Overall, we can conclude that expanded trade is likely to increase national income and consumption but impose costs on some segments of society, often the least skilled and least able to easily adjust. Normative considerations imply that it may be desirable for the government to implement policies that reduce the costs to these groups. These policies include subsidizing human capital investment by displaced workers, encouraging displaced workers to attempt to become reemployed quickly through earned income tax credits, and subsidizing employment through payroll subsidies. Since the costs of international trade are not born solely by displaced workers and others directly affected, a broad “safety net” of policies may be selected in order to reduce risks and enhance gains from growing trade opportunities.

**Review Questions**

Choose the letter that represents the **BEST** response.

**International Trade and Comparative Advantage**

In answering Questions 1–7, please refer to Figure 16-3. The production possibilities curve for wheat ($W$) and corn ($C$) facing the United States is the line $ab$, and the production possibilities curve for Canada is the line $vw$.

1. What is the internal tradeoff between wheat and corn facing the United States?
   a. 1 unit of wheat costs 5 units of corn
   b. 1 unit of wheat costs 1/5 unit of corn
   c. 1 unit of corn costs 5 units of wheat
   d. both b and c

![Figure 16-3a](image1)

![Figure 16-3b](image2)

2. What is the internal tradeoff between wheat and corn facing Canada?
   a. 1 unit of corn costs 1/2 unit of wheat
   b. 1 unit of wheat costs 2 units of corn
   c. 1 unit of corn costs 1/2 unit of wheat
   d. both b and c
3. Suppose that the initial production levels in each country are represented by points $c (W = 40, C = 200)$ and $x (W = 45, C = 150)$. Also suppose that the number of workers in the United States is 100 million, and the number of workers in Canada is 50 million. If per capita consumption levels can be taken as indicators of the real wage rate in each country then
   a. real wages are higher in the United States.
   b. real wages are higher in Canada.
   c. real wages are the same in both countries.
   d. real wages are higher in the United States for corn producers, but lower for wheat producers.

4. Terms of trade acceptable to both countries would be
   a. 1 unit of wheat for 4 units of corn.
   b. 1 unit of corn for $\frac{1}{3}$ a unit of wheat.
   c. 1 unit of wheat for $2\frac{1}{2}$ units of corn.
   d. all of the above.

5. Suppose the actual terms of trade agreed to by both countries are reflected in the lines $bd$ and $vy$. The actual terms of trade are
   a. 1 unit of corn for 4 units of wheat.
   b. 1 unit of wheat for $\frac{1}{4}$ a unit of corn.
   c. 1 unit of wheat for four units of corn.
   d. both $b$ and $c$.

6. Suppose the final consumption combinations of the two countries are point $e (W = 50, C = 200)$ and $z (W = 70, C = 200)$. The actual trade that took place must have been
   a. 70 units of wheat for 200 units of corn.
   b. 50 units of corn for 70 units of wheat.
   c. 20 units of wheat for 240 units of corn.
   d. 50 units of wheat for 200 units of corn.

7. The effect on employment and wages of international trade between the two countries has been
   a. lower real wages and job losses in the country that initially had the highest wages.
   b. higher real wages in both countries.
   c. a change in the mix of employment opportunities.
   d. both $b$ and $c$.

**International Trade Effects on the Demand for Labor**

8. Suppose that the wage of foreign workers falls. Which of the following best describes the scale effect on the demand for U.S. labor?
   a. Lower foreign wages mean that U.S. companies will substitute foreign workers for U.S. workers, decreasing the U.S. demand for labor.
   b. Lower foreign wages mean that U.S. companies will substitute foreign workers for U.S. workers, increasing the U.S. demand for labor.
   c. Lower foreign wages mean that U.S. companies will have lower production costs, increasing output and thus increasing the U.S. demand for labor.
   d. Lower foreign wages mean that U.S. companies will have lower production costs, increasing output but decreasing the U.S. demand for labor.
   e. Lower foreign wages will not shift the U.S. demand for labor.
9. Suppose that the wage of foreign workers falls. Which of the following best describes the substitution effect on the demand for U.S. labor?
   a. Lower foreign wages mean that U.S. companies will substitute foreign workers for U.S. workers, decreasing the U.S. demand for labor.
   b. Lower foreign wages mean that U.S. companies will substitute foreign workers for U.S. workers, increasing the U.S. demand for labor.
   c. Lower foreign wages mean that U.S. companies will have lower production costs, increasing output and thus increasing the U.S. demand for labor.
   d. Lower foreign wages mean that U.S. companies will have lower production costs, increasing output but decreasing the U.S. demand for labor.
   e. Lower foreign wages will not shift the U.S. demand for labor.

