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Study guide
"ECONOMIC THEORY"
for students of the specialties 25 "Economics"

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S. Yu. Solodovnikov, N. V. Zaitseva, T. V. Kuzmitskaya
D. A. Gradyushko, M. P. Stashevskaya, V. S. Sokov

R e v i e w e r s

Doctor of Economics, PhD in Engineering Sciences, Professor,
Head of the Department of Business Administration,
School of Business of BSU,
G. A. Khatskevich;

PhD in Economics, Associate Professor,
Head of the Department of Marketing, FMME of BNTU,
K. V. Yakushenko.

The study guide reflects the issues of the formation of economic theory based on the study of the achievements of domestic and world economic thought. The main issues of models and the state of markets, firm costs, pricing methods and many others are considered in order to form basic economic knowledge of students. The guide is addressed to students of the 1st stage of higher education, specialties 25 "Economics".

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CONTENT

SECTION 1 SUMMARY OF LECTURES ON THE DISCIPLINE

"ECONOMIC THEORY"	8
TOPIC 1 ECONOMIC THEORY: SUBJECT AND METHOD.....	8
1.1 The concept of economic theory.....	8
1.2 Subject and functions of economic theory	9
TOPIC 2 NEEDS AND RESOURCES. THE PROBLEM OF CHOICE IN ECONOMICS.....	11
2.1 Needs, their classification and main characteristics	11
2.2 Resources and factors of production, their classification	13
2.3 Economic benefits and their classification.....	17
2.4 Limited resources and the problem of choice in the economy. Production capabilities of the economy	18
2.5 Production, reproduction, economic growth	20
TOPIC 3 ECONOMIC SYSTEMS.....	22
3.1 The economic system of society. Economic institutions	22
3.2 The concept of ownership.....	26
3.3 Subjects of economic relations	31
TOPIC 4 MARKET ECONOMY AND ITS MODELS.....	34
4.1 Market: concept, conditions of occurrence, functions, main features. Market infrastructure.....	34
4.2 Competition in the market mechanism, its types. Perfect and imperfect competition	35
4.3 Imperfections (fiasco) of the market and the need for state regulation of the economy.....	38
4.4 Market economy models	39
4.5 Features of the Belarusian national development model	40

TOPIC 5 DEMAND, SUPPLY AND MARKET EQUILIBRIUM.....	41
5.1 Demand and the factors that determine it.....	41
5.2 Market proposal and its determinants	43
5.3 Industry market equilibrium. Commodity deficit and commodity surpluses. Changes in supply and demand and their impact on the price.....	44
TOPIC 6 ELASTICITY OF SUPPLY AND DEMAND	48
6.1 The concept of elasticity.....	48
6.2 Elasticity of demand.....	49
6.3 Elasticity of the supply	51
6.4 Point and arc elasticity.....	52
TOPIC 7 FUNDAMENTALS OF THE BEHAVIOR OF MARKET ECONOMY SUBJECTS.....	54
7.1 The main subjects of the market economy	54
7.2 Household as an economic entity	55
7.3 A cardinalist approach to evaluating utility. The utility maximization rule and the consumer equilibrium condition.....	57
7.4 Firm (enterprise) as an economic entity	58
7.5 Production function. Production periods. The production choice of the company in the short term. The law of decreasing marginal productivity	61
7.6 The production choice of the company in the long term. Isoquant. The maximum rate of technological substitution	67
7.7 Production costs and their classification	69
7.8 Production costs in the short term.....	71
7.9 Production costs in the long term. Scale effect	73
7.10 Isokosta. Manufacturer's equilibrium.....	75
7.11 Income and profit of the enterprise	76
7.12 The state as an economic entity. Microeconomic regulation, its goals and tools.....	80

TOPIC 8 MAIN MACROECONOMIC INDICATORS	82
8.1 The concept of the national economy and its structure	82
8.2 The system of National Accounts. Key macroeconomic indicators	83
8.3 Methods for calculating the gross domestic product	85
TOPIC 9 MONETARY SYSTEM	88
9.1 The essence of money and its functions. The evolution of money	88
9.2 The monetary system of the country and its structure	89
9.3 Credit and its forms. Creation of money by banks.	91
TOPIC 10 THE FINANCIAL SYSTEM	94
10.1 The concept of finance and its functions.....	94
10.2 The financial system and its structure	95
10.3 Taxation: the essence, principles, types of taxes	96
10.4 The state budget and its functions.....	98
10.5 Budget surplus and budget deficit.....	100
TOPIC 11 GENERAL MACROECONOMIC EQUILIBRIUM: THE MODEL OF AGGREGATE DEMAND AND AGGREGATE SUPPLY (MODEL AD-AS).....	102
11.1 Aggregate demand, its elements and factors	102
11.2 The aggregate supply, its elements and factors	107
11.3 Macroeconomic equilibrium in the model AD-AS.	110
TOPIC 12 MACROECONOMIC INSTABILITY AND ITS FORMS OF MANIFESTATION	114
12.1 Cyclical nature of economic development and its causes. The economic cycle and its phases	114
12.2 Inflation, its definition and measurement. Causes, forms and consequences of inflation.....	117
12.3 Unemployment. Types of unemployment. Determination of the unemployment rate. Economic and social consequences of unemployment....	123

TOPIC 13 THE WORLD ECONOMY AND CURRENT TRENDS IN ITS DEVELOPMENT	126
13.1 The world economy and the prerequisites for its formation.	126
13.2 Forms of international economic relations	127
13.3 Fixed and floating exchange rates. The demand for currency. Currency supply	128
13.4 The Republic of Belarus in the world economy	129
SECTION 2 PRACTICE.....	131
TUTORIAL PLANS	131
SECTION 3 KNOWLEDGE CONTROL	139
EXAM QUESTIONS	139
SECTION 4 ADDITIONAL SECTION	143
CURRICULUM FOR THE DISCIPLINE "ECONOMIC THEORY"	143

Course overview

The course for the academic discipline "Economic Theory" is designed for students of specialties 25 "Economics".

The aim of the discipline "Economic theory" is the development of students' economic thinking, the formation of their basic economic knowledge relying on the achievements of domestic and world economic thought.

The objectives are:

- develop students' skills in analyzing economic information;
- ensure that students master the fundamental problems of economic development, the main economic categories;
- study the principles of functioning of economic systems that determine the behavior of economic entities;
- study the most important forms of economic regulation;
- form an understanding of the basic principles of the functioning of economic entities and commodity markets;
- identify the features of economic development at the present stage;
- create a methodological basis for mastering the academic disciplines "Microeconomics" and "Macroeconomics".

SECTION 1 SUMMARY OF LECTURES ON THE DISCIPLINE "ECONOMIC THEORY"

TOPIC 1 ECONOMIC THEORY: SUBJECT AND METHOD

1.1 The concept of economic theory

Economic theory, as a science, has passed a significant path of formation and development. It is a science that primarily was originated as the science of household management. Even in the era of the primitive communal system, people had certain knowledge and skills about farming, about the distribution and exchange of goods. Moreover, these norms and rules were considered not only from an economic point of view, but also from the point of view of religious morality. They were so-called "universal truths", peculiar norms of human behavior.

