

Self Test

Modeling Energy Taxes

Click on True or False to test your knowledge of the chapter.

1. **True False** The US Federal government gets the most revenue from the individual income tax, US states get the most revenue from general sales taxes, while US local governments get the most revenue from property taxes.
2. **True False** VAT taxes or taxes on percent of value added are collected in the US and are very common outside of the US.
3. **True False** A severance tax goes to the government and a royalty goes to the mineral owner.
4. **True False** LPG tends to be the most heavily taxed petroleum product.
5. **True False** Musgrave and Musgrave (1989) argue that the income tax is probably the best tax.
6. **True False** Indirect taxes or taxes on products are often less satisfactory than the personal income tax, because they distort market efficiency.
7. **True False** Suppose that demand and supply in the LPG market are

$$Q_d = 92.5 - 1P_d$$

$$Q_s = -13.4 + 2P_s$$

Then market equilibrium price and quantity are 35.3 and 57.2, respectively.

8. **True False** Suppose that demand and supply in the LPG market are again

$$Q_d = 92.5 - 1P_d$$

$$Q_s = -13.4 + 2P_s$$

If a tax of 15 is placed on LPG, consumers pay \$10 of the tax, suppliers pay \$5 of the tax and the government collects \$708.

9. **True False** The deadweight loss from the tax in question 8 is 6.
10. **True False** If supply is perfectly elastic, the producer pays the tax.
11. **True False** If demand is perfectly elastic, the producer pays the tax.
12. **True False** If demand is perfectly inelastic, the supplier pays the tax.
13. **True False** The more responsive side of the market passes more of the tax to the other side of the market.
14. **True False** In a competitive market with perfectly inelastic demand consumers fully absorb imposed taxes. (Contributed by Oksana Chernenko)

15. **True False**. A subsidy granted by the Navajo nation on each ton of low grade coal extracted from the coal resources on its reservation would artificially improve the price for coal and increase its competitive capacity in the coal market.
16. **True False** Let the inverse demand equation be $P_d = 100 - 2Q_d$ and the inverse supply equation be $P_s = 20 + 3Q_s$. If a subsidy of 5 were placed in this market, equilibrium quantity would be increased from 16 to 17.
17. **True False** Let the inverse demand equation be $P_d = 100 - 2Q_d$ and the inverse supply equation be $P_s = 20 + 3Q_s$. If a subsidy of 5 were placed in this market, supply price would go up by 5. Thus, the incidence of the subsidy would be for all the benefits to go to the supplier.
18. **True False** Let $Q_d = 87.5 - 2P$ and $Q_s = -14.6 + 2P$. To maintain a price of \$30 the government would have to subsidize oil production by \$8.95 at a total cost of \$406.33.
19. **True False** Let the inverse demand equation be $P_d = 100 - 2Q_d$ and the inverse supply equation be $P_s = 20 + 3Q_s$. If a subsidy of 5 were placed in this market, the social losses would be 2.5.
20. **True False** In a competitive market, suppose that $Q_d = 98 - 2P_d$, $Q_s = -20 + 4 P_s$, and a unit subsidy of 4 is imposed. $P_s = 17$, $P_d = 21$, and $Q = 64$.
21. **True False** If the demand elasticity is -0.2, the supply elasticity is 0.8, and a tax of \$1.50 is enacted, the consumer pays \$1.20 and the supplier pays \$0.30.