MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

National Aviation University

Faculty of Transport, Management and Logistics

Management of Foreign Economic Activity of Enterprises Department

Methodical Recommendations to Practicals on "Microeconomics"

Educational Degree Bachelor
Educational and Professional Program: "Management of Foreign Economic Activity"
Field of study: 07 "Management and Administration"
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Practical session 1,2

Theme of the class: Subject and methods of the discipline "Microeconomics"

The concept of microeconomics as a scientific discipline. Limited resources and unlimited needs. Economic goods and economic resources. Problems of choice. The limit of production possibilities. Efficiency and opportunity costs.

The subjects of microeconomics are the household, the firm, and the state. Property rights as a necessary condition for market exchange. Transaction costs, their main forms. Methods of microeconomic analysis. Modeling of economic phenomena and processes. Optimization, equilibrium models. Frontier analysis - the main method of microeconomics.

Literature: [1]; [2]; [4]; [5]; [7].

Guidelines

Before starting to consider the material of this topic, it is necessary to understand what is the subject of the course "Microeconomics", what are its content and objectives, and methodology. It is important to understand the relationship between this course and other social disciplines.

Since microeconomics examines economic relations at the level of consumers, firms, and industries, it is necessary to master the methods used to study economic processes. Various forms of ownership should be considered, with special attention to private property.

Questions for self-examination

1. What is the subject of the Microeconomics course?
2. Content and main objectives of the course "Microeconomics".
3. What are the main characteristics of a market economy?
4. What are the principles and incentives for development inherent in the market?
5. What is the role of the price mechanism and competition in a market economy?
6. What are the advantages and disadvantages of a market-based economic system?

7. What is the complexity and difference between positive and normative approaches to economics? In what cases should the former be preferred, and in what cases the latter?

8. A model is a reflection of some, but not all, aspects of real reality, so a model never reflects reality in its entirety. Is it acceptable to use models in this case? Is it possible to do without them in theoretical research?

9. Do people take the opportunity cost principle into account in their everyday lives? Give your own examples.

10. What happens to the production possibility curve when the amount of resources at the disposal of society increases? Can the development of technology leap forward at the same time?

11. Can an economy work efficiently when some of its resources are not used?

12. What costs should be attributed to transaction costs?

Practical session 3

Supply and demand. Elasticity

Market operations: analysis of supply and demand. Demand, demand function, demand curve, dependence of demand on price. Demand function. Changes in the volume of demand and changes in demand in general. Factors leading to the movement of the demand curve.

Supply. The supply curve. Dependence of supply on prices. The function of supply. Factors affecting supply. Changes in the volume of supply. Factors leading to the movement of the supply curve. Interaction of supply and demand. Market equilibrium.

The concept of elasticity. Price elasticity of demand. Point and arc elasticity. Factors of price elasticity of demand. Elasticity of demand by income. Supply elasticity and factors that affect it.

References: [1]; [2]; [3]; [4]; [5]; [6]; [7].

Guidelines

The study of this topic is based on the knowledge gained in the course of economic theory: the concepts of demand, supply, and elasticity.

It should be remembered that the dependence of the volume of demand on prices is fixed by the law of demand and can be represented as a curve with a negative slope. The inverse dependence of demand on the price level is determined by three factors: price reductions that increase the number of buyers; expansion of purchasing power; and market saturation that leads to a decrease in the utility of additional units of a product. Therefore, buyers are willing to purchase additional units of a product only at lower prices.

After understanding the concepts of demand and the factors that influence it, we can move on to consider the category of elasticity.

You need to know what elasticity is, understand how the price elasticity of demand can be used to determine how buyers will react if there is a change in the price of a product. Then you need to understand the meaning of elastic and inelastic demand.

After considering the price elasticity of demand, it is necessary to start considering the income elasticity of demand and understand how it is calculated.

Next, it is necessary to study the average elasticity of demand and the method of its calculation, to compare the differences in the value of the coefficient of average elasticity for interchangeable, complementary and neutral goods.

