BOSTON UNIVERSITY Global Development Policy Center
Economics in Context Initiative

Chapter 12: Aggregate Supply, Aggregate Demand, and Inflation: Putting it All Together

Appendices

Appendices to Chapter 12 of *Essentials of Economics in Context*

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APPENDICES: MORE SCHOOLS OF MACROECONOMICS

APPENDIX A: NEW CLASSICAL ECONOMICS

In the simple classical model presented in Chapter 12, the economy is nearly always at or close to full employment. Faced with the empirical evidence of widely fluctuating output and unemployment rates, some modern-day economists—often called "new classical" economists—have come up with a number of theories that seek to explain how classical theory can be consistent with the observed fluctuations.

At one extreme, some economists have sought to redefine full employment to mean pretty much whatever level of employment currently exists. Assuming that people make optimizing choices and markets work smoothly, one might observe employment levels rising and falling if, for example, technological capacities or people's preferences for work versus leisure shift over time. Some new classical economists, who have worked on what is called **real business cycle theory**, have suggested that "intertemporal substitution of leisure" (i.e., essentially, people voluntarily taking more time off during recessions) could be at the root of the lower employment levels observed during some historical periods. On this basis, the Great Depression of the 1930's is seemingly, and controversially, understood as being the 'Great Vacation'.[1] Availability of unemployment compensation, in this view, could also make people more likely to choose not to work.

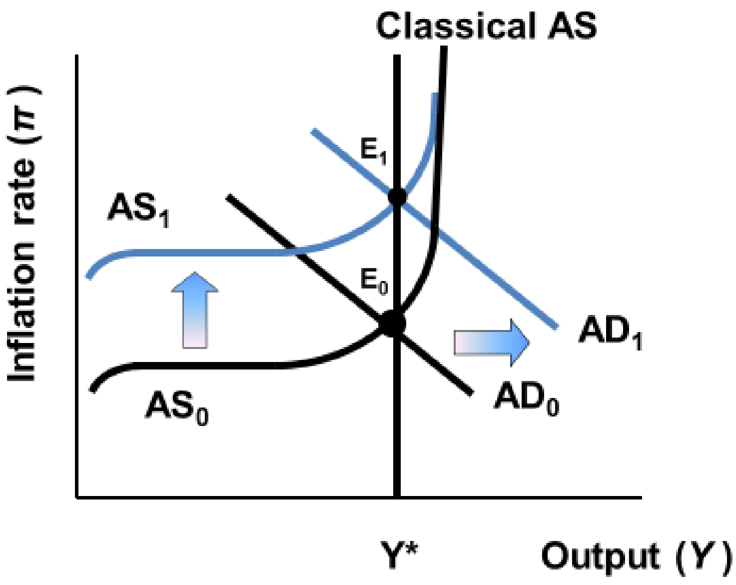
real business cycle theory: the theory that changes in employment levels are caused by change in technological capacities or people's preferences concerning work

Economists of the **rational expectations** school (which originated during the 1970s and 1980s) proposed a theory according to which monetary policy only affects the inflation rate and not output. The basic idea is that people have perfect foresight (i.e., they are perfectly rational), so their decisions already factor in the effects of predictable Fed policy, rendering it ineffective. This model can be explained by using the *AS/AD* model with a classical-type vertical *AS* (as shown in Figure 12.19). This vertical *AS* is interpreted to be the real supply curve for the economy, while in the short term the ordinary, curved *AS* reflects people's inflationary expectations.

rational expectations theory: the theory that people's expectations about Federal Reserve policy cause predictable monetary policies to be ineffective in changing output levels

Figure 12.19 shows the effects of an expansionary monetary policy in this classical world. Starting at E_0, the Fed acts to shift the *AD* curve to the right by expanding the money supply, from AD_0 to AD_1. Economists of the rational expectations school predict that actors in the private economy will anticipate this expansionary move by the Fed and interpret it to mean that higher inflation is likely. As a result, they immediately raise their inflationary expectations. This rise in expected inflation, shown by the upward shift of the standard *AS* curve from AS_0 to AS_1, cancels out the expansionary effects of the policy. Output will not change, and the economy stays on the classical *AS* curve—but at a higher level of inflation. Possibly a very unexpected move by the Fed might have a temporary effect on output, but as soon as people understand what policies the Fed is carrying out, the policies will become ineffective due to changes in expectations.

Figure 12.19 Classical Aggregate Supply Curve



Other new classical economists accept that unemployment is real and very painful to those whom it affects. However, they see aggregate demand policies as useless for addressing it. Rather, they claim that unemployment is caused by imperfections in labor markets (the "classical unemployment" described in Chapter 7). To reduce unemployment, new classical economists prescribe getting rid of government regulations (such as rigorous safety standards or minimum wages) that limit how firms can do business, restricting union activity, or cutting back on government social welfare policies that make it more attractive (according to the new classical economists) to stay out of work. Market pressures, they believe, will be enough on their own to support full employment—if given free rein.

