

In the model with imperfect competition but no price stickiness, we derive the following equations:

1. Firm  $i$ 's optimal pricing equation:  $\frac{P_i}{P} = \frac{\eta}{\eta-1} \left( \frac{W}{P} \right)$

2. Demand curve for firm  $i$ 's product:  $Y_i = \left( \frac{P_i}{P} \right)^{-\eta} Y$

3. Labor supply curve for economy:  $L = \left( \frac{W}{P} \right)^{\frac{1}{\gamma-1}}$

4. Production function:  $Y_i = L_i$  or  $Y = L$

Next we will add in an aggregate-demand curve  $Y = M/P$ .

Using these equations, solve for  $Y$ ,  $L$ , and  $P$  in terms of  $M$ , noting that in equilibrium all firms will set the same price (because they are symmetric) and therefore  $P_i/P = 1$ . Are these values optimal? Does aggregate demand ( $M$ ) affect output or employment? How does  $M$  affect prices? Is money neutral in this model?