

# LESSON ELEVEN

## RICH MAN, POOR MAN

### INTRODUCTION

The issue of income distribution has been controversial throughout history. Decisions about the distribution of income are made by individuals and firms making exchanges in resource markets, and also through the political process. Public policies, such as taxation and transfer payments, have been targeted at particular income groups to redistribute income. Some of these policies redistribute income from the rich to the poor; but surprisingly, some policies increase the share of income going to middle and upper-income families, making the distribution of income less equal.

### CONCEPTS

- Resource payments
- Transfer payments
- Personal distribution of income
- Functional distribution of income
- Proprietors' income
- Corporate profits

### CONTENT STANDARDS

The personal distribution of income classifies the population according to the amount of income they receive, including transfer payments.

Decisions about the distribution of income are made by individuals and firms making exchanges in the markets for productive resources (inputs), and also through the political process.

Public policies that can be used to redistribute income include taxation (e.g., progressive or negative income taxes), spending and assistance programs targeted at particular income groups, and programs designed to provide training to workers or to encourage private investments in education or other kinds of human capital.

Transfer payments are monetary payments or the direct provision of goods and services made

by one party to another without receiving money, goods, or services in return.

The functional distribution of income classifies the income received by individuals and business firms according to the type of productive resources sold in resource markets.

There are four basic categories of income: wages, rent, interest, and profit.

### OBJECTIVES

- U Analyze the personal distribution of income.
- U Identify sources of income differences.
- U Classify resource payments (income) as wages, rent, interest, and profit.
- U Analyze the structure of the functional distribution of income over the past 70 years.

### LESSON DESCRIPTION

Students participate in an income redistribution simulation and interpret statistics about the distribution of income.

### TIME REQUIRED

Two class periods. Day one—procedures 1-14. Day two—procedures 15-17 and Assessment.

### MATERIALS

- H One copy of Activity 1 and 2 for each student.
- One transparency each of Visuals 1, 2, 3, and 4.

### PROCEDURE

1. Give a copy of Activity 1 to two or three students the day before teaching this lesson. Tell them to study for the exam but keep the information confidential. If they share the exam with any other student, they will receive a zero.
2. Distribute a copy of Activity 1 to each student. Announce that grades received will be included as a part of the semester grade. Allow 7-10 minutes for completion. Write the possible scores 20-0 on the board, in descending order.
3. Instruct students to exchange exams for grad-

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ing. Display Visual 1. Ask graders to report scores and tally them next to each possible score. Establish a distribution with + and - categories in which a few students receive As, a few receive Fs, and most fall in between. (For example: A+ (20), A (19), A- (18), B+ (17), B (15-16), B- (14), C+ (13), C (10-12), C- (9), D+ (8), D (6-7), D- (5), F (4 or below)).

4. Explain that you have received many complaints about unequal grades. Today you will try to do something about the usual grade distribution.

5. Explain that graders should put an "X" through the exam score because you are going to make some adjustments. Tell graders to add one point to the score if a student has an F. They should subtract one point if a student has a B+ or above. Inform students that you will explain your rationale later.

6. Instruct graders to add one point to scores of students who are 16 years or older and subtract one point from students who are younger than 16. (Or pick an age that roughly divides the class into two equal-sized halves.)

7. Instruct graders to subtract one point from the scores of students who are shorter than 5'4" and add one point to the scores of students who are taller than 5'4". Those who are exactly 5'4" keep the same point count.

8. Instruct graders to calculate the new point score. Tally the new scores but do not change the letter grade ranges. Tell graders to return exams to test takers.

9. Explain that this exercise about grade distribution is designed to reflect several controversial issues concerning income distribution in our economy, and announce that student scores will *NOT* be a part of their semester grades. Note that some students were "rich" in points on the test, some were "poor," and most were somewhere in the middle.

10. Display Visual 2 and explain that a quintile represents 20 percent of families. For example, the first quintile is the 20 percent of families receiving the smallest money income; the second quintile is the 20 percent of families receiving the next-lowest income; etc.