APPENDIX B: THE NEOCLASSICAL SYNTHESIS AND NEW KEYNESIAN MACROECONOMICS

Somewhere in the middle ground is what has been called the "classical-Keynesian synthesis" or **neoclassical synthesis**. (It is a bit confusing that the terms "neoclassical" and "new classical" sound so similar, but they represent two different approaches). In this way of looking at the world, Keynesian theory, which allows for output to vary from its full-employment level, is considered a reasonably good description of how things work in the short and medium run. However, this view holds that, for the reasons set out in the classical model, the economy will tend to return to full employment in the long run.

neoclassical synthesis: A combination of classical and Keynesian perspectives

You may have noticed that in the exposition of the *AS/AD* model above, we talked about the short run and the medium run, but did not mention the long run. This is because in more decidedly Keynesian thought (to be discussed below), the economy is really a succession of short and medium runs. Shocks to the economy are so frequent and so pronounced, and price and wage adjustments (especially downward ones) so slow, that the economy never has a chance to "settle down" at a long-run equilibrium.

In the neoclassical synthesis, however, it is assumed that the economy, if left to its own devices for long enough, would settle back at full employment, due to the (eventual) success of classical wage and price adjustments. Models built on this basis would use an analysis much like that presented in the *AS/AD* model used in the body of this chapter but add a vertical *AS* curve such as that shown in Figures 12.18 and 12.19, labeling it "long-run aggregate supply."

To the extent that neoclassical economists and some Keynesians agree on this model, then, debates come down to a question of how long it takes to get to the long run. More classically oriented economists tend to emphasize that excessive unemployment is merely temporary and believe that (at least if government stays out of the way) the long run comes fairly soon. Some Keynesian economists, often called **New Keynesians**, have accepted the challenge from classical economists to present all their analysis in terms of the workings of individual markets, individual optimizing behavior, and possible "imperfections" in markets. They have built up theories (such as efficiency wage theory, discussed in Chapter 7) to explain why wages do not just fall during a recession to create a full employment equilibrium. They tend to work within the neoclassical synthesis, but claim that due to institutional factors the long run may be a long, long way away. They believe that government action, then, is often justified.

New Keynesian macroeconomics: a school of thought that bases its analysis on micro-level market behavior, but which justifies activist macroeconomic policies by assuming that markets have "imperfections" that can create or prolong recessions

APPENDIX C: POST-KEYNESIAN MACROECONOMICS

Post-Keynesian economists base their analyses on some of the more radical implications of the original Keynesian theory.[*] They believe that modern economies are inherently unstable and do not accept the idea of a long-run equilibrium at full employment. They stress the view that history matters in determining where the economy is today (a perspective known as **path dependence**). They also believe that the future, although it will depend to some extent on the actions we take now, is fundamentally unpredictable, due to the often surprising nature of economic evolution and world events.

post-Keynesian macroeconomics: a school of thought that stresses the importance of uncertainty, money and history in determining macroeconomic outcomes
path dependence: the idea that the state of a system such as the economy is strongly dependent on its past history

Post Keynesians emphasize the importance of uncertainty in explaining business cycles and the volatility of investment. As discussed in Chapter 9, Keynes argued that because the costs and benefits associated with business investments depend on a yet to be determined future, the

[*] Again, the similarity between the terms "New Keynesian" and "post-Keynesian" can be confusing, but there is a significant difference in the theoretical perspectives, though they do hold some policy recommendations in common.

decision to invest has far less to do with rational calculation and far more with feelings of confidence or optimism - what Keynes referred as 'animal spirits'. Such sentiments often work well as a motivating force for investment, but they are prone to sudden reversal, group think, and self-fulfilling prophecy. If investment confidence suddenly falters, investment drops resulting in a decline in aggregate demand.

In the Post Keynesian view, money is also primarily understood as a means to cope with uncertainty. When consumers or investors are feeling more uncertain, and thus more cautious, they will tend to hold more money. This strategy may work for particular individuals, but it can cause the aggregate demand to collapse if it is deployed economy wide by many individuals.

As mentioned above, Post Keynesians also emphasize the importance of past in influencing current economic outcomes. For example, one post-Keynesian argument is that high unemployment, like high inflation, may also be "toothpaste" that is very difficult to get back into the tube. When people are unemployed for a long time, they tend to lose work skills, lose work habits, and may get demoralized. If this is true, then government action to counter unemployment is even more needed, since high unemployment now may tend to lead to high unemployment in the future, even if the demand situation recovers. (Economists sometimes use the term "hysteresis" to refer to an event such as unemployment that persists into the future, even after the factors that cause that event have changed.)

In addition, long periods of high unemployment mean a permanent loss of output and investment—making the economy weaker in the long term. For these reasons, it is essential for the government to act to maintain full, or close-to-full, employment. Post-Keynesian economists would say that the fiscal expansionary policies put into place in 2009 were a good idea, because they do not believe that an economy left to its own devices will naturally return to full employment, even "in the long run."[2]

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[1] Krugman, Paul 2009. How Did Economists Get It So Wrong? *New York Times Magazine*, Sept 2, 2009

[2] Post Keynesians also have distinctive view points on many other issues such as financial instability, inequality, economic growth, and income policies. To learn more about this distinctive school of macroeconomics, see for example, Cohn, S. 2006. *Reintroducing Macroeconomics*, and the Post Keynesian entry on Exploring Economics: https://www.exploring-economics.org/en/orientation/post-keynesian-economics/. For a more detailed coverage, see King, J 2015 *Advanced Introduction to Post Keynesian Economics*.