Oil prices are at record highs. And we wonder how is this going to affect the macroeconomy? What will be the effect on the aggregate price level and aggregate output as a result of this price shock? Well, oil prices affect the economy through the input prices that producers have to pay to make the goods and services that people buy, and as the prices rise higher and higher these prices will eventually be passed on to the rest of us in the form of higher prices for the goods and services that use oil in their production and distribution. Our model can help us predict how these price increases will affect the macroeconomic variables.

An oil price shock, that is, an upward spike in oil prices, means an increase in input costs for businesses. As these businesses experience rising input costs they will produce less output at any given price level for goods and services. This inward shift in the aggregate supply curve then creates an imbalance in the economy. At the original price level, aggregate demand exceeds aggregate supply. As businesses, households, and the government scramble to get the goods and services they want, they begin to bid up prices. As the price level begins to rise, the real money supply shrinks, interest rates go up, and businesses demand less. As price levels rise, then consumers experience a reduction in their real wealth and consumption falls. Also, the rising domestic price level discourages foreigners from buying our goods and services and exports fall. All of these components add up to a reduction in the aggregate quantity demanded as the price level rises: a movement along the aggregate demand curve to the new equilibrium point with a higher price level and a smaller aggregate output.

Now, this lower aggregate output is a problem for the economy because it’s creating a gap which might spell unemployment for a lot of workers. What do we do about this? First of all, we could respond to the higher prices and reduced output with government policy. One logical approach would be to increase aggregate demand so that output returns to full employment levels. If we shift the aggregate demand curve outwards by increasing government spending, by monetary policy to lower interest rates and stimulate business spending, or a reduction in taxes, then certainly we could get that full employment output level back in equilibrium in the short-run.

However, we would do so at the cost of an even higher price level. This inflation may not be acceptable in the economy, and as a result, we may not want to undertake policy to stimulate aggregate demand. If we’re really concerned about this inflation, we may actually want to undertake contractionary fiscal policy or contractionary monetary policy to reduce aggregate demand, and when we do, the aggregate demand curve would shift inwards. We could pull the price level all the way back to its original level if we push the interest rate up high enough or reduced government spending or raised taxes by enough. In that case however, notice that the output gap would grow even larger. The reduction in prices, or preempting inflation, would come at the cost of an even deeper recession.

You can see here we’re stuck on the horns of a dilemma. That’s why this situation created by oil price shocks is called stagflation, higher prices and lower output. And it’s done through a movement of the aggregate supply curve that sets up a trade-off between reducing prices and increasing output. You can’t do both in this situation. What could we do?
Well, if we wait for the economy to adjust naturally, then the reduced output is going to create slack in the labor market and unemployed resources that lower the price of inputs. And as input prices adjust downwards, then the aggregate supply curve will move back towards its original level. Eventually, when prices have adjusted enough, aggregate supply will return to intersect aggregate demand at full employment output. But how long will that take? How long do other prices have to adjust to compensate for that oil price spike?

Maybe the best luck that we can hope for is that oil prices will return to their original levels and that this spike in oil prices has been a temporary aberration. Well, perhaps we’re not that lucky with more and more of the world’s rapidly growing economies demanding ever larger quantities of oil, supply and demand may be setting up higher oil prices for the long-run and create some tough decisions for policymakers in our economy.