

LESSON 6 : DEMAND AND ITS DETERMINANTS

Focus Question: *What factors affect demand in a market economy?*

Objectives

Students will be able to:

- Explain the law of demand.
- Create and interpret demand charts.
- Discuss the factors that change demand.
- Explain the difference between movement along and shifting of the demand curve.

Standards

NES: 1, 7, 8, 9, 13

ELA: 1, 2, 3

Materials

Text: Chapter 7, pp. 168-185.

Teaching Strategies

I. The Law of Demand

- Begin the lesson by asking for the economists’ definition of *demand*.

Demand is the desire to purchase a particular item at a specified price and time, by consumers who are willing and able to buy.

- Explain that there is a **Law of Demand** which states that **quantity demanded varies inversely with changes in price**. When all other things are equal, buyers will purchase more of an item at a lower price and less at a higher price. Elicit reasons why this is so:

When prices are lower...	When prices are higher...
More people can afford the product	Fewer people can afford to buy the product
People tend to buy more of the product	People tend to buy less of the product
People tend to substitute the product for similar items that are more expensive or less desirable	People tend to substitute less expensive products

The relationship between the price of a good and the quantity consumers will demand can be expressed as a demand schedule and as a demand curve.

- Distribute and have the students complete worksheet 6A; have them confirm their understanding of the Law of Demand by answering the following questions:
 - What happens to the quantity demanded as the price goes up?
 - What happens to the quantity demanded as the prices goes down?
 - Describe the slope of the demand curve: is it positive or negative?
 - Describe the relationship between price and quantity demanded: is it direct or inverse?

*When economists refer to the quantity demanded, they refer to a specific point along the demand curve. A change in the quantity demanded is a result of change in the price of a good and is shown as a movement **along** the demand curve.*

II. Determinants of Demand

- Explain that to economists, an *increase or decrease in quantity demanded* has a different meaning than an *increase or decrease in demand*.

*An increase or decrease in the quantity demanded is shown as movement along the demand curve, an increase or decrease in demand is shown by a shift in the demand curve. A change in the demand of a good or service is caused by something **other than a change in the price** of a good or service.*

- Distribute and have the students complete worksheet 6B and then answer the following questions:
 - When the demand curve shifts upward and to the right, is this indicative of an increase or decrease in demand?
 - When the demand curve shifts downward and to the left, is this indicative of an increase or decrease in demand?
 - Why does the demand curve shift?
- Distribute worksheet 6C and group the students into teams of 3, 4 or 5; have each team complete the worksheet (complete the table) and be prepared to share the results. Record the responses into tables on the board.
 - Provide an opportunity for students to identify any determinants that have not been listed.
 - Have the students confirm direction the demand curve will move for each determinant.

Determinant of demand	Demand increases or decreases?	Explanation
Population increases	I	There are more opportunities to buy and sell.
Population decreases	D	There are fewer opportunities to buy and sell.
Increase in most peoples' income	I	When income goes up, people have a greater ability to buy.
Decrease in most peoples' income	D	When income goes down, people have a diminished ability to buy.
Price of substitute increases	I	As the price of a substitute increases, the demand for the product under study increases. (If consumers have substituted fish for meat, and the price of fish goes up, the demand for meat will increase.)
Price of substitute decreases	D	As the price of a substitute decreases, the demand for the product under study decreases. (If consumers have substituted fish for meat, and the price of fish goes down, the demand for meat will decrease.)
Price of complementary good increases	D	If the price of peanut butter (the complementary good) increases, the demand for jelly will decrease.
Price of complimentary good decreases	I	If the price of peanut butter decreases, the demand for jelly will increase. (More consumers will eat peanut butter and jelly.)
Product becomes a popular fad (change in taste of buyers)	I	When a product becomes a fad, more of it is demanded at all price levels.
Product now out of fashion (change in taste of buyers)	D	When a product that was a fad falls from favor, less of it is demanded at all price levels.
There is an expectation that the price of the product will soon fall	D	If consumers expect to be able to buy the product in the near future for less, current demand will fall at all price levels.
There is a fear that the economy will go	D	If consumers are worried about their jobs,

into a recession where many firms will fail and unemployment will increase		they will curtail spending on many products resulting in a decrease in demand at all price levels.
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- Use the table below to confirm students' comprehension of the distinction of movement along the curve or a shift in the demand curve by indicating whether each scenario results in a change in the quantity demanded (movement along the demand curve), or a change in demand (shift in the demand curve). If there is a shift in the demand curve, indicate whether the curve shifts up or down.

