*24a. For the data in Table 15-1 in the Summary section Example problem, compute the skewness measure. Is the distribution skewed left or right?

*24b. Now suppose that $20 is transferred from person 3 to person 1. Has the variance increased or decreased? Has the skewness increased or decreased?

*24c. Does increased earnings equality necessarily mean less skewness?

*24d. Why might an earnings distribution that is skewed to the right be considered unfair?

Lorenz Curves and Gini Coefficients (Appendix 15A)

25. Consider the data from Table 15-1 in the Summary section Example problem.

25a. Draw the Lorenz curve consistent with the data. Be sure to indicate the line of perfect equality.

*25b. Compute the Gini coefficient associated with this earnings distribution.

25c. Now suppose the distribution of earnings changes so that the earnings levels are now $32, $48, $60, $80, and $180. Total earnings are still $400. Draw the new Lorenz curve.

25d. Is it clear from the Lorenz curves which distribution is more equal?

*25e. Compute the Gini coefficient associated with the new earnings distribution.

Applications

Popular Perspectives on Inequality

26. A perspective shared by many Americans is that the economy is essentially a “zero-sum” game, i.e., when those at the upper end of the earnings distribution gain, the gain comes at the expense of those at the bottom. Some would go so far as to say that what the rich gain is taken from the poor.

26a. Did higher-earning men actually “gain” in an absolute sense during the period 1975–1997? Did higher-earning women?

26b. Data suggest that higher wage earners of both genders did gain relative to lower wage earners during the period 1975–1997. What was the major reason for this gain? Did this gain result from the rich exploiting the poor?

26c. Explain why shifts in the relative supply of less-educated workers could not have caused the decrease in relative wages experienced by those workers.

26d. Explain why changes in the relative quality of labor supplied by less-educated workers could not have caused the decrease in relative wages experienced by those workers.

26e. Explain why institutional changes like declining union membership could not have been a major factor in the rising return to education seen during the 1980s.
The Superstar Effect

27. Consider the situation of two lawyers with the same education, age, and experience. Lawyer A is just slightly more proficient under pressure than lawyer B. You are involved in a major lawsuit where the loser must pay the winner $1 million. The case is very close and sure to be decided in favor of the side with the better lawyer.

27a. How much would you be willing to pay lawyer A in this situation? How much would you be willing to pay lawyer B?

27b. What is the relationship between worker productivity and earnings in this example? What is it about the nature of the contest that makes for this relationship?

27c. What effect would such contests have on the dispersion of earnings within narrowly defined human capital groups? What effect does such dispersion have on the overall dispersion of earnings in the economy?

27d. Review the hypothesis about the effects of relative standing concerns discussed in Question 27d in Chapter 1. If this hypothesis is true, what effect would it have on the inequality of earnings?

Effects of Income Maintenance Policies on the Earnings Distribution

28. Review Example 2 from the Summary section of Chapter 6 on labor supply.

28a. For the person with preferences given by the utility function

\[ U = L^{\frac{3}{4}} Y^{\frac{1}{4}}, \]

find the total wage earnings before and after the development of the welfare program described in the example.

28b. For the person with preferences given by the utility function

\[ U = L^{\frac{1}{3}} Y^{\frac{3}{4}}, \]

find the total wage earnings before and after the development of the welfare program described in the example.

28c. What effect does the welfare program described in this example have on the dispersion of earnings?

Lorenz Curves and Gini Coefficients (Appendix 15A)

29. Consider the data from Table 15-1 in the Summary section Example problem. The Lorenz curve and Gini coefficient for this data were computed in Problem 25.

29a. How would the Lorenz curve change if all earnings levels were multiplied by 1,000?

29b. Suppose each worker in the economy received an additional $20 in earnings. Draw the new Lorenz curve and compute the new Gini coefficient.

29c. Lorenz curves can be drawn to represent the distribution of earnings or income. In this example, since there is no nonlabor income or taxes, the two curves would be the same. In general, this would not be true. Would you expect the distribution of earnings to be more or less equal than the distribution of income?