

**DISCUSSION QUESTION**

Name:

Instructor:

Course:

Across the majority of U.S. colleges, faculty salaries vary widely across disciplines. For example, in 2013 Business professors earned approximately \$23,000 more per year on average than Biology professors, and \$39,000 more than English professors.<sup>1</sup> This salary disparity exists despite the fact that Business faculty generally have lower teaching workloads compared to faculty in other disciplines.

- a) Why is it that the Business faculty makes more than faculty in most other disciplines?
  
  
  
  
  
  
  
  
  
  
- b) Is it fair that some faculty make more than other faculty even if they teach less?
  
  
  
  
  
  
  
  
  
  
- c) Consider what would likely happen if a law passed that required all faculty to be paid the same amount in all disciplines. Would this be a positive change from society's perspective?

<sup>1</sup><https://www.higheredjobs.com/salary/salaryDisplay.cfm?SurveyID=28>

## PEER GROUP PROBLEM SOLVING

Name:

Instructor:

Course:

- a) Fill in the blanks in the table below. Suppose the price of output is constant at \$5 per unit.

Number of Workers	Output	MP Labor	Total Revenue	Marginal Revenue Product
1	100			
2	200			
3	280			
4	350			
5	410			
6	450			
7	470			
8	480			

- b) Suppose the wage of each worker is \$300 per day. How many workers should be hired?
- c) Suppose the wage of each worker increases to \$400. How many workers should be hired?
- d) Suppose the price of output increases to \$6 per unit. How many workers should be hired? (Assume the wages remain constant at \$400.)

**IN-CLASS EXPERIMENT / ACTIVE EXERCISE**

Derive a labor market supply curve for two different hypothetical labor markets – one which most students would not dislike, another which most would dislike. For example, one market could be “cat-sitting” and the other market could be “porta-potty cleaning”.

Ask students to consider the minimum amount they would have to be paid to be willing work in the markets for 8 full hours.

The supply curves should be graphed by starting with a low wage, such as \$1/hour, then incrementally increasing the wage. The labor market supply curve will be higher for the cat-sitting market relative to the porta-potty cleaning market.

After the supply curves for both markets are graphed out, the instructor could assume identical labor demand curves to show the difference in equilibrium quantity of workers and wages across markets.

Variants of this experiment include focusing on just one hypothetical market, then discussing factors that can change supply and demand in this market and how that affects wages.

## SOLUTIONS AND INSTRUCTOR NOTES

Across the majority of U.S. colleges, faculty salaries vary widely across disciplines. For example, in 2013 Business professors earned approximately \$23,000 more per year on average than Biology professors, and \$39,000 more than English professors.<sup>1</sup> This salary disparity exists despite the fact that Business faculty generally have lower teaching workloads compared to faculty in other disciplines.

- a) Why is it that Business faculty make more than faculty in most other disciplines?

*The demand outside of academia for people with advanced degrees in Business is higher than people with advanced degrees in other disciplines. If Business faculty aren't compensated at a higher level many would choose to work outside of academia.*

- b) Is it fair that some faculty make more than other faculty even if they teach less?

*One can argue that is fair or it is not fair. Wages, like other market prices, are not always what we would like them to be or what we would consider to be fair. They are a reflection of supply and demand; or of costs and needs in society.*

- c) A commonly held belief is that it is unfair that major league baseball players earn so much more than teachers. However, the supply of people with the skills required to play professional baseball is much lower than the supply of people with the skills required to be a teacher. Therefore, the salaries are much higher.

*Consider what would likely happen if there was a law passed that required all faculty to be paid the same amount in all disciplines. Would this be a positive change from society's perspective?*

*Though some people in lower paid disciplines would benefit from this change, others would be hurt. Universities would not hire as many faculty in the lower paid disciplines if they all must be paid more, and they would not be able to attract the most qualified individuals to fill faculty positions in the higher paid disciplines. It would also likely have a negative impact on the productivity of faculty in terms of research, because there is reduced incentive (payoffs) from producing more.*

### Peer Group Problem Solving

- a) Fill in the blanks in the table below. Suppose the price of output is constant at \$5 per unit.

Number of Workers	Output	MP Labor	Total Revenue	Marginal Revenue Product
1	100	100	\$500	\$500
2	200	100	\$1,000	\$500
3	280	80	\$1,400	\$400
4	350	70	\$1,750	\$350
5	410	60	\$2,050	\$300
6	450	40	\$2,250	\$200
7	470	20	\$2,350	\$100
8	480	10	\$2,400	\$50

- b) Suppose the wage of each worker is \$300. How many workers should be hired?

*The firm should hire workers as long as wage < marginal revenue product and stop where they are equal. This happens at  $L = 5$ .*

- c) Suppose the wage of each worker increases to \$400. How many workers should be hired?

*Now wage = marginal revenue product at  $L = 3$ .*

- d) Suppose the price of output increases to \$6 per unit. How many workers should be hired? (Assume the wages remain \$400.)

*If the price of output is \$6, the marginal revenue product will be greater than \$400 up to  $L = 4$ .*

For more in-class experiment and active learning ideas, visit [www.econedactive.com](http://www.econedactive.com).