METHODS OF PRICING ACCORDING TO THE LAW OF DEMAND AND SUPPLY AND THE CONCEPT OF ELASTICITY AND ITS TYPES

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Abstract: *This article covers the fundamental principles of market economy, namely demand and supply, pricing methods based on them, as well as the concept of elasticity and its types. The relationship between demand and consumer needs and their ability to pay, and the determination of supply by the quantity of products brought to the market by producers are explained on a scientific basis. The article deeply analyzes the interrelationship between demand and supply with price, market equilibrium, and the price formation mechanism.*

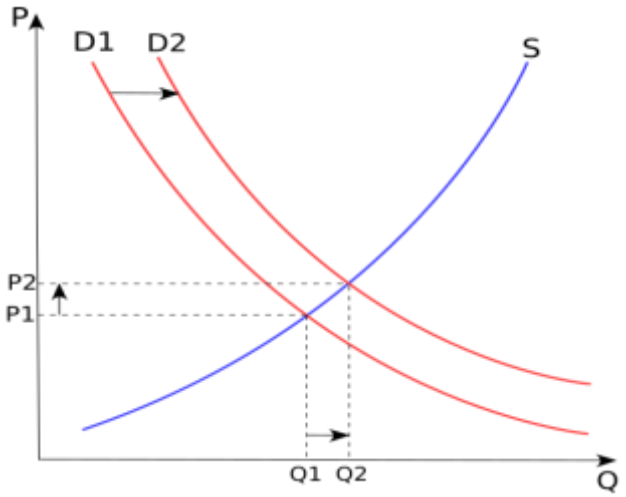
Keywords: *Demand, supply, market equilibrium, price, market price, economy, elastic, demand elasticity, supply elasticity, inelastic, inelastic demand, inelastic supply.*

INTRODUCTION

The foundation of a market economy is formed by the interaction between demand, which represents the needs of consumers, and supply, which reflects the capabilities of producers. It is through the interplay of these two forces that the market price for any good or service is formed and market equilibrium is established. Understanding the pricing mechanism is of strategic importance not only for firms but also for policymakers, ordinary consumers, and society as a whole. However, to what extent do demand and supply react to changes in price? The concept of 'elasticity' is widely used in economics to answer this question, as it allows for the measurement of the sensitivity of demand and supply to changes in price, income, and other factors.

To this end, this article first analyzes the essence of the law of demand and supply, and the main methods of pricing based on them—market, cost-based, psychological, and competition-based methods. Subsequently, the concept of elasticity, a vital tool for economic analysis, its forms in relation to price, income, and cross-relationships, as well as the types of demand and supply elasticity, are illuminated with scientific examples. The aim of the article is to contribute to a deeper understanding of market mechanisms and their quantitative indicators.

Demand and supply form prices, while at the same time, prices determine the relationship between demand and supply.



S - Supply
D - Demand
P - Product price
Q - Product quantity

Demand (demand for goods and services) is the desire of a buyer, consumer to purchase certain goods, benefits in the market; needs that have entered the market and are secured by financial capabilities.

Needs turn into demand through the medium of money and price.

Formally, demand is the magnitude of consumption. Demand is formed in line with the diversity in the world of goods. For example, demand for food products, industrial goods, household and social services forms the structure of demand for goods. In terms of content and movement, it is divided into real, growing, stably satisfied, delayed satisfaction, unsatisfied, normative and other demands. The demand expressed by each consumer, i.e., an individual person, family, enterprise, or firm for a certain set of goods or goods is called individual demand. The sum of demands expressed by all buyers for a certain good or set of goods is called market demand, and the social demand expressed at the societal level for all goods in all markets is called aggregate demand. A number of factors influence the change in the quantity of demand. Among them, the most important is the price factor. A decrease in the price of a good leads to an increase in the quantity of goods purchased and, conversely, an increase in price leads to a decrease in the quantity of purchases.

Supply is expressed by the quantity of goods and services that are offered and can be offered to the market at a certain time and at certain prices; supply is the desire of producers (sellers) to offer their goods for sale (to the market). In the market, there is a direct relationship between the price of a good and the quantity of its supply: the higher the price, other things being equal, the more goods are offered for sale, or conversely, as the price decreases, the volume of supply decreases.

For example, at a price of 10 som, 3 units of goods are offered, if the price rises to 15 som, the volume of supply increases to 5 units, if the price reaches 20 som, the volume of supply reaches 6 units. Thus, changes in the quantity of supply are expressed in the movement from one point to another on the supply curve. The positive slope of the curve reflects the direct relationship between the price of a good and the quantity of its supply.

In addition to the price of the good itself, a number of factors affect the supply of goods: prices of resources necessary for the production of this good; technology used; taxes and subsidies; expectations of scarcity or price changes; the number of sellers in the market and others. For example, cheaper resources reduce the costs of producing a certain good, which stimulates an increase in its supply. The sensitivity to changes in factors affecting supply itself, primarily to price changes, is called supply elasticity.

