

Chapter 02 Labor Supply

Student: _____

1. Who is not counted in the U.S. labor force?
 - A. A person working 15 hours a week or more not for pay.
 - B. A fulltime college student.
 - C. A person working at least one hour for pay per week.
 - D. Someone actively looking for a job.
 - E. A 70-year-old person who supplements his social security payments by working 8 hours each week at minimum wage.

2. Which of the following is not a property of standard indifference curves in a leisure-consumption model?
 - A. Indifference curves tend to be downward sloping.
 - B. Higher indifference curves (to the northeast) indicate higher levels of utility.
 - C. Indifference curves tend to be convex to the origin.
 - D. There is an indifference curve passing through every leisure-consumption bundle.
 - E. Indifference curves intersect one another.

3. Of the 500,000 people (age 16+) in a particular country, 300,000 people are in the labor force. Of these, 240,000 are employed and 60,000 are unemployed. What is the labor force participation rate?
- A. 25%
 - B. 48%
 - C. 55%
 - D. 60%
 - E. 80%
4. Of the 500,000 people (age 16+) in a particular country, 300,000 people are in the labor force. Of these, 240,000 are employed and 60,000 are unemployed. What is the unemployment rate?
- A. 10%
 - B. 20%
 - C. 25%
 - D. 35%
 - E. 40%
5. Of the 500,000 people (age 16+) in a particular country, 300,000 people are in the labor force. Of these, 240,000 are employed and 60,000 are unemployed. Of the 200,000 workers not in the labor force, 20,000 want jobs but have given up looking for one. What is the unemployment rate if discouraged workers are counted as being unemployed?
- A. 10%
 - B. 20%
 - C. 25%
 - D. 48%
 - E. 60%

6. Assuming consumption and leisure are normal goods, hours worked will fall when the wage increases if
- A. the income effect dominates the substitution effect.
 - B. the substitution effect dominates the income effect.
 - C. the income and substitution effect move in the same direction (i.e., if they are of the same sign).
 - D. the income and substitution effect move in the opposite direction (i.e., if they are of the opposite sign).
 - E. the wage increase is accompanied by an increase in prices.
7. An increase in non-labor income while holding the wage rate constant
- A. rotates the budget line out along the consumption axis.
 - B. rotates the budget line out along the leisure axis.
 - C. rotates the budget line in along the leisure axis.
 - D. rotates the budget line in along the consumption axis.
 - E. shifts the budget line up (in the direction of the consumption axis) while maintaining the same slope.
8. According to the substitution effect, in response to an increase in her wage a person will
- A. reduce hours worked because she wants to substitute leisure for work.
 - B. reduce hours worked because she wants to substitute work for leisure.
 - C. increase hours worked because leisure has become relatively more expensive than consumption.
 - D. increase hours worked because leisure has become relatively less expensive than consumption.
 - E. increase both consumption and hours of leisure.

9. What would a person do if the market wage is less than his or her reservation wage?
- A. The person will enter the labor market.
 - B. The person will work as much as possible.
 - C. The person will work more hours as the wage falls further.
 - D. The person will be unemployed.
 - E. The person will not participate in the labor force.
10. Which of the following statements did not reflect the U.S. labor market in the early 2000s?
- A. Of working men and women, the average man tended to work more annual hours than the average woman.
 - B. The labor force participation rate of men was greatest between the ages of 25 and 55.
 - C. A greater percentage of women than men worked part-time.
 - D. Labor force participation was unrelated to education.
 - E. The labor force participation rate over all women was about 70 percent.
11. What is the budget line for consumption (C) and leisure (L) if a person faces a constant wage of \$10 per hour, there are 168 hours in the week to work, and she receives non-labor income of \$220 per week?
- A. $C = 1,900$
 - B. $C + 10L = 1,900$
 - C. $L = 10C + 220$
 - D. $C - 10L = 1,460$
 - E. $10C - L = 1,460$