Discuss:

- A. In 1991, what percentage of national money income did the 20 percent of families with the lowest income receive? (4.5%)
- B. In 1991, what percentage of national money income did the 20 percent of families with the highest incomes receive? (44.2%)
- C. If we define the middle class as the middle 60 percent (the 3 middle quintiles), what percentage of national money income did those families receive? ( $10.7 + 16.6 + 24.1 = 51.4\%$ )
- D. According to this table, how have those percentages changed over time? (The portion of total income received by the first (lowest income) quintile increased through 1967 and then decreased. The portion of total income received by the fifth (highest income) quintile decreased through 1967 and then increased. The portion received by the middle quintiles increased up to 1957 and then decreased.)

*Note:* Students may be interested in the range of income levels associated with the quintiles for 1991. Those divisions were:

1st quintile	\$17,000 or less
2nd quintile	\$17,001 to \$29,111
3rd quintile	\$29,112 to \$43,000
4th quintile	\$43,001 to \$62,991
5th quintile	\$62,992 or above

Source: *Statistical Abstract of the United States*, 1993

(Optional: Students could calculate quintiles for their grade distributions before and after adjustments.)

11. Remind students that Visual 2 shows the personal distribution of family income. Define *personal distribution of income* as income received after cash transfer payments and before taxes. This distribution, therefore, reflects some redistribution of income in our society because of cash transfer payments. Define *transfer payments* as cash or in-kind benefits given to people from the

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government. Individuals do not have to provide goods or services to the government to receive these payments. Discuss:

- A. Name some cash transfer payments you have heard about. (Social Security payments, Aid to Families with Dependent Children, unemployment compensation, worker's compensation.)
- B. Although the figures in Visual 2 do not include in-kind transfers, name some in-kind transfer payments you have heard about. (Food stamps, rent subsidies, and free and reduced-price school lunches.)
- C. Why do you think the federal government distributes cash transfer payments? (To redistribute income and assist low-income families.)
- D. Which of the adjustments made on the class exams would parallel cash transfer payments? (Giving points to students with scores less than D- and to older students.)

12. Explain that students have seen that people's incomes differ and now they will examine why those differences occur. Discuss:

- A. Why were some student scores higher than others? (They may be smarter or better students in economics than others; therefore, they earned a higher score. Explain that differences in ability account for some income inequalities, but not all of them.)
- B. Do you think people's level of education makes a difference in their income? (Statistics from the U.S. Bureau of the Census show that, in general, income increases as the level of education increases. For example, in 1989, the median income of males who graduated from high school was \$26,609. For those who attended high school but did not graduate, the median income was \$21,065. For male college graduates, the median income was \$41,892.)
- C. Do people who perform unpleasant or dangerous jobs tend to earn more income?

(Yes, after adjusting for other differences such as education and physical skills. For example, coal miners and workers who put out oil fires tend to earn more because their jobs are dangerous.)

- D. Is all income earned from work? (No, some people inherit wealth. They can invest this money to earn income.) Explain that two students were given the test ahead of time. This "inherited wealth" allowed the students to earn better scores.
- E. Are some rich or poor people just lucky or unlucky? (Yes. A landowner might discover oil on his or her land. An investor might buy a certain stock just before it doubles in value. A student might study hard to become a civil engineer and graduate at a time when demand and salaries are very low. Some rock bands have big hits; others flop. A new actor may get a big break by starring in a movie that becomes very popular.)
- F. Do any students live in a family with two income earners? One? (Generally, more income earners in a family means more income.)
- G. Ask students to explain what you were trying to demonstrate when you instructed them to add a point for students who are taller than 5'4" and subtract for those who are shorter than 5'4". (Discrimination accounts for some income differences.) Ask students taller than 5'4" to raise their hands. Count how many males and females are in that group. Now count the males and females in the group shorter than 5'4". Gender discrimination is one type of discrimination that occurs in the workplace. Ask students for other examples. (Race, age, and so on.) Explain that differences because of discrimination are very difficult to calculate. In the past, men have received more than women on average, but, on average, men were better educated, worked longer hours, and had more work experience. These performance-related differences have to be eliminated before

determining how much of the wage difference is accounted for by current discrimination in paying different wages for identical work. However, the wage differences also led women to invest less in their own education and training, perpetuating the differences to some degree.