Methods of pricing according to the law of demand and supply. The law of demand and supply is one of the fundamental principles of economics and plays an important role in the pricing process. This law represents the relationship between demand and supply: if the demand for a product or service increases, its price rises, and conversely, if supply increases and demand decreases, the price falls. Pricing methods are implemented taking into account demand and supply in market conditions.

First, there is the market price method. In this method, prices are determined according to market conditions. The equilibrium of demand and supply forms the price. If demand for a product is high but supply is low, the price increases. Conversely, if supply for a product is high and demand is low, the price decreases. This method is often used in a free market economy.

Second, there is the cost-based pricing method. In this method, the price is determined based on the production costs of the product. Production costs, including raw materials, labor, and other expenses, are taken into account. The price of the product must be higher than the costs so that the producer can make a profit. This method is often used in monopoly or oligopoly market conditions.

Third, there is the psychological pricing method. In this method, prices are set based on the psychological characteristics of consumers. For example, if the price of a product is set at 1999 som, consumers may perceive it as cheaper than 2000 som. This method is used to attract consumers and increase sales.

Fourth, there is the competition-based pricing method. In this method, producers set the prices of their products taking into account competitors' prices. If competitors lower their prices, other producers may be forced to lower their prices as well. This method is widely used in competitive market conditions.

Fifth, there is also the analysis-based pricing method. In this method, producers study demand and supply through market research and analysis and set prices based on this. This method is often used when launching new products or entering new market segments.

The concept of elasticity and its types. The concept of elasticity in economics is an indicator that measures the relative change of one variable (such as price or income) as a result of a change in another variable (such as demand or supply). This concept represents how sensitive demand and supply are to price or other economic factors. It is determined by the elasticity coefficient, and this coefficient shows by what percentage the second variable changes as a result of a one percent change in the variable.

The main types of elasticity are as follows:

1. Price elasticity (price-dependent change in demand and supply);
2. Income elasticity (the effect of income change on demand);
3. Cross elasticity (change in demand or supply for another good as a result of a change in the price of one good).

The concept of demand elasticity and its types. The price elasticity of demand (Ed) - indicates by what percentage demand changes when the price changes by 1%.

Main types:

1. Perfectly elastic demand (Ed = ∞) - if the price increases slightly, demand disappears completely.
2. Perfectly inelastic demand (Ed = 0) - no matter how much the price changes, the volume of demand does not change (e.g., insulin).
3. Elastic demand (Ed > 1) - demand changes more than the price change (e.g., luxury goods).
4. Inelastic demand (Ed < 1) - demand is not much affected by price changes (e.g., basic foodstuffs).
5. Unit elastic demand (Ed = 1) - the change in price and demand are equal.

Example: If the price of gasoline increases by 10%, demand decreases by only 3% → inelastic demand.

The concept of supply elasticity and its types. The price elasticity of supply (Es) - indicates by what percentage the volume of supply by producers changes when the price changes by 1%.

1. Perfectly elastic supply (Es = ∞) - producers can offer any quantity of the product at this price.
2. Perfectly inelastic supply (Es = 0) - the volume of supply does not change despite price changes (e.g., land area).
3. Elastic supply (Es > 1) - if the price increases, producers quickly offer more products.
4. Inelastic supply (Es < 1) - even if the price increases, producers are not able to increase the volume (e.g., agricultural harvest in the short term).
5. Unit elastic supply (Es = 1) - price and supply change by the same percentage.

Based on the elasticity coefficient, demand and supply elasticity are divided into the following types: elastic demand (large change), inelastic demand (small change), unit elastic demand (unit change), perfectly elastic and perfectly inelastic goods. The degree of elasticity depends on the type of goods, the availability of substitute goods, the share in the budget, and the time interval. In addition, elasticity is expressed through derivatives in economics and also shows the dependence of economic indicators on production factors.

Statistical Data Illustrating the Article

These tables make it easier to understand concepts like demand, supply, their reaction to price (elasticity), and market equilibrium through numerical examples.

1. Statistical Data Illustrating the Law of Demand

This table shows how the demand for a product (e.g., a simple loaf of bread) changes as its price changes. As you can see, the lower the price, the higher the demand.

Table 1: The Relationship Between Price and Demand for "Simple Loaf of Bread"

Price (UZS)	Quantity Demanded (units/month)	Explanation
800	1,200	Low price, high demand
1,000	1,000	Initial point
1,200	850	Price increased, demand decreased
1,500	600	Price increased significantly, demand decreased further

2. Statistical Data Illustrating the Law of Supply

This table shows how much of a product producers are willing to bring to the market at different prices. The higher the price, the higher the potential profit, and therefore, the greater the supply.

Table 2: The Relationship Between Price and Supply for "Simple Loaf of Bread"

Price (UZS)	Quantity Supplied (units/month)	Explanation
800	700	Low price, producers supply less
1,000	1,000	Initial point
1,200	1,150	Price increased, supply also increased
1,500	1,300	High price, more product is supplied

3. Statistical Data Illustrating Market Equilibrium

This table combines the two previous tables to show the point where the quantity demanded equals the quantity supplied (i.e., the market equilibrium point).