10. A fall in the wage of foreign workers would be likely to increase the demand for U.S. labor under which of the following conditions?
    a. Skill levels of domestic and foreign workers are similar.
    b. Foreign labor is a large share of the total cost of production.
    c. The goods produced by domestic and foreign workers are substitutes in production.
    d. The elasticity of demand for the final product is very small (inelastic).

Effects on Employment and Wages of International Trade

11. Most empirical studies suggest that the overall effects of international trade on domestic employment are
    a. positive and large.
    b. positive but small.
    c. zero.
    d. negative but small.
    e. negative and large.

12. If the wage to marginal productivity ratio in another country is lower than in the domestic country, firms will
    a. move production to the other country.
    b. move production to the other country only if the benefits outweigh the higher transactions costs from foreign production.
    c. move production from the other country to the domestic market.
    d. move production from the other country to the domestic market only if there are tariffs and other trade barriers.

13. Wage convergence is most likely for
    a. occupations with very similar skill levels.
    b. products that are bulky and hard to transport.
    c. service and other occupations that need to be located near the end user.
    d. high-skilled, specialized labor.
Policy Issues

14. Which of the following is a good argument for using government policies to assist workers harmed by trade?
   a. International trade reduces total social welfare.
   b. International trade lowers wages for workers, which is unfair.
   c. International trade reduces the efficiency of the economy.
   d. The least-skilled workers are most at risk of losing from trade.

15. An argument for broad government policies that assist workers and citizens in all areas, not just those directly displaced by trade is that
   a. to be fair, the government should assist all workers.
   b. governments of other countries assist workers, so it is necessary to level the playing field.
   c. the costs of trade are also borne by workers not directly affected, due to increased uncertainty and other factors.
   d. the efficiency of society will be increased by increasing benefits to all workers.

Problems

International Trade and Comparative Advantage

16. Suppose the following equations represent the production possibilities curves for food \( F \) and clothing \( C \) in the United States and China. Both \( C \) and \( F \) are measured in millions of units.

   \[
   \text{United States: } C = 100 - 0.25F, \quad C = 300 - 0.5F. \]

   Suppose there are 100 million workers in the United States and 600 million in China. The initial production combinations are \( F = 240, C = 40 \) in the United States, and \( F = 120, C = 240 \) in China.

16a. What is the cost in the United States of 1 unit of food? Of 1 unit of clothing?

16b. What is the cost in China of 1 unit of food? Of 1 unit of clothing?

16c. Which country is the low-cost producer of food? Of clothing?

16d. What are the effective real wage rates in each country as indicated by the per capita consumption of its workers?

16e. How should each country allocate its capital and labor resources in order to maximize its future gains from trade?

16f. What are the limits of the terms of trade (i.e., what is the maximum amount of clothing a unit of food could trade for, what is the minimum amount clothing a unit of food could trade for)?

16g. Consider a trade of 150 units of food for 50 units of clothing. Show the effects of the trade on living standards in each country.

17. Despite the advantages that free trade offers, why do so many countries construct barriers to free trade like import quotas?

18. How are the employment effects of technological change like those associated with international trade?
International Trade Effects on the Demand for Labor

19. While a number of factors may be part of this empirical observation, it is generally true that in the United States, manufacturing industries have had greater job losses than service industries since the expansion of international trade.

19a. Why in general would you expect manufacturing industries to be more vulnerable to job losses due to trade than service-related industries?

19b. Using the concepts of substitution and scale effects, explain why the clothing industry in the United States has suffered large job losses due to trade.

Effects on Employment and Wages of International Trade

20. In an article published in The Wall Street Journal shortly before the 1992 presidential election, economist Robert J. Barro made the following statement:

“The prize for poor economic analysis must surely go to Ross Perot. [H]is theory of international trade goes something like this: Wage rates in the United States are $15 per hour, whereas those in Mexico are $1 per hour. If we eliminated all barriers to trade, the U.S. businesses would move to Mexico to take advantage of the cheap labor; in the end, wage rates in the two countries would stabilize at about $7 to $8 per hour.”


20a. Assuming this is an accurate portrayal of Mr. Perot’s view, why is this a poor economic analysis of the effects of free trade among countries?

20b. Do trade barriers such as import quotas really help American workers?