PAGE ONE Economics

the back story on front page economics

Economics
CLASSROOM EDITION

Would Increasing the Minimum Wage Reduce Poverty?

March 2014

An informative and accessible economic essay with a classroom application.

Includes the full version of the **Page One Economics Newsletter,** *plus questions for students and an answer key for classroom use.*

Common Core Standards (see page 13)

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Scott A. Wolla
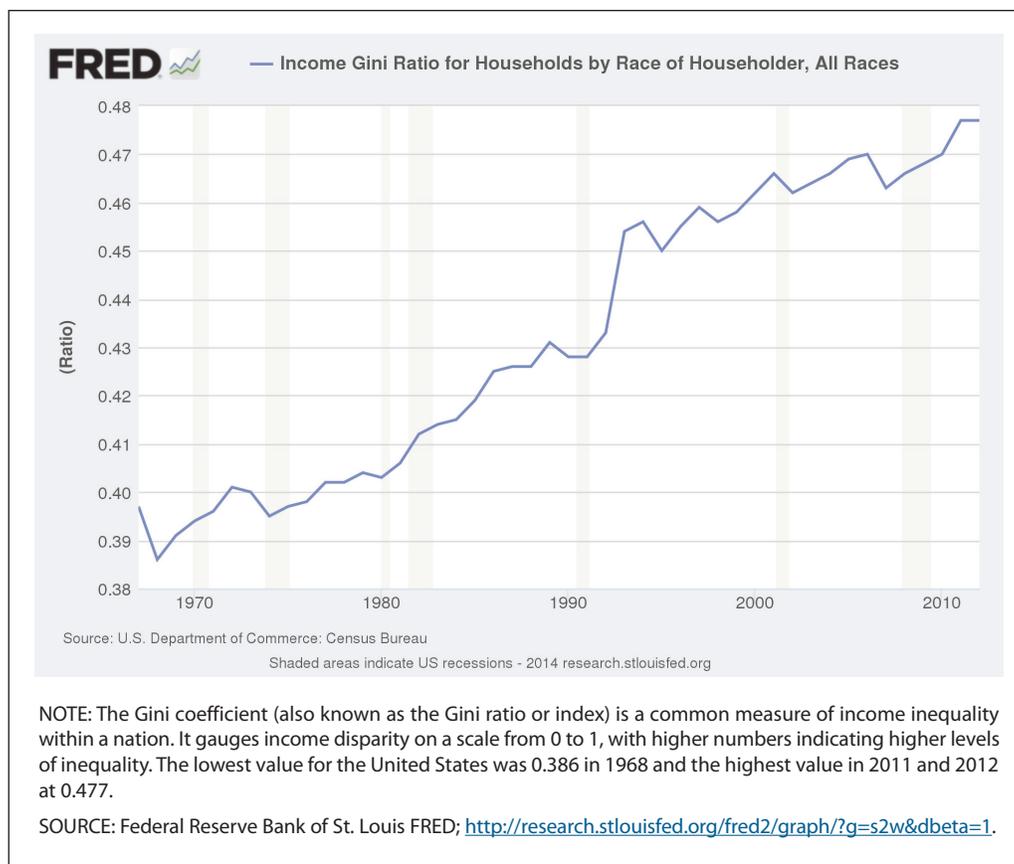*Economic Education Group of the Federal Reserve Bank of St. Louis*

Would Increasing the Minimum Wage Reduce Poverty?

Scott A. Wolla, *Senior Economic Education Specialist*

"A family with two kids that earns the minimum wage still lives below the poverty line. That's wrong…
Tonight, let's declare that in the wealthiest nation on Earth, no one who works full time should have to live in poverty."
—President Barack Obama, State of the Union Address (February 12, 2013)

Since its inception, the federal **minimum wage** has been used as one way to help alleviate poverty and promote a sense of economic fairness. The federal minimum wage was first enacted in 1938 as part of the Fair Labor Standards Act and set minimum hourly wages at 25 cents per hour, but the law excluded large segments of the labor force. The current federal minimum wage is $7.25 per hour, which means a full-time minimum wage worker earns $15,800 per year. At this level of income, a three-person household that includes at least one child (for example, a

Income Gini Ratio for Households by Race of Householder, All Races

Source: U.S. Department of Commerce: Census Bureau

Shaded areas indicate US recessions - 2014 research.stlouisfed.org

NOTE: The Gini coefficient (also known as the Gini ratio or index) is a common measure of income inequality within a nation. It gauges income disparity on a scale from 0 to 1, with higher numbers indicating higher levels of inequality. The lowest value for the United States was 0.386 in 1968 and the highest value in 2011 and 2012 at 0.477.