Scenario	Movement or shift up or shift down?
1. There is an outbreak of the flu and sales of rubber gloves skyrocket.	
2. A nail salon cuts the price it charges for manicures and more clients come.	
3. A chain of department stores extends the hours that stores will remain open and total sales for the chain has increased.	
4. The US Census Bureau has announced that there is baby boom in the United States and sales of baby carriages have increased.	
5. John's Bicycle shop increases the prices of bicycles and sales decrease.	
6. The City of New York has cut the number of city employees by 10% and sales of big screen televisions fall.	

III. Price Elasticity of Demand

- Although the Law of Demand tells us that fewer items are bought at higher prices than lower prices, it does not tell **by how much** the quantity demanded will increase or decrease at different prices.

Price Elasticity describes the percentage change in demand – as measured by the dollar value of spending for an item – that follows a price change. The more demand expands or contracts after a price change, the greater the price elasticity of demand.

- Demand is price elastic when the percentage change in quantity demanded is greater than the percentage change in price.*
 - Demand is price inelastic when the percentage change in price is greater than the percentage change in quantity demanded.*
 - Demand is unit elastic when the percentage change in price is exactly equal to the percentage change in quantity demanded*
- Ask students to identify factors that tend to affect price elasticity of demand for a product or service. List each factor in a table (like the one below) and then have the class explain how the factor affects elasticity.

Factor	Explanation
The item is considered a luxury.	Luxuries are generally considered to be items that people can live without. Consumers are less likely to buy if the price is high, and more likely to consider buying if the price drops.
What portion of the family income is the price of the product? (If the cost is a high portion, the elasticity will generally be high; if the cost is a small portion, the elasticity will generally be low.)	The price of salt could double yet most people would not hesitate to buy more if they ran out because the price still takes such a small portion of the family income. Sales of big screen televisions increased dramatically as their price fell because their purchase had a bigger impact on consumers' overall spending.
Does the item have few or many substitutes? (If there	Products that have many substitutes tend to have an

are many substitutes, the elasticity will be high; if there aren't many substitutes, the elasticity will be low.)	elastic demand because it is easier to buy a substitute when its price rises. Products that have few substitutes tend to have inelastic demand because buyers don't have as many alternatives from which to choose.
The time frame for consumers to react to price changes.	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. Long-run demand tends to be more elastic than short-run demand.

- Explain how price elasticity can be measured. (Write these formulas on the board leaving them up for students to refer as they work on worksheet 6D.)

- **The Total Revenue Test**

The total revenue test measures the revenues that a firm receives at different price levels. Total revenue is based on the following formula:

$$\text{Total Revenue} = \text{Price} * \text{Quantity}$$

If total revenue increases after the price of a product drops, then demand for that product is considered to be elastic. Revenues increase for that good or service by a greater percentage than the percentage change in price. (The seller makes less on each sale, but sells enough additional units to make up for the lower price.)

If total revenue decreases after the price of a product decreases, then demand for that product is considered to be inelastic. When a decrease in price has resulted in only a small increase in quantity demanded, and the change in quantity demanded is less than the change in price, total revenue will decrease.

- **Price Elasticity of Demand Formula (PEoD)**

$$\text{PEoD} = (\% \text{ change in quantity demanded} / \% \text{ change in price})$$

To calculate the price elasticity, you first calculate the percentage change in quantity demanded and the percentage change in price.

The higher the price elasticity, the more sensitive consumers are to price changes. High price elasticity suggests that when the price of a good goes up, consumers will buy less and when the price of a good goes down, consumers will buy more. Low price elasticity implies the opposite, that changes in prices have little impact on demand.

- Distribute Worksheet 6D; have the students complete the activities and share their results with the class.

Summary:

- The accounting manager of your VE firm advocates a cost-based pricing strategy in which the company will price products by starting with the wholesale cost and then adding a markup to provide a profit. What factors, besides the wholesale cost of the product, should be considered when determining the selling price of products?
- How do business managers use information about demand, demand determinants and price elasticity of the company's products to make pricing decisions? Explain.