13. Explain that other comparisons are often made in looking at income distribution and redistribution. Students have seen that transfer payments make a difference in income distribution, but they have not seen how taxes also have an influence. Display Visual 3 and discuss:

- A. Comparing income shares before and after federal taxes and cash transfers in 1980, what happened to the distribution of income? (The shares became more equal.)
- B. What happened in 1990? (In general, the shares became more equal.)
- C. Why do you think that the percentage received by the lowest income group increased and the share received by the highest income group decreased in 1980 and 1990? (There are many reasons; however, students are likely to remember that the U.S. income tax is a progressive tax system. The philosophy of a progressive tax system is that people with higher incomes are able to pay a larger percentage of their incomes as taxes than people with lower incomes. High-income people would be taxed more and the poor would receive transfers of income and in-kind services.)
- D. How can higher income families reduce their taxes and ease the effects of a higher tax bracket? (There are many tax deductions they use that may not be as useful to low income families. The home mortgage interest deduction is an excellent example. Poorer families tend to rent rather than buy homes; therefore, they do not receive the interest deduction. Richer families can buy more expensive houses, have larger mortgage interest payments, and larger tax deductions. Overall, it has

been estimated that the federal government "gave up" \$45.5 billion in tax revenues from the mortgage interest deduction in 1994.)

- E. Would you conclude that our overall system of cash transfers and taxes redistribute income? (Definitely, but some tax or cash transfer policies favor low-income families and some policies favor high-income families. Studies have shown that the federal tax system tends to be progressive, but state and local tax systems are less progressive given their use of sales and property taxes. Also, social security taxes tend to be regressive. Many studies have concluded that, across income levels earned by the vast majority of taxpayers, the overall tax system in the United States is broadly proportional.)

14. Instruct students to compare the first and second grade distributions (prepared in procedures 3 and 8, respectively). Ask them whether the second distribution is more equal or less equal. Then ask them to discuss whether they believe the new distribution is more fair or less fair, and why. Relate their discussion to the debate over various tax and assistance programs that redistribute family incomes.

15. Explain that income distribution can be described in other ways. Display **Visual 4**. Explain that the *functional distribution of income* classifies income received by individuals and businesses according to the type of productive resources sold in markets for productive resources.

16. Point out that there are four basic categories of income: wages, rent, interest, and profit. Explain that profits are included in both the corporate profits and proprietors' income columns. Define *proprietors' income* as income earned by single-owner business firms (sole proprietorships). Note that some of this income represents wages for work the proprietors do in their own business; the rest is profit for risking assets in a business that might go bankrupt. *Corporate profits* include dividends, corporate income taxes, and retained earnings. Discuss:

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- A. How is the majority of income earned in the U.S.? (Wages and salaries—income earned working for an organization not owned by the worker.)
- B. What is the smallest category of income earned? (Rental income.)
- C. How has the functional distribution of income changed over time? (The percentage share earned by sole proprietorships (especially family farms) and people who rent out resources they own has declined, as the percentage paid to wage and salary employees has increased. Profits and interest payments have fluctuated with national and international business conditions.)

17. Distribute a copy of Activity 2 to each student. Explain that students should read the statement and determine what type of income is described.

### Answers to Activity 2

1. I 2. R 3. W 4. P 5. P  
6. W 7. TP 8. R 9. W 10. I

### ASSESSMENT

1. Do you favor or oppose the following proposals for government policies? Explain your position in terms of the policy's effect on income distribution. (The effect of each policy, in terms of

making the distribution of income more or less equal, is noted in parentheses.)

- A. Employers contribute to pension plans for employees. Their contributions are not counted as income by the IRS. (Less equal.)
- B. Income earners may take a tax deduction for property taxes paid on the homes in which they live. (Less equal.)
- C. Low income families may be eligible for an earned income tax credit which reduces their taxes. (More equal.)
- D. Retired workers would not have to pay taxes on a portion of their Social Security benefits. (More equal.)
- E. Tax credits are given to the disabled. (More equal.)
- F. Income earners are eligible to take a tax credit for child care expenses. (Unclear—depends on whether more high income or low income families take the tax credit, and how much the credit lowers their taxes.)