Once the concept of demand has been mastered, it is necessary to start considering the economic category of supply in the same sequence as demand.

The dependence of supply on prices is fixed by the law of supply and is described as a curve with a positive slope. The effect of non-price factors leads to changes in supply, which is reflected in a shift of the supply curve to the right (if it is growing) and to the left (if it is falling).

Based on this knowledge, it is necessary to consider the equilibrium (market) price, the market pricing mechanism, and then determine the impact of changes in supply and demand on the market price.

Questions for self-examination

1. What is the economic essence of the category "market demand"?

2. What are the main factors affecting supply and demand?
3. How are the demand and supply functions represented graphically?
4. What is the essence of the concept of market equilibrium?
5. What is the essence of the concept of price elasticity of demand?
6. Define the following terms: elastic, unit elasticity, and inelastic demand.
7. What is the essence of the concept of income and price elasticity of demand?
8. What is the essence of the concept of average elasticity of demand? Give an example of its calculation.
9. In what units is the consumer's gain measured - monetary or useful?
10. Give examples of goods with high price and income elasticity; pairs of goods with high and low cross elasticity. What is the sign of the cross elasticity of substitutes and complements?

Practical session 4

Theory of consumer behavior

Fundamentals of the theory of consumer behavior. Requirements and conditions (axioms) for determining consumer choice.

Utility. The function of utility. Total and marginal utility. Indifference curve. Map of indifference curves. Marginal rate of substitution (MRS).Budget constraint. Factors affecting the budget line. Consumer equilibrium. The general condition of consumer equilibrium in terms of marginal utility (MU) and prices of goods (P).

Income-consumption curves. Engel's laws. Price-consumption curves and derivation of demand curves. Income effect and substitution effect.

References: [1]; [2]; [3]; [5]; [7].

Guidelines

The study of this topic should begin with a consideration of the category of marginal utility. The consumer arranges his needs according to his preferences and seeks to purchase a set of goods with a limited income that would allow him to satisfy his needs to the maximum extent possible.

It should be noted that the principle of diminishing marginal utility underlies the approach to determining the conditions of consumer equilibrium.

It is necessary to consider indifference curves. While indifference curves characterize consumer preferences, the budget line defines the consumer's capabilities, limited by the size of the consumer budget.

After considering the indifference curves and budget lines, it is necessary to move on to the income-consumption and price-consumption curves.

Questions for self-examination

1. What is the essence of marginal utility of a product? Show its difference from total utility and formulate the law of diminishing marginal utility.
2. What is the essence of the maximum utility rule?
3. Under what conditions will the consumer be in a state of equilibrium?
4. How can the income-consumption and price-consumption curves be constructed, and how can the demand curve be constructed on the basis of the price-consumption curve?
5. What is the indifference curve, indifference map? State how the curves on the map differ from each other.
6. What is a budget line and what factors determine its position on the chart?
7. What is the dynamics of marginal utility as the amount of the good consumed increases?
8. Why are economists interested in the point of contact between the budget line of an individual consumer and his indifference curve? What are the variants of this point of contact in the economy?

Practical session 5

The theory of producer behavior. Marginal product theory and microeconomic model of the enterprise

Production. Factors of production. Schemes of the production system (entry and exit from production). Production technology.

Production function. Short-term and long-term periods, fixed and variable factors of production. Isoquant, isoquant map. Total (TR), average (AR), marginal (MR) products of a variable factor of production, their graphical representation. The law of declining marginal productivity. Substitution of factors of production. The marginal rate of technological substitution of labor for capital ($MRTS_{LK}$) and, conversely, capital for labor ($MRTS_{KL}$). Dependence of MRTS on marginal products of labor (MP_{L}) and capital (MP_{K}).The effect of scale (positive, constant, negative).

Literature: [2]; [3]; [4]; [5]; [6].

Guidelines

The theory of production is fundamental to the course. In production theory, the technological relationship between the structure of resource consumption and the maximum possible output is reflected in the production function. Next, you need to move on to the graphical representation of the production function using an isoquant map.

