

A recent newspaper article, "Pet Adoption Fees Increased by Commission," highlighted the emotional testimony by Animal Shelter workers at a county commission meeting recently. The current adoption fee at the animal shelter is \$15.00 and the average number of animals adopted per week is 100. In the face of rising costs, the county commissioners proposed an increase in the pet adoption fees at the animal shelter from \$15.00 to \$22.50 (a 50% increase). Proponents argued that the fee increase was necessary to raise revenues for the shelter. Critics of the plan worried that the fee increase might decrease adoptions enough to actually lower shelter revenues.

1. What is the current revenue earned by the Humane Society for animal adoptions?

*The current revenue is $\$15 * 100 = \1500 per week.*

2. If the adoption fee is increased by 50%, to \$22.50, what do you predict will happen to the quantity of animals adopted? Why? Offer an explanation.

The quantity of animals adopted will fall. The law of demand states that price and quantity demanded are inversely related. More people will choose to either not adopt or to get animals from another source (newspaper ads, for example) when the price of adoption rises.

3. Suppose animal adoptions fall by 10% in response to the fee increase (to 90 animals per week).

- a. What is the new level of total revenue earned from adoptions? $\$22.50 * 90 = \2025 per week
- b. What is the elasticity of demand for adoptions? Is demand elastic or inelastic?

The percent change in price is 50; the percent change in quantity is 10. Thus the elasticity of demand is $-10/50 = -1/5$ or -0.2 , which is inelastic.

4. Suppose animal adoptions fall by 60% in response to the fee increase (to 40 animals per week).

- a. What is the new level of total revenue earned from adoptions? $\$22.50 * 40 = \900 per week
- b. What is the elasticity of demand for adoptions? Is demand elastic or inelastic?

The percent change in price is 50; the percent change in quantity is 60. Thus the elasticity of demand is $-60/50 = -6/5$ or -1.2 , which is elastic.

5. What is the relationship between price and total revenue when demand is elastic? (That is, when price rises and demand is elastic, what happens to total revenue?)

When price rises and demand is elastic, total revenue falls (see part 4a for evidence of this)

6. Describe a factor that could influence the elasticity of demand for animals from the Animal Shelter.

Answers Vary, but the availability of substitutes matters: if more animals are available from other sources, demand for adoptions from the Animal Shelter will be more elastic.