

Assume the Phillips curve is

$$\Delta\pi_t = \tilde{Y}_t,$$

so its slope is equal to 1.

Suppose that today the economy is producing at potential:

$$\tilde{Y}_0 = 0,$$

and inflation is equal to its long-run level:

$$\pi_0 = \bar{\pi} = 2\%.$$

Now suppose policymakers try to stimulate the economy so that output is above potential by 3% every year:

$$\tilde{Y}_t = 3\% \quad \text{for } t = 1, 2, 3, \dots$$

1. What happens to inflation after one year?
2. What happens after two years? After three years?
3. Does inflation settle at a new long-run level?
4. What does this example imply about using policy to keep output permanently above potential?