Chapter 35: Extending the Analysis of Aggregate Supply

Our analysis of the macroeconomy, up to this point, has focused on policies appropriate for short-run stabilization. But what about the long run? How can we foster long-run economic growth, and can short-run stabilization policies affect long-run economic growth for better or for worse? Chapter 35 shifts our attention to the long run, focusing on aggregate supply, the tradeoffs between inflation and unemployment, and an introduction to the disagreements among economists regarding the best means of fostering long-run economic growth.

The difference between the short run and the long run deals with the costs of inputs in production. Resource costs are fixed in the short run, so the short-run aggregate supply curve is upward-sloping; higher prices (and, therefore, higher profits) entice the firm to produce more products. In the long run, however, input costs are flexible, and so the long-run aggregate supply curve is vertical at full-employment output.

Long-run economic equilibrium occurs where the aggregate demand, the short-run (upward sloping) aggregate supply, and the long-run (vertical) aggregate supply all intersect. At that point, the economy is experiencing full-employment output, there is no recessionary or inflationary gap, and full employment (the natural rate of unemployment) has been achieved.

Short-run instabilities are eventually brought back to equilibrium in the long-run model. Demand-pull inflation increases both output and price level in the short run. But in the long run, as resource prices increase, short-run aggregate supply shifts to the left, and long-run equilibrium is restored at full-employment output, but a higher price level. Cost-push inflation reduces short-run aggregate supply, increasing the price level and reducing output. If the government uses fiscal and monetary policy to reduce unemployment, output will increase, but at the cost of a higher price level. If the government uses fiscal and monetary policy to reduce the inflation rate, the economy will slow, at the cost of higher unemployment. When short-run aggregate demand falls during a recession, most economists recognize that input prices are downwardly rigid, so the economy may not quickly restore equilibrium. Most economists call for government to use fiscal and monetary policy to restore aggregate demand, recognizing that higher prices will still result from the policy actions.

Increases in long-run economic growth can be seen in models such as the production possibilities curve from the first chapters of the book, as well as the long-run aggregate supply curve from this chapter. Improvements in technology and increases in the quantity and quality of resources are central to potential economic growth. U.S. economic growth is illustrated in the AS-AD model by simultaneous rightward shifts in aggregate demand, short-run aggregate supply, and long-run aggregate supply.

The Phillips Curve illustrates the short-run tradeoff between inflation and unemployment. The downward-sloping curve shows that in the short run, increases in aggregate demand increase price levels and employment (thus reducing unemployment), while decreases in aggregate demand cause increases in unemployment and reductions in price levels. Therefore, changes in fiscal and monetary policy move the economy to different points along the short-run Phillips Curve. Aggregate supply shocks, however, cause the Phillips Curve itself to shift. Stagflation of the 1970s, with its simultaneous high inflation and high unemployment, demonstrated that the relationship between

inflation and unemployment is not always a stable tradeoff. Inflationary expectations can lead to even greater decreases in aggregate supply.

The long-run Phillips Curve illustrates no tradeoff between inflation and unemployment. While an increase in aggregate demand may increase profits, output, and employment beyond full employment, eventually wages catch up, reducing profits, output, and employment to full-employment output levels. Therefore, the long-run Phillips Curve is vertical at the natural rate of unemployment.

Supply-side economists argue that changes in aggregate supply are important for promoting long-run economic growth. Specifically, supply-siders focus on reducing marginal tax rates to foster investment and growth. As illustrated by the Laffer Curve, reductions in taxes on wages were expected to increase work incentive. In addition, lower taxes on investment income were expected to increase saving and investment. The improved work output and productivity were supposed to significantly increase long-run aggregate supply. In practice, economists widely agree the United States is on the lower end of the Laffer Curve, nullifying arguments about tax rate cuts increasing work incentive, and illustrating that cuts in tax rates reduce, rather than increase, government revenues. Further, most economists agree that tax cuts more immediately and certainly increase aggregate demand than any potential effect on aggregate supply. The resulting inflation, or increase in interest rates to prevent inflation, defeats the investment purpose of the tax cuts.

Material from Chapter 35 regularly appears in several multiple-choice questions, and questions concerning the Phillips Curve and long-run economic growth have been included in free-response questions on the AP Macroeconomics Exam. The ability to correctly graph the economy in long-run equilibrium as well as disequilibrium is key to beginning the analysis of policies. An occasional question may appear regarding the tenets of supply-side policy, but the extended AS-AD model and the short-run and long-run Phillips Curves are the focus of questions from this chapter.