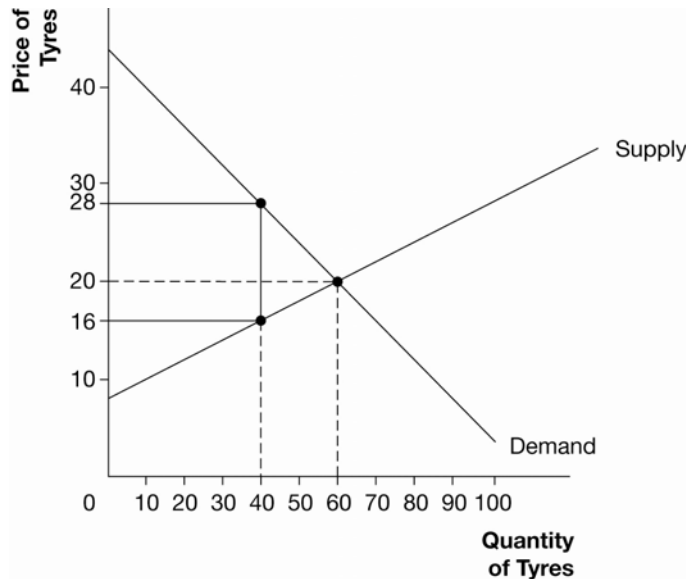


## Chapter 8

1. Exhibit 2 shows the market for tyres. Suppose that a €12 road use tax is placed on each tyre sold.
  - a. In Exhibit 2, locate consumer surplus, producer surplus, tax revenue, and the deadweight loss.

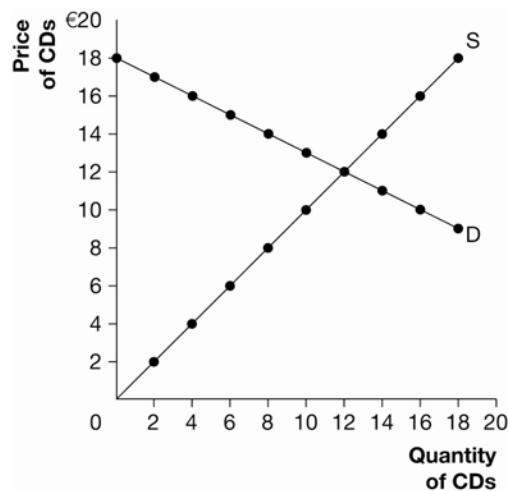
Exhibit 2



- b. Why is there a deadweight loss in the market for tyres after the tax is imposed?
    - c. What is the value of the tax revenue collected by the government? Why wasn't the government able to collect €12 per tyre on 60 tyres sold (the original equilibrium quantity)?
    - d. What is the value of the tax revenue collected from the buyers? What is the value of the tax revenue collected from the sellers? Did the burden of the tax fall more heavily on the buyers or the sellers? Why?
    - e. Suppose over time, buyers of tyres are able to substitute away from car tyres (they walk and ride bicycles). Because of this, their demand for tyres becomes more price elastic. What will happen to the size of the deadweight loss in the market for tyres? Why?

2. Use Exhibit 3, which shows the market for music CDs, to answer the following questions.

Exhibit 3



- a. Complete the table. (Note: to calculate deadweight loss, the area of a triangle is  $1/2$  base multiplied by height).

Tax per unit	Tax revenue collected	Deadweight loss
€0	_____	_____
3	_____	_____
6	_____	_____
9	_____	_____
12	_____	_____
15	_____	_____
18	_____	_____

- b. As the tax is increased, what happens to the amount of tax revenue collected? Why?
- c. At a tax of €18 per CD, how much tax revenue is collected? Why?
- d. If the government wanted to maximize tax revenue, what tax per unit should it impose?
- e. If the government wanted to maximize efficiency (total surplus) what tax per unit should it impose?
- f. What happens to the deadweight loss due to the tax as the tax is increased? Why?