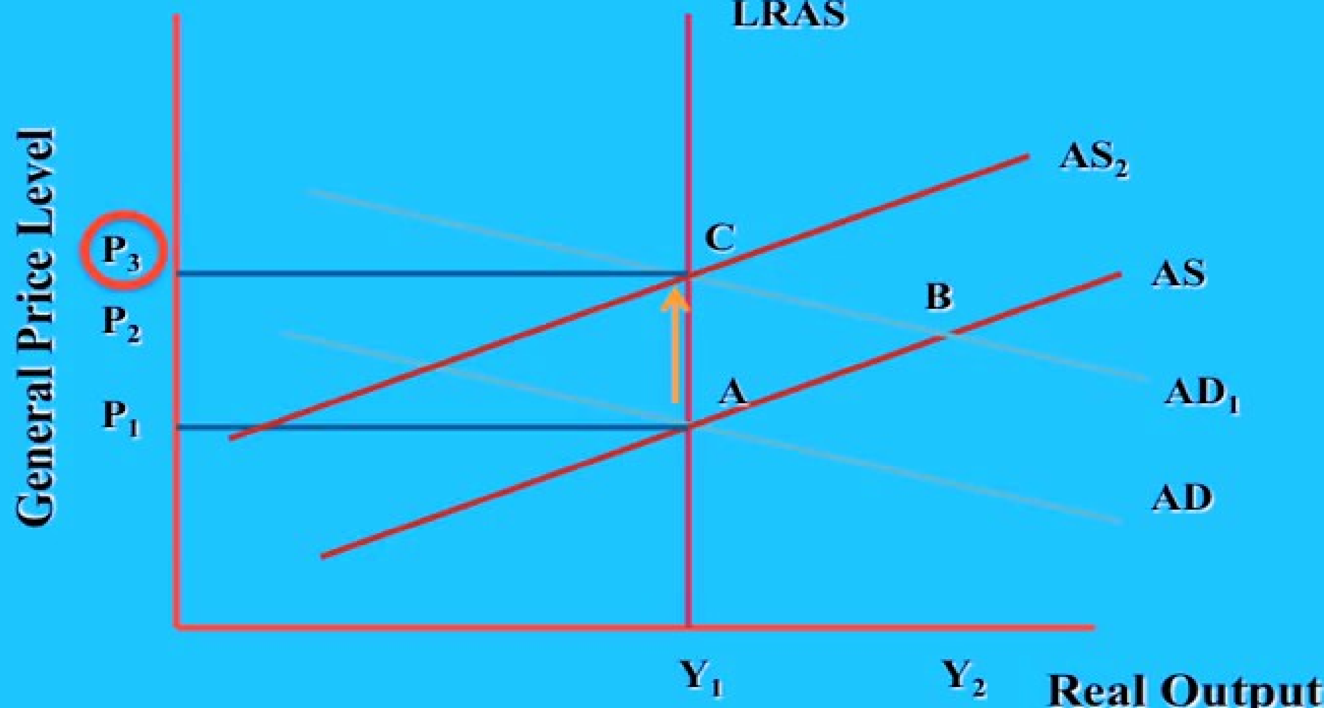
Key Point: Expansionary policy leads to growth spurt followed by a return to the natural rate AND inflation with adaptive expectations!

The Case of Rational Expectations



Key Point: Expansionary policy leads ONLY to inflation under rational expectations!

The Case of Rational Expectations



Key Point: Expansionary policy leads ONLY to inflation under rational expectations!

A Critique of Rational Expectations

The Economics and Politics of the Theory

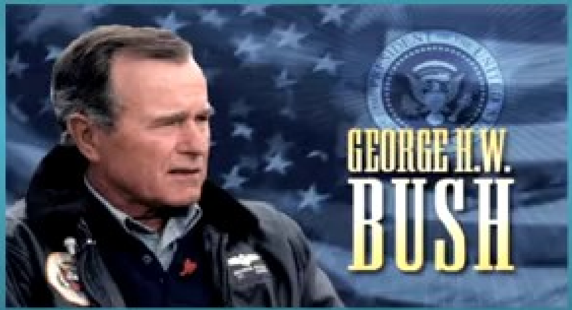
A Critique of Rational Expectations

- Critics say people are not as economically literate as the theory requires.
- Therefore, adjustments will not take place with the speed they are supposed to.
- This criticism should not detract from the central point of rational expectations:

Central Point
People's behavior may partially, or completely, counteract the goals of activist fiscal and monetary policies.

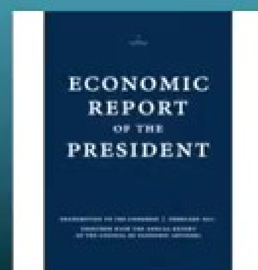
Good Economics is Bad Politics

- President George H.W. Bush learned a harsh political lesson relying on his New Classical advisors.
- His advisors flatly rejected any Keynesian "quick fix" to a deepening recession.



Bush's New Classical Advice

- More "stable and systematic" policies based on long term goals.
- No Keynesian "short-sighted discretionary reactions."



Bush Loses the 1992 Election

- Bush took the New Classical advice.
- The economy limped into the 1992 election.
- Bush lost to a Democrat in much the same way as Nixon lost to JFK.

Clinton Restores Confidence

- Bill Clinton actually did very little to stimulate the economy.
- However, his promise of more activism restored business and consumer confidence!

Congress Passes Deficit Reduction Bill

- This legislation sent Wall Street a clear signal Clinton was serious about budget balance.
- Restored business, consumer, and Wall Street confidence accelerated a recovery already begun by the end of Bush's term.
- A booming economy set the stage for Clinton's remarkably easy 1996 re-election.

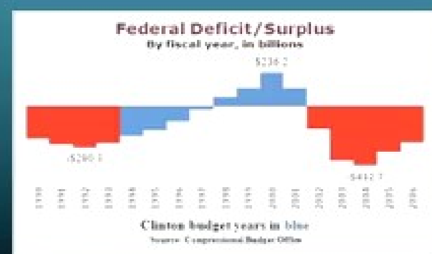
LECTURE SIX - PART THREE

The Roaring 1990s – A Macro Dream

- A technology boom shifts out the aggregate supply curve.
- Potential output increases while the natural and actual rates of unemployment fall.
- Real U.S. GDP growth averages around 4% a year!

The U.S. Balances Its Budget!

- Rapid economic growth leads to a surge in tax revenues.
- Unemployment and welfare payments falls.
- The budget generates a surplus from 1998 through 2001 for the first time in decades.



The Stagnant 2000s

- March 2001 recession ushers in a new era of slow growth.
- From 1947 to 2000, real GDP grew annually by **3.5%!**
- For the decade beginning in 2001, real GDP growth fell to around **1.6%.**

Question
How many jobs do you think were lost in the stagnant 2000s due to slow growth?

A Startling Answer!

- Rule of thumb: One percentage point of GDP growth lost = one million new jobs not created.
- A difference of 3.5% growth versus 1.6% growth is about two GDP points lost a year or two million jobs lost a year.

Answer

Over the decade, that's about 20 million jobs not created because of slow growth!

Wage Growth Falls to Zero!

- Wage growth fell as GDP growth slowed and labor markets became very lax.
- Average median household income plunged to zero for the 2000s!!!!!!

A Decade With No Income Gains

By DAVID LEONHARDT

The typical American household made less money last year than the typical household made a full decade ago.

To me, that's the big news from the Census Bureau's annual report on income, poverty and health insurance, which was released this morning. Median household fell to $50,303 last year, from $52,163 in 2007. In 1998, median income was $51,295. All these numbers are adjusted for inflation.

The Great Recession of 2007

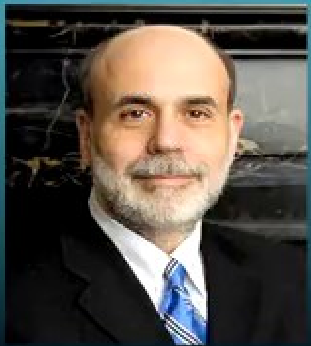
- Steepest downturn since Great Depression.
- Massive bailouts of both private and public corporations.

A Massive Fiscal Stimulus

- Outgoing President Bush and incoming President Obama team up.
- They execute the largest fiscal stimulus in world history.