SOURCE: Federal Reserve Bank of St. Louis FRED; http://research.stlouisfed.org/fred2/graph/?g=s2w&dbeta=1.

couple with one child or a single parent with two children) falls below the **poverty threshold** (approximately $18,500).[1] Many argue that a full-time worker should earn a wage that supports a household—especially in the United States, a wealthy nation. This seems especially relevant given the recent increase in income inequality (see the chart on the previous page).

The Economics of the Minimum Wage

Labor markets, like other markets, have a supply side (workers supply labor) and a demand side (employers demand labor), and their interactions result in an **equilibrium price**—in this case, the price paid per unit of labor is an **equilibrium wage**. The minimum wage acts as a **price floor** for low-skilled labor. When the government (federal or state) increases the legal minimum wage (labeled W_m in the diagram) above the equilibrium wage that the market would determine (W_e in the diagram), predictable outcomes occur: The higher wage (W_m) increases the quantity of workers willing to work at the higher wage (Q_s, quantity supplied, in the diagram), but

Market for Low-Skilled Labor

the higher wage also decreases the quantity of workers that firms wish to employ (Q_d, quantity demanded, in the diagram). The result is a surplus of workers (Surplus in the diagram), where more workers seek employment than there are jobs available at the mandated minimum wage— and the workers who fail to find employment are unemployed.
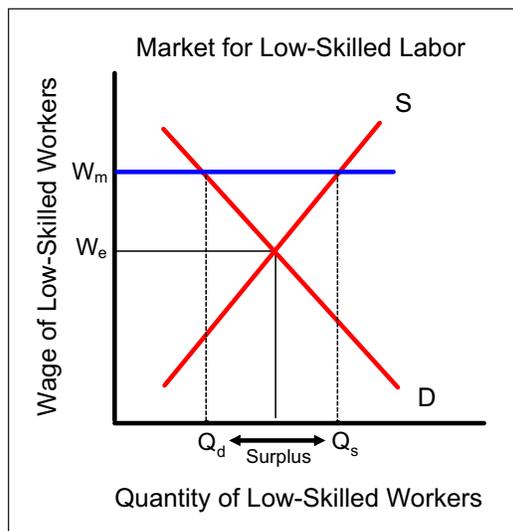
To economists, a wage is a labor market outcome. As such, economists avoid making value judgments regarding the "fairness" of a wage. Rather, in assessing minimum wage policy, they measure the economic costs and benefits of the policy and estimate how effectively it achieves its intended goals. As with any policy discussion, there are two sides to this story, and economists are split on the issue. A 2013 poll of leading academic economists found the profession nearly evenly split; 34 percent agreed with the statement that "Raising the minimum wage to $9 per hour would make it noticeably harder for low-skill workers to find employment," while 32 percent disagreed (the rest were uncertain or had no opinion).[2]

In many cases, economists who support a higher minimum wage acknowledge that the policy might reduce employment, but they argue that the employment effects are likely to be very small and the benefits to wage earners are certainly large.[3] So, many workers would have higher wages, which would boost their family income, and a smaller group would be jobless, which would reduce their family income. In short, the benefits of the higher wage outweigh the costs in terms of lost jobs.

Economists who oppose such policies argue that increasing the minimum wage does significantly reduce low-skilled jobs.[4] For example, a recent study by the Congressional Budget Office (CBO) estimated that raising the minimum wage to $10.10 would reduce total employment by 500,000 workers.[5] Economists also warn of **unintended consequences** of the policy that might disproportionately hurt those whom the policy was meant to help. For example, since the policy

reduces the number of jobs available to low-skilled workers, it restricts access to entry-level positions that the youngest and least-skilled workers need to gain valuable skills and work experience. In addition, too often the working poor do not benefit from the higher wage; rather, the working poor bear a disproportionate share of the jobs lost.

