Social Welfare 553

Problem set 3

1. Word has gotten out that UW social work students are developing expertise in economic-based policy analysis. In fact, this good news has spread as far as “Generoustania,” a small island country known for its high levels of social program spending within a market-based economy.

You get a call asking you to advise the Generoustanian Minister of Education on choosing between several education reform proposals on the matter of child and family well-being. The Generoustanian public schools are notoriously bad and although there are a very large number of private schools with infinite capacity to take on students, only wealthy families can afford these private schools.

The proposals are:

1. A voucher program which would provide up to $20,000 to be used for tuition at private schools. Vouchers will pay the tuition directly.
2. A direct transfer of $20,000 per school-aged child. This transfer would be in cash and can be spent on anything.

The ministry official in charge of hiring you has made two things clear. First, she is concerned only about the short-run effects on the well-being of families and children. (She’s hired another team of consultants to analyze how these policies will affect schools.) Second, she likes to see graphs. They reassure her that the analysts know what they’re talking about.

The Generoustanian currency is the “dollar” ($) and you can assume that prices, wages and family budgets in Generoustania are more or less the same as in the US.

Think about this: What is the general concept represented in this question? To which Frank chapter and section does it correspond?

Now, compare the two possible programs.

i. Which program will likely lead to the larger increase in quality of education for low-income children?
ii. Which program will likely lead to the larger increase in family well-being?
iii. Which program would you chose and why? (no graph needed on this one)

2. You are very devoted to eating five fruits or vegetables per day. Due to a horrible combination of bad weather, a sudden rise in gas prices and a teamster strike, prices for all fresh produce triple. Describe the impact of this price hike on your consumption patterns. Specify total-, income- and substitution effects.

3. Frank Chapter 17, question 7 parts a and b (c is optional for imaginary bonus points)

4. Frank Chapter 18, question 5 (this requires a supply and demand graph)
Frank questions (in case older editions don’t contain selected problems)

17.7 A village has six residents, each of whom has $1000. Each resident may either invest his money in a government bond, which pays 11 percent/year, or use it to buy a one year-old steer, which will graze on the village commons. Year-old steers and government bonds each cost exactly $1000. Steers require no effort to tend and can be sold for a price that depends on the amount of weight they gain during the year. Yearly weight gain, in turn, depends on the number of steers that graze on the commons. The prices of 2-year-old steers are given in the table as a function of the total number of steers.

<table>
<thead>
<tr>
<th>Number of steers</th>
<th>Price per 2-year-old steer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$1200</td>
</tr>
<tr>
<td>2</td>
<td>1175</td>
</tr>
<tr>
<td>3</td>
<td>1150</td>
</tr>
<tr>
<td>4</td>
<td>1125</td>
</tr>
<tr>
<td>5</td>
<td>1100</td>
</tr>
<tr>
<td>6</td>
<td>1075</td>
</tr>
</tbody>
</table>

a. If village residents make their investment decisions independently, how many steers will graze on the commons?
b. How many steers would graze on the commons if investment decisions were made collectively?
c. (optional) What grazing fee per steer would result in the socially optimal number of steers?

18.5 Chicken wings and chicken drumsticks are jointly produced private goods. The introduction of Buffalo wings—the fast food sensation—has led to a sharp increase in the demand for chicken wings. Show how this affects the equilibrium price and quantity of drumsticks.