

# Quiz on Wage Functions

Pascal Michailat

### Question 1

Consider a one-period matching model in which wages are determined by Nash bargaining between workers and firms. That is, the wage  $W$  maximizes  $(a - W)^{1-\beta} \times (W - z)^\beta$ , where  $a$  is labor productivity,  $z$  is the utility from nonwork, and  $\beta \in [0, 1]$  is workers' bargaining power. Then, the wage is given by:

- A)  $W = (1 - \beta) \times a + \beta \times z$
- B)  $W = \beta \times a + (1 - \beta) \times z$
- C)  $W = \beta \times (a + z)$
- D)  $W = (1 - \beta) \times (a + z)$
- E)  $W = \beta$
- F)  $W = 1 - \beta$
- G) None of the above

### Question 2

Consider a matching model in which firms set wages by sharing surplus with workers. We expect wages to be higher when:

- A) Labor market tightness is lower.
- B) Labor market tightness is higher.
- C) Unemployment insurance is less generous.
- D) Unemployment insurance is more generous.
- E) Workers have less bargaining power.
- F) Workers have more bargaining power.
- G) None of the above.

### Question 3

In the United States, what is a plausible estimate of the elasticity  $\gamma$  of real wages with respect to productivity?

- A)  $\gamma = 0$
- B)  $\gamma = 0.1$
- C)  $\gamma = 0.5$
- D)  $\gamma = 0.9$
- E)  $\gamma = 1$
- F) None of the above

### Question 4

The surplus enjoyed by a worker from a worker-firm match is  $(W - z)/[s + f(\theta)]$ , where  $W$  is the wage,  $z$  is the value from unemployment,  $s$  is the job-separation rate, and  $f(\theta)$  is the job-finding rate. Why is the term  $s + f(\theta)$  in the denominator of the surplus?

- A) Because  $s + f(\theta)$  is the expected duration of unemployment for a worker who just lost her job.
- B) Because  $s + f(\theta)$  is the expected duration of employment for a worker who just found a job.
- C) Because  $1/[s + f(\theta)]$  is the expected duration of unemployment for a worker who just lost her job.
- D) Because  $1/[s + f(\theta)]$  is the expected duration of employment for a worker who just found a job.
- E) Because  $s + f(\theta)$  is the expected duration of the period during which a worker initially employed and a worker initially unemployed retain a different employment status.
- F) Because  $1/[s + f(\theta)]$  is the expected duration of the period during which a worker initially employed and a worker initially unemployed retain a different employment status.
- G) None of the above.

**Question 5**

Consider a matching model with a fixed wage. In the tightness-employment diagram, an increase in the wage leads to:

- A) An inward shift of the labor supply curve
- B) An outward shift of the labor supply curve
- C) A downward shift of the labor demand curve
- D) An upward shift of the labor demand curve
- E) A downward rotation of the labor demand curve
- F) An upward rotation of the labor demand curve
- G) None of the above

**Question 6**

Consider a matching model with Nash bargaining. Imagine that the government implements training programs to increase the skills and productivity of workers. In the tightness-employment diagram, this policy would:

- A) Raise the real wage
- B) Lower the real wage
- C) Shift the labor supply curve leftward
- D) Shift the labor supply curve rightward
- E) Have no effect on real wage and labor supply