Better Options?

As previously stated, advocates propose increasing the minimum wage to help alleviate poverty among the working poor. However, it would be a mistake to equate minimum wage workers with the working poor. The CBO report estimates raising the minimum wage to $10.10 would result in an additional $31 billion in earnings for low-wage workers. However, only 19 percent of the higher earnings would go to families below the poverty threshold. Stated differently, 81 percent of the higher earnings would benefit families who are not poor; in fact, 29 percent of the higher earnings would go to families earning over three times the poverty threshold. Teenagers likely make up a sizable part of this group. In fact, the Bureau of Labor Statistics estimates that 24 percent of minimum wage workers in 2012 were teens.[6] The CBO projections highlight the difficult trade-off presented by increasing the minimum wage: A $10.10 minimum wage could potentially reduce the number of people (currently 45 million) who live below the poverty threshold by 900,000, but in the process, total employment could potentially be reduced by 500,000—a severe consequence for those workers who might transition from low-wage employment to unemployment. Many argue there are more effective ways to help alleviate poverty. For example, food stamps and other welfare programs are specifically targeted to help low-income households.

Economists also favor the **earned income tax credit**, which provides an income subsidy (in the form of a tax credit) to low-income working families. The tax credit benefits are phased out slowly so that workers are not penalized as they earn more income. This policy has proven effective in raising the incomes of the working poor while minimizing the unintended consequences associated with some other anti-poverty programs.

Conclusion

Low-wage jobs provide a key opportunity for inexperienced workers to develop valuable skills and work experience, a crucial rung on the ladder of success. However, the income earned is not likely to be sufficient to support a household. While raising the wages of workers seems like it might be a good solution, the proposal makes the mistake of equating minimum wage workers with the working poor. Rather, if the objective is to reduce poverty, it seems that using a more-targeted approach, such as the earned income tax credit, might be the most effective way to accomplish the task. ∎

NOTES

[1] See U.S. Census Bureau. "Poverty Thresholds." Various years; http://www.census.gov/hhes/www/poverty/data/threshld/.

[2] See IGM Forum. "Minimum Wage." Initiative on Global Markets, February 26, 2013; http://www.igmchicago.org/igm-economic-experts-panel/poll-results?SurveyID=SV_br0IEq5a9E77NMV.

[3] Two often-cited articles are those by Card, David. "Do Minimum Wages Reduce Employment? A Case Study of California, 1987-89." *Industrial and Labor Relations Review*, October 1992, *46*(1), pp. 38-54; and Card, David and Krueger, Alan. "A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review*, September 1994, *84*(4), pp. 773-93.

[4] See Neumark, David and Wascher, William L. *Minimum Wages*. Cambridge, MA: MIT Press, 2008; and Neumark, David; Salas, J.M. Ian and Wascher, William. "Revisiting the Minimum Wage-Employment Debate: Throwing Out the Baby with the Bathwater?" NBER Working Paper No. 18681, National Bureau of Economic Research, January 2013; http://www.nber.org/papers/w18681.pdf?new_window=1.

[5] See Congressional Budget Office. "The Effects of a Minimum-Wage Increase on Employment and Family Income." February 18, 2014; http://www.cbo.gov/sites/default/files/cbofiles/attachments/44995-MinimumWage.pdf.

[6] See Bureau of Labor Statistics. "Labor Force Statistics from the Current Population Survey, Characteristics of Minimum Wage Workers: 2012." February 26, 2013; http://www.bls.gov/cps/minwage2012tbls.htm#1.

GLOSSARY

Earned income tax credit: A refundable federal tax credit for low-income working people designed to reduce poverty and encourage labor force participation.

Equilibrium price: The price at which the quantity supplied and quantity demanded are equal.

Equilibrium wage: The wage at which the quantity of labor supplied and quantity of labor demanded are equal.

Labor market: The market in which workers compete for jobs and employers compete for workers.

Minimum wage: The lowest wage that employers may legally pay for an hour of labor.

Poverty threshold: The dollar amount the Census Bureau uses to determine a family's or person's poverty status.

Price floor: A government-mandated minimum price that must be paid for a good or service.

Unintended consequences: The unexpected and unplanned results of a decision or action.