Table 3: Market Equilibrium for "Simple Loaf of Bread"

Price (UZS)	Quantity Demanded (units/month)	Quantity Supplied (units/month)	Market Condition
800	1,200	700	Supply Shortage (Scarcity)
1,000	1,000	1,000	Equilibrium
1,200	850	1,150	Supply Surplus (Glut)

Price (UZS)	Quantity Demanded (units/month)	Quantity Supplied (units/month)	Market Condition
1,500	600	1,300	Supply Surplus (Glut)

In this example, the market equilibrium price is 1,000 UZS, where the quantity demanded and supplied (1,000 units) are equal.

4. Statistical Data Illustrating Types of Price Elasticity of Demand

Elasticity Coefficient (Ed) = (% Change in Demand) / (% Change in Price)

a) Elastic Demand (Ed > 1) Example: Modern smartphones (a luxury good)

Scenario	Price	Price Change (%)	Quantity Demanded	Demand Change (%)	Elasticity (Ed)
Initial	4,000,000	-	5,000	-	-
New	3,600,000	-10%	6,500	+30%	-3.0

When the price dropped by only 10%, demand increased by 30%. Since |Ed| = 3 > 1, demand is elastic.

b) Inelastic Demand (Ed < 1) Example: Table salt (a necessity)

Scenario	Price	Price Change (%)	Quantity Demanded (kg)	Demand Change (%)	Elasticity (Ed)
Initial	5,000	-	10,000	-	-
New	6,000	+20%	9,500	-5%	-0.25

Despite a 20% price increase, demand only fell by 5%. Since |Ed| = 0.25 < 1, demand is inelastic.

5. Statistical Data Illustrating Types of Price Elasticity of Supply

Elasticity Coefficient (Es) = (% Change in Supply) / (% Change in Price)

a) Elastic Supply (Es > 1) Example: Hand-sewn shirts (easily produced goods)

Scenario	Price	Price Change (%)	Quantity Supplied	Supply Change (%)	Elasticity (Es)
Initial	50,000	-	2,000	-	-
New	60,000	+20%	2,800	+40%	2.0

When the price increased by 20%, producers immediately increased supply by 40%. Since Es = 2 > 1, supply is elastic.

b) Inelastic Supply (Es < 1) Example: Grain harvested once a year in agriculture (in the short term)

Scenario	Price (per kg)	Price Change (%)	Quantity Supplied (tons)	Supply Change (%)	Elasticity (Es)

Scenario	Price (per kg)	Price Change (%)	Quantity Supplied (tons)	Supply Change (%)	Elasticity (Es)
Initial	3,000	-	100,000	-	-
New	3,600	+20%	105,000	+5%	0.25

Despite a 20% price increase, the harvest quantity cannot be increased in the short term, so supply increased by only 5%. Since Es = 0.25 < 1, supply is inelastic.

6. Statistical Data Illustrating Cross-Price Elasticity

This shows how a change in the price of one good affects the demand for a second, related good.

a) Substitute Goods (e.g., Butter and Margarine)

Scenario	Butter Price	Price Change (%)	Margarine Demand	Demand Change (%)	Cross Elasticity
Initial	30,000	-	500	-	-
New	36,000	+20%	600	+20%	+1.0

As the price of butter increased, the demand for its substitute, margarine, also increased. The positive elasticity (+1.0) indicates they are substitute goods.

b) Complementary Goods (e.g., Cars and Gasoline)

Scenario	Car Price	Price Change (%)	Gasoline Demand (liters/month)	Demand Change (%)	Cross Elasticity
Initial	200,000,000	-	1,000,000	-	-
New	180,000,000	-10%	1,050,000	+5%	-0.5

As cars became cheaper, the number of cars on the road increased, leading to a rise in the demand for gasoline. The negative elasticity (-0.5) confirms they are complementary goods.

These tables help to understand the economic laws and concepts discussed in the article through practical examples.

In conclusion, this article has demonstrated the crucial role of the two fundamental pillars of a market economy—demand and supply—in price formation. It has been scientifically substantiated that price is not arbitrary but rather the result of the actions of sellers and buyers in the market. Based on this, the formation of various pricing methods—such as market price, cost-based price, psychological price, and competition-based price—was explained. Each of these methods is applied under specific market conditions, creating opportunities for producers to make a profit and attract consumers.

The concept of elasticity, in turn, reveals the quantitative depth of these processes. It is not enough to simply know that demand and supply move in opposite directions to

price; it is crucial to understand the extent of these changes. Whether demand and supply are elastic, inelastic, or unit elastic with respect to price directly influences the pricing policies of firms, the tax policies of the government, and consumer spending. For example, the inelasticity of demand for essential goods means that imposing taxes on their prices can be effective for the government.

Thus, while the law of demand and supply provides a general idea of 'how' a market economy works, the concept of elasticity shows 'how sensitive' this process is. By studying these two concepts together, it is possible to enhance the effectiveness of decisions made by economic agents and achieve economic stability in modern and complex market conditions.

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