2. Display the following chart on the board. Instruct students to select one country that has a relatively equal income distribution and one country that is relatively unequal. Ask the students to study the two countries and write a short paper on why the distributions are so different in the two countries.

**Percentage Shares of Income (1975–1980)**

Country	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile
France	5.5	11.5	17.1	23.7	42.2
Japan	8.7	13.2	17.5	23.1	37.5
Israel	6.0	12.0	17.7	24.4	39.9
Mexico	2.9	7.0	12.0	20.4	57.7
Switzerland	6.6	13.5	18.5	23.4	38.0
United Kingdom	7.0	11.5	17.0	24.8	39.7
United States	5.3	11.9	17.9	25.0	39.9

Source: The World Bank, *World Development Report*, 1988.

## ACTIVITY 1

### WHAT'S YOUR EQ (ECONOMICS QUOTIENT)?

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Name \_\_\_\_\_

Write "true" or "false" in the spaces below.  
Do *NOT* write "T" or "F."

- \_\_\_\_\_ 1. Money is one of the four basic types of economic resources.
- \_\_\_\_\_ 2. When economists refer to "capital," they mean the amount of money necessary to start a business.
- \_\_\_\_\_ 3. The law of demand states that price and quantity demanded are inversely related.
- \_\_\_\_\_ 4. An increase in the costs of production will decrease supply.
- \_\_\_\_\_ 5. A price floor above the equilibrium price will result in a shortage.
- \_\_\_\_\_ 6. A pure market system with no government sector will not produce enough public goods.
- \_\_\_\_\_ 7. If a business facing elastic demand for its product raises the price of the product, the business will receive more revenue.
- \_\_\_\_\_ 8. An increase in the price of chickens will cause the supply curve for beef to shift to the right.
- \_\_\_\_\_ 9. Voluntary exchange between two parties tends to make both parties better off.
- \_\_\_\_\_ 10. The Social Security program is a social insurance and welfare program.
- \_\_\_\_\_ 11. An increase in the rate of inflation will cause interest rates to fall.
- \_\_\_\_\_ 12. U.S. currency is backed by the gold at Fort Knox and in government banks.
- \_\_\_\_\_ 13. The amount of money in the United States is controlled by the Treasury Department.
- \_\_\_\_\_ 14. If U.S. citizens would only "buy American," most of them would be better off economically.
- \_\_\_\_\_ 15. New technology has been a major source of economic growth.
- \_\_\_\_\_ 16. Highly paid athletes earn a large salary because they are worth it to their teams.
- \_\_\_\_\_ 17. The value of money varies inversely with the price level.
- \_\_\_\_\_ 18. When Congress lowers taxes, the level of total spending in the economy increases.
- \_\_\_\_\_ 19. Whenever people make economic decisions, they incur an opportunity cost.
- \_\_\_\_\_ 20. Any adult who does not have a job is counted as unemployed.

## ACTIVITY 2

### WHAT'S MY INCOME?

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Name \_\_\_\_\_

Each statement below indicates a type of income. In the space provided, write "W" if the statement describes wages and salaries, "R" for rent, "I" for interest, "P" for profit, or "TP" for transfer payment.

- \_\_\_\_\_ 1. Mary Jones received \$365 this year on her certificate of deposit.
- \_\_\_\_\_ 2. William Walker received \$3,600 from tourists using his Florida condo.
- \_\_\_\_\_ 3. Terrence Harris received \$675 in tips this year as a waiter.
- \_\_\_\_\_ 4. Florence Smith received a \$250 dividend check from General Motors.
- \_\_\_\_\_ 5. Joel Lander sold potatoes for \$40,000 this year and paid expenses (including the cost of his own time) of \$30,000, thereby netting \$10,000.
- \_\_\_\_\_ 6. Maria Gonzalez is a manager at a local grocery store, where she earns \$27,000.
- \_\_\_\_\_ 7. Aunt Ethel received her Social Security check for \$567 this month.
- \_\_\_\_\_ 8. The Hulls received \$5,000 this year leasing land to a farmer.
- \_\_\_\_\_ 9. Mr. Chang received a bonus of \$2,000 this year for being such a valuable salesperson.
- \_\_\_\_\_ 10. Tyrone Jackson earned \$330 on his savings account.