ADDITIONAL RESOURCES

Grossman, Jonathan. "Fair Labor Standards Act of 1938: Maximum Struggle for a Minimum Wage." U.S. Department of Labor; June 1978; http://www.dol.gov/oasam/programs/history/flsa1938.htm.

Hernández-Murillo, Rubén. "Local Income Inequality." Federal Reserve Bank of St. Louis *Economic Synopses*, 2008, No. 31; http://research.stlouisfed.org/publications/es/08/ES0831.pdf.

Lopez, David A. "Gini in a Bottle: Some Facts on Income Inequality." Federal Reserve Bank of St. Louis *Page One Economics Newsletter*, March 2012; http://research.stlouisfed.org/pageone-economics/uploads/newsletter/2012/PageOne0312_Income_Inequality.pdf.

Federal Reserve Bank of St. Louis *Page One Economics Newsletter*:
"Would Increasing the Minimum Wage Reduce Poverty?"

After reading the article, answer the following questions.

1. How does raising the minimum wage above the market wage create a surplus of workers?

2. Summarize the reasons some economists support a higher minimum wage.

3. Summarize the reasons some economists oppose a higher minimum wage.

4. Why might the minimum wage be an inefficient approach to reducing poverty?

5. What types of programs might be more efficient in reducing poverty?

Teacher's Guide

Federal Reserve Bank of St. Louis *Page One Economics Newsletter*:
"Would Increasing the Minimum Wage Reduce Poverty?"

After reading the article, answer the following questions.

1. How does raising the minimum wage above the market wage create a surplus of workers?

The higher wage increases the quantity of workers willing to work for this wage, which increases the quantity of labor supplied. The higher wage also decreases the quantity of workers that firms wish to employ, which decreases the quantity of labor demanded. This means there are more workers seeking jobs than there are jobs available—there is a surplus of workers. Those who are seeking but unable to find employment are unemployed.

2. Summarize the reasons some economists support a higher minimum wage.

These economists argue that (i) there will be a relatively small number of job losses, and (ii) those who have jobs will have higher wages. As a result, the benefits of higher wages outweigh the costs of lost jobs. For example, the CBO study estimates raising the minimum wage to $10.10 would reduce the number of people in poverty by 900,000.

3. Summarize the reasons some economists oppose a higher minimum wage.

These economists argue that increasing the minimum wage does significantly reduce the number of jobs. For example, the CBO study estimates that raising the minimum wage to $10.10 would reduce total employment by 500,000. Fewer entry-level jobs means fewer inexperienced workers will have the opportunity to gain valuable job skills and experience. Also, the working poor bear a disproportionate share of the jobs lost.

4. Why might the minimum wage be an inefficient approach to reducing poverty?

A recent study found that only 19 percent of those who would gain from an increase in the minimum wage were actually poor (according to the poverty threshold). Or, 81 percent of those who would gain from the higher wage were not poor.

5. What types of programs might be more efficient in reducing poverty?

Some programs are specifically targeted to help low-income households. These programs include food stamps and other welfare programs, as well as the earned income tax credit.
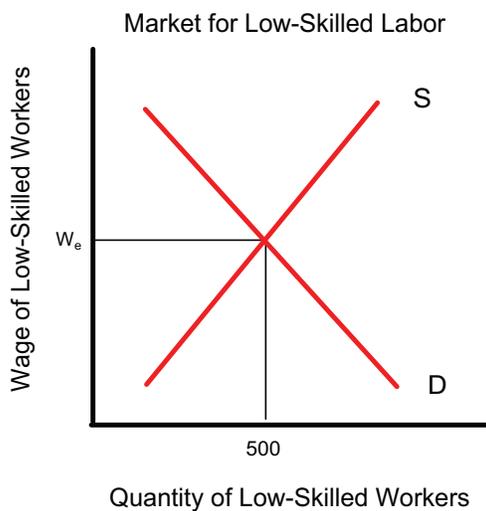
Lesson Extension: Minimum Wage