12. All of the following represent an increase in non-labor income except for:
- A. A decrease in the income tax rate.
 - B. Receiving higher dividends from a stock portfolio.
 - C. An increase in a spouse's wage.
 - D. Receiving an inheritance from a long-lost uncle who recently passed away.
 - E. Having one's property tax bill fall by \$1,000.
13. According to the income effect, an increase in the wage rate will lead the worker to
- A. work more hours if leisure is a normal good.
 - B. work fewer hours if leisure is a normal good.
 - C. work fewer hours if leisure is an inferior good.
 - D. work more hours and leisure more hours.
 - E. not change hours worked.
14. Prior to an expanded child care subsidy program in Illinois, the labor force participation rate of single mothers in Illinois was 45% and in Wisconsin was 48%. After Illinois expanded its child care subsidy program, the participation rate increased to 58% in Illinois and to 51% in Wisconsin. The expanded child care program in Illinois is estimated to increase labor force participation of single mothers by how much according to a difference-in-differences estimator?
- A. 3%
 - B. 6%
 - C. 7%
 - D. 10%
 - E. 13%

15. The Earned Income Tax Credit is a federal program that
- A. increases the wages of minorities.
 - B. provides cash assistance to the non-working poor.
 - C. provides cash assistance to firms that hire single mothers living in poverty.
 - D. increases wages for the working poor.
 - E. provides in-kind assistance to minimum wage workers.
16. The single most important phenomenon in the U.S. labor market in the second half of the 20th century was
- A. the drastic reduction in the labor force participation rate of males.
 - B. the drastic increase in the labor force participation rate of females.
 - C. the elimination of the glass ceiling.
 - D. the increase in the average number of hours worked each week.
 - E. the elimination of child poverty.
17. When the tax rate on wages falls (so that the take-home wage or effective wage increases), the budget line
- A. rotates out along the consumption axis.
 - B. shifts out, parallel to the old budget line.
 - C. rotates in along the leisure axis.
 - D. shifts in, parallel to the old budget line.
 - E. rotates out along the leisure axis.

18. When the wage was \$10 per hour, a group of workers supplied 30 hours of work per week on average. The wage then increased to \$12 per hour, and the same group of workers supplied 33 hours of work per week on average. What is the elasticity of labor supply for this group of workers?

- A. 0
- B. 0.5
- C. 1.0
- D. 1.5
- E. 2.0

19. What is the added worker effect?

- A. A secondary worker enters the labor force when the wage rate is high.
- B. A secondary worker enters the labor force when his or her consumption of goods exceeds his or her non-labor income.
- C. A secondary worker enters the labor force when his or her household productivity decreases.
- D. A secondary worker enters the labor force when he or she no longer must allocate time to household production.
- E. A secondary worker enters the labor force when the main worker in the household has lost his or her job or has experienced a wage cut.

20. Due to the discouraged worker effect, the labor force participation rate

- A. increases during a recession.
- B. decreases during a recession.
- C. is counter-cyclical.
- D. over-counts the number of workers wanting a job.
- E. over-counts the number of workers with a job.

21. How does the presence of an underground labor market bias the government's calculation of the labor force participation rate?
- A. The official government statistic on labor force participation is too low, because people working in the underground labor market should be counted as participating in the labor market.
 - B. The official government statistic on labor force participation is too high, because people working in the underground labor market should be counted as participating in the labor market.
 - C. The official government statistic on labor force participation is too low, because people working in the underground labor market should not be counted as participating in the labor market.
 - D. The official government statistic on labor force participation is too high, because people working in the underground labor market should not be counted as participating in the labor market.
 - E. The official government statistic on labor force participation is identical to actual labor market participation whether or not there is an underground labor market.
22. According to the added worker effect, what happens during a recession?
- A. Households consume less.
 - B. More inferior goods are purchased.
 - C. Capital earns a lower rate of return.
 - D. There is an increase in the labor force participation rate of secondary workers.
 - E. There is a decrease in the labor force participation rate as many unemployed workers give up looking for a job.

