

## 6 WAGE-SETTING AND UNEMPLOYMENT

1.
  - a) The employment rates are 74 percent for men and 64 percent for women.
  - b) The unemployment rates are 7.5 percent for men and 8.6 percent for women.

2.
  - a) Job finding rates:

	u=0.04	u=0.08
s=0.01	0.20	0.11
s=0.02	0.33	0.20

- b) The duration of unemployment is given by  $x = \lambda f + v \rightarrow \frac{1}{x} = \frac{1}{\lambda f + v}$ .

	u=0.04	u=0.08
s=0.01	$1/(0.20+0.10)=3.3$	4.8
s=0.02	2.3	3.3

3. The answer is a subjective evaluation but you should try to argue for your case.
4. What is described here is so-called skill-biased technical change. One possibility is to make wages more “flexible” i.e. to allow more unequal wages by lowering minimum wages in laws and/or contracts and reducing benefits for unemployed so people accept to work at lower wages. This could be combined with lower taxes on low incomes so that income differentials *after tax* increase less. Another possibility is to educate more workers so that supply of skilled workers better matches demand. One can also subsidize certain jobs which are available for less educated workers but this is an imprecise instrument which distorts allocation between different types of production. These are some suggestions.

5.
  - a) Labour demand increases for a given real wage.
  - b) If the unemployment benefit is a constant fraction of the pre-unemployment wage, the incentives to take a job are roughly unchanged so we may expect  $\lambda$  and the natural rate of unemployment to remain unchanged. Then employment is unaffected in the long run while the real wage increases with  $E$ .

- c) If the unemployment benefit is kept constant in real terms, the real wage will increase relative to the unemployment benefit so the incentives to search for jobs become stronger and the natural level of unemployment should decrease.
6. If a law is passed that working hours must be shortened this has the same effect as a reduction in  $E$  which was discussed in the previous exercise.
- a) If the unemployment benefit is a constant fraction of the pre unemployment wage, the incentives to search are unchanged so employment should also remain unchanged.
- b) If the unemployment benefit is kept constant in real terms, the incentives to search are reduced because the wage (per day or month) for those who work will fall when hours are reduced. Then the level of employment will fall.

7.

a) The first order condition is  $1 + hWZ' \left( \frac{W_i}{W} \right) \frac{1}{W} f = 0$ .

b)  $1 + hZ'(1) \frac{s}{\lambda u + s} = 0$        $1 = -hZ'(1) \frac{s}{\lambda u + s}$

$$\lambda u + s = -hZ'(1)s \qquad u^n = -\frac{s}{\lambda} [1 + hZ'(1)]$$

Within the parenthesis we have a positive and a negative term, but comparing with the first order condition  $(1 + hZ'(1) f = 0)$  we see that the negative term must be larger. Hence the expression within the parenthesis is negative and the answer is a positive level of unemployment.

- c) If many workers quit their jobs (high  $s$ ) there are many job openings and upward pressure on wages so unemployment will be high. If hiring costs ( $h$ ) are high, firms are concerned about turnover so they set higher wages and employment is lower. If workers react strongly to wages (high  $Z'$ ) firms have incentives to raise wages so the natural rate of unemployment is higher. If unemployed workers are less willing or able to compete for jobs (lower  $\lambda$ ) unemployment will be higher.