Experiment 5

A Minimum Wage

People are often dissatisfied with the prices that emerge from competitive markets. Farmers think the price of corn is too low. Laborers would like higher wages. Renters want lower rents for their apartments. Borrowers believe that interest rates are too high. Party animals think that beer is too expensive...and so on. Occasionally, governments intervene in markets in the hope of changing market prices in one direction or the other. What is the effect of such intervention?

This lesson concerns government efforts to raise wages by minimum-wage legislation. The good that will be traded in this experiment is “labor.” The suppliers are workers and the demanders are firms. The “price” in this market is the wage rate that firms pay their workers. In the second and third sessions of this experiment, a minimum wage law is introduced. A minimum wage law makes it illegal to hire anyone at a wage lower than the mandated minimum wage. In our experiment, the market manager will not honor any contract in which a worker is paid less than the minimum wage.

Instructions

Some participants in this experiment will be workers and some will be employers. As in previous markets, workers and employers can circulate around the trading floor, trying to make a deal.

Workers’ Instructions

If you are a laborer, you can either take a job or remain unemployed. If you remain unemployed, you will get a payment equal to the reservation wage.
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listed on your Personal Information Sheet. In the real world, a person’s reservation wage represents the lowest wage at which he or she is willing to take a job rather than remain unemployed.\(^1\)

In each round of the experiment, if you agree to take a job, you should record your ID number, wage, and reservation wage on your employer’s employment record sheet. Your profit will be the wage that you agree to.

If you do not take a job, you should put your identification number and type on the List of Unemployed which is maintained by the market manager, and you will be credited with a profit that is equal to your reservation wage.

Employers’ Instructions

In the first two sessions, each employer can hire zero, one, or two laborers. In the third session, each employer can hire up to four laborers. In the first two sessions, if you are an employer, the total value of your output will be 0 if you hire no laborers, $20 if you hire one laborer, and $30 if you hire two laborers. In Session 3, the total value of your output will be 0 if you hire no laborers, $30 if you hire one laborer, $55 if you hire two laborers, $75 if you hire three laborers, and $95 if you hire four laborers. Your profits are equal to the total value of your output minus the total amount of wages that you pay. In each round of each session, you will be given an employment record on which you should record the ID number and type of each laborer that you hire, as well as the wage that you pay this laborer.

Example:

Suppose that your personal information sheet tells you that the value of your output will be $20 if you hire one laborer and $30 if you hire two laborers. You find somebody who will work for you for $6. You record that person’s ID and reservation wage on your employment sheet, and return to the trading floor where you find somebody else who agrees to work for you at a wage of $9. Since you have hired two people, the value of your output is $30. Your total labor costs are $6 + $9 = $15. So your profits are $30 - $15 = $15.

If you had hired only the first laborer and not the second, the value of your output would have been $20, your total labor costs would have been $6, and your profits would have been $20 - $6 = $14.

\(^1\)Typically a person’s reservation wage is influenced by the amount of unemployment benefits that she could earn if unemployed, the amount or earnings that she could make in self-employed activities, and the value that she places on leisure.
A Tip for Employers

A general rule to apply is this: Hiring one more laborer will increase profits if the amount of money that an additional laborer adds to your revenue is more than the amount of money it costs to hire her.

Warm-up Exercise

The first part of this exercise is designed to help you think about the best strategy to use in the experiment. Please answer these questions before you come to class.2

For the next three questions, suppose that you are an employer who can hire either 0, 1, or 2 laborers. If you hire 0 laborers, you will produce no output. If you hire 1 laborer, you will produce $30 worth of output. If you hire 2 laborers, you will produce $50 worth of output.

W 5.1 You run a firm and you have to pay a wage of $35 for each laborer that you hire, what will your profits (or loss) be if you hire:

0 laborers? $______, 1 laborer? $______, 2 laborers? $______

How many laborers should you hire in order to maximize profits? ______

W 5.2 You run a firm and you have to pay a wage of $25 for each laborer hired, what will your profits (or loss) be if you hire:

0 laborers? $______, 1 laborer? $______, 2 laborers? $______

How many laborers should you hire in order to maximize profits? ______

W 5.3 You run a firm and you have to pay a wage of $15 for each laborer that you hire, what will your profits (or loss) be if you hire:

0 laborers? $______, 1 laborer? $______, 2 laborers? $______

How many laborers should you hire in order to maximize profits? ______

W 5.4 Assuming that you have to pay the same wage to each employee, it will be more profitable to hire 1 worker than to hire 0 workers, as long as the wage is less than $______.

W 5.5 Assuming that you have to pay the same wage to each employee, it will be more profitable to hire 2 workers than 1 worker, as long as the wage

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2Answers to these exercises are found on page 139.
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is less than $________.

W 5.6 You are a laborer and your reservation wage is $12. You are offered a job at a wage of $10. What will be your profit if you take the job?

$________ What will your profit be if you do not take the job? $________

W 5.7 You are a laborer and your reservation wage is $5. You are offered a job at a wage of $10. What will be your profit if you take the job?

$________ What will be your profit if you do not take the job? $________

What Do You Expect to See?

- Do you think that doubling the legal minimum wage would increase, decrease, or have no effect on the number of people who want jobs but cannot find them?

- Do you think that doubling the legal minimum wage would increase, decrease, or have no effect on the total income of employed laborers?