A Massive Monetary Stimulus

- Central banks around the world adopt ultra "easy money" policies to lower interest rates and stimulate growth.
- The U.S. Fed adds trillions to its balance sheet.



Fed Chairman
Ben Bernanke

The Advent of Quantitative Easing

- With short term interest rates near zero, Fed Chairman Ben Bernanke launches "QE".
- QE: Fed buys long term bonds to drive up bond prices and thereby drive down yields and long term interest rates.

The Goals of QE

- By lowering long term interest rates, the Fed hoped to stimulate both investment and net U.S. exports in the GDP equation.
- Capital investment requires longer term financing so lower long term rates act as stimulus.
- Lower interest rates and a flood of newly printed also helped devalue the U.S. dollar, thereby stimulating exports.

A New Keynesian Failure?

- Despite massive fiscal and monetary stimuli, unemployment soared to double digits in both the U.S. and Europe.
- Just why was Keynesian economics unable to bring about a full global economic recovery?

LECTURE SIX - PART FOUR

It's Structural, Not Cyclical!

Key Point

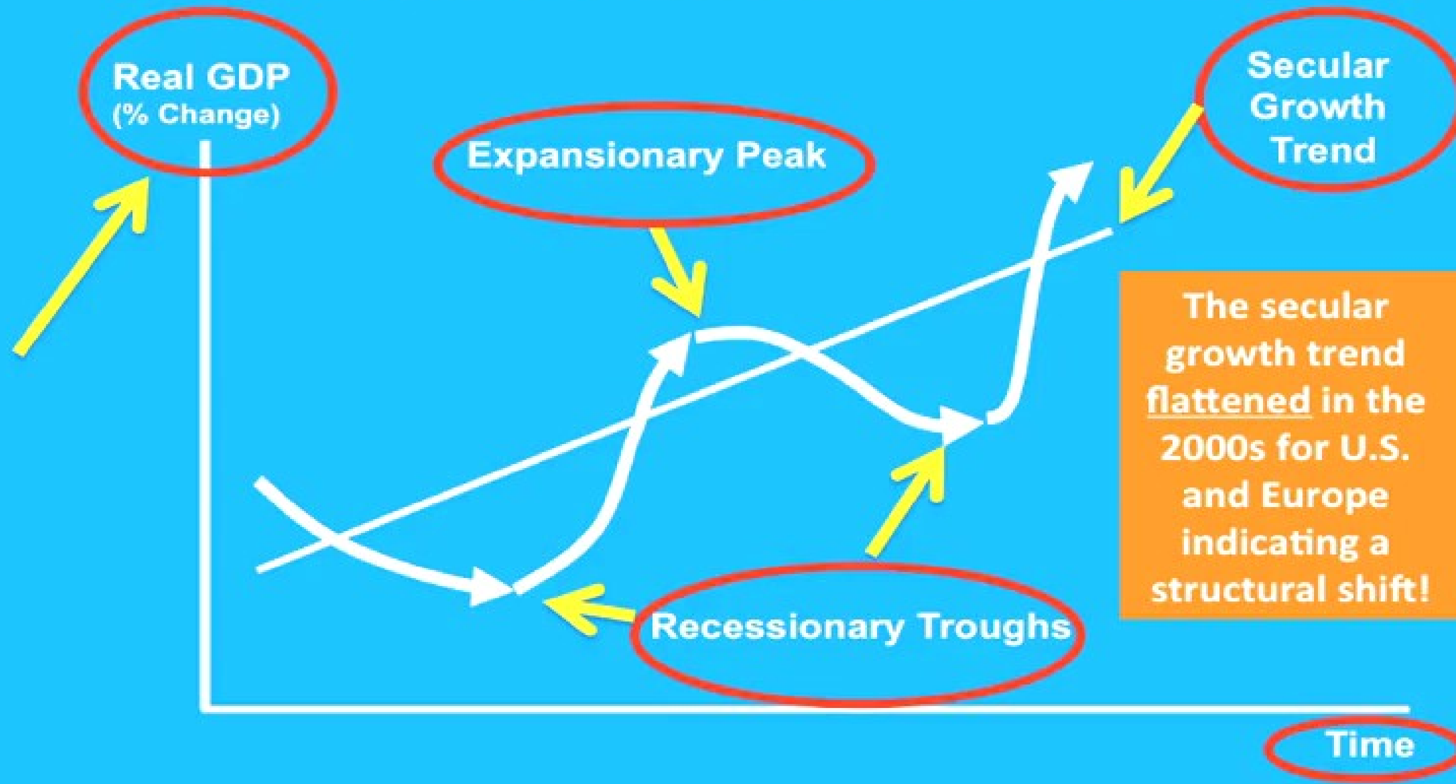
Many macroeconomists failed to understand the underlying structural nature of the slow GDP and wage growth problems that emerged in the 2000s.

Next Goals

1. Understand how all economies grow.

2. Learn how to plot – and forecast! – movements in the business cycle.

The Typical Business Cycle

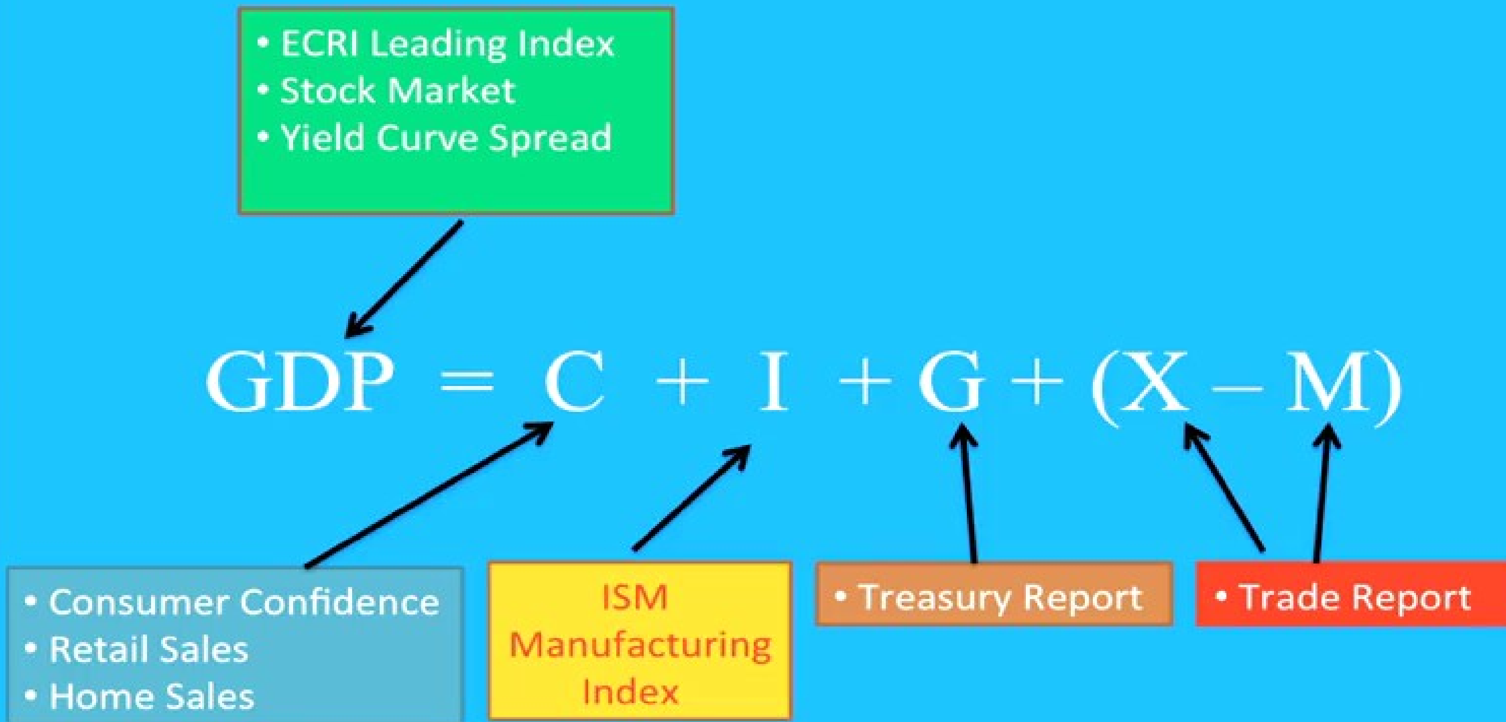


The GDP Forecasting Equation

$$GDP = C + I + G + (X - M)$$

If Imports > Exports Then a Country Runs a Trade Deficit!