Review the following or distribute the handout to your students; then lead a classroom discussion on the minimum wage.
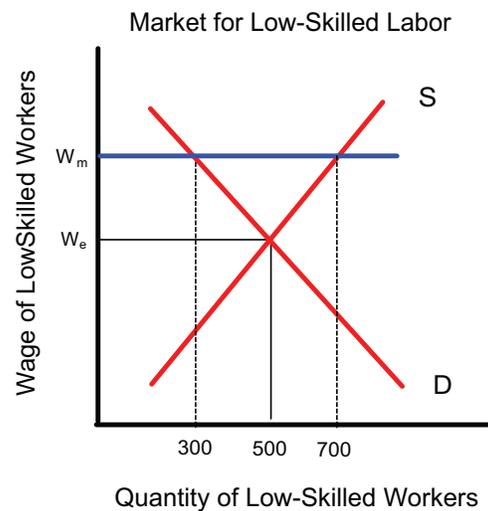
A price floor is a government-mandated minimum price that must be paid for a good or service. Price floors are economic policies intended to increase or support the price of some good or service. For example, an agricultural policy might be designed to benefit farmers by using a price floor to increase the price of certain agricultural products. Or, a price floor might be used to increase wages (another price).

As you will likely predict, there are winners and losers with this type of policy. A graph can be used to visualize the effects of raising the minimum wage above the equilibrium. The following discussion refers to Graphs 1 and 2 below.

Graph 1: Notice that at the equilibrium wage (W_e), the equilibrium quantity of low-skilled labor supplied and labor demanded are both 500. Theoretically, this creates a situation where workers willing to work at W_e will be able to find a job, and employers willing to pay W_e will be able to find workers to fill their positions.
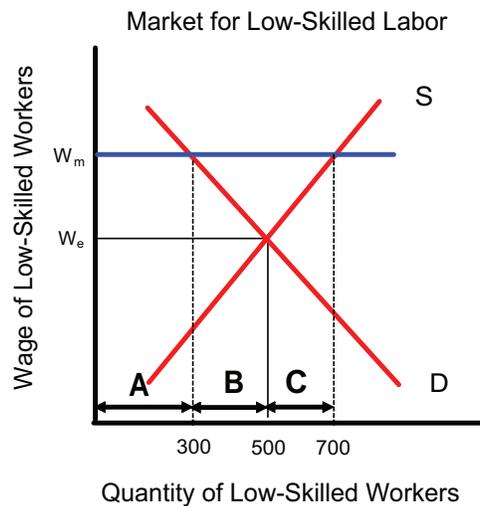
Market for Low-Skilled Labor

Market for Low-Skilled Labor

Graph 1

Graph 2

Graph 2: Now, let's imagine that workers are dissatisfied with their wages and successfully lobby for an increase in the minimum wage (W_m) to a level that greatly exceeds the equilibrium wage (W_e). The new minimum wage serves as a price floor, which means that wages cannot drop below this mandated wage. At this higher wage, the quantity of labor supplied by workers (700) is greater than the quantity of labor demanded by employers (300). The excess workers are seeking but cannot find employment. In this scenario, 400 more workers are seeking employment than there are jobs available at the higher minimum wage (W_m). They are unemployed.

A Closer Look

Now let's take a closer look at our scenario (Graph 3). The worker surplus is composed of two parts:

Market for Low-Skilled Labor

Graph 3

The higher minimum wage results in an increase in the number of workers willing to work for the new wage. Notice that prior to the establishment of the higher minimum wage, 500 workers were seeking employment, but at the higher wage, 700 workers now seek employment. In other words, there are 200 workers who started seeking work as a result of the higher wage, and these workers add to the number who cannot find employment. These workers newly seeking employment are represented by span C.
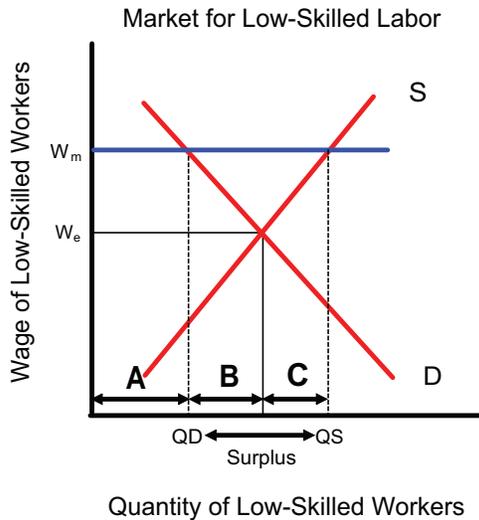
The higher wage also results in a decrease in the number of workers that employers are willing to hire at the higher wage. Notice that at the equilibrium wage (W_e), employers were willing to employ 500 workers; but at the higher minimum wage (W_m), employers are now willing to employ 300 workers. In other words, 200 workers who were previously employed lost their jobs. These newly unemployed workers are represented by span B.