The initial ideas on economics include the ancient Indian "Laws of Manu" (IV-III centuries BC), "Arthashastra" (II century BC). The Babylonian "Laws of King Hammurabi" (XVIII BC), the ancient Chinese "Book of Changes".

The formation of economic theory as a science, or systematized knowledge, is attributed to the XVII century and beyond, the period of active development and formation of capitalist relations.

In 1615, the Frenchman Antoine de Montcretien published his "Treatise of Political Economy", where he used the term "political economy", which designated the future science.

In its development, economics has passed through several stages, each of which corresponded to certain economic stages, based on the current political situation.

In this manual, the term economics is used as "economic theory" or "economic science".

Economic theory is the science of the economic activity of people and the choice of the most effective ways to meet their unlimited needs through the rational usage of limited resources.

Economic theory has its own structure, where there are 4 main sections:

Economic theory reveals the general theory of economic science, its structures, typology criteria, characterizes the main types, models, determines the general prerequisites, their features and development trends.

Microeconomics is a part of economic theory that studies the activities of individual economic entities (households, enterprises, firms, individual economic entities),

Macroeconomics studies the functioning of the national economic system and the entire national economy of the country.

The world economy studies the economic interaction between countries, regions and various international associations and structures.

1.2 Subject and functions of economic theory

Economic theory, like any science, has its own subject and object of research.

The subject of economic theory is economic relations that appear in the conditions of historical and social development. They are formed and established in the process of interaction of production, distribution, exchange and consumption of material goods and services in conditions of limited resources.

The object of study is the economic life of society.

Economic theory uses a wide range of methods of scientific knowledge. They include both general scientific and special research methods. *General scientific methods include* scientific abstraction; analysis and synthesis; historical and logical approach; induction and deduction; dialectical method, etc.

Special methods are economic and mathematical method, econometric; method of economic experiment, etc.

Functions of economic theory.

- *Cognitive function.* It includes studying the processes, reasons and factors of various economic phenomena. It also allows you to establish relationships between individual processes and phenomena of the economy. It is resulted in the formation of theoretical knowledge based on the analysis presented in the form of literary scientific materials, practical schemes and historical data.

- *Practical function.* It includes the formation of schemes and principles of economic activity of the state, the development of specific principles and methods of rational economy.

- *Methodological function.* This function of economic theory is a methodological basis for other branch of economics sciences, such as economic geography, economic statistics, pricing, etc.

- *Educational function.* It includes the formation of a certain idea in society in relation to various economic phenomena, which is reflected in interpersonal relations in the social life, as well as ideology. These are, first of all, labor relations, economic culture, as well as the rights, freedom and obligations of the population to the state and society.

- *Critical or analytical function.* It implies an assessment and identification of disadvantages of various forms of production and distribution, as well as an understanding of differential approaches and in relation to certain phenomena in the economic activity of the state or enterprise.

- *Predictive function.* It includes the ability to develop promising areas of development based on the analysis of economic phenomena and processes.

TOPIC 2 NEEDS AND RESOURCES. THE PROBLEM OF CHOICE IN ECONOMICS

2.1 Needs, their classification and main characteristics

The basis of people's life is their production activity. Nature does not provide in a ready-made form everything that people need to meet their various needs. Therefore, people have to extract, create or produce a variety of goods that can satisfy certain of their needs. People are involved in production activities under the influence of their numerous needs. Therefore, needs act as an impulse of production and its final goal.

In the most general form, a need can be defined as the presence of a person's need for something necessary to maintain and improve his vital activity. The need can appear both as a state of dissatisfaction experienced by a person, and as a state of satisfaction that he seeks to prolong. Needs have the property of historicity and infinity. With the development of society, there is a modification of needs, the disappearance of some and the appearance of others, new ones, as a result, the range of needs expands, their structure changes. Production leads to the disappearance of some needs and the emergence of new ones. Production forms needs, because it constantly creates more and more new goods that make people's lives more comfortable, thereby generating a need for these goods in them. The law of the elevation of needs reflects the relationship between needs and production, their mutual dependence: with the development of social progress and production, there is an increase and modification of needs, a qualitative improvement in their structure.

Economic theory studies economic needs, i.e. those needs that require the production of various goods to meet. These benefits, obtained as a result of production activities and that can satisfy certain needs, are called *economic benefits*.

The economic needs of people are limitless and tend to increase. Therefore, different criteria are used to classify them. From the perspective of the subjects of needs, economic needs are divided into two large groups: *production needs and non-production (personal) needs*. Production needs are determined by the requirements of the normal functioning of the production process, without which production is impossible. These are the needs of economic entities (entrepreneurs, enterprises, organizations) in production resources: production buildings, equipment, raw materials, workers. Non-productive (personal) needs are people's needs for consumer goods necessary for their life and development. If the classification of personal needs is based on the provisions of the American psychologist and economist A. Maslow, then we will get a so-called pyramid of five groups of needs. At the base of the pyramid are the most urgent physiological needs of a person, then the needs for security and self-preservation, then there are social needs (the desire to belong to a certain circle of people, to feel their support), and finally, the needs of a person for self-realization and development.

From the point of view of the role played by the satisfaction of the needs for the reproduction of a person as an employee, *physiological, intellectual and social* needs are distinguished. According to the degree of urgency, personal needs are divided into *primary and secondary*. Primary (the need for food, for example) they cannot be replaced by one another. They do not change for a long time, the degree of their tension decreases rapidly as economic benefits are consumed. Secondary needs (for example, leisure needs such as sports, cinema, theater, etc.) are usually interchangeable. From the point of view of the subjects of needs, it is necessary to distinguish the needs of individual and social needs ¹.

¹ Kurs ekonomicheskoy teorii dlya neekonomicheskikh special'nostej: uchebnoe posobie / pod red. M. I. Nozdrina-Plotnickogo, E. I. Lobkovicha. – Minsk: Amalfeya: Misanta, 2016. – S. 53–56.

Economic needs act as an impulse of production. But in order to become an impulse for the implementation of production activities and to be the motivator of this activity, economic needs must be realized by people. Only the needs realized by people force them to look for ways and means of satisfying these needs, encouraging people to take certain actions aimed at satisfying their needs, thereby becoming an *economic interest*. Thus, economic interests are people's conscious and meaningful economic needs that encourage them to engage in activities aimed at meeting these needs.

The diversity of economic entities, subjects of various needs, determines the diversity of their economic interests. They distinguish between personal interests, the interests of a group, collectives and public interests.

2.2 Resources and factors of production, their classification

The productive activity of people is the basis of their life. *Production* in a broad sense should be understood as the activity of people aimed at obtaining, receiving or creating material goods or services. In order to organize and carry out the production of necessary goods and services, *production or economic resources* are needed. Production or economic resources are a set of natural, human and human-produced means and capabilities necessary and sufficient for the organization and implementation of production activities.