Some Leading Economic Indicators



Some Leading Economic Indicators

A confident consumer spends more so GDP rises!!!

$$GDP = C + I + G + (X - M)$$

- Consumer Confidence
- Retail Sales
- Home Sales

A Leading Indicator of <u>Investment</u>

If the ISM Manufacturing Index is ABOVE 50, the economy is probably expanding!!!!

$$GDP = C + I + G + (X - M)$$

ISM Manufacturing Index

Why Inflation Matters in Forecasting!

- Consumer Price Index (CPI)
- Producer Price Index (PPI)

$$GDP = C + I + G + (X - M)$$

- If the CPI indicates inflation, the Federal Reserve might raise interest rates to slow GDP growth!
- This is VERY good forecasting information to have!

Structural Problem:
Trade Deficits and Offshoring Subtract From GDP Growth!!!

Key Point #2
Offshoring SUBTRACTS points from the GDP!

$$GDP = C + I + G + (X - M)$$

Key Point #3
Much of the offshoring has gone to China.

Key Point #1
A trade deficit SUBTRACTS points from the GDP!

China Joins the World Trade Organization in 2001

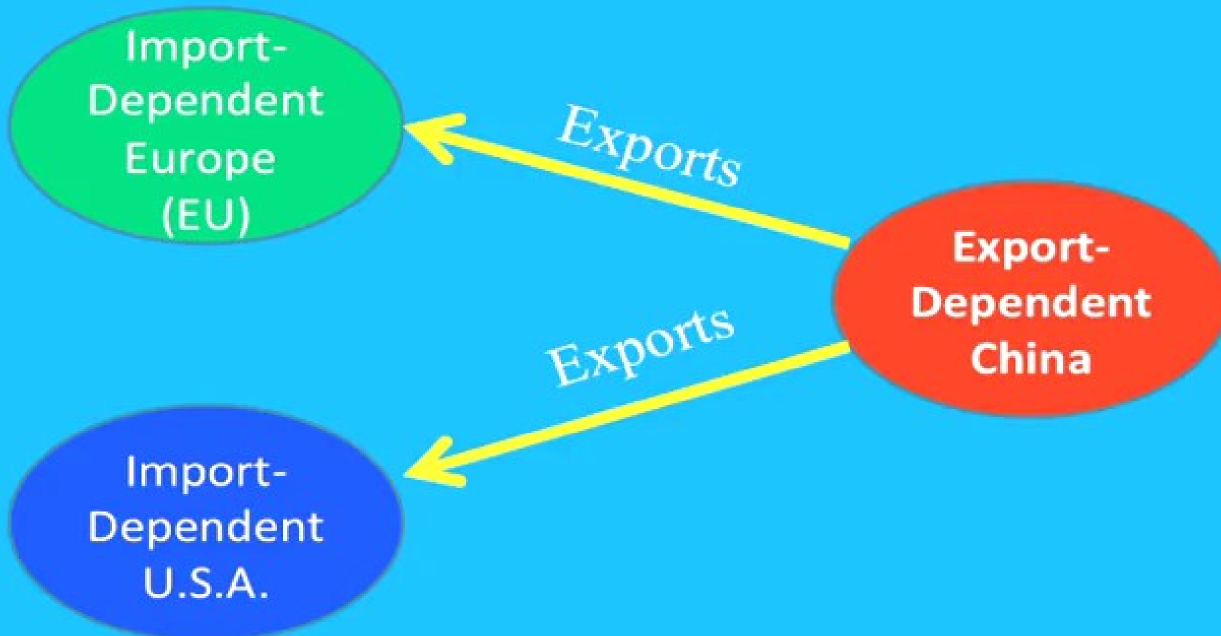
- China's WTO entry gives it full access to U.S. markets.
- China floods U.S. markets with often illegally subsidized exports.
- Over 50,000 U.S. factories and more than 5 million manufacturing jobs disappear.

The Emergence of Structural Trade Imbalances

- The economies of Europe, India, Brazil, and many others run large trade deficits with China.
- This reduces global GDP growth below what it would otherwise be.
- A structural emergence of a growth-sapping global trade imbalance.