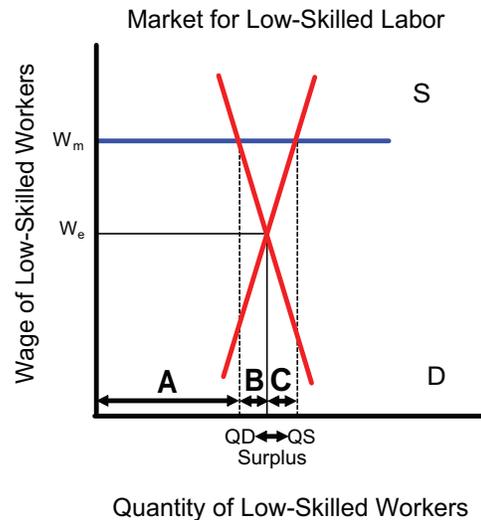Workers who are employed and now earning the higher minimum wage are represented by span A.

To summarize the winners and losers in this scenario:

- **Winners:** Those who have jobs at the now-higher wage (300 workers, represented by span A).

- **Losers:** Those who lost jobs (200 workers, span B) and those who have entered the labor market and been added to those unable to find work (200 workers, represented by span C).

In the accompanying essay, you read that economists who disagree about minimum wage policy differ about its actual impact on employment. In other words, economists disagree about how sensitive workers and employers are to wage changes, or in this case, how they will respond to a higher minimum wage. Perhaps the higher wage will not draw a large number of new job seekers. And, perhaps employers will not greatly reduce the number of workers employed even if they must pay higher wages. Economists use price elasticity to discuss how sensitive buyers and sellers are to changes in price. In this case, the price is a wage. Graph 4 is the same graph as Graph 5, but the supply and demand curves have been shifted to reflect a larger degree of inelasticity, or insensitivity. Notice that in the scenario represented by Graph 5 both the supply and demand curves are more vertical (spans B and C are narrower). This means that both workers and employers are less sensitive to changes in price (wage) than in the scenario shown in Graph 4.

Market for Low-Skilled Labor

Graph 4

Market for Low-Skilled Labor

Graph 5

Again, areas A, B, and C show the winners and losers.

- **Winners:** Those who have jobs at the now-higher wage (span A).

- **Losers:** Those who lost jobs (span B) and those who have entered the labor market and been added to those unable to find work (span C).

Based on what you have learned in this lesson, answer the following questions.

1. **How does the elasticity of demand and supply affect the costs and benefits of the policy?**

   When the supply and demand curves are more vertical, more people benefit from the higher wage (span A), and there is a smaller surplus of workers, which means fewer people are unemployed. More specifically, span B is smaller (fewer jobs are lost) and span C is smaller (fewer new entrants to the labor market are unable to find work).

2. **If you were a policymaker voting on whether to raise the minimum wage, would you vote for a minimum wage increase in the scenario described by Graph 4? How would you vote in the scenario described by Graph 5? Explain your answer using information from the essay and the information above.**