There are four groups of economic resources:

1) *Natural resources* are a potentially suitable part of the natural environment that is used or can be used in production activities. It can be both the land itself, as well as forest and water resources, mineral reserves, etc;

2) *Labor resources* are the employable part of the population;

3) *Material resources* are the means of production produced by people: industrial buildings, machinery and equipment, raw materials and etc;

4) *Financial resources* are the funds necessary for the organization and implementation of production activities.

It should be emphasized that all economic resources are available in limited quantities. It means that their number is not enough to produce such a volume of necessary goods that can meet the current needs of people. In addition, among the economic resources there are *exhaustible and inexhaustible resources, reproducible and non-reproducible*. So, it is necessary to use them effectively.

Economic resources are divided into those involved in the production process and those not involved, i.e. reserve. The resources actually involved in the production process become *factors of production*. Factors of production have a decisive impact on the capabilities and efficiency of production. The volume of economic goods produced directly depends on the quantity and quality characteristics.

The factors of production are diverse, and therefore they are classified in a certain way. The main factors of production are land, capital, labor and the entrepreneurial factor.

Land is a natural factor. It includes all "free benefits of nature" used in production activities. These are agricultural and non-agricultural areas, mineral deposits, forests, and water resources.

Capital as a factor of production is a set of means of production (buildings, structures, equipment, raw materials, energy resources) created by people and used in the production process. Moreover, some of them (buildings, structures, equipment) are used in the production process for a long period. During its usage, they gradually wear out and lose their consumer properties, while maintaining their functional properties during the standard service life. Then they are replaced with new ones.

The other part of the means of production (raw materials, energy resources) is consumed during one production cycle, i.e. the time period of manufacturing a

unit of production. During this time, this part of the means of production materializes into manufactured products and disappears physically.

Naturally, in order to ensure the continuity of the production process, the cost of these various components of production must be compensated. It is compensated through the cost of manufactured products. However, this compensation is carried out in different ways. In this regard, capital as a factor of production is divided into fixed and circulating.

Fixed capital is that part of the means of production that is used for a long time in the production process and the cost of which is included in the costs of manufactured products. It means that the money used by an economic entity for the purchase of various elements of fixed capital will be returned throughout the entire period of its operation.

Circulating capital is a part of the means of production that are spent (consumed) during one production cycle and the cost of which is fully included in the costs of manufactured products and is fully returned to the entrepreneur after the sale of products.

Fixed capital is used for a long period of time in the production process, during which it is subjected to depreciation. There are physical and moral depreciation of fixed capital. Physical depreciation is the loss of a part of its value due to its inclusion in the costs of manufactured products and, to some extent, consumer properties. Moral depreciation is the loss of a part of its value either due to the appearance of similar, but cheaper machines and equipment due to lower costs for their production, or the release of new, more advanced and more productive equipment. Using the latter, taking into account the purchase price and the cost of its operation, is more economical than old equipment. It follows from this that it is not economically efficient to use obsolete equipment, since the cost of producing a unit of production for enterprises with such equipment will be

higher. Consequently, the profit from the sale of one unit of production will be lower.

Depreciation of fixed capital makes it necessary to replace or update it after the expiration of its normative service life, which requires the accumulation of certain funds. These funds are accumulated through amortization of fixed capital. Amortization is the process of compensating in monetary form the depreciation of fixed capital by including part of its cost in the cost of production during the normative life of its operation. Therefore, the article "Amortization of fixed capital" is allocated in the structure of production costs. Amortization is made in accordance with the depreciation rate, which is calculated as a percentage by dividing the annual amount of amortization by the cost of fixed capital.

Labor as a factor of production is understood as the totality of physical and mental abilities of people, their knowledge and experience used in production. Labor itself is any intellectual or physical activity related to the usage of a person's mental, physical, or professional abilities and aimed at creating material goods or providing services.

The entrepreneurial factor is a special type of human resource, which consists not only in the ability to effectively coordinate, combine and use all other factors of production, but also their ability to anticipate the market situation, manage risk and minimize the likelihood of undesirable consequences. It can be said that the entrepreneurial factor is a special ability of a few managers and entrepreneurs who have ability to foresee, take risks, make non-standard decisions in standard and, especially, in non-standard situations, allowing their enterprises and firms to succeed in difficult, often unpredictable market situations.

Along with the considered main factors of production, there are so-called specific factors, such as science, information, the use of which has a great impact on the results of economic activity.

2.3 Economic benefits and their classification

The existence of needs presupposes the availability of the means necessary to meet them. The means (things, services) that are suitable for meeting needs are called *benefits*. Some of the benefits are created by nature. These are so-called *natural or free benefits*. The same benefits that are obtained as a result of productive activity are called *economic benefits*. A characteristic feature of these benefits is their quantitative limitation or rarity. It means that their number is limited compared to the needs that they satisfy. The fact is that economic benefits must be created and produced. And since the possibilities of their production are limited by the lack of production resources, economic benefits are also rare.

Economic benefits are very diverse. All their diversity can be grouped depending on certain features.

Based on the functional purpose, benefits are divided into *consumer (final)* benefits that go to meet the needs of the population and *production (investment)* benefits used in the production process.

According to their role in consumption, benefits are divided into *basic necessities* (food, clothing) and *luxury items* (paintings, yachts). According to the duration of the usage, benefits are *long-term* (buildings, machines) and *short-term* (food, fuel).

Depending on the number of consumers who use the benefits, they are divided into *private benefits* (for example, your clothes) and *public benefits* (highways and national defense, lighthouses and clean air). A benefit is private if, being consumed by one person. Another person cannot simultaneously consume it. There are also benefits that can be consumed by many at once at the same time without the consumption of one person reducing the consumption of another. They are called public benefits. The distinctive features of public benefits are their non-selectivity and non-exclusion from the consumption of individuals. A benefit is public if, even if one person consumes it, it is at the same time available for consumption by another.

Benefits are divided into interchangeable (substitutes) and complementary. Those benefits that can replace each other in meeting the same need (for example, personal transport and public transport, oil, coal or peat as fuel, etc.) are *interchangeable benefits*. Benefits that can satisfy a certain need only if they are used together are *complementary* (for example, a car cannot move without fuel, a camera does not work without film, etc.).

2.4 Limited resources and the problem of choice in the economy.

Production capabilities of the economy

The potential of production is limited by the scarcity of resources (as a result, economic benefits are also rare). In addition, any resource can be used in different ways, i.e. it can be used in the production of various goods. Because of this, society at any given moment faces the need to make a certain choice, i.e. to decide which goods and services should be produced, and which should be abandoned, how they should be produced, i.e. which technologies should be used, and which resources should be used. The solution to these problems is called the problem of choice in the economy, i.e. determining the directions and ways of using limited resources.

Since resources are limited, the economy at any given time has certain *production capabilities*, which are understood as the maximum possible amount of various goods that the economy can produce, ensuring full employment (full usage) of the available factors of production.