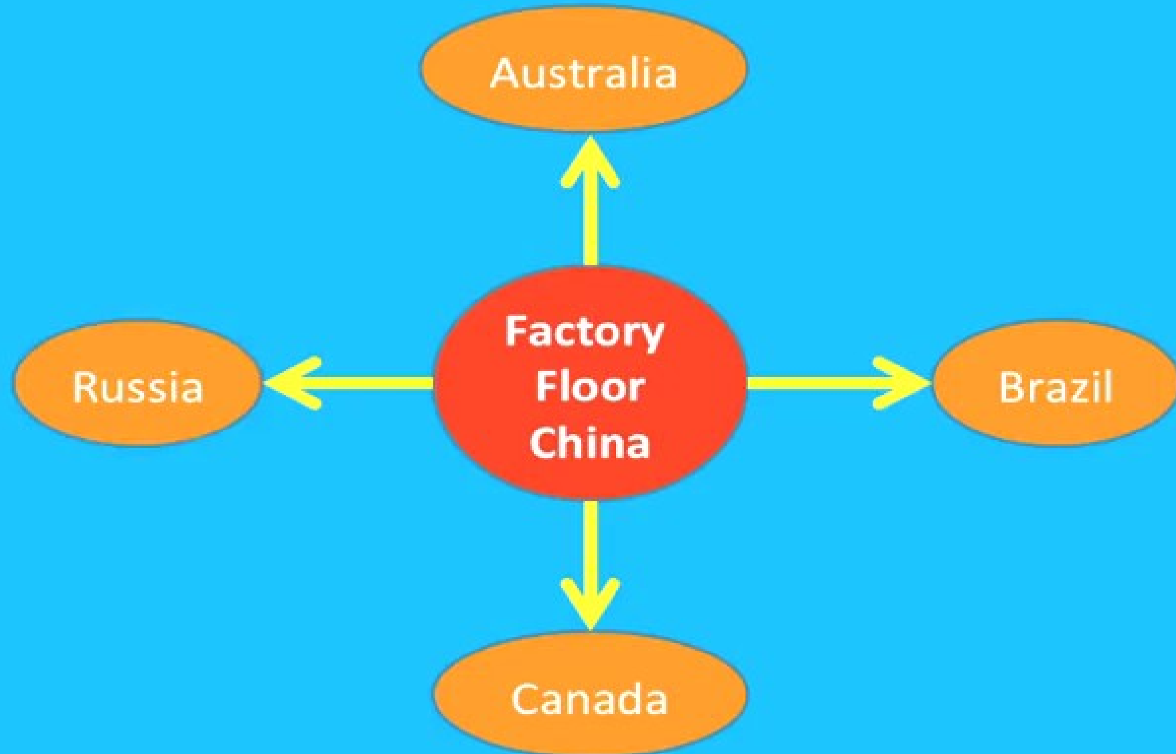
The Global Trade Imbalance Triangle

Chronic China Trade Deficits Slow Europe's Growth

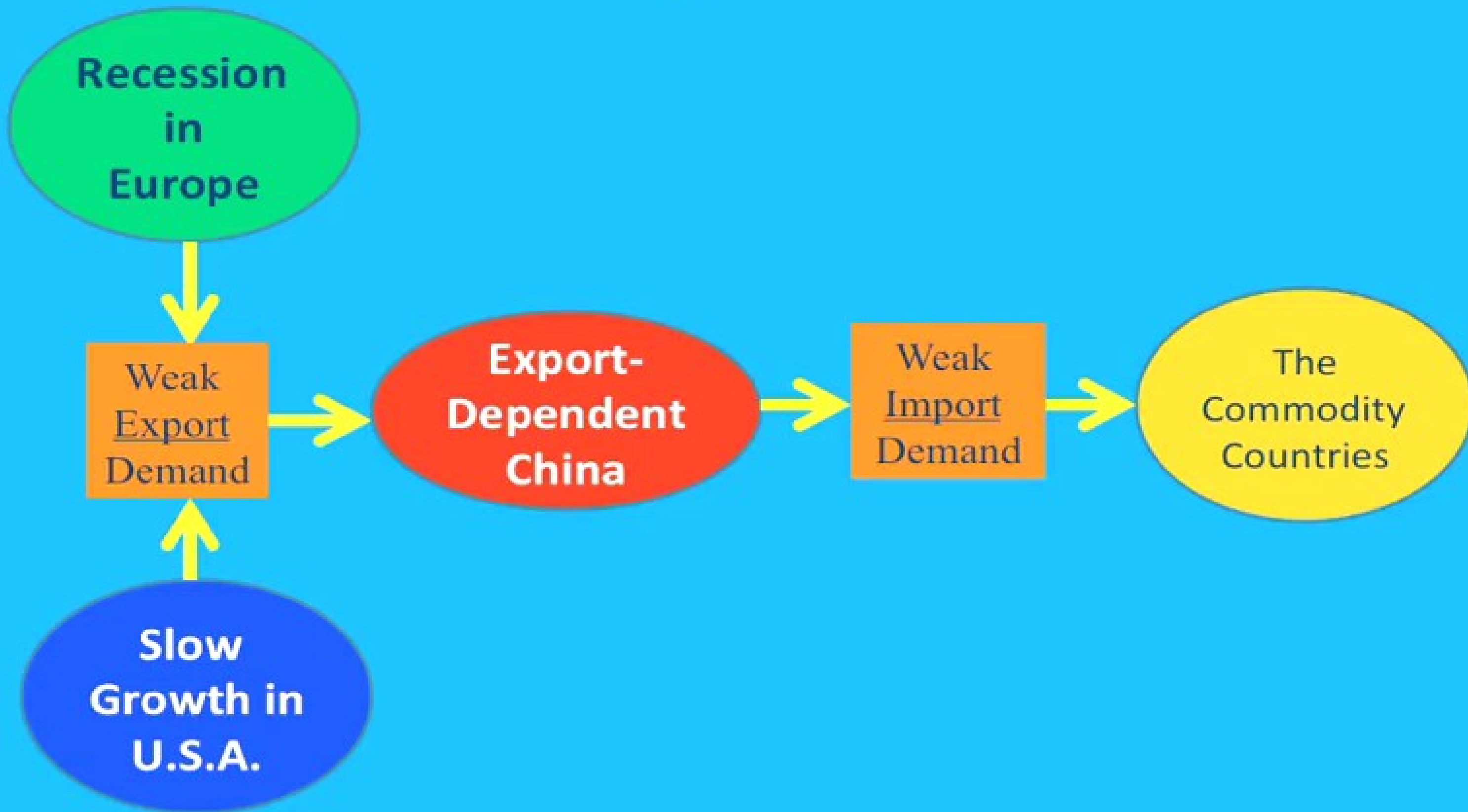


Chronic China Trade Deficits Slow U.S. Growth

Some Major Commodity Countries



The New Butterfly Effect Circa 2013



Why Keynesian Stimulus Failed

Key Points

- Short term Keynesian stimulus efforts did nothing to address the long term <u>structural</u> issue of chronic global trade imbalances.

- These structural imbalances acted as a drag on the economies of the U.S., Europe, and much of the rest of the world in the early 2010s.

LECTURE SIX - PART FIVE

Three Important Questions

1. What causes instability in the economy?
2. Is the economy self-correcting and, if so, what is the speed of adjustment?
3. Should the government adhere to rules or use discretion in setting economic policy?

Question #1: What Causes Instability?

- Keynesians believe instability arises from two sources.
- Changes in investment and consumption shift the AD curve in or out, causing recession or inflation.
- Adverse supply side shocks shift the AS curve in, causing stagflation.

The Monetarist View of Instability

- Bad government policies are the major cause.
- Monetarism is rooted in Classical Economics which relies on market processes for adjustment.
- Price and wage flexibility provided by competitive markets cause fluctuations in aggregate demand to alter <u>prices</u> rather than <u>output</u>.

Wage Inflexibility, “Government Failure”

- Wages can't adjust because of government policies like the minimum wage, farm price supports, and monopoly protections.
- The Monetarists blame instability on “government failure” rather than “market failure.”

Is The Velocity of Money Stable?

- Recall the Equation of Exchange: MV=PQ
- If V is stable and Q is independent of P, increasing M can only lead to inflation.
- Unlike Monetarists, Keynesians take the view that velocity is actually unstable.

The Supply Side View of Instability

- Agree with Keynesians macroeconomic instability can result from supply side shocks.
- Share Classical/Monetarist view that government failures can also cause shocks.
- Supply Siders focus on high tax rates and regulations that reduce supply incentives.

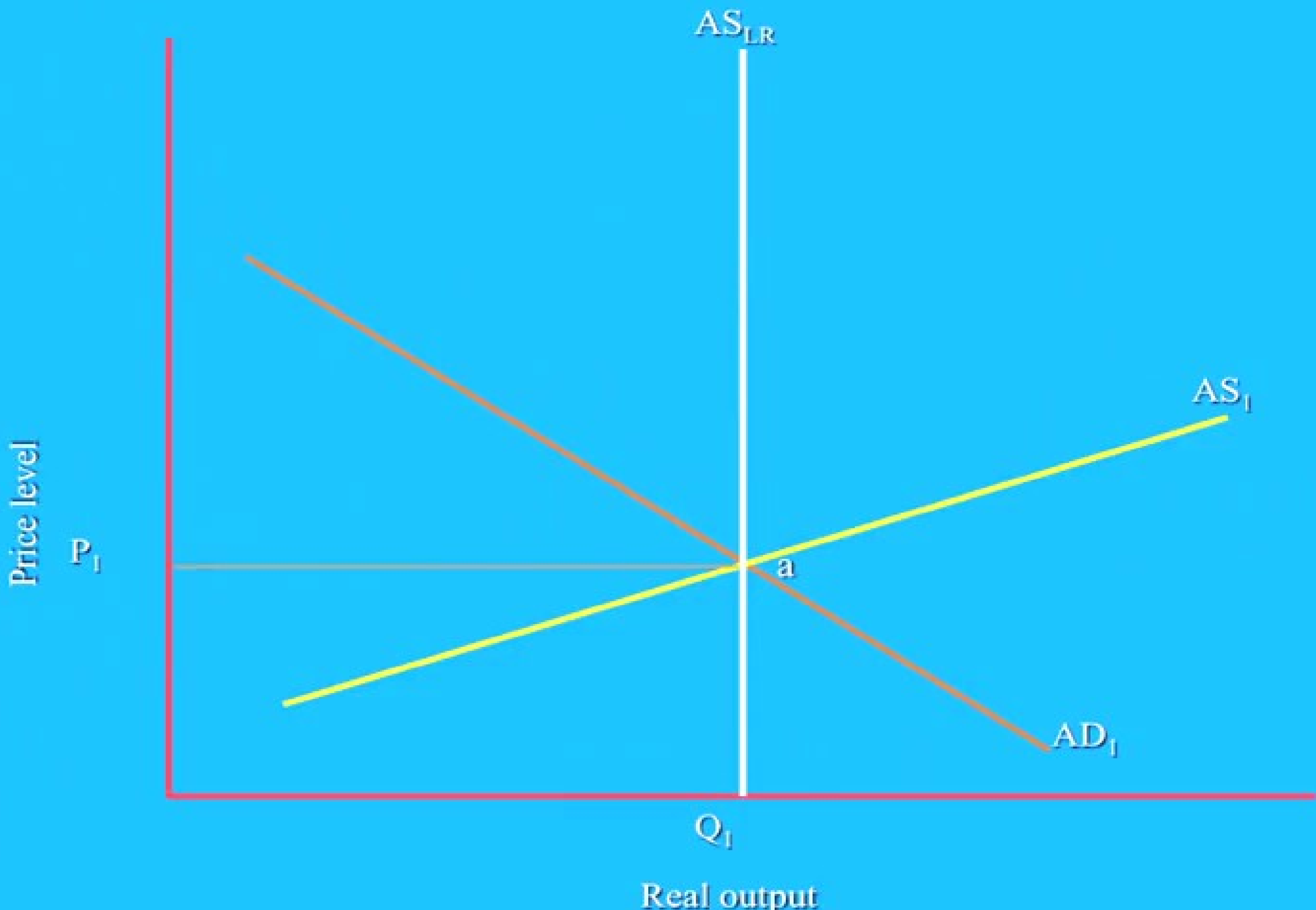
Question 2A:
Does The Economy "Self Correct"?

