

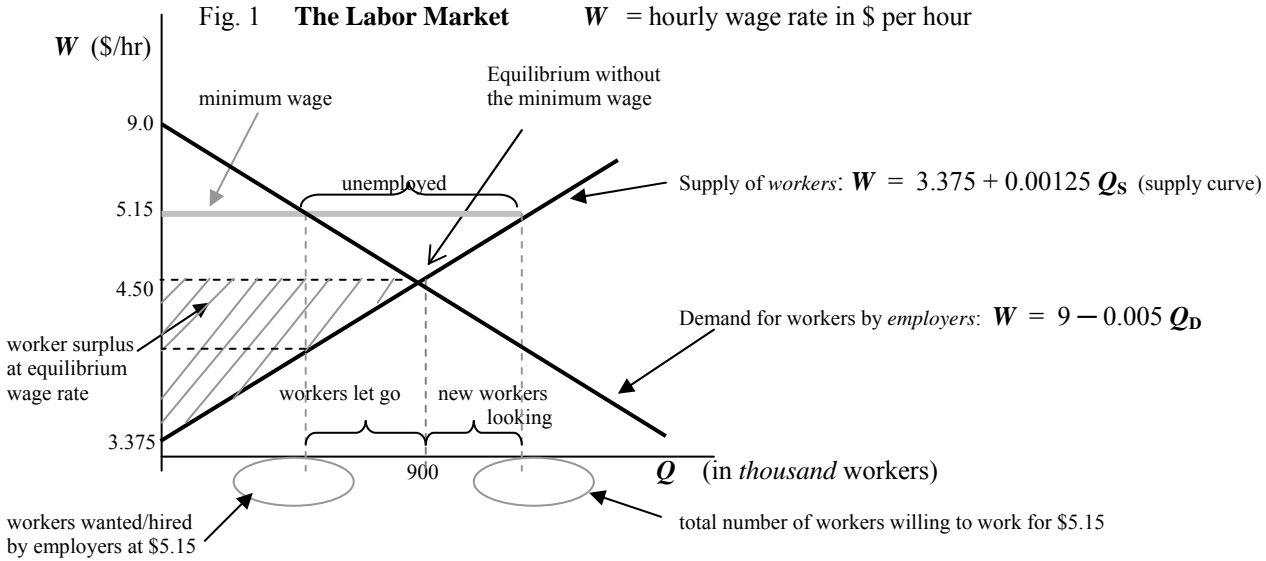
**Microeconomics**

**Ch. 6 & 7 (The Labor Market, Problem Set 2)**

*Instructions:* Round off final answers to 2 decimal places unless indicated otherwise.

I. Consider in Fig. 1 below the following demand and supply curves for labor and initial equilibrium points (**not** drawn to scale).

Let  $Q_D$  = number of workers *demanded* or wanted by *employers* (in thousands)  
 $Q_S$  = number of workers willing to work for a given wage rate (in thousands)  
 $W$  = hourly wage rate in \$ per hour



Assume initially that the labor market is left unregulated, meaning that employers/companies are free to negotiate with workers on wage rates. Under this situation, the equilibrium wage rate in the labor market is **\$4.50** per hour and 900,000 workers are employed. Now suppose that the federal government wouldn't have it that way. Assume that it now imposes a *minimum wage rate* of **\$5.15** per hour. Employers cannot hire anyone below this minimum wage rate or they would be in violation of the law. As result, employers hire less workers than before because they cannot afford to be as profitable paying the higher wage rate. Some workers are let go.

a. Given Fig. 1 above, how many workers are hired at the *minimum* wage rate of \$5.15? \_\_\_\_\_ thousand workers  
(or demanded)

*(Hint: Plug  $W = \$5.15$  into the demand equation and solve for  $Q$ )*

b. How many workers, previously employed at the equilibrium wage rate of \$4.50, are let go? \_\_\_\_\_ thousand workers

c. How many workers, previously not looking for a job when the wage rate was \$4.50, are now looking for (but can't get) a job because of the higher wage rate of \$5.15? \_\_\_\_\_ thousand workers

d. How much is the **worker** surplus (not the labor mkt. surplus) at the equilibrium wage rate of \$4.50 ? \$ \_\_\_\_\_

e. How much is the **new worker** surplus given the *minimum* wage rate of \$5.15 ? \$ \_\_\_\_\_

f. How much is the **new employer** surplus given the *minimum* wage rate of \$5.15 ? \$ \_\_\_\_\_

g. At the *minimum* wage rate of \$5.15, how many workers in all are unemployed? (the labor mkt. surplus) \_\_\_\_\_ thousand workers