

Principles of Macroeconomics

ECON 2002.01 - Chapter 11 Classical and Keynesian Macro Analyses

Introduction

The most commonly used gauge of volatility in U.S. financial markets is the VIX index. During the severe 2008-2009 recession, the VIX index increased substantially, indicating significant variability in the value of financial claims and interest rates. How can disturbances in financial markets sometimes translate into reductions in real GDP and perhaps even into a decline in the overall price level?

In Chapter 11, you will develop an understanding of how to answer this question by learning about how the equilibrium price level is determined in the short run.

Learning Objectives

- Discuss the central assumptions of the classical model
- Describe the short-run determination of equilibrium real GDP and the price level in the classical model
- Explain the circumstances under which the short-run aggregate supply curve may be either horizontal or upward sloping
- Understand what factors cause shifts in the short-run and long-run aggregate supply curves
- Evaluate the effects of aggregate demand and supply shocks on equilibrium real GDP in the short run
- Determine the causes of short-run variations in the inflation rate

Chapter Outline

- The Classical Model
- Keynesian Economics and the Keynesian Short-Run Aggregate Supply Curve
- Output Determination Using Aggregate Demand and Aggregate Supply: Fixed versus Changing Price Levels in the Short Run
- Shifts in the Aggregate Supply Curve
- Consequences of Changes in Aggregate Demand
- Explaining Short-Run Variations in Inflation

The Classical Model

- **The classical model was the first attempt to explain:**
 - Determinants of the price level
 - National levels of real GDP
 - Employment
 - Consumption
 - Saving
 - Investment

- Classical economists – Adam Smith, J.B. Say, David Ricardo, John Stuart Mill, Thomas Malthus, A.C. Pigou, and others – wrote from the 1770s to the 1930s
- They assumed wages and prices were flexible, and that competitive markets existed throughout the economy
- **Say's Law**
 - A dictum of economist J.B. Say that supply creates its own demand
 - Producing goods and services generates the means and the willingness to purchase other goods and services
 - *Supply creates its own demand; hence it follows that desired expenditures would equal actual expenditures*
- **Assumptions of the classical model**
 - Pure competition exists
 - Wages and prices are flexible
 - People are motivated by self-interest
 - People cannot be fooled by money illusion
- **Money Illusion**
 - Reacting to changes in money prices rather than relative prices
 - If a worker whose wages double when the price level also doubles thinks he or she is better off, that worker is suffering from money illusion
- **Consequences of the assumptions**
 - If the role of government in the economy is minimal;
 - If pure competition prevails, and all prices and wages are flexible;
 - If people are self interested, and do not experience money illusion
 - Then problems in the Macroeconomy will be temporary and the market will correct itself
- **Equilibrium in the credit market**
 - When income is saved, it is not reflected in product demand
 - It is a type of *leakage* from the circular flow of income and output, because saving withdraws funds from the income stream
 - Therefore, total planned consumption spending can fall short of total current real GDP
 - Classical economists contended each dollar saved would be matched by business investment
 - Leakages would thus equal injections
 - At equilibrium, the *price* of credit – the interest rate – ensures that the amount of credit demanded equals the amount supplied
- **Equating Desired Saving and Investment in the Classical Model**
 - Changes in saving and investment create a surplus or shortage in the short run
 - In the long run, this is offset by changes in the interest rate
 - This interest rate adjustment returns the market to equilibrium where $S = I$
- **Question**
 - Would unemployment be a problem in the classical model?
- **Answer**
 - No, classical economists assumed wages would always adjust to the full employment level
- **Classical theory, vertical aggregate supply and the price level**
 - In the classical model, long-term unemployment is impossible
 - Say's law, along with flexible interest rates, prices and wages would tend to keep workers fully employed
 - The LRAS curve is vertical
 - A change in aggregate demand will cause a change in the price level

Keynesian Economics and the Keynesian Short-Run Aggregate Supply Curve

- The classical economists' world was one of fully utilized resources
- In the 1930s, Europe and the United States entered a period of economic decline that could not be explained by the classical model
- John Maynard Keynes developed an explanation that has become known as the Keynesian model
- **Keynes and his followers argued**
 - Prices, including wages (the price of labor) are inflexible, or "sticky", downward
 - An increase in aggregate demand, *AD*, will not raise the price level
 - A decrease in *AD* will not cause firms to lower the price level
- **Keynesian Short-Run Aggregate Supply Curve**
 - The horizontal portion of the aggregate supply curve in which there is excessive unemployment and unused capacity in the economy
- **Real GDP and the price level, 1934-1940**
 - Keynes argued that in a depressed economy, increased aggregate spending could increase output without raising prices
 - Data showing the U.S. recovery from the Great Depression seem to bear this out
 - In such circumstances, real GDP is demand driven, as the short-run aggregate supply curve was almost flat
- **The Keynesian Model**
 - Equilibrium GDP is *demand-determined*
 - The Keynesian short-run aggregate supply schedule shows sources of price rigidities
 - a) Union and long-term contracts explain inflexibility of nominal wage rates

Output Determination Using Aggregate Demand and Aggregate Supply: Fixed versus Changing Price Levels in the Short Run

- The underlying assumption of the simplified Keynesian model is that the relevant range of the short-run aggregate supply schedule (SRAS) is horizontal
- The price level has drifted upward in recent decades
- Prices are not totally "sticky"
- Modern Keynesian analysis recognizes *some* – but not complete – price adjustment takes place in the short run
- **Short-Run Aggregate Supply Curve**
 - Relationship between total planned economy wide production and the price level in the short run, *ceteris paribus*
 - If prices adjust incompletely in the short run, the curve is positively sloped
- In the modern Keynesian short run, when the price level rises partially, real GDP can expand beyond the level consistent with its long-run growth path
- **This is because:**
 - Most labor contracts allow for flexibility in the total number of hours worked
 - The existing capital stock can be used more intensely
 - If wages are constant when prices rise, a firm is more profitable in its operations
- **All these adjustments cause real GDP to rise as the price level increases:**
 - Firms use workers more intensively (getting workers to work harder)
 - Existing capital equipment used more intensively (use machines longer)
 - If wage rates held constant, a higher price level leads to increased profits, which leads to lower unemployment as firms hire more