23. How does the labor force participation rate of women compare to that of men?
- A. The labor force participation rates between the two groups is about the same.
 - B. Men participate less than women at all ages.
 - C. Women participate less than men at all ages.
 - D. Women participate less than men when young (20-34 years-old) but at the same rate as men in later years (35-54 years-old).
 - E. Men participate less than women when young (20-34 years-old) but at the same rate as women in later years (35-54 years-old).
24. The intertemporal substitution hypothesis suggests that hours of work should
- A. be greatest during peak wage years.
 - B. steadily increase with age.
 - C. steadily decrease with age.
 - D. be greater for women than for men.
 - E. increase during retirement.
25. Which one of the following conclusions is not supported by the intertemporal substitution hypothesis?
- A. The profile of hours of work over the life cycle will have roughly the same shape as the age-earnings profile.
 - B. Hours of work over the life cycle will be inversely related to wages over the life cycle.
 - C. Hours of work increase as the wage rises and decline as the wage falls.
 - D. An unemployed person might choose to become a discouraged worker during a low-wage recession with an eye toward returning to the labor market when wages increase.
 - E. A high wage worker may choose to work 60+ hours a week during her peak wage years in order to retire at a younger age later in life.

26. Fertility in the U.S. declined in the last 100 years primarily because

- A. real income has increased and children are inferior goods.
- B. the tax benefits for families with children have expanded.
- C. the cost of having children has decreased, primarily in terms of healthcare and education costs.
- D. the cost of having children has increased, primarily in terms of the opportunity cost of the mother's foregone wages.
- E. economic growth has slowed, prohibiting households from efficiently having large families.

27. According to the substitution effect, an increase in the wage rate will lead the worker to

- A. work more hours if leisure is a normal good.
- B. work more hours if leisure is an inferior good.
- C. work fewer hours if leisure is a normal good.
- D. work fewer hours if leisure is an inferior good.
- E. work more hours regardless of whether leisure is normal or inferior.

28. Why might it be wrong to include self-proclaimed discouraged workers in calculations of the unemployment rate?
- A. Discouraged workers likely have a job but are discouraged only because they would like a better-paying job.
 - B. Some discouraged workers are taking advantage of a low-wage period to consume large amounts of leisure.
 - C. Discouraged workers receive federal assistance.
 - D. Discouraged workers are already included in official unemployment statistics as long as no one else in their household is working.
 - E. By definition, discouraged workers are only temporarily laid-off, and they will return to a job shortly.
29. Due to the added worker effect, the labor force participation rate
- A. increases during a recession.
 - B. decreases during a recession.
 - C. a fairly useless statistic.
 - D. over-counts the number of workers wanting a job.
 - E. over-counts the number of workers with a job.
30. The reservation wage likely increases when
- A. the price of consumption increases.
 - B. the wage increases.
 - C. the price level (of consumption and wages) increases.
 - D. non-labor income increases.
 - E. one is a discouraged worker.

Chapter 02 Labor Supply **Key**

1. Who is not counted in the U.S. labor force?
- A. A person working 15 hours a week or more not for pay.
 - B.** A fulltime college student.
 - C. A person working at least one hour for pay per week.
 - D. Someone actively looking for a job.
 - E. A 70-year-old person who supplements his social security payments by working 8 hours each week at minimum wage.

Borjas - Chapter 02 #1

2. Which of the following is not a property of standard indifference curves in a leisure-consumption model?
- A. Indifference curves tend to be downward sloping.
 - B. Higher indifference curves (to the northeast) indicate higher levels of utility.
 - C. Indifference curves tend to be convex to the origin.
 - D. There is an indifference curve passing through every leisure-consumption bundle.
 - E.** Indifference curves intersect one another.

Borjas - Chapter 02 #2

3. Of the 500,000 people (age 16+) in a particular country, 300,000 people are in the labor force. Of these, 240,000 are employed and 60,000 are unemployed. What is the labor force participation rate?

- A. 25%
- B. 48%
- C. 55%
- D. 60%**
- E. 80%

Borjas - Chapter 02 #3

4. Of the 500,000 people (age 16+) in a particular country, 300,000 people are in the labor force. Of these, 240,000 are employed and 60,000 are unemployed. What is the unemployment rate?