It is necessary to analyze the firm's activities in the short term, using indicators of total, average, and marginal products.

Questions for self-examination

1. Explain the essence of the concepts of "production" and "productivity".
2. Define isoquant categories and an isoquant map.
3. How do you understand resource "substitution"? What is the definition of technological substitution rate - MRTS?
4. Describe the firm's activities in the immediate, short-term and long-term periods.
5. Explain why the average gross cost line has a U-shape in the short run; why does the AFC line have a downward slope?
6. Suppose the producer tax is 100 thousand UAH per year. Show that in the short-run this tax will increase average costs but will not affect average variable and marginal costs.
7. Explain why the producer's equilibrium is achieved at the point of contact between the isocost and the isoquant?
8. What are economies of scale and why do they exist?

Practical session 5

Production costs, revenues and profits of the firm

Production costs - accounting and economic. Explicit (external) and implicit (internal) costs, opportunity costs.

Total (TC), fixed (FC), variable (VC) costs. Average values of these costs. Marginal cost (MC). The firm's costs in the short run. The optimal volume of production at which the firm minimizes costs. The firm's costs in the long run.

Isocost, its properties. The condition for minimizing the cost of producing a given quantity of products (graphical representation). The condition (reason) for the lowest cost (analytical representation).

Gross, average, and marginal revenues of the firm. The main approaches to determining the volume of production that maximizes the firm's profit: comparison of aggregate values, analysis of marginal costs.

The relationship between costs and profit. Accounting and economic profit. Normal profit.

References: [1]; [2]; [4]; [5]; [6].

Guidelines

The study of this topic should begin with the definition of the cost category. Next, it is necessary to identify external, internal, fixed, variable, total, average and marginal costs, and to find out the conditions for minimizing costs in the short and long term.

Next, you need to figure out how a competitive firm determines the volume of production at which it will maximize its profits. This is best done with a graphical representation.

Questions for self-examination

1. Accounting and economic approach to determining costs.
2. Define and give examples of fixed and variable costs.
3. What is the difference between short- and long-term expenses?

4. Define the essence and importance of average, marginal, and total costs for production.

5. What is an "isoquant"?

6. What does the point of contact of an isoquant and an isocost show?

7. To maximize profit, you need to sell the maximum amount of products. Is this statement correct?

8. Should firms necessarily close down immediately if their products are unprofitable? Is this true in all cases?

Practical session 6

A market of perfect competition

Conditions for the formation of a perfect competition market. Demand for products of a competitive firm. Offer of a competitive firm. Market offer. Determinants of market supply.

Short-run equilibrium of the firm. Equilibrium options: a firm that makes a profit; a firm that breaks even; a firm that incurs losses; a firm that minimizes losses; a firm that stops production.

Long-run equilibrium of the firm. The firm's supply in the long run. Industry equilibrium in the long run. Market supply in the long run. Perfect competition and efficiency.

References: [1]; [2]; [4]; [5]; [6].

Guidelines

The study of the topic should begin with the definition of a perfect competition market. Perfect competition implies the existence of a market structure in which a large number of firms produce and sell homogeneous products, the entry and exit of economic agents in the industry is not restricted by anyone, etc. It is necessary to note the conditions under which a firm stops producing a product. Then it is necessary to establish how a long-term equilibrium is achieved in a competitive industry and how the most efficient use of society's resources is achieved in a competitive economy.

Determine the competitive strategy of the enterprise in the short term, the conditions of long-term equilibrium.

Questions for self-examination

1. The economic essence and main characteristics of the perfect competition market.
2. Why can't a competitive firm influence the market price of a product?
3. How does a profit-maximizing competing firm make decisions about the supply of goods and services?
4. Why, under certain conditions, do firms simultaneously stop producing a product?
5. How is the short-term supply curve of a mold formed?
6. How is equilibrium established in a competing industry?
7. In a competitive economy, how can the most efficient use of society's resources be achieved?
8. What is the company's competitive strategy in the short term?
9. Determine the firm's long-run equilibrium under perfect competition.

