Chapter 20

1.   Use Table 20.2 from Chapter 20 in your text to answer this question.
a.   In the most recent year available, what percentage of income did the bottom
        fifth of the income distribution receive? What percent of income did the top fifth
        of the distribution receive? Roughly, what is the relationship between what the
        bottom fifth received and what the top fifth received?

Answer:
Bottom fifth = 7.1 per cent. Top fifth = 43.1 per cent. The top fifth received just over six times
what the bottom fifth received.

b.   What is the range of the percentage of income received by the bottom fifth of
        the income distribution over the last 29 years? What is the range for the top
        fifth? Describe the trend for each group over the last 29 years.

Answer:
Bottom fifth range is from 10.0 per cent to 7.1 per cent. Top fifth range is from 35.0 per cent to

43.1 per cent. For the bottom fifth, their share fell between 1979 and 1990 and appears to have
remained fairly constant thereafter. For the top fifth, their share rose between 1979 and 1990 and
seems to have risen slightly since.

c.   Describe three reasons why the measure of income distribution used in Table
        20.2 in Chapter 20 may not truly measure someone's ability to maintain a
        certain standard of living. As a result, are the standard measures of income
        distribution likely to exaggerate or understate the true distribution of the
        standard of living? Explain.

Answer: In-kind transfers are not included; the economic life-cycle is not recognized; and transitory
versus permanent income is not recognized. All three problems suggest that standard measures
exaggerate economic inequality because the poor receive transfers in the form of goods and
services, because people may be poor at certain points in their lives but not at others, and because
the variation in income can be smoothed by borrowing and lending.

d.   What is permanent income? Why might we wish to use permanent income
        when measuring the distribution of income? If we used permanent income
        instead of current annual income when measuring the distribution of income,
        would this tend to exaggerate or understate the true distribution of the standard
        of living? Explain. (Hint: If you are a full-time student, can you borrow as much
        as you want in order to perfectly smooth out your lifetime consumption?)

Answer: Permanent income is a person's normal, or average, income. Using it removes the life-
cycle effects and the transitory effects that cause any given year's income to be non-representative
of the person's true standard of living. This would probably tend to understate the true distribution of
the standard of living because, in reality, we cannot fully smooth our living standards by borrowing
when young or when we have a bad year.

2.   Sabine earns five times as much as Gert.

a.   What would the political philosophy of utilitarianism, liberalism, and libertarianism likely suggest should be done in this situation? Explain.

Answer: Utilitarianism: Since there is diminishing marginal utility of income as income grows large, it would harm Sabine less than it would help Gert if we redistributed income from Sabine to Gert. Thus, to maximize total utility, redistribute from Sabine to Gert. Liberalism: Both Sabine and Gert would agree that if they didn't know their station in life, they would choose to socially insure each other with a maximin system in case they were to be the one on the bottom end of the income distribution. So, redistribute from Sabine to Gert. Libertarian: Since equal opportunity is more important than equal outcome, if each came by their income fairly and honestly, then no redistribution need take place.

b.   Compare the degree of redistribution each suggests.

Answer:
From least redistribution to most, libertarianism, utilitarianism, liberalism.

3.   Suppose the government has to choose between two anti-poverty programs. Each program guarantees that every family has at least €15,000 of income. One scheme establishes a negative income tax where: Taxes = (0.50 of income) – €15,000. The other scheme is for
the   government to guarantee every family at least €15,000 to spend and if a family falls short, the government will simply make up the difference.

a.   Using the negative income tax scheme described above, fill out the following table.

Earned Income	Taxes Paid	After-tax Income
€0	_____	_____
5,000	_____	_____
10,000	_____	_____
20,000	_____	_____
30,000	_____	_____
40,000	_____	_____

Answer:

Earned Income	Taxes Paid	After-tax Income
€0	−€15,000	€15,000
5,000	−12,500	17,500
10,000	−10,000	20,000
20,000	−5,000	25,000
30,000	0	30,000
40,000	5,000	35,000

b.   What is the value of income for which this family neither receives a subsidy nor pays any tax? (That is, how high does income have to be for the family to stop receiving a subsidy?)

Answer:
€30,000

c.   Under the second scheme where the government simply guarantees at least €15,000 to every family, what is the level of income at which a family stops receiving a subsidy? Explain.

Answer:
€15,000. The government simply guarantees that each family has €15,000 so once a family reaches that level, it fails to receive a subsidy.

d.   Which plan is likely to be more expensive to the government? Explain

Answer:
The negative income tax because, under this tax scheme, the government will continue to subsidize families in the €15,000 to €30,000 range.

e.   Suppose a poor family that only earns €5,000 per year decides to plant a garden and sell the produce in a "farmer's market" in the city. Suppose the family earns an additional €5,000 selling the produce. What is the family's final income under each scheme? What is the effective tax rate on the €5,000 earned by family under each scheme? Which scheme promotes a work ethic among the poor and which one discourages work? Explain.

Answer:
If negative income tax, final income = €10,000 earned income + €10,000 subsidy = €20,000. If €15,000 guaranteed, final income = €10,000 + €5,000 subsidy = €15,000. If negative income tax, tax rate equals .50 because when income went up €5,000, take home pay went up €2,500 or €2,500/€5,000 = .50.

If €15,000 guaranteed, tax rate equals 100 percent, because when income went up €5,000, final take home pay stayed the same at €15,000 because benefits were reduced by €5,000 or €5,000/€5,000 = 100 percent.

The €15,000 guarantee discourages work because there is no gain whatsoever from working

when income is in the €0 to €15,000 range.