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Borjas - Chapter 02 #4

5. Of the 500,000 people (age 16+) in a particular country, 300,000 people are in the labor force. Of these, 240,000 are employed and 60,000 are unemployed. Of the 200,000 workers not in the labor force, 20,000 want jobs but have given up looking for one. What is the unemployment rate if discouraged workers are counted as being unemployed?

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Borjas - Chapter 02 #5

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- B. the substitution effect dominates the income effect.
- C. the income and substitution effect move in the same direction (i.e., if they are of the same sign).
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- E. the wage increase is accompanied by an increase in prices.

Borjas - Chapter 02 #6

7. An increase in non-labor income while holding the wage rate constant
- A. rotates the budget line out along the consumption axis.
 - B. rotates the budget line out along the leisure axis.
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Borjas - Chapter 02 #7

8. According to the substitution effect, in response to an increase in her wage a person will
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Borjas - Chapter 02 #8

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Borjas - Chapter 02 #9

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Borjas - Chapter 02 #10

11. What is the budget line for consumption (C) and leisure (L) if a person faces a constant wage of \$10 per hour, there are 168 hours in the week to work, and she receives non-labor income of \$220 per week?

A. $C = 1,900$

B. $C + 10L = 1,900$

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Borjas - Chapter 02 #11

12. All of the following represent an increase in non-labor income except for:

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C. An increase in a spouse's wage.

D. Receiving an inheritance from a long-lost uncle who recently passed away.

E. Having one's property tax bill fall by \$1,000.

Borjas - Chapter 02 #12

13. According to the income effect, an increase in the wage rate will lead the worker to

A. work more hours if leisure is a normal good.

B. work fewer hours if leisure is a normal good.

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D. work more hours and leisure more hours.

E. not change hours worked.

Borjas - Chapter 02 #13

14. Prior to an expanded child care subsidy program in Illinois, the labor force participation rate of single mothers in Illinois was 45% and in Wisconsin was 48%. After Illinois expanded its child care subsidy program, the participation rate increased to 58% in Illinois and to 51% in Wisconsin. The expanded child care program in Illinois is estimated to increase labor force participation of single mothers by how much according to a difference-in-differences estimator?
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 - C. 7%
 - D. 10%**
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Borjas - Chapter 02 #14

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 - C. provides cash assistance to firms that hire single mothers living in poverty.
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Borjas - Chapter 02 #15

16. The single most important phenomenon in the U.S. labor market in the second half of the 20th century was
- A. the drastic reduction in the labor force participation rate of males.
 - B.** the drastic increase in the labor force participation rate of females.
 - C. the elimination of the glass ceiling.
 - D. the increase in the average number of hours worked each week.
 - E. the elimination of child poverty.

Borjas - Chapter 02 #16

17. When the tax rate on wages falls (so that the take-home wage or effective wage increases), the budget line
- A.** rotates out along the consumption axis.
 - B. shifts out, parallel to the old budget line.
 - C. rotates in along the leisure axis.
 - D. shifts in, parallel to the old budget line.
 - E. rotates out along the leisure axis.

Borjas - Chapter 02 #17

18. When the wage was \$10 per hour, a group of workers supplied 30 hours of work per week on average. The wage then increased to \$12 per hour, and the same group of workers supplied 33 hours of work per week on average. What is the elasticity of labor supply for this group of workers?

- A. 0
- B. 0.5**
- C. 1.0
- D. 1.5
- E. 2.0

Borjas - Chapter 02 #18

19. What is the added worker effect?

- A. A secondary worker enters the labor force when the wage rate is high.
- B. A secondary worker enters the labor force when his or her consumption of goods exceeds his or her non-labor income.
- C. A secondary worker enters the labor force when his or her household productivity decreases.
- D. A secondary worker enters the labor force when he or she no longer must allocate time to household production.
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Borjas - Chapter 02 #19

20. Due to the discouraged worker effect, the labor force participation rate
- A. increases during a recession.
 - B. decreases during a recession.**
 - C. is counter-cyclical.
 - D. over-counts the number of workers wanting a job.
 - E. over-counts the number of workers with a job.