Production capabilities are used for production of alternative benefits. If we assume that all the benefits produced in the country are divided into consumer goods and means of production by the nature of their final usage, then the production capabilities of the economy can be graphically depicted in the form of a curve of production capabilities.

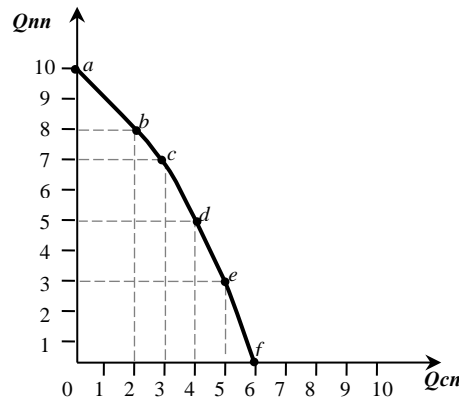


Figure 2.1 – The curve of the production capacity of the economy

The curve of production capabilities defines the boundary of the economy's capabilities. Each point on this curve represents the maximum possible volume of two types of products (in our example, means of production and consumer goods) that a country's economy can produce with a given number of production factors. If the economy is functioning at the limit of its production capabilities, it means that the existing factors of production are fully employed and their effective usage is ensured, and the potential possible volume of production is reached.

Due to the fact that resources are limited, economy cannot simultaneously produce a large number of all the desired products. Therefore, any increase in the production of products will require the diversion of resources from the production of alternative goods. As a result, the production of the latter will decrease. Consequently, at any given time, an economy operating at the limit of its production capabilities must sacrifice (i.e., reduce the volume of output) by some amount of one product in order to get a larger amount of another, more necessary now.

The amount of one product that should be abandoned or sacrificed in order to get more necessary product is called the imputed production costs of this product.

Imputed costs tend to increase. Their growth is due to the fact that production resources are not completely interchangeable, and therefore they cannot provide the same return or productivity when they are used in the production of alternative products. When making a choice in favor of producing of an alternative product, first, as a rule, they attract the resources most suitable for the production of this product and which, as a result, give a greater return. However, the need to increase the production of an alternative product forces us to use less suitable resources for its production in the future, with lower productivity. This phenomenon is called the law of increasing imputed costs.

2.5 Production, reproduction, economic growth

People's production activities are based on their needs. The economic benefits obtained as a result of this activity are consumed in the process of satisfying needs. Therefore, the need for constant satisfaction of needs determines the need for constant repetition of the production process, i.e., the implementation of reproduction. The process of production, considered as a continuously repeating process is *reproduction*.

The reproduction process can occur on an unchanged scale, when the volume of goods produced does not change. In this case, there is a simple reproduction. A narrowed reproduction is also possible, when the volume of economic benefits produced in a given year will be less than in the previous one due to crisis phenomena in the economy. But what is desirable for the economy of any country is to ensure expanded reproduction, when the volume of economic goods produced increases from year to year. After all, with an increase in the

number of goods produced, the population has the opportunity to more fully satisfy its needs, even taking into account the natural increase in the population.

Expanded production causes economic growth, which is understood as a change in the results of the production activity of the economy in the direction of increase. It is possible to ensure economic growth in the country, firstly, by involving an additional number of production factors similar to those currently used in production. Secondly, due to the involvement of technically and technologically high-quality production factors in the production process. In the first case, when growth is achieved by simply increasing the number of factors used, this is an extensive type. In the second case, there is an intensive type of economic growth.

TOPIC 3 ECONOMIC SYSTEMS

3.1 The economic system of society. Economic institutions

The economic system of society is a unified, stable, organizationally formed, relatively independent, material and social complex, within which internally interconnected production, appropriation and socially significant consumption of material resources and goods are carried out to ensure the physical life of society, as well as to create the material base necessary in all other spheres of public life. The functional purpose of economic relations in the most general terms is to provide society with the material conditions, means, and benefits necessary for its existence.

The following types of relations are distinguished in the economic system of society: labor relations, property relations, need relations and relations of socio-economic management of the behavior of subjects. The first three types of relations are responsible for the implementation of the function of the economic system of society. At the same time, based on the current provisions of cybernetics, any system must have a subsystem that is responsible for the normal functioning of the system itself. In the economic system of society, such a function is performed by the relations of socio-economic management of the behavior of subjects, which is a special set of relations regarding the production of socially necessary behavior of subjects. These relations arise about the economic relations themselves, their organizational forms and methods of organization. The relations of socio-economic management form the fundamental socio-economic disposition of the parties and their general status in the economic system.

The existence and development of human society, providing its material base, is possible only based on labor. Currently, in the literature, the relations that the subjects enter into in the process of work are called labor and are defined as the relations of people about their participation in work. The most important components of labor relations (species groups) are a functional and technological

way of connecting labor with the means of production; division and cooperation of labor; change of labor. The main types of labor relations are social division and cooperation. The division of labor in the economic literature is understood as a historically defined qualitative differentiation of labor activity, leading to the isolation and existence of its various types. The division of labor presupposes, firstly, the presence of various types of activities and the personification of labor, secondly, the production of finished products by relatively separate subjects and, thirdly, the need for some subjects in the products of the activities of other subjects. Labor cooperation is understood as a form of organization that ensures the consistency of joint actions of employees in the production process. The need for such coordination follows from the qualitative differentiation of labor activity. The consideration of the division of labor presupposes the simultaneous consideration of the cooperation of labor, since the first never exists without the second.

In the division of labor, two sides are distinguished: the material and social. The material side of the division of labor is a specialized means of production, with which a person carries out his active influence on nature. The social side of the division of labor is a personification of its material side (reflection of the process of connecting an individual with specialized means of production with the corresponding abilities for their production consumption). The interrelation and continuity of these sides is obvious, since the social division of labor always has some material expression and it, like any social phenomenon is always personalized.

Along with the identification of two sides of the social division of labor, the following types of labor are distinguished: technological and social. The technological division of labor is understood as such a system of social division of labor, which is formed as a result of the differentiation of labor activity, based on the purely technological structure of the production process. Let's make a note

that there is no purely technological division of labor. It is always influenced by social conditions. From the technological side, labor is an expedient human activity, in the process of which he influences nature with the help of certain tools of labor and uses it to create values. Labor, as an eternal natural condition of human life, does not depend on any form of it, but, on the contrary, is equally common to all its social forms. The technological division of labor inevitably entails technological cooperation of individuals, which connects various subjects of the division of labor based on the technological needs of production of the production process, based on the specific production functions performed by them. These differential-integral and coordination-subordination processes will act as an attributive factor in the formation of a technological production system. Collective actions of people always require a certain management of them (the distribution of labor conditions in space and time, their coordination or concentration, if necessary, the distribution of available tools, etc.). Management is directly related to the division and cooperation of labor, since the allocation of the management function itself is the allocation of a special kind of labor (managerial, organizational), which is opposed by executive labor. At the same time, any cooperative actions of individuals require management. It is generally recognized that any joint work carried out on a relatively large scale needs more or less management, which establishes consistency between individual works and performs general functions arising from the movement of its independent bodies. Therefore, in the technological division of labor, it is advisable to allocate organizational and managerial as one of its forms, which will be determined both by the technological basis of production and by the historically specific system of its organization and management, conditioned by traditions and customs. In other words, the genetically organizational and managerial division of labor grows on a purely technological basis, but under different specific historical, national and other conditions. The fact is that in the activities of people in general, and in