- Not just a question of whether an economy corrects itself.
- How long will – or should! -- it take for any such self-correction to happen?

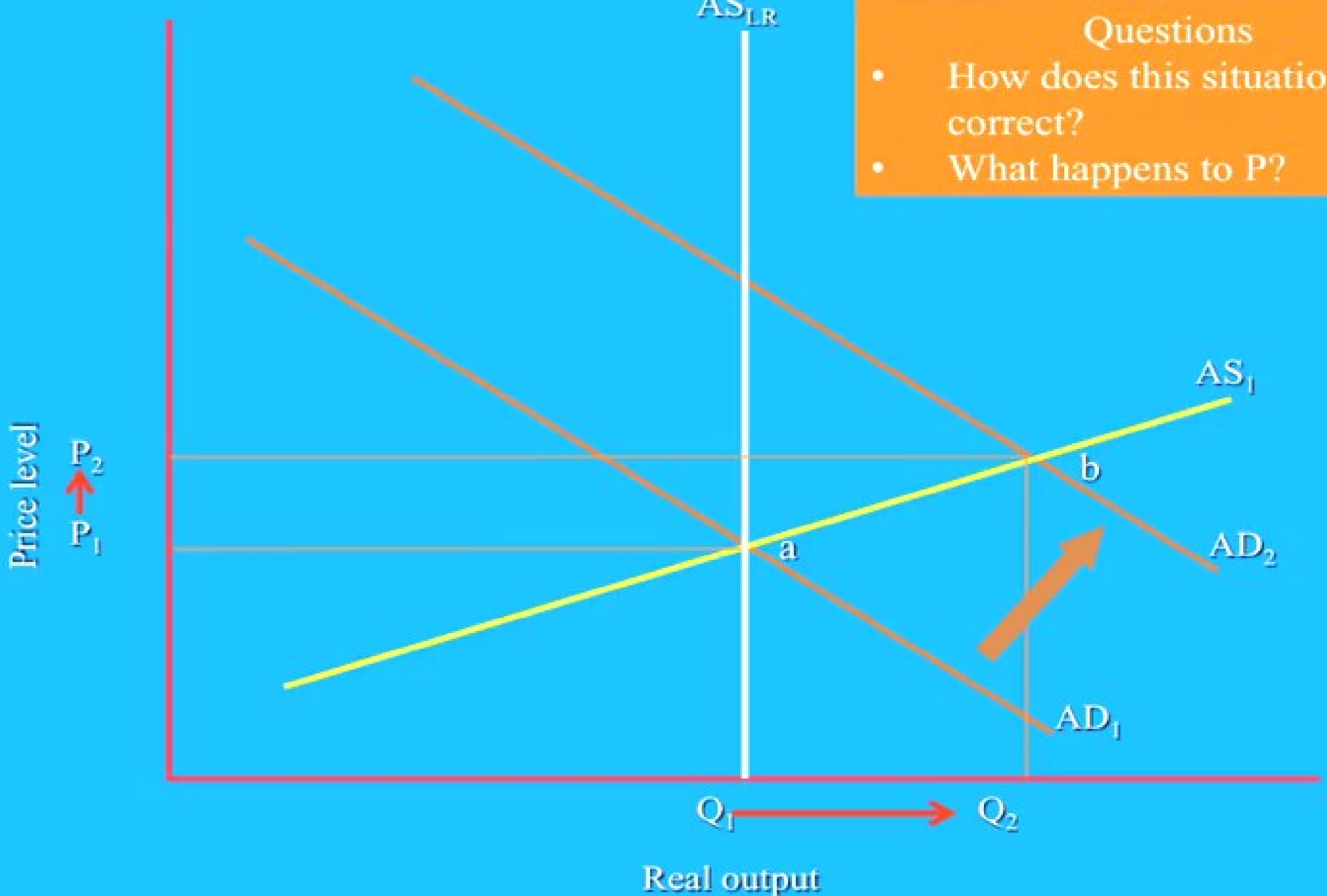
The Monetarist & New Classical Views

- When the economy diverges from full-employment output, internal mechanisms automatically move it back.
- This perspective is associated with the theories of adaptive and rational expectations.

New Classical Self-Correction



New Classical Self-Correction

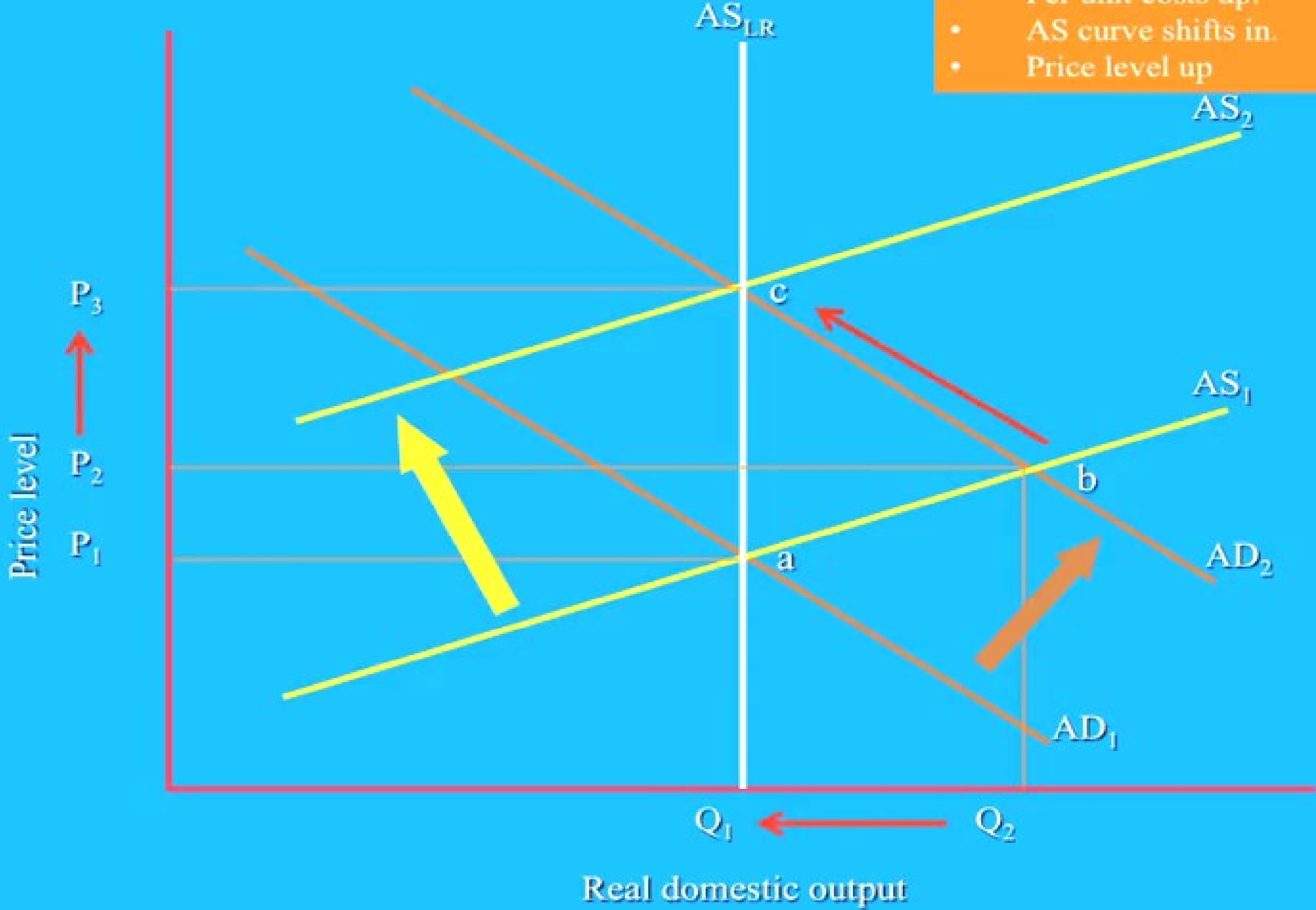


Questions

- How does this situation "self-correct?
- What happens to P?

Answer

- Nominal wages up.
- Per unit costs up.
- AS curve shifts in.
- Price level up



Question #2B: What is the Speed Of Adjustment?

Key Concept

The faster the speed of the adjustment process back to full potential output, the less the need for activist fiscal and monetary policies!

