



Macroeconomics II: Aggregate Demand, Aggregate Supply, and Stabilization

How economic shocks move the economy—and what governments and central banks can (and cannot) do to stabilize it

Building Your Policy Toolkit



Identify Economic Shocks

Distinguish between demand-side and supply-side disturbances and their distinct impacts on output and prices



Master the AD-AS Framework

Understand how aggregate demand and supply interact in both short-run and long-run equilibrium



Know Your Policy Instruments

Learn when and how to deploy fiscal policy (government spending, taxes) and monetary policy (interest rates, liquidity)



Recognize Real-World Constraints

Understand the limits: implementation lags, credibility challenges, debt sustainability, and open-economy complications

- The goal is developing a "policy reflex"—identify the shock, predict movements in output and inflation, choose appropriate instruments, and anticipate side effects and trade-offs.

Aggregate Demand (AD): Total Planned Spending

Aggregate demand represents total planned spending on domestic goods and services at each overall price level. It's not vague "wanting"—it's actual spending plans translated into economic activity.

The AD Equation

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

- **C:** Consumption (household spending on goods and services)
- **I:** Investment and housing (business capital, residential construction)
- **G:** Government purchases (federal, state, local spending)
- **X - M:** Net exports (exports minus imports)

In the standard model, the AD curve slopes downward: higher price levels are associated with lower real spending.



- ❑ When economists say "demand is weak," they typically mean that C, I, G, or net exports have fallen enough that total spending is below what would support potential output.

Why Does AD Slope Downward?

Three standard channels explain the inverse relationship between the price level and aggregate spending:

Real Balance Effect

When the overall price level rises, the real purchasing power of money balances (cash, checking accounts) falls. Households feel poorer and reduce consumption.

Interest-Rate Effect

Higher prices typically lead to higher nominal interest rates as people demand more money for transactions. Higher rates discourage investment spending and purchases of durable goods.

Exchange-Rate Effect

In open economies, higher domestic prices make domestic goods relatively more expensive compared to foreign goods. This reduces net exports ($X - M$) as imports rise and exports fall.

- Treat these as useful intuitions rather than mechanical laws. They help explain why higher price levels often coincide with lower real spending in the aggregate.

Aggregate Supply: SRAS and LRAS

Short-Run Aggregate Supply (SRAS)

The SRAS curve shows the relationship between the price level and output produced when some input costs adjust slowly. It's typically upward sloping because:

- Wages and contracts are sticky in the short run
- Firms have imperfect information about price changes
- Menu costs make frequent price adjustments costly

This means output can temporarily deviate from its long-run potential.

Long-Run Aggregate Supply (LRAS)

The LRAS curve represents potential output (Y^*) and is often drawn as vertical. In the long run:

- Wages and prices fully adjust to economic conditions
- Expectations align with reality
- The economy gravitates toward its productive capacity

LRAS is determined by fundamentals: labor force, capital stock, technology, productivity, and institutions.

Equilibrium and Output Gaps

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Short-Run Equilibrium

Occurs where aggregate demand intersects short-run aggregate supply. At this point, planned spending equals actual output, but the economy may not be at full capacity.

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Long-Run Equilibrium

Achieved when the economy operates at potential output ($Y = Y^*$), where the LRAS curve intersects AD and SRAS. All markets have cleared and expectations are fulfilled.

Diagnosing Output Gaps

Recessionary Gap ($Y < Y^*$)

Actual output falls short of potential. Characteristics include:

- Rising unemployment
- Underutilized capacity
- Downward pressure on prices
- Economic slack and lost output

Inflationary Gap ($Y > Y^*$)

Actual output exceeds sustainable potential. Signs include:

- Labor shortages
- Overutilized capacity
- Upward pressure on wages and prices
- Unsustainable growth rates

- Output gaps are the fundamental language of stabilization policy. Accurate diagnosis matters: a recessionary gap can stem from weak demand or supply disruptions, and the appropriate policy response differs dramatically.

Demand Shocks vs Supply Shocks

The single most important distinction in macroeconomic policy analysis:

Demand Shock (AD Shifts)

Positive demand shock (AD shifts right):

- Output ↑
- Inflation ↑

Negative demand shock (AD shifts left):

- Output ↓
- Inflation ↓

Key insight: Output and inflation move in the same direction

Supply Shock (SRAS Shifts)

Negative supply shock (SRAS shifts left):

- Output ↓
- Inflation ↑
- Result: Stagflation

Positive supply shock (SRAS shifts right):

- Output ↑
- Inflation ↓

Key insight: Output and inflation move in opposite directions—creating painful trade-offs



Recognizing Shocks in Practice

Rapid identification of shock types is essential for effective policy response.



Negative Demand Shocks

AD shifts left:

- Consumer/business confidence collapse
- Wealth destruction (stock market crash, housing bust)
- Credit tightening or high interest rates
- Fiscal austerity measures
- Sharp drop in export demand

Negative Supply Shocks

SRAS shifts left:

- Energy price spikes (oil shocks)
- Supply chain disruptions
- Natural disasters, wars, sanctions affecting inputs
- Labor shortages or sudden productivity drops
- Adverse weather affecting agriculture

- Quick diagnostic test:** If output falls with declining inflation, suspect a demand shock. If output falls with rising inflation, suspect a supply shock. This distinction is critical because policy responses differ fundamentally.

The Stabilization Toolkit

Policymakers pursue two primary goals: reduce output gaps and stabilize inflation expectations. They have two main toolkits at their disposal.



Fiscal Policy

Authority: Government (legislative and executive branches)

Primary instruments:

- Government spending (G) on goods, services, infrastructure
- Tax policy affecting consumption (C) and investment (I)
- Transfer payments (unemployment insurance, social programs)

Two modes: Automatic stabilizers (act without new legislation) vs discretionary policy (requires legislative action)

Strengths: Powerful, targeted, can address inequality

Weaknesses: Slow political process, implementation lags, sustainability concerns



Monetary Policy

Authority: Central bank (Federal Reserve, ECB, etc.)

Primary instruments:

- Policy interest rate (federal funds rate, discount rate)
- Liquidity provision and asset purchases
- Reserve requirements
- Forward guidance and expectations management

Strengths: Fast implementation, technocratic independence, can act decisively

Weaknesses: Blunt instrument, credibility-dependent, limited at zero lower bound

Constraints That Limit "What Works"

Textbook policy prescriptions face practical limitations that policymakers must navigate:



Policy Lags

Recognition lag: Time to identify the problem

Decision lag: Time to agree on and implement policy

Impact lag: Time for policy to affect the economy

Risk: Policy can arrive too late and destabilize (stimulus during recovery causes overheating)



Credibility and Expectations

Policy effectiveness depends on whether households and firms believe policymakers will follow through. If inflation expectations become unanchored, disinflation costs rise dramatically. Central bank independence and track records matter enormously.



Debt and Fiscal Space

Sustainability depends on the relationship between interest rates (r) and growth (g), plus primary deficits. High debt levels constrain fiscal options and can trigger market concerns, raising borrowing costs and limiting countercyclical capacity.



Open-Economy Complications

Exchange rates, capital flows, and external debt create trade-offs. Tighter monetary policy may strengthen the currency (helping inflation but hurting exports). Capital flight can force policy adjustments regardless of domestic conditions.