

Chapter 4: Elasticity

According to the Law of Demand, all other things equal, consumers will buy more at lower prices and less at higher prices. But have you ever noticed that how you respond to a price change really depends on the product? If the price of a new car doubled, you almost certainly would decide not to purchase it. But when the price of gasoline doubled, consumers bitterly complained—while they were standing at the gas pumps, continuing to pour fuel into their cars. Why were they so willing to buy almost the same amount of gas at the higher price? Chapter 4 introduces the concept of elasticity, which measures how sensitive consumers and producers are to changes in the price of products.

Price elasticity of demand or supply relies on a variety of factors. Price elasticity of demand is generally a function of the availability of substitutes, the expense of the product relative to the consumer's income, and how necessary it is to purchase the product. Price elasticity of supply primarily depends on how long it takes firms to shift resources to respond to the change in product price.

Economists can measure consumer and producer sensitivity to price changes through mathematical formulas. Elastic demand occurs when a change in price creates an even larger change in the quantity demanded; in other words, consumers are very responsive to price changes. Inelastic demand can be seen when a change in price causes only a small change in the quantity demanded; consumers only slightly reduce the quantity purchased at the higher price. Extreme cases of perfectly elastic demand (where the quantity demanded drops to zero if the price rises) or perfectly inelastic demand (where consumers buy exactly the same quantity of the product, no matter what the price) are extremely rare. Cross-price elasticity of demand measures the change in quantity demanded when the price of a substitute or complement to the product changes. Income elasticity of demand measures the change in quantity demanded when the consumer's income changes.

Knowledge of elasticity is important for firms and governments. Using a total revenue test, firms can determine how a change in price will affect the total revenue of the company. When demand for a product is relatively inelastic and the firm raises the price, the total revenue increases because the firm keeps most of its customers. But if a firm faces elastic demand for its product, it can only increase its total revenue by lowering prices, attracting customers to buy more of the product; higher prices will drive the sensitive consumers away. Governments also are keenly aware of elasticity, as they place excise taxes on products with very inelastic demand, knowing that the consumers of these products—cigarettes, gasoline, and alcohol—will largely continue to buy the product at the higher price.

Material from Chapter 4 consistently appears on the AP Microeconomics Exam in a couple of multiple-choice questions and occasionally is included as part of a free-response question. It is important to be able to identify elasticity levels from examples, as well as mathematically and graphically.