Putting It All Together

Agenda

• Putting It All Together
  ➢ The IS-LM, DAD-SAS, and SGM together.
  ➢ A Simple Model of Growth, Unemployment, and Inflation.

Putting It All Together, Part 1

• Three models
  ➢ IS-LM
  ➢ DAD-SAS
  ➢ Solow Growth Model

Putting It All Together, Part 1

• The IS-LM Model
  ➢ Short-run orientation.
  ➢ Determination of Y and R.
  ➢ Prices are exogenous.
  ➢ Y can deviate from Yn.
  ➢ Adjustment mechanism is through inventory change and changes in R.

Putting It All Together, Part 1

• The DAD-SAS Model
  ➢ Medium-run orientation.
  ➢ Determination of Y and π.
  ➢ Wage and price adjustment is sticky.
  ➢ Y can deviate from Yn in the short-run but not in the intermediate-run.
  ➢ Adjustment mechanism is through π, changes in the real Ms, and R.

Putting It All Together, Part 1

• The Solow Growth Model
  ➢ Long-run orientation.
  ➢ Determination of Yn/N, Yn, and y-dot.
  ➢ Wages and prices are fully flexible.
  ➢ Y does not deviate from Yn.
  ➢ Yn is determined by the:
    • Labor force,
    • Capital stock, and
    • Technology (productivity).
  ➢ Adjustment mechanism is through Investment.

Putting It All Together, Part 1

• The IS-LM, DAD-SAS, and SGM are fully consistent with one another:
  ➢ Changes in any model MUST be transmitted to the other models in a fully consistent manner.
  ➢ Examples:
    • Changes in fiscal policy.
    • Changes in monetary policy.
    • Change in autonomous investment.
    • Change in productivity.
Putting It All Together, Part 2

• A Simple Model of Growth, Unemployment, and Inflation:
  ➢ based on Okun’s Law and
  ➢ the DAD – SAS Model.

Putting It All Together, Part 2

• Relationship between GDP and Unemployment
  ➢ If GDP > potential GDP, then U < Un
  ➢ If GDP < potential GDP, then U > Un

Putting It All Together, Part 2

• Implications
  ➢ If output ratio is rising, then U is falling
  ➢ If output ratio is falling, then U is rising

• Conclusion:
  ➢ Changes in the unemployment rate depend on changes in the output ratio, NOT on its level.
Putting It All Together, Part 2

- Relationship between GDP, the Output Ratio, and Inflation:
  - If the output ratio is $> 0\%$, then inflation will rise, i.e., accelerating inflation.
  - If the output ratio is $< 0\%$, then inflation will fall, i.e., disinflation.
  - Changes in inflation depend on whether the output ratio is above or below 0%, NOT on whether it is rising or falling.

The relationship between GDP and inflation is more subtle than for unemployment, depending on whether the output ratio is above or below 0%.