Introductory Macroeconomics

In-Tutorial #6
Week Starting 19th April 2021

Questions.

1. If the inflation target increases, the AD curve is unchanged but inflation increases along the AD curve. True or False?

2. If monetary policy really operated using a mechanical policy reaction function, we could replace a central bank governor with a computer that would determine interest rates. Why do you think central bank governors still exist and have not been replaced by computers? If policy rules do not reflect how central bank governors operate, do you think there is a problem in using them in macroeconomic models?

3. Consider the monetary policy reaction function $r = r^* + \alpha(\pi - \pi^*)$ with $r^* = 0.02$ and $\alpha = 0.5$. Suppose the economy has been in long run equilibrium with inflation $\pi^* = 0.12$ but the new governor of the central bank wants a lower inflation target, $\pi^{**} = 0.02$. What real interest rate will the central bank initially set so as to bring about this change in the inflation target? What will this do to the economy in the short run?

4. Consider the AD-AS model

$$Y = Y^* - \alpha\gamma(\pi - \pi^*) + \varepsilon_D$$

$$\pi = \pi^e + \phi\beta(Y - Y^*) + \varepsilon_S$$

   Suppose the parameter values are $\alpha = 0.5$, $\gamma = 2$, $\phi = 0.5$, $\beta = 2$ with inflation target $\pi^* = 0.02$ and natural output normalized to $Y^* = 1$.

   Suppose the economy begins in an initial long run equilibrium and there is then a temporary demand shock $\varepsilon_D = 0.04$. Compute the short run and long run effects of this shock on output and inflation.