production in particular, with all its diversity and complexity of processes, similar situations are often repeated that require individuals to perform the same type of actions. As a result of repeated repetition of the same actions, the solution of practical problems is facilitated, stereotypes of behavior and skills, inclinations, attitudes are developed, which are "automatically " included in the action when an individual gets into familiar conditions and can gradually take the form of customs that function in those social relations where there are stereotypically repeated situations; the implementation of these relations can crystallize in rigid standard actions. Along with customs, traditions are formed, which are general norms that are similar to an idea, a principle and allow, within the boundaries of the orientation of behavior approved by it, to vary more widely specific actions of people. Thus, the applied technology will determine the organizational and managerial form of the division of labor not directly, but being adjusted depending on the existing customs and traditions of a particular society.

The division of the labor process into separate subprocesses, the emergence of individual labor means the fragmentation of the conditions and results of production, the division of their assignment into separate acts. This is inevitably accompanied by the disintegration of the appropriating homogeneous society into different-quality subjects of production, their autonomization, the formation as subjects of property and the establishment of a new type of social connection, the formation of relations necessary to maintain the integrity and order of social appropriation. Here, appropriation and alienation get their social features. In the production process, the distribution of production conditions is carried out, its registration takes place by property relations.

3.2 The concept of ownership

The category of "property" entered scientific circulation long before the emergence of economic theory as a separate science and it was originally the object of study of philosophy.

The first definition of "property" is already found among ancient thinkers. Aristotle divided property into "part of the family organization (the family is the part of the state...)" and "basic necessities, without which it is impossible ... to live at all".

During the period of modern history, philosophers developed an idea of this category. Thus, Georg Wilhelm Friedrich Hegel pointed out about this concept: "Possession becomes property, legal, if everybody recognizes that the thing I have made mine is mine, just as I recognize their possession. T. Gobs considered property as" ... possession, the exact distinction between mine and yours. Each person considers as his own only what he can get, and only as long as he is able to keep it." Spinoza believed that the concept of "property" exists only in the consciousness of man, since "there is nothing in nature about which one could say that it is the property of such a person, and not of another one" and, therefore, property is "... domination over any thing by general recognition".

A significant contribution to the study of the socio-economic nature of property relations was made by K. Marx. Initially, he defined property as "the attitude of a working (producing or reproducing himself) subject to the conditions of his production or reproduction as his own. Therefore, depending on the conditions of this production, it will take various forms. Later, K. Marx concretizes property as "the appropriation by an individual of objects of nature within and through a certain form of society", based on the identification of certain socio-economic formations that were characterized by various stages of the development of productive forces and production relations. Thus, K. Marx made an epistemological breakthrough in the political economic study of the essence of

property relations. At the same time, like any scientific discovery over time, today these views are somewhat outdated, since the interpretation of property as appropriation through alienation corresponded to the system of the modern industrial society for this thinker.

In Soviet political economy, property has traditionally been interpreted in two ways: *first, some researchers believed that property is a separate, relatively independent, special production relationship; secondly, others held the view that property represents the entire system of production relations.*

Representatives of the first point of view, for example, V. N. Afanasyev, who in the monograph "The Dialectic of property: the logic of the economic form" considers property as a certain economic form of human activity, Yu. M. Osipov, who writes that "property is the result of appropriation.

Representatives of the second view, for example, S. V. Mokichev, writes that "property is the relationship between people about the means of production, expressing the historically defined nature and method of communication between producers and these means, subjective and objective factors of production." M. V. Kolganov, writes that "full property, or just property, we will call all forms of appropriation based in one way or another on the production and circulation of goods".

The common point in these views is that their representatives agree on property as an economic category that expresses a system of objective relations between people regarding the appropriation of means and results of production in the process of production, distribution, exchange and consumption of material goods.

The basis of the economic theory of property rights is a methodological position, which consists in a relatively new characteristic of the property object, which is not a physical object, not a means of production in itself, but a "bundle or share of rights to use a resource".

This interpretation is close to the approaches proposed by legal science. It should be noted that in a certain historical period, property as a special social institution was, first of all, the subject of the study of jurisprudence. In Roman law, both the concept of property and the basic relations associated with it were defined. In the future, civil law interpreted property as an opportunity to use, dispose and own things at its discretion. For example, in the "Civil Code of France" of Napoleon I Bonaparte it is written that "property is the right to use and dispose things in the most absolute way so that their usage is not such is not prohibited by laws or regulations".

The position of lawyers on property problems is characterized by the fact that the division of property rights allows them to be combined in any way. However, it is difficult to see the qualitative parameters of property behind quantitative powers, although it is useful as one of the methodological tools in the study of property relations within the framework of economic theory. First of all, the fact that the right of ownership fixes socio-economic and other relations between subjects regarding the appropriation of economic goods and other values.

Returning to the economic theory of property rights, it can be noted that within its framework, eleven "elementary" property rights are identified, which, according to its representatives, exhaust the full "bundle of rights to use a resource". The latter include: the right of appropriation, i.e. exclusively physical control over goods; the right to use, i.e. the usage of useful properties of goods for oneself; the right of management, i.e. the right to decide who and how will ensure the usage of goods; the right to income, i.e. the right to receive a result from the usage of goods; the right of the sovereign, i.e. the right to alienate, consume, change or even destroy goods; the right to security, i.e. to protect goods from expropriation and from harm from the external environment; the right to inheritance; the right to perpetuity of possession of goods; prohibition of such usage of goods that harms the environment; the right to liability in the form of

recovery, i.e. the possibility of recovery of goods in payment of debt; the right to residual character, i.e. the existence of such institutions and procedures that ensure the restoration of violated rights.

In this interpretation, property rights are understood as socially sanctioned behavioral relations between people that arise in connection with the existence of tangible and intangible goods and relate to their usage.

The theory of recombined property focuses on the expansion of the managerial version of management. This property theory emphasizes that there are no real "pure" forms of ownership in the modern economic system, and it represents mixed property in its "social and pure" forms.

Despite the diversity of understanding of the essence of property relations in modern economic theory, all researchers consider them through subjects and objects. However, there is also a discrepancy in approaches here.

Firstly, representatives of the orthodox Marxist trend consider property relations as subject-subject. At the same time, attention is fixed on the fact that the ownership of certain goods to the subject should be recognized by other subjects.

Secondly, a number of scientific schools consider property as a subject-object relationship. In this approach, property relations are defined as a reflection of the real interaction of the owner with his property (disposal and usage of the latter).