   Answers will vary. Most will be more likely to support the policy if the situation looks more like Graph 5. They will be less likely to support the policy if the situation looks like Graph 4. However, some will likely question whether raising the minimum wage is a good policy because it does not specifically target those in poverty and might hurt those whom it intends to help (as stated in the essay).
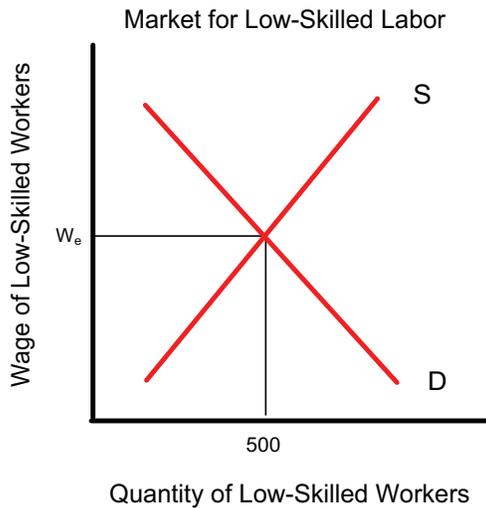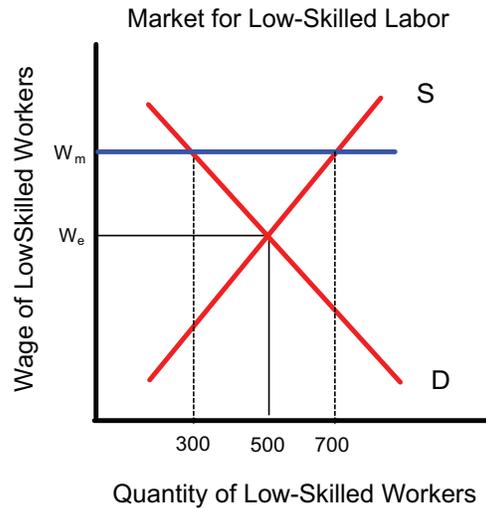
Handout

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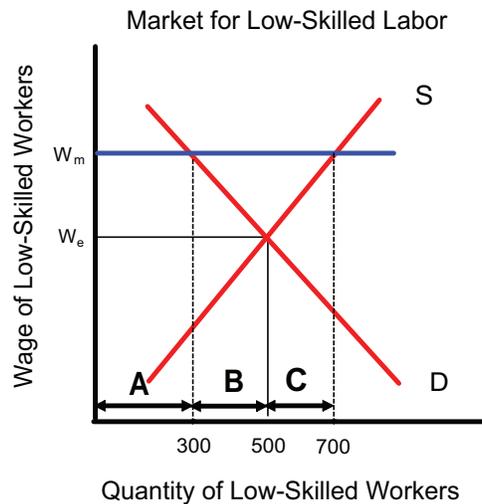
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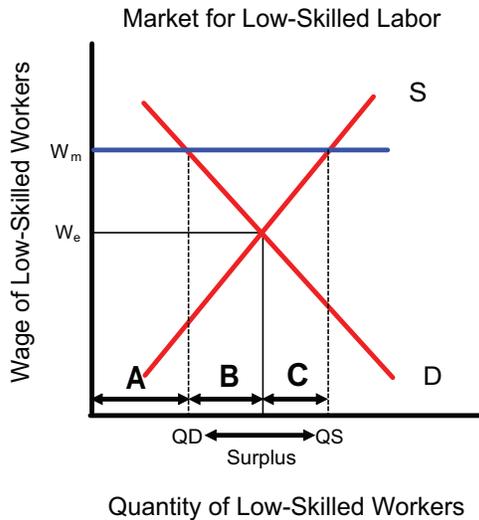
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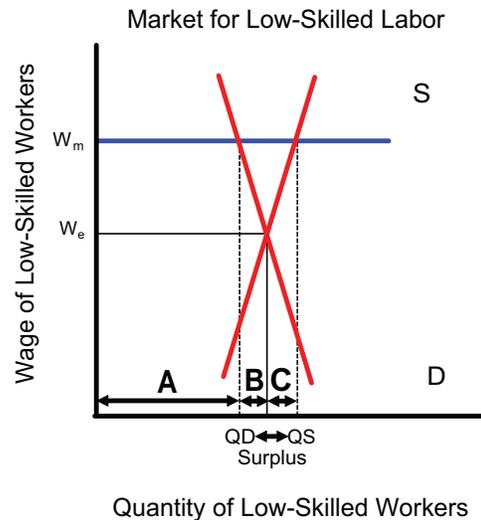Workers who are employed and now earning the higher minimum wage are represented by span A.

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Market for Low-Skilled Labor

Graph 4

Market for Low-Skilled Labor

Graph 5

Again, areas A, B, and C show the winners and losers.

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Common Core State Standards

Grades 6-12 Literacy in History/Social Studies and Technical Subjects

- **Key Ideas and Details**

  RH.11-12.1: Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.

  RH.11-12.2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

- **Craft and Structure**

  RH.11-12.4: Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).