C&T, Chapter 7: Price Floors, Taxes, and Subsidies

1. The basic idea of deadweight loss is that a willing buyer and a willing seller can’t find a way to make an exchange. In the case of the minimum wage law, the reason they can’t make an exchange is because it’s illegal for the buyer (the firm) to hire the seller (the worker) at any wage below the legal minimum. But how can this really be a “loss” from the worker’s point of view? It’s obvious why business owners would love to hire workers for less than the minimum wage; but if all companies obey the minimum wage law, why are some workers still willing to work for less than that?

2. As we saw in the chapter, a lot turns on elasticity. Decades ago, Washington, D.C., a fairly small city, wanted to raise more revenue by increasing the gas tax. Washington, D.C., shares borders with Maryland and Virginia, and it’s very easy to cross the borders between these states without even really noticing: The suburbs just blend together.
   a. How elastic is the demand for gasoline sold at stations within Washington, D.C.? In other words, if the price of gas in Washington, D.C., rises, but the price in Maryland and Virginia stays the same, will gasoline sales at Washington, D.C., stations fall a little, or will they fall a lot?

   b. Take your answer in part (a) into account when answering this question. So, when Washington, D.C., increased its gasoline tax, how much revenue did it raise: Did it raise a little bit of revenue, or did it raise a lot of revenue?

   c. How would your answer to part (b) change if Washington, D.C., Maryland, and Virginia all agreed to raise their gas tax simultaneously? These states have heavily populated borders with each other, but they don’t have any heavily populated borders with other states.
3. In the market depicted below there is either a price ceiling or a price floor—surprisingly, it doesn’t matter which one it is: Whether it’s an $80 price floor or a $30 price ceiling, the chart looks the same.

In the chart, there’s a rectangle and a triangle. One represents the value lost from the “deals that don’t get made” and one represents the value lost from “the deals that do get made.” Which is which?

4. Using the following diagram, use the wedge technique to answer these questions:
   a. If a tax of $2 were imposed, what price would buyers pay and what price would suppliers receive? How much revenue would be raised by the tax? How much deadweight loss would be created by the tax?
b. If a subsidy of $5 were imposed, what price would buyers pay and what price would suppliers receive? How much would the subsidy cost the government? How much deadweight loss would be created by the subsidy?

5. In the 1970s, AirCal and Pacific Southwest Airlines flew only within California. As we mentioned, the federal price floors didn’t apply to flights within just one state. A major route for these airlines was flying from San Francisco to Los Angeles, a distance of 350 miles. This is about the same distance as from Chicago, Illinois, to Cleveland, Ohio. Do you think AirCal flights had nicer meals than flights from Chicago to Cleveland? Why or why not?
Minimum Wage

6. Use a labor market supply and demand model to answer the following questions.

a) From an equilibrium position a minimum wage is set above the going wage. Graph this possibility and show (1) the amount of new entrants into the labor market, and (2) the number of workers laid-off from their jobs.

b) Is society better or worse off because of the new minimum wage law?
7. The table below summarizes the labor market for unskilled workers in South Carolina.

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Quantity Demanded (millions of hours per week)</th>
<th>Quantity Supplied (millions of hours per week)</th>
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</thead>
<tbody>
<tr>
<td>$6.00</td>
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</tr>
<tr>
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<tr>
<td>$8.50</td>
<td>18</td>
<td>27</td>
</tr>
</tbody>
</table>

a) What is the equilibrium wage and employment level in this market? How much unemployment occurs at the equilibrium wage?

b) Suppose the South Carolina state legislature imposes a minimum wage of $8.00 per hour on this market. What is the new quantity demanded of labor? What is the new quantity supplied of labor? How much unemployment is created by the minimum wage?