Monetarists & Adaptive Expectations

- People form expectations on present realities.
- They only gradually change their expectations.

Key Point

With adaptive expectations, shifts of AS and AD curves and corrections are very slow.

Rational Expectations

- Workers anticipate future outcomes before they occur.

Key Point

With rational expectations, shifts of AS and AD curves and corrections are very fast or instantaneous.

The Keynesian & Mainstream Views

- Almost *all* economists acknowledge New Classical economics offers important lessons about the theory of aggregate supply.
- Most strongly disagree with New Classical rational expectations theory on the question of <u>downward</u> price and wage flexibility.

Which Markets Experience Rapid Prices Changes?

- Stock markets, foreign exchange markets, and certain commodity markets experience very rapid price changes.
- This is NOT true in many product markets and most labor markets.

The Economy Likely Is Slow To Adjust

- There appears to be ample evidence that many prices and wages are inflexible downward for long periods.
- Implication: In the Keynesian view, it may take years for an economy to move from recession back to full-employment output without help from fiscal and monetary policy.

LECTURE SIX - PART SIX

Question #3: Rules Or Discretion?

- Should policymakers rely on rules or discretionary activism?

Key Point
Activism is warranted only if the economy is not self-correcting or may be very slow to correct.

How The Debate Is Framed

- Monetarists/New Classicals: Should the government adhere to rules that prohibit it from causing instability in an economy that would otherwise be stable?
- Keynesians: Should the government use discretionary policies to stabilize a sometimes unstable economy?
- Supply Siders: Should the government pursue discretionary policies to shift out the AS curve to increase real GDP and lower price level?

Monetarist/New Classical View

- Supports policy rules for the conduct of monetary policy and balancing the budget.
- Purpose: Prevent government from trying to "manage" aggregate demand.
- Government Failure: Management is misguided and thus likely to *cause* more instability than it cures.

Example of a Monetary Rule

- **Why a Rule?** Monetarists believe discretionary monetary policy is a major source of macroeconomic instability.
- **Rule Example:** Direct the Fed to expand the money supply at the same annual rate as the typical growth of the economy's production capacity.

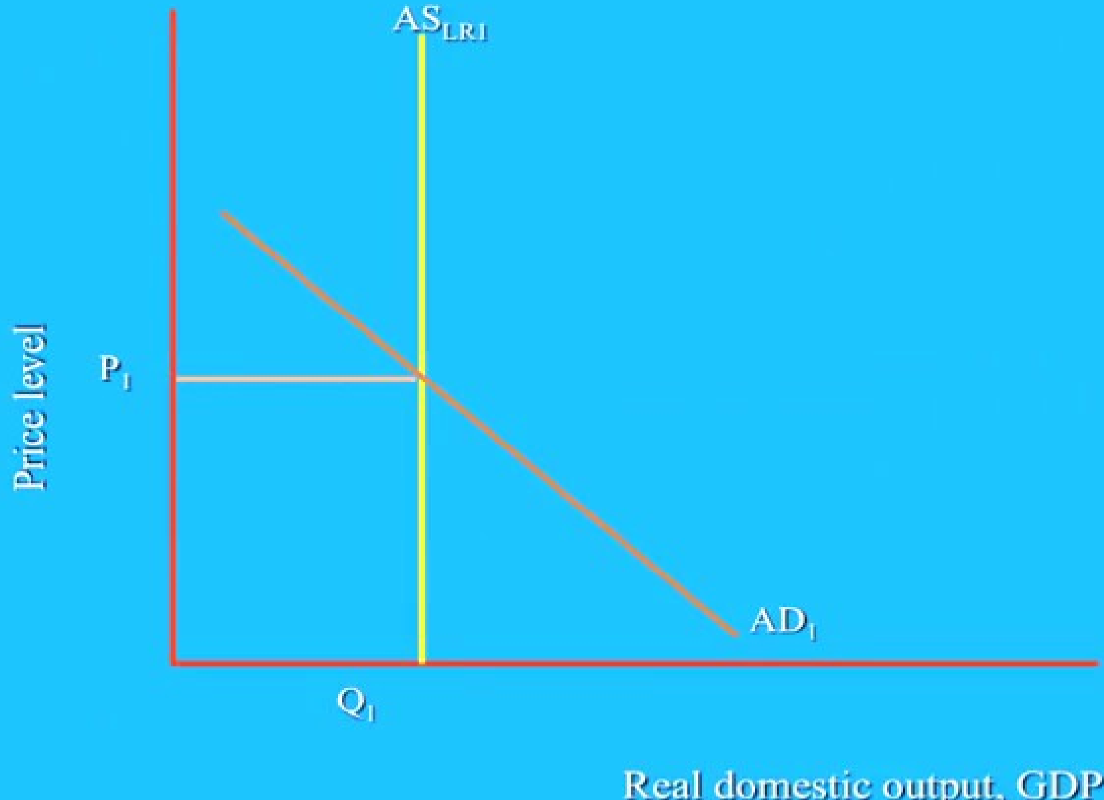
Implementing a Monetarist Rule

- Use open market operations and changes in the reserve requirement and discount rate to ensure steady money supply growth.

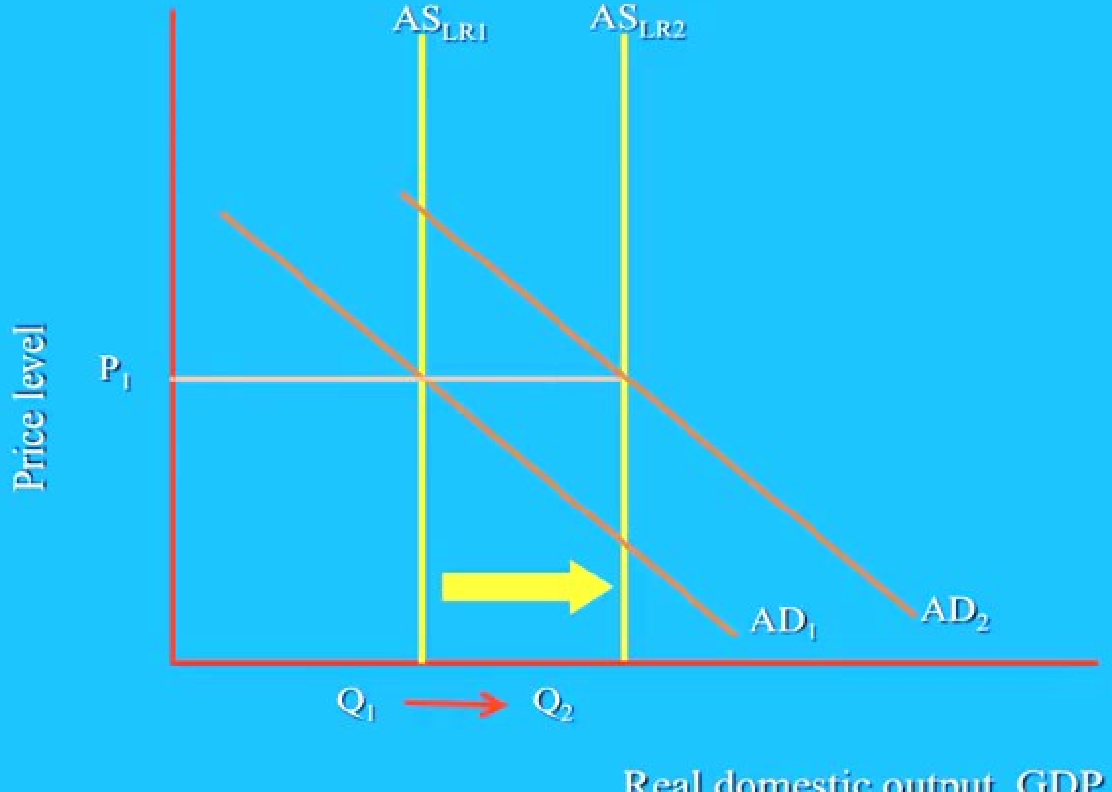
Milton Friedman Speaks!

"[S]uch a rule…would eliminate…the major cause of instability in the economy--the capricious and unpredictable impact of countercyclical monetary policy."

Graphing a Monetary Rule



Graphing a Monetary Rule



The New Classical View of Rules

- New Classical economists support a monetary rule.
- New Classicals believe an easy or tight money policy increases or decreases inflation but not real output.