Third, property relations are considered both as subject-subject (behavioral or egonal) and as subject-object (productive). The latter approach, based on modern theories of economic systems, is the most scientifically productive today and shared by a number of Belarusian economists (P. G. Nikitenko, A. P. Morova, S. Y. Solodovnikov, E. K. Medvedev and some others).

The essence of property relations is appropriation-alienation. Appropriation is a set of relations between subjects regarding the rejection of goods from one

person to another in various ways on equivalent or non-equivalent principles and the circulation of these goods. Alienation is a relationship that is the opposite of appropriation. The specific forms of appropriation are disposal, usage and possession. The disposal of property objects is the adoption by the owner of socially binding decisions about the nature, measure and order of usage, as well as the alienation of goods belonging to him. The usage is the final, functional meaning of property relations. Possession is a set of relations between subjects regarding the actual possession of property objects without disposing them and without extracting a useful effect from them. The objects of property relations are the whole set of economic goods: material means of production; the natural environment; production results; information and social conditions of production; production and social abilities of individuals and production and socio-economic functions themselves. Property relations assign these objects to certain subjects and thereby subordinate people in relation to each other.

Depending on the real social subjects and specific social mechanisms of their association, the following forms of property relations are distinguished: state, collective and private. In historically defined conditions, when the state has significant autonomy in relation to the subjects of the economic process, and the latter do not have significant opportunities to influence it, then we are talking about the state form of ownership. The collective form of ownership is characterized by group personification, the assignment of property objects to the group, collective, association. In some cases, there is a clear and complete personification within the group; in other cases, the personification is of a private nature, covers only a part of the property objects; in others, there is no personification completely. The private form of ownership is characterized by a complete personification of property objects, a clear fixation of their belonging to a certain person. With this form of ownership, the social subject has all the prerogatives and functions necessary for the usage of the property object.

3.3 Subjects of economic relations

Labor relations, property relations and need relations are realized not by themselves, but through the relations of the socio-economic definition of the subject's behavior. Relation of socio-economic definition of subjects is a special set of relations concerning the implementation of any relations, i.e. the creation of socially necessary behavior of subjects. These relations arise about the economic relations themselves, their organizational forms and methods of organization. The relations of socio-economic determination of the behavior of subjects form the fundamental socio-economic disposition of the parties and their general status in the economic system. The foundations of these relations are the relations of socio-economic management. Their functional purpose is connected with ensuring the production, appropriation and use of material goods in the interests of the dominant social classes and groups, society as a whole, and other subjects through the formation and implementation of certain behavior of subjects. Social management as an impact on society in order to streamline it, preserve its systemic integrity, improve and develop. It is impossible to imagine the normal functioning of the productive forces without a mechanism for constantly maintaining the normal mode of their activity, implementing the program and goals of this activity. Naturally, this requires the allocation, firstly, of the function of managing productive forces itself, and, secondly, the personification of this function. The relations of socio-economic management function both as serving labor relations and property relations, and as determining them. The rules of economic activity - behavioral, formal and informal-along with the basic structure of the economic system form a set of mechanisms that determine the dynamics of this system as a kind of closed integrity. Without the relations of socio-economic management, no economic action is possible.

There are *three main types of social management* in the broad sense: 1) authoritative; 2) informational; 3) stimulating. The basis of authoritative

management is power. In the most general sense, power is the ability to order in conditions when the one who is ordered is obliged to obey. Power can be economic, political, ideological, etc. Power relations, similar to all other social relations, include at least two active subjects with specific interests and motives. In power relations, we should talk about the interaction of the activity of subjects, while emphasizing someone's domination. Power is the ability of some social subjects to impose their will to a greater or lesser extent on other subjects, that is, to force the latter to act in accordance with the interests of the former to a greater or lesser extent. In most cases, power relations are a struggle (mutual compromise) between subjects who have a certain power in relation to each other. As a result, they can exist, partially realizing their interests.

Such a political institution as *the state* plays a huge role in the system of power management. In addition to the actual power relations and the state, such a social institution as law is of great importance in the operation of the relations of socio-economic management of the behavior of subjects. It is with the help of law that the social class and social groups holding state power are able to regulate the behavior of subjects in a certain way and in order to consolidate those socio-economic relations that meet (or at least do not contradict) their interests. The legal definition of socio-economic relations provides, in contrast to direct power (administrative) coercion, fixes a certain amount of power and power prerogatives for each subject. The state forces him not to go beyond these limits.

The information type of management is based on the knowledge, consciousness and belief of individuals. Unlike power management, this type is not aimed at external coercion of subjects, but at the formation of a certain integral set of internal ideological attitudes that allow the subject to control its actions. The basis is the subject's value system, which determines the nature of all its other components – goals, attitudes, stereotypes, beliefs, behaviors, etc. It is obvious

that without the recognition of the existing socio-economic system as socially necessary by at least a part of society, its existence is impossible.

The incentive type of management is characterized by the provision of benefits for positive and non-provision of benefits for negative behavior. As noted in the literature, this type of management finds expression in the functioning of various political and institutional forms. First of all, this applies to state bodies of socio-economic management, which have a significant “arsenal” of levers of influence on subjects and economic institutions. In this case, we are talking about granting the latter exclusive rights to something (engaging in a certain type of activity, producing some products, using natural resources); about a certain tax and credit policy of the state; about making transfer payments and public procurement; about direct state financing of any projects, etc. The direct reaction of the subjects of incentive management is expressed in the effectiveness or non-effectiveness of incentives.

TOPIC 4 MARKET ECONOMY AND ITS MODELS

4.1 Market: concept, conditions of occurrence, functions, main features. Market infrastructure

The market is an economic concept that has several definitions.

The market is a mechanism of commodity-money relations, which is a link between the buyer and the seller;

The market is an established system of relations regarding the production, exchange, circulation and distribution of the results of the production of goods and services.

The market is a system of socio-economic relations in the sphere of exchange, sale of goods and recognition of these goods by society, i.e. it is a system of relationships that is associated with the production, consumption, circulation and distribution of economic benefits.

The main features of the market include freedom of entrepreneurship; freedom of pricing; competitiveness; awareness; priority of contractual relations; spontaneity; unpredictability.

Market functions:

- regulatory;
- stimulating;
- informative;
- sanitizing;
- intermediary.

There are many classifications of existing markets. This is determined by the very diversity of markets. From the point of view of economics, markets can be classified according to such features as:

- the economic purpose of market objects: the goods market, the labor market, the money market, etc.

- methods of organizing market exchange: wholesale, retail;
- the form of ownership of the market: private, state;
- production sectors: automotive, agricultural, etc.;
- geographical location: local, regional, national, world markets;
- degree of legality: legal, illegal;
- mechanism of functioning: free, monopolized, regulated.

Market infrastructure is the presence and interaction of various organizational, legal norms and institutions, systems and services, as well as enterprises that are assigned certain functions for servicing the market and fulfilling certain obligations to ensure the movement of goods and services, capital and labor. It serves as a guarantee of the functioning of market relations. It connects the processes of production and consumption with each other. This includes enterprises, organizations, institutions, stock exchanges, banks, information and commercial centers, wholesale and intermediary firms, supply and sales organizations; insurance companies, audit firms, auctions, fairs, etc.