## VISUAL 1

### ANSWERS TO WHAT'S YOUR EQ?

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- False 1. Money is one of the four basic types of economic resources.
- False 2. When economists refer to "capital," they mean the amount of money necessary to start a business.
- True 3. The law of demand states that price and quantity demanded are inversely related.
- True 4. An increase in the costs of production will decrease supply.
- False 5. A price floor above the equilibrium price will result in a shortage.
- True 6. A pure market system with no government sector will not produce enough public goods.
- False 7. If a business facing elastic demand for its product raises the price of the product, the business will receive more revenue.
- False 8. An increase in the price of chickens will cause the supply curve for beef to shift to the right.
- True 9. Voluntary exchange between two parties tends to make both parties better off.
- True 10. The Social Security program is a social insurance and welfare program.
- False 11. An increase in the rate of inflation will cause interest rates to fall.
- False 12. U.S. currency is backed by the gold at Fort Knox and in government banks.
- False 13. The amount of money in the United States is controlled by the Treasury Department.
- False 14. If U.S. citizens would only "buy American," most of them would be better off economically.
- True 15. New technology has been a major source of economic growth.
- True 16. Highly paid athletes earn a large salary because they are worth it to their teams.
- True 17. The value of money varies inversely with the price level.
- True 18. When Congress lowers taxes, the level of total spending in the economy increases.
- True 19. Whenever people make economic decisions, they incur an opportunity cost.
- False 20. Any adult who does not have a job is counted as unemployed.



## VISUAL 2

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THE PERSONAL DISTRIBUTION OF FAMILY INCOME:  
PERCENTAGE OF NATIONAL MONEY INCOME  
RECEIVED BY FAMILY QUINTILES

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Year	1st Quintile (lowest)	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile (highest)
1947	5.0	11.9	17.0	23.1	43.0
1957	5.1	12.7	18.1	23.8	40.4
1967	5.5	12.4	17.9	23.9	40.4
1977	5.2	11.6	17.5	24.2	41.5
1987	4.6	10.8	16.9	24.1	43.7
1991	4.5	10.7	16.6	24.1	44.2

Source: U.S. Bureau of the Census, *Current Population Reports*, series P-60 (Washington, D.C., U.S. Government Printing Office, 1992).

## VISUAL 3

### THE IMPACT OF TAXES AND TRANSFERS ON INCOME

	Pre-Tax, Pre-Transfer Income Share (%)		Post-Tax, Post-Transfer Income Share (%)	
	1980	1990	1980	1990
1st Quintile	2.0	1.8	6.8	5.5
2nd Quintile	9.3	8.3	11.3	9.9
3rd Quintile	15.5	14.1	15.8	14.5
4th Quintile	23.1	22.0	22.1	21.2
5th Quintile	50.3	54.3	44.5	49.5

Source: E. Gramlich, R. Kasten, and F. Sammartino, "Growing Inequality in the 1980s: The Role of Federal Taxes and Cash Transfers" in *Uneven Tides: Rising Inequality in America*, edited by S. Danziger and P. Gottschalk, 1993.

## VISUAL 4

### THE FUNCTIONAL DISTRIBUTION OF INCOME (%)

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	<b>Wages &amp; Salaries</b>	<b>Rental* Income</b>	<b>Net Interest</b>	<b>Corporate Profits</b>	<b>Proprietors' Income</b>
1929	60.0	6.0	6.0	11.0	17.0
1939	67.0	4.0	5.0	8.0	16.0
1949	66.0	3.0	1.0	13.0	17.0
1959	68.6	3.6	2.5	12.8	12.6
1969	72.4	2.3	4.2	11.2	9.9
1979	73.4	0.1	7.4	9.9	8.9
1989	73.0	- 0.3	10.7	8.5	8.2
1991	74.6	- 0.2	9.9	7.6	8.1

Source: *Economic Report of the President*, 1993 and earlier years.

\* Rental payments made to corporations are reflected in the profits category. Depreciation charges account for negative values in 1989 and 1991.