How Monetary Policy Creates Inflation Under Rational Expectations

- The Fed: An easy money policy to reduce interest rates, expand investment spending, and boost real GDP.
- The Public: Anticipates inflation and takes self-protective action.
- The Result: Workers demand higher wages, firms increase prices, & lenders raise interest rates.

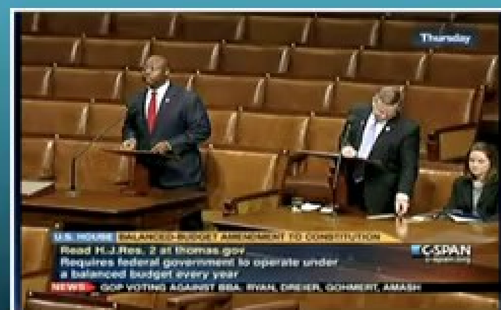
A Perverse Result If Rational Expectations Theory Holds

- Wages and price levels rise immediately.
- Inflation offsets the increase in aggregate demand brought about by easy money.
- Real output and employment do not expand!
- Wages and prices do expand!

LECTURE SIX - PART SEVEN

A Balanced Budget Rule

- Both Monetarists and New Classical economists question the effectiveness of <u>fiscal</u> policy.
- Some favor a Constitutional amendment to annually balance the Federal budget.



The "Passive" Fiscal Policy View

- The government should not intentionally create budget deficits or surpluses.
- Deficits and surpluses caused by recession or inflationary expansion correct themselves as the economy self-corrects to full-employment output.

The Keynesian Defense of Discretionary Stabilization Policy

- How do Keynesians respond to calls for rules-based fiscal and monetary policy?
- Keynesians argue that the rationale for a monetary rule is flawed.
- While there is typically a close relationship between the money supply and nominal GDP, it can break down during periods of instability.

Keynesians: Velocity Is Variable!

- V varies both cyclically and overtime.
- A constant annual rate of increase in M need *not* eliminate fluctuations in aggregate demand because V varies.

Key Point

A steady rise in M does *not* guarantee a steady expansion of aggregate demand because the velocity V can change.

Does "Crowding Out" Neutralize Keynesian Stimulus?

- A Big Debate: Does expansionary fiscal policy "crowd out" private sector investment?

Key Concept

Crowding Out: The offsetting effect on private expenditures caused by the government's sale of bonds to finance expansionary fiscal policy.

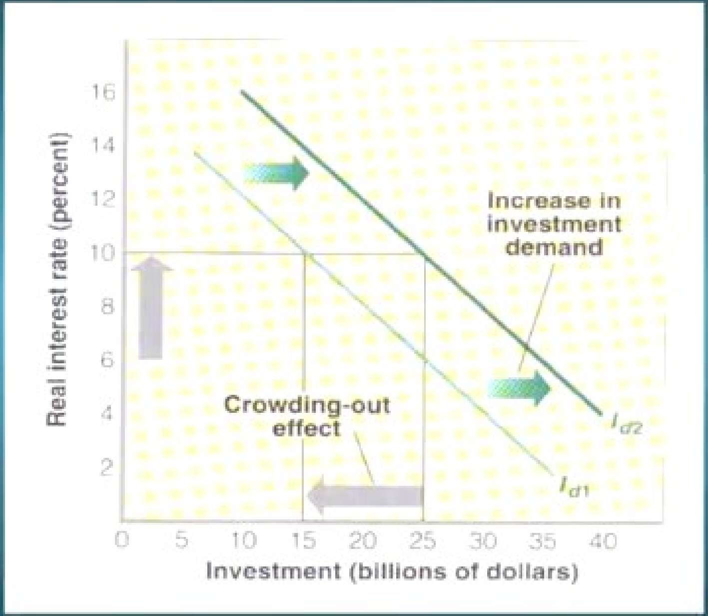
The Nuts & Bolts of Crowding Out

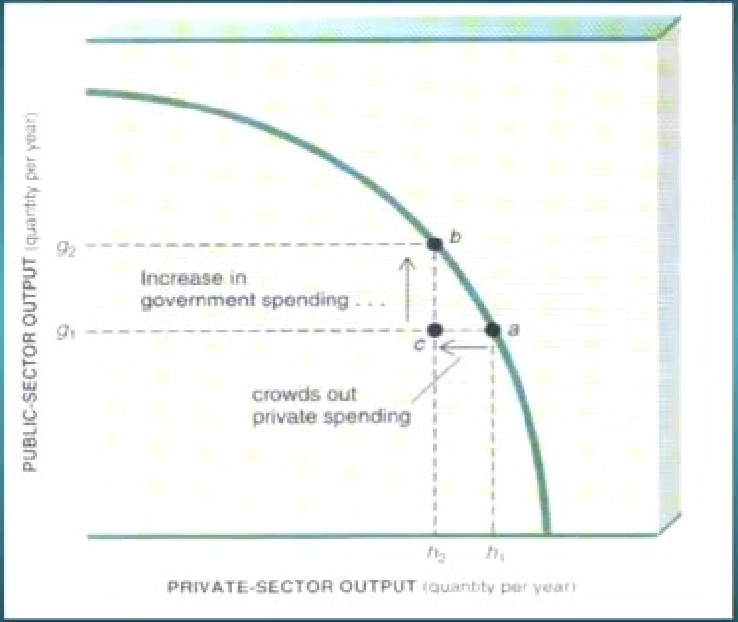
- To finance a budget deficit, the U.S. Treasury sells bonds <u>directly</u> to the private capital markets.
- The Federal Reserve is out of the loop.
- The U.S. Treasury competes directly in the capital markets with private corporations.
- Corporations sell bonds and stocks to raise capital to invest in new plant and equipment.

Deficits Lead to Higher Interest Rates

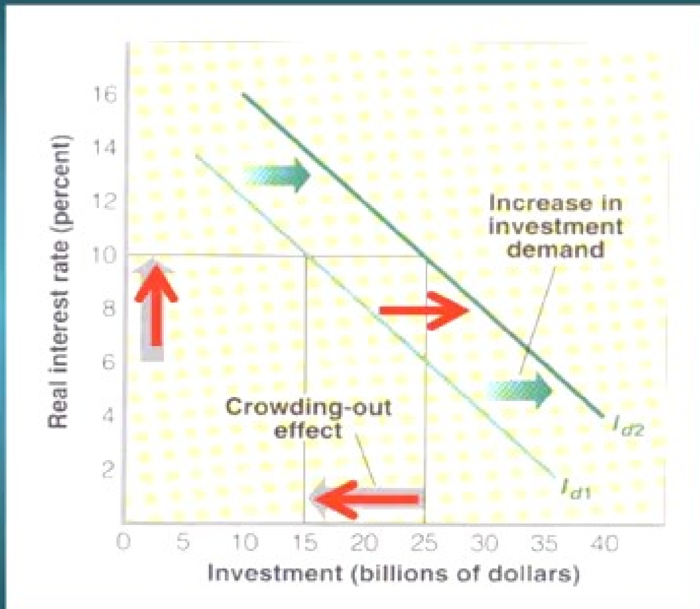
- To compete in bond market, the Treasury must raise the interest rate it is offering to attract enough funds.
- A "Zero Sum Game": Funds to finance government spending would <u>otherwise</u> have been spent on private investment.
- As G rises and I falls, deficit spending thereby "*crowd outs*" private investment.