4.2 Competition in the market mechanism, its types. Perfect and imperfect competition

Competition is rivalry. From an economic point of view, it is an interaction and struggle between market participants for more favorable conditions for the production, purchase and sale of goods and services. This is a struggle for the consumer, for his interest. Competition can also be interpreted as a competition of producers for the most favorable conditions for the application of capital, for markets for goods and services, for raw materials.

Competition can be classified as *intra-industry and inter-industry*.

Intra-industry competition is a competition between producers of the same industry for the greatest benefit, for obtaining the greatest profit. The main goal

of this form of competition is to obtain maximum profit, reduce production costs and, accordingly, the price of goods.

Inter-industry competition is characterized by the struggle for the most profitable areas of capital application. It manifests itself in the economic struggle between large, often monopoly enterprises, associations and groups of enterprises of various industries for the best economic results. It often leads to the so-called transfer of capital from one industry (less profitable) to another (more profitable).

It is also possible to classify competition with based on the scale (national, global); the nature of development (price-non-price, free-regulated), etc.

Perfect competition is a competition based on market relations, which are based on market interaction and where homogeneous products are offered

Perfect competition is characterized by the following:

- the factors of production are movable;
- unlimited freedom is provided for the movement of capital, which gives the right to choose;
- product uniformity;
- a lot of sellers and buyers in the market;
- with perfect competition, there is a situation when none of the participants in the competitive situation is able to directly influence the decision of the other in their personal interests;
- providing reliable and up-to-date information to all market participants about the market situation;
- prices are set in the process of free competition, etc...

This is an ideal market model and, as a rule, there are no options and cases when all these conditions are met, therefore, there is no free and perfect market.

Imperfect competition is a situation where individual producers can influence the price of a product by raising or lowering it.

There are pure monopoly; monopolistic competition; oligopoly.

A pure monopoly implies a situation where one enterprise produces the only product on the market that does not have any close substitutes and analogues.

For a pure monopoly, there are following characteristics:

- there is a single seller of the product on the market;
- the product being sold is unique;
- entry and exit from the market is significantly limited by barriers. Barriers are obstacles of any nature that make it difficult for new players to enter the market (or for existing players to exit the market).

Monopolistic competition is a situation when there is a relatively large number of manufacturers and sellers on the market offering similar, but not identical products

There are following characteristics:

- a sufficient number of enterprises and sellers in the market; the previous factor restricts the control of sellers and enterprises over the price, which results in the lack of interdependence and control over the setting of prices;
- access to the market is quite free and practically unlimited, except for price control, ensures normal profit in the future
- products are characterized by real and imaginary differences (taste, color, etc.) and dissimilar conditions of their sale (differentiation of products, services).

An oligopoly is a situation when there are few participants in the production and sale of a certain type of product on the market.

There are following characteristics:

- the presence of a small number of enterprises and a large number of buyers;
- the product type is standardized or differentiated;
- a complex process of joining the industry;
- a difficult competitive situation, including non-price, with the existence of different prices.

Examples of oligopoly can be industries where production is quite large and where there are no opportunities for differentiation of the industry product. These are manufacturers of passenger aircraft, such as Boeing or Airbus, manufacturers of cars, household appliances, etc.

4.3 Imperfections (fiasco) of the market and the need for state regulation of the economy

The imperfection (fiasco) of the market is a manifestation of the inefficiency and imperfection of the functioning of the market mechanism. This is a situation where the market mechanism is not able to ensure the effective usage of limited resources. The role of the state is to coordinate legislative, executive and control mechanisms using its own methods and tools.

The main forms of manifestation of imperfection (fiasco) of the market:

- monopolization of the economy;
- external effects;
- public goods;
- instability of the economy;
- social protection of the population, etc.

The functions of the state in this situation can be divided into two groups:

- functions for creating conditions for the effective functioning of the market;

- functions to supplement and adjust the actual market regulators.

The functions of creating conditions for the effective functioning of the market include the following: ensuring the legal framework and creating general conditions for the economic activity of business entities, stimulating and protecting competition (antimonopoly legislation, support for small businesses, etc.); improving the market infrastructure, etc.

The functions of supplementing and adjusting the market regulators themselves include the following elements: regulation and distribution of income regulation of external effects (achieving a positive external effect is possible when regulating the tax system, in particular, tax reduction situations or support through subsidies, and a negative external effect – by increasing taxes), the production of public goods (goods and services that are provided by the state to all citizens, without exception: education, health, security, etc.), ensuring economic stability and stimulating economic growth.

However, it is necessary to take into account that the state impact on the economy is often contradictory. Therefore, the state itself must determine the acceptable measures of influence on the market mechanism.

4.4 Market economy models

Almost all post-industrial and newly industrialized countries belong to countries with market-based economic models. However, having common features, they differ in their own characteristics, which are due to national, cultural, historical traditions and conditions.

There are the following main models of a market economy:

- Liberal model (USA, Great Britain, etc.). This model is characterized by the predominance of private property, the freedom of market economy subjects, and the limited influence of the state in the economic sphere. Its role is limited to the implementation of macroeconomic policy, state support is mainly aimed at the most vulnerable and disadvantaged segments of the population.

- Socially-oriented model of a market economy (Germany, Sweden, etc.). This model is characterized by a strong influence of the state on reproductive and social processes. The state's social policy is aimed at protecting all segments of the population.

4.5 Features of the Belarusian national development model

Due to the prevailing economic and political conditions in the Republic of Belarus, a program of transition to a socially oriented market economy is being implemented, which involves creation of the necessary conditions for providing the population with a decent standard of living. The model of state structure implemented in the Republic of Belarus has its own peculiarities, due to our history, traditions, and mentality.

TOPIC 5 DEMAND, SUPPLY AND MARKET EQUILIBRIUM

5.1 Demand and the factors that determine it

The demand of buyers for certain goods is formed under the influence of needs. *Demand* is an effective need that manifests itself in a certain number of goods that consumers want and are able to buy. There is a distinction between individual and market demand. *Individual demand* is the demand of a particular consumer for a given product, i.e. this is the amount of this product that he can and wants to buy. *The market demand* for this product consists of the individual demand of many consumers seeking to purchase it in a certain period of time.

The volume of market demand primarily depends on the price of the product. This dependence is expressed by the law of demand: the higher the price of a product, the lower the market demand, and vice versa. Graphically, the correlation between price and demand is reflected by the demand curve.