Borjas - Chapter 02 #20

21. How does the presence of an underground labor market bias the government's calculation of the labor force participation rate?

- A. The official government statistic on labor force participation is too low, because people working in the underground labor market should be counted as participating in the labor market.**
- B. The official government statistic on labor force participation is too high, because people working in the underground labor market should be counted as participating in the labor market.
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Borjas - Chapter 02 #21

22. According to the added worker effect, what happens during a recession?

- A. Households consume less.
- B. More inferior goods are purchased.
- C. Capital earns a lower rate of return.
- D. There is an increase in the labor force participation rate of secondary workers.
- E. There is a decrease in the labor force participation rate as many unemployed workers give up looking for a job.

Borjas - Chapter 02 #22

23. How does the labor force participation rate of women compare to that of men?

- A. The labor force participation rates between the two groups is about the same.
- B. Men participate less than women at all ages.
- C. Women participate less than men at all ages.
- D. Women participate less than men when young (20-34 years-old) but at the same rate as men in later years (35-54 years-old).
- E. Men participate less than women when young (20-34 years-old) but at the same rate as women in later years (35-54 years-old).

Borjas - Chapter 02 #23

24. The intertemporal substitution hypothesis suggests that hours of work should

- A. be greatest during peak wage years.
- B. steadily increase with age.
- C. steadily decrease with age.
- D. be greater for women than for men.
- E. increase during retirement.

Borjas - Chapter 02 #24

25. Which one of the following conclusions is not supported by the intertemporal substitution hypothesis?

- A. The profile of hours of work over the life cycle will have roughly the same shape as the age-earnings profile.
- B. Hours of work over the life cycle will be inversely related to wages over the life cycle.
- C. Hours of work increase as the wage rises and decline as the wage falls.
- D. An unemployed person might choose to become a discouraged worker during a low-wage recession with an eye toward returning to the labor market when wages increase.
- E. A high wage worker may choose to work 60+ hours a week during her peak wage years in order to retire at a younger age later in life.

Borjas - Chapter 02 #25

26. Fertility in the U.S. declined in the last 100 years primarily because
- A. real income has increased and children are inferior goods.
 - B. the tax benefits for families with children have expanded.
 - C. the cost of having children has decreased, primarily in terms of healthcare and education costs.
 - D. the cost of having children has increased, primarily in terms of the opportunity cost of the mother's foregone wages.
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Borjas - Chapter 02 #26

27. According to the substitution effect, an increase in the wage rate will lead the worker to
- A. work more hours if leisure is a normal good.
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 - E. work more hours regardless of whether leisure is normal or inferior.

Borjas - Chapter 02 #27

28. Why might it be wrong to include self-proclaimed discouraged workers in calculations of the unemployment rate?
- A. Discouraged workers likely have a job but are discouraged only because they would like a better-paying job.
 - B.** Some discouraged workers are taking advantage of a low-wage period to consume large amounts of leisure.
 - C. Discouraged workers receive federal assistance.
 - D. Discouraged workers are already included in official unemployment statistics as long as no one else in their household is working.
 - E. By definition, discouraged workers are only temporarily laid-off, and they will return to a job shortly.

Borjas - Chapter 02 #28

29. Due to the added worker effect, the labor force participation rate
- A.** increases during a recession.
 - B. decreases during a recession.
 - C. a fairly useless statistic.
 - D. over-counts the number of workers wanting a job.
 - E. over-counts the number of workers with a job.

Borjas - Chapter 02 #29

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- A. the price of consumption increases.
 - B. the wage increases.
 - C. the price level (of consumption and wages) increases.
 - D. non-labor income increases.
 - E. one is a discouraged worker.

Chapter 02 Labor Supply Summary

| | <u>Category</u> | <u># of Questions</u> |
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