Practical session 7

A company in a monopoly environment

Conditions for the functioning of a monopoly market. Monopoly power. Types of monopolies. Indicators of monopoly power: Lerner index, Herfindahl index.

The conditions under which a monopolistic firm maximizes its profits are called the short-run monopoly equilibrium. Long-term monopoly equilibrium. Principles of pricing under conditions of monopoly power: limiting pricing, price discrimination.

Monopoly equilibrium and competitive equilibrium. Social costs of monopoly power and the social price of monopoly. Antitrust policy.

Literature: [1]; [2]; [4]; [5]; [7].

Guidelines

After studying the section on perfect competition, you need to understand what a monopoly is. Consider the conditions under which a monopoly can exist. Then you need to understand how a monopolist chooses its output and price to maximize its profits.

To conclude the study of this section, it is necessary to familiarize yourself with the content of various options for state regulation of natural monopolies.

Questions for self-examination

1. What is the economic essence of the concept of monopoly?
2. Under what conditions can a monopoly exist?
3. How does a monopoly choose the output and price at which profits are maximized?
4. Why do monopolies sometimes practice price discrimination? What are the consequences of price discrimination?
5. What options for state regulation of natural monopolies do you know?
6. Why can't a monopolist set any price and produce any quantity of goods it wants?
7. Is a monopoly an evil or a good thing for society? Who wins and who loses in the conditions of monopoly power?

Practical session 8

The market of monopolistic competition

Monopolistic competition and its main features. Determination of prices and production volumes in monopolistic competition. Maximizing the profit of the firm. Minimizing the firm's losses. Equilibrium of the firm in the short and long term.

Non-price competition: product improvement, advertising and promotional activities. Costs of non-price competition. Factors affecting the advertising budget. Monopolistic competition and efficiency.

References: [1]; [2]; [3]; [4]; [5]; [7].

Guidelines

The study of this topic should begin with the concept of monopolistic competition. Next, it is necessary to define non-price competition, the elasticity of demand in monopolistic competition, and the conditions for breakeven and break-even in the short term.

Questions for self-examination

1. Monopolistic competition: essence, types and main differences from pure monopoly and perfect competition.
2. Determine the conditions for entering the industry.
3. What is the peculiarity of demand elasticity in monopolistic competition?
4. Determine the break-even condition of the enterprise in the short and long term.
5. Which markets are dominated by monopolistic competition?
6. Why is price competition ineffective in markets with product differentiation? How could the importance of price competition be increased in such conditions?
7. Can we say that high advertising costs hinder the development of production?

Practical session 9

Oligopolistic market

Characteristic features of an oligopolistic market. Reasons for the emergence of oligopolistic structures. Features of the oligopolist's behavior in the market. The dilemma of the oligopolist. Behavior of the firm in terms of price and output. Options for pricing strategy when firms act without collusion. Factors contributing to the collusion of oligopolists.

Models of oligopolistic pricing: the broken demand curve model; outright collusion; cartel; price leadership model; cost-plus pricing. Economic efficiency of the oligopolistic market.

References: [1]; [2]; [4]; [5]; [6].

Guidelines

Before proceeding to the material on this topic, it is necessary to identify the main reasons for the existence of an oligopoly, barriers to entry into an oligopolistic industry. special attention should be paid to models of oligopolistic pricing.

Questions for self-examination

1. The main features of an oligopoly.
2. Define the Cournot duopoly model.
3. What is the efficiency of an oligopoly compared to other market structures?
4. What characteristic most distinguishes oligopoly from monopolistic competition?
5. What factors increase the likelihood of a cartel in an oligopoly?
6. How are consumer surplus and firm profits formed in an oligopoly?
7. What pricing methods do oligopolists use? What are the conditions for the existence of price leadership and price discrimination in an oligopoly?

LIST OF RECOMMENDED LITERATURE

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