Problems

New-Keynesian macroeconomics

1. The New-Keynesian macromodel with menucosts can explain why firms do not adjust their prices when the nominal money supply increases. One of the underlying assumptions is that wages remain constant after this shock.

a. When will wages indeed remain constant?

b. How would you adjust figure 1 if wages would increase after the monetary expansion? Explain.

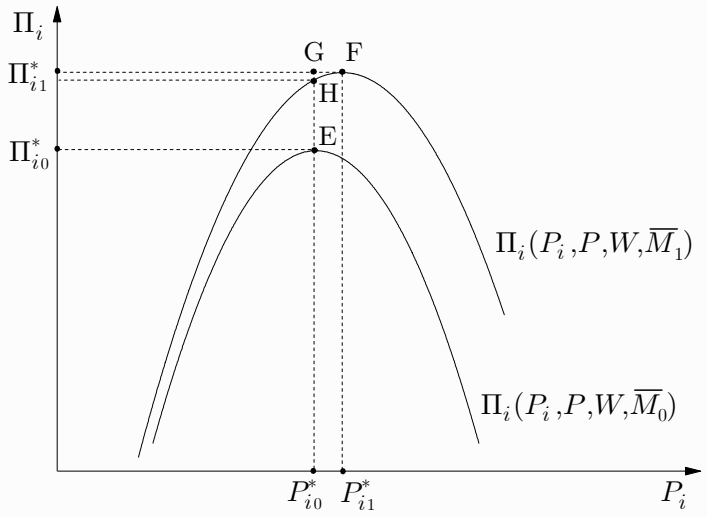

Figure 1

c. What would be the implications for the critical menucosts, and hence for the probability of prices to remain fixed, if wages would indeed increase? Use your answer to question b.

2. Consider the New-Keynesian macromodel with menucosts and have a look at the following tables.

Table 1. Critical menucosts $\delta = 0.8$

	$\sigma = 2$	$\sigma = 5$	$\sigma = 10$	$\sigma = 20$
$\gamma = 1.1$	0.776	1.241	1.396	1.473
$\gamma = 1.5$	1.832	2.931	3.297	3.481
$\gamma = 2.0$	3.189	5.102	5.740	6.059
$\gamma = 5.0$	12.262	19.619	22.071	23.297
$\gamma = 10$	31.608	50.573	56.895	60.056

Table 2. Critical menucosts. $\delta = 1$

	$\sigma = 2$	$\sigma = 5$	$\sigma = 10$	$\sigma = 20$
$\gamma = 1.1$	0.257	0.411	0.462	0.487
$\gamma = 1.5$	1.296	2.074	2.333	2.463
$\gamma = 2.0$	2.625	4.200	4.725	4.987
$\gamma = 5.0$	11.314	18.103	20.365	21.497
$\gamma = 10$	28.945	46.312	52.101	54.995

Explain why the critical menucosts increase as the parameter δ becomes smaller. Remember,

$$Y_i = N_i^{\delta} \qquad i = 1, 2, \cdots, n \qquad 0 < \delta \leq 1$$

3. The 2-period model with fixed staggered prices is able to generate persistent effects on output of a monetary shock. Evaluate the following statement: *"The persisitence in real output will be larger, the greater the parameter σ."* Give an economic interpretation. Remember:

$$Y_i = \left(\frac{P_i}{P}\right)^{-\sigma} \frac{Y}{n}.$$

Private consumption

1. There is conflicting empirical evidence concerning the relation between the average propensity to consume and disposable income in microeconomic cross-setion data on the one hand, and in macroeconomic time seriers data on the other. Explain briefly this apparent incostincency. Remember:

$$C_1 = \theta\left(Y_1^d + \frac{Y_2^d}{1+r} + V_1\right)$$

2. Empirical evidence suggests that quite some consumers tend to spend their entire current disposable income immediately. Is this irrational? Discuss.

3. *"The Ricardian Equivalence Theorem implies that a tax reduction will have no effect on consumption unless the tax reduction is financed by a decrease in government expenditures."* Do you agree? Why or why not?

Monetary policy and aggregate demand

1. Explain the importance of a credible communication by the central bank of its future policy.

2. Why does the AD-curve slope downwards? Which factors can cause the AD-curve to shift? Which factors determine the slope of the AD-curve? Remember:

$$y - \overline{y} = \alpha(\pi^* - \pi) + z \qquad \alpha = \frac{\alpha_2 h}{1 + \alpha_2 b}, \quad z = \frac{v - \alpha_2 \widehat{\rho} + \alpha_1 (g - \overline{g})}{1 + \alpha_2 b}$$