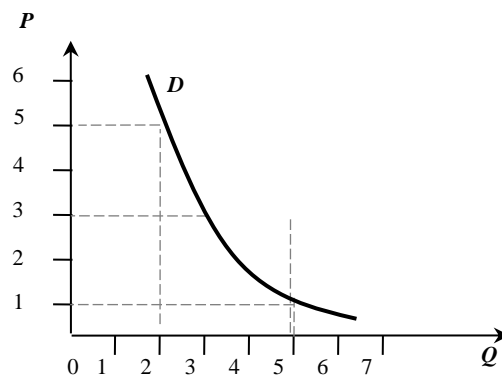


Figure 5.1 – The demand curve

The inverse dependence of the amount of demand for a product on its price is explained by the following circumstances. First, with a decrease in the price, the product becomes available to a larger number of consumers who will be able to buy it. Secondly, with a lower price of a product, the consumer can buy a larger amount of this product without reducing the number of purchases of other goods.

The law of demand has no absolute meaning. There may be cases when a price change does not cause a corresponding change in demand. Let's consider them.

1. An increase in the prices of essential goods does not, as a rule, cause a reduction in demand, since people must satisfy their primary, most urgent needs in order to live. Therefore, they will be forced to reduce purchases of less essential goods in order to be able to purchase more necessary ones.

2. An increase in the prices of goods that determine the social status of the consumer is not accompanied by a decrease in demand for them. A person who considers himself to belong to a particular social group, striving to be no worse than others, will strive to have all those goods that reflect his social status, even if their prices are rising.

3. Inflation expectations. In the conditions of inflation, which manifests itself in an increase in prices, the demand for many goods does not decrease. They buy today, because tomorrow the right product will cost more.

In addition to the price, a number of non-price factors also affect the amount of demand, i.e. factors whose change affects the amount of market demand at the same price of a product. These factors include:

1) income of buyers. Changes in income affect the purchasing power of consumers and, consequently, the amount of demand.

2) a change in the price of one of the interchangeable or complementary goods. Thus, an increase in the price of one of the interchangeable goods (natural fur products) leads to a decrease in demand for it and an increase in demand for artificial fur products. An increase in the price of one of the complementary goods leads to a decrease in demand for both this product and the other;

3) the total number of buyers or the size of the market. An increase in the number of buyers in the market leads to an increase in market demand, and vice versa;

4) changing tastes, habits, fashion;

5) consumer expectations. Thus, the expectation of a decrease in the price of a product needed by consumers in the near future causes a decrease in market demand for it today.

Under the influence of these non-price factors, the amount of demand changes. As a result, the demand curve shifts to the right when demand increases, or to the left when demand decreases. When only the price changes, then there is a movement along the demand curve.

5.2 Market proposal and its determinants

A *market supply* is a quantity of a given product with certain prices that is offered for sale in a specific place and at a certain time. The volume of the *supply* depends, first of all, on the price level. The increase in the price of the product stimulates the *supply*. After all, a higher price at these costs for the production of a unit of production allows manufacturers to make more profit. Therefore, manufacturers, seeking to increase profits, will increase the volume of production and *supply* of this product. This dependence is reflected by *the law of supply* and graphically it is reflected by *the supply curve* (Figure 5.2).

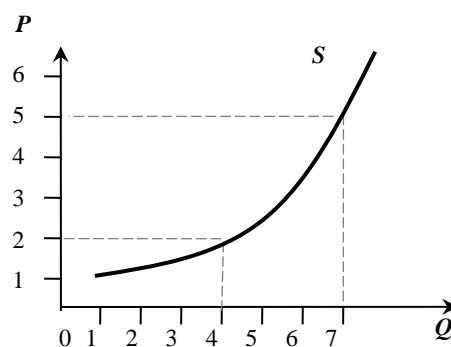


Figure 5.2 – The supply curve

The supply curve shows the quantity of a given product that its manufacturers would like to put on the market at a particular price.

The following non-price factors affect the volume of the supply, in addition to the price:

1) changes in the costs of producing a unit of production that directly affect the amount of profit received from the sale of a unit of production. So, if at a given level of product price the costs of its production decrease, then the manufacturer will receive a large profit from the sale of each unit of production. Therefore, he will strive to produce and sell it more, and vice versa;

2) a change in the price of other goods, leading to the overflow of production resources (re-profiling of production) from less profitable to more profitable production. As a result, the departure of firms from a less profitable sphere of production to other, more profitable ones will lead to a decrease in supply in this field of activity and an increase in supply in other, more profitable industries.

3) the total number of manufacturers of this product. The more of them, the greater the volume of goods (all other things being equal) will be offered for sale;

4) manufacturers' expectations. Thus, the expectation of a price increase in the near future may lead to a decrease in supply at the present time and vice versa.

5) These non-price factors cause the supply curve to shift to the right when it grows or to the left when the supply decreases. When only the price changes, then there is a movement along the supply curve.

5.3 Industry market equilibrium. Commodity deficit and commodity surpluses. Changes in supply and demand and their impact on the price

The supply and demand curves, reflecting the action of the laws of supply and demand, show how many goods buyers could buy and producers could offer at different prices. But by themselves, they cannot show at what price the purchase and sale of goods on the market will actually take place. It is only as a result of the interaction of supply and demand that the price at which goods and services are actually sold and bought is established in the market, and which balances supply and demand, i.e. the equilibrium price.

The market price is the price of such a level that suits both buyers of this product and its producers: the first want to buy it at this price, and the second want to sell it. But to want does not mean to be able. After all, a situation is not excluded, and the market constantly confirms this, when the volume of demand for this product and the volume of its supply do not coincide for various reasons. And this leads to a change in the market price. Therefore, in order to ensure a certain stability in a particular market, it must also achieve equality in the quantity of goods that producers offer and consumers buy at an equilibrium price. Only in this case there will be a market equilibrium in the market.

Market equilibrium is a situation in the market when, at a given price level, equality of supply and demand is achieved, i.e. the coincidence of the quantity of goods that consumers want and can buy, and producers want and can sell. Graphically, this equilibrium corresponds to the intersection point of the supply and demand curves (point E).

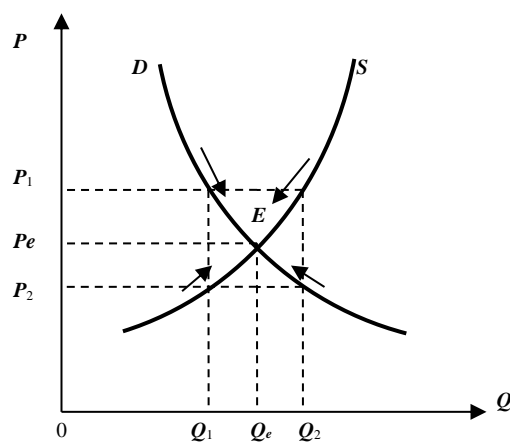


Figure 5.3 – Market equilibrium and the mechanism of its establishment

Market equilibrium in any competitive market can take place only relative to a certain fixed point in time. After all, in the market, both demand and supply constantly fluctuate under the influence of various factors, thereby causing constant changes in prices and sales volumes and, accordingly, imbalance. But any deviation from the state of equilibrium triggers market forces that return the

market to a state of equilibrium. So, if for some reason the market price (P_1) is set above the equilibrium price (P_e), then a situation of a commodity surplus or an excess of supply will arise on the market. The fact is that at such a price, manufacturers seeking to increase profits will