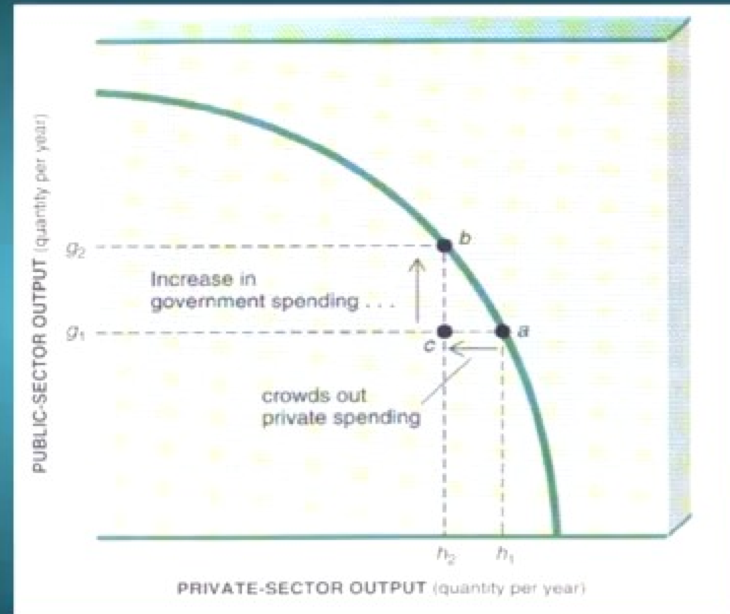
Crowding Out Illustrated



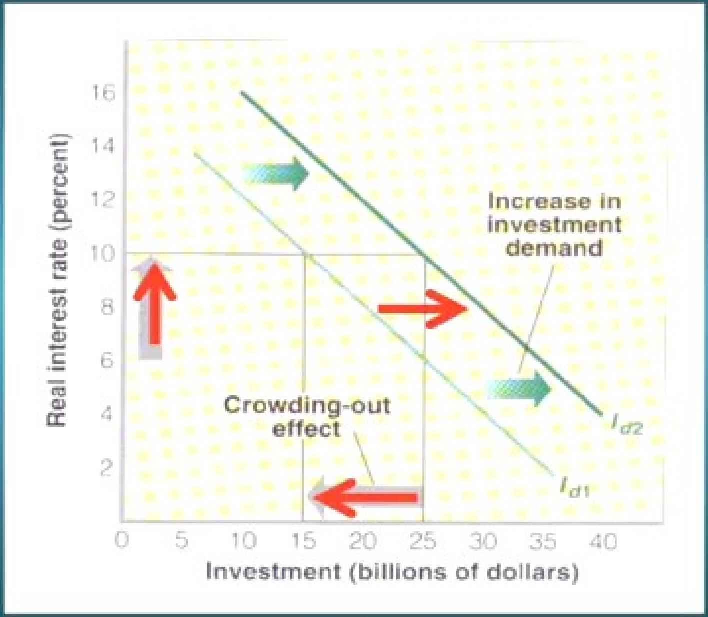


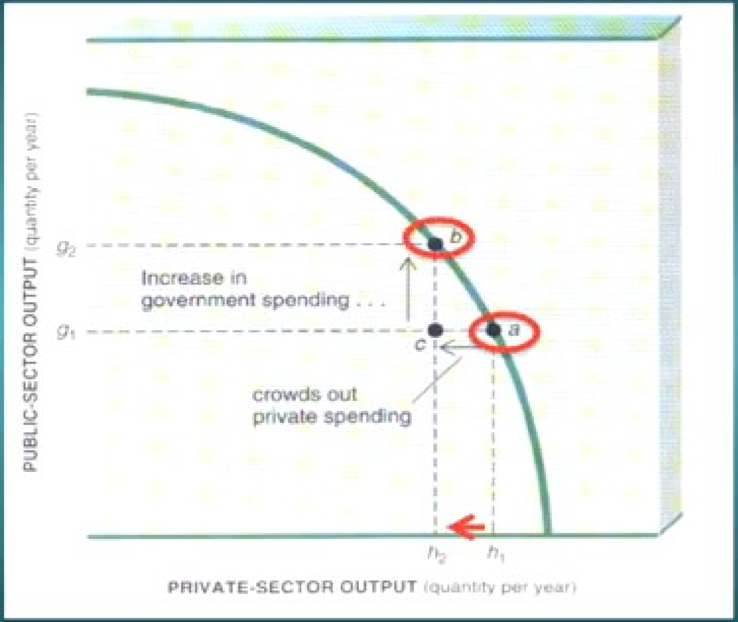
Crowding Out Illustrated



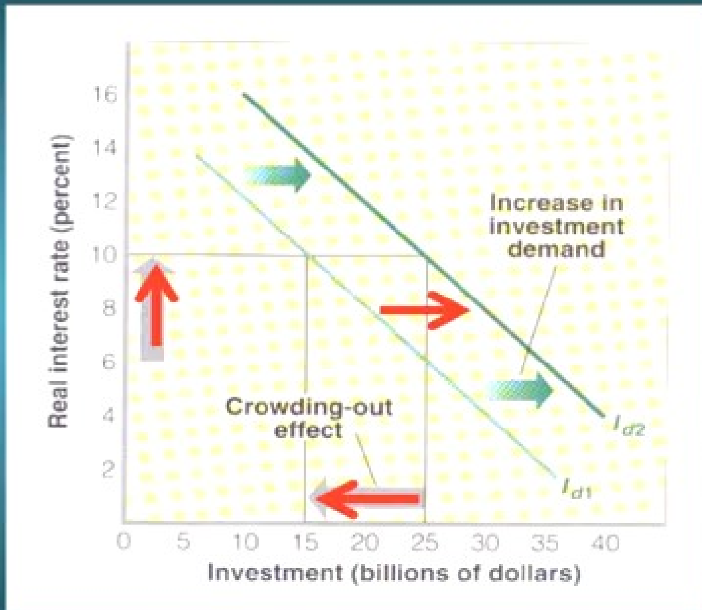


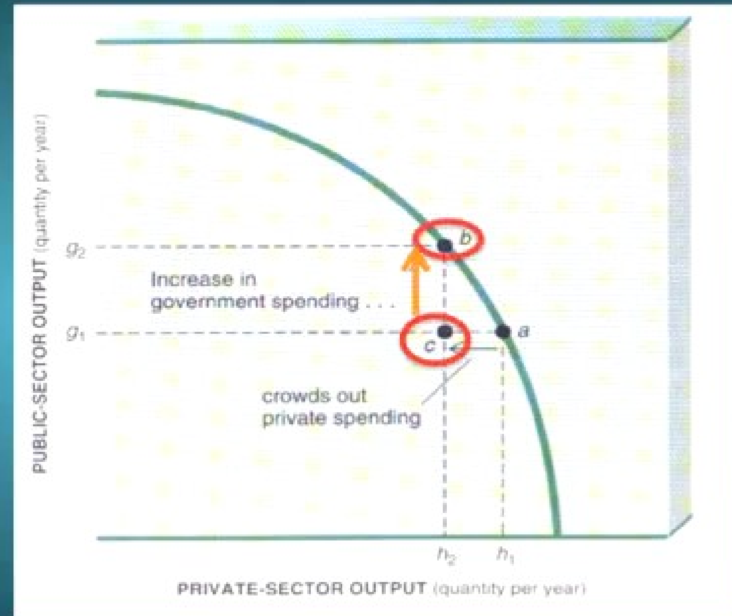
Crowding Out Illustrated





Crowding Out Illustrated





The Policy Implication

- Monetarists believe substantial crowding out is associated with discretionary expansionary fiscal policy.

Key Point

Monetarists conclude fiscal policy shouldn't be used because increases in G are largely, or wholly, offset by declines in I.

The Keynesian Rejoinder

- Keynesians recognize the possibility of crowding out.
- They don’t think it is a problem when business borrowing is depressed, as is the case in a recession.
- Therefore, activist expansionary fiscal policy is appropriate!

Why Keynesians Oppose A Balanced Budget Rule

- Tax revenues fall during recessions and rise during demand-pull inflation.
- A Balanced Budget rule would require contractionary fiscal policy during a recession and deepen it!
- A Balanced Budget rule would require cutting taxes during an expansion and increase inflation!!

The Supply Side View of Activism

- Taxes and regulations must be reduced to get more output without inflation.
- Thus, Supply Siders favor discretionary policy actions much like Keynesians do.
- Supply Siders often seek to reduce the negative effects of existing government regulations or tax policies.

Where The Warring Schools Converge

- Despite disagreements, the warring schools of macroeconomics share common ground.
- Most Keynesians agree with Monetarists that "money matters."
- They acknowledge excessive growth of M is the major cause of long-lasting, rapid inflation.
- Keynesians also agree with Rational Expectations proponents that expectations are indeed important.

Some More Convergence

- If government can create expectations of price stability, full employment, and growth, households & firms will act to make that happen.
- Keynesians concur with Supply Siders that government needs to focus on policies that shift out the AS curve and increase economic growth.

The Bottom Line

Because of ongoing challenges, macroeconomics remains very much an evolving policy science.

Coming Up Next!

Lesson Seven:

Economic Growth & Productivity

THE POWER OF MACROECONOMICS

Professor Peter Navarro
University of California-Irvine

END OF LESSON SIX