## What is Price Elasticity of Demand?

#### Overview



According to the **law of demand**, quantity demanded decreases when price increases. When price decreases, quantity demanded increases. However, it is not enough to know in what direction quantity demanded changes in response to price changes. It is also important to know how much the quantity demanded changes. A business may decide not to increase the price of its product if consumers will buy much less of it at the higher price. But a business will certainly increase the price of its product if consumers will buy only a little less of it at the higher price.

The measure of how much quantity demanded changes relative to price changes is called **price elasticity of demand**. If the quantity demanded changes more than price, in percentage terms, demand is elastic.

#### ELASTIC DEMAND means the quantity demanded is very responsive to changes in price. If the quantity demanded changes relatively little, the good or service has INELASTIC DEMAND.

Several factors determine whether the demand for a product is elastic or inelastic in some price range:

- Products that have many substitutes tend to have an elastic demand because it is easy to buy a substitute when its price rises. A product that has few substitutes tends to have an inelastic demand, because buyers don't have as many alternatives from which to choose.
- Goods and services that take a large portion of a consumer's budget tend to have an elastic demand because the price change has a bigger impact on the consumer's overall spending. Goods and services that represent a small portion of a consumer's budget tend to have an inelastic demand, because the impact of price changes for these products has a much smaller effect on the consumer's overall spending.
- The more time consumers have to adjust to price changes, the more they will increase purchases in response to price decreases, and decrease purchases in response to price increases. Therefore, long-run demand tends to be more elastic than short-run demand.

#### In Your Own Words

- A. What does it mean for demand to be elastic?
- B. What are the three situations in which demand tends to ELASTIC?
- C. What are the three situations in which demand tends to INELASTIC?

### **Elastic or Inelastic?**

Determine whether the demand for the following items is price elastic or inelastic. Write your answer on the line after the item. Then write the reasons for your answer.

Α.	Salt
	Why?
В.	New cars
	Why?
C.	Pork chops
	Why?
D.	European vacation
	Why?
E.	Heart medicine
	Why?
F.	Heart medicine at one of four drug stores in a shopping mall
	Why?
G.	Gasoline purchased one day after a 20 percent price increase
	Why?
Н.	Gasoline purchased one year after a 20 percent price increase
	Why?

# **Applying Elasticity to the Real World**

Each of the following stories contains an assumption about elasticity of demand. For each story:

- 1. State whether the assumption made about elasticity of demand is correct or incorrect.
- 2. Justify your answer.
- A. I. M. Politico, a candidate for the state legislature, is proposing a large increase in the taxes on cigarettes and liquor. He says, "I'm not proposing these taxes to raise revenue, but to discourage reckless drinking and the filthy habit of smoking. If the prices of cigarettes and booze go up, most people will quit using them. After all, no one has to drink or smoke."

B. Members of the Organization of the Petroleum Exporting Countries (OPEC) restricted production of crude oil. That was one reason for sharp increases in the price of oil and gasoline. B. A. Green, an environmentalist, has acclaimed this move by OPEC. "This is a step in the right direction for the environment. People will cut their consumption of nonrenewable petroleum products dramatically, and the air will be markedly cleaner."

C. Councilman Vic Acqua opposed a price increase for water during a recent drought. He claimed that there is no substitute for water, and that therefore increasing the price of water charged by the city-owned water company will not cause the amount of water people use to decrease at all.

D. Sky King, world traveler, says if the airlines want to attract more passengers, they should lower fares for business travelers as well as for vacationers. She believes both groups will respond equally to a price decrease.