

Supervision 4

Unemployment II

Short question

Suppose that an unemployed worker receiving benefits b and paying out of pocket search costs c gets a wage offer of $w > b - c$. Why might he reject this offer? Are there circumstances under which he would accept any wage offer that exceeds $b - c$?

Section A question A1

Consider the following basic imperfect competition model of a closed economy:

$$PS: w^p = a - bE \quad (1)$$

$$WS: w^b = c + dE \quad (2)$$

where w^p is the price-determined real wage, w^b is the bargained real wage, E is employment and a, b, c and d are positive constants.

1. Explain briefly what the PS and the WS represent and highlight the underlying assumptions.
2. Find the equilibrium level of employment and the corresponding equilibrium level of unemployment (either graphically or mathematically).
3. Assess the likely impact on equilibrium level of employment of the following economic policies:
 - (a) a reform of the benefit system whereby the replacement ratio is reduced.
 - (b) trade liberalisation
 - (c) reduction in the income tax rate.
 - (d) monetary expansion
4. Explain carefully why and how the economy will gradually move to a new equilibrium position over time in response to a downwards shift in the WS curve.

Section A question A2

Suppose James lives for only two periods, $t = 1, 2$. In each period, if unemployed, he receives an offer of work (for the rest of his life) at a wage w , where w is drawn from a known and unchanging distribution $F(w)$. If unemployed he received b in benefits. His objective is to maximize

$$E(y_1 + \beta y_2)$$

where y_1 is income in period 1, y_2 is income in period 2 and β is his discount factor. His income is w if he works and b if he is unemployed.

1. Explain his optimal choices in the second period (keeping in mind that an employed worker in his second period 2 has no choice to make).
2. Derive the expressions for the expected value of accepting and rejecting an job offer paying the wage w in the first period.
3. Show that the first period reservation wage is given by

$$w^r = b + \frac{\beta}{1 - \beta} \int_b^{\infty} (x - b) F(x) dx.$$

Provide an intuitive interpretation of this expression.

4. Why is the reservation wage declining over time?
5. What happens to the reservation wage is the discount factor falls?
6. What happens if the unemployment benefit increases?

Section B **question** (max 1500 words)

[Tripos 2004] Hysteresis is often used to explain unemployment.

- (a) What is unemployment hysteresis and why does it emerge?
- (b) Explain whether the theoretical arguments for hysteresis are consistent with the empirical evidence on unemployment.

Main readings

1. Carlin, W. and Soskice, D. (2006), "Macroeconomics. Imperfections, Institutions and Policies", Oxford University Press. Chapter 4 (you may also want to read chapter 3 as a preamble).
2. Williamson, Macroeconomics, chapter 16.
3. Mankiw, N. G., Macroeconomics, 6th edition, chapter 6.
4. Abel, Bernanke and McNabb (1998), Macroeconomics. European Edition
5. Blanchard (2005) Macroeconomics. 4th edition. Chapter 6-8.
6. Barro, R. (1997), Macroeconomics, 5th edition. MIT Press. Chapters 6 and 10.
7. McCall, John J. (1970) "Economics of Information and Job Search." Quarterly Journal of Economics Vol. 84 (1), pp. 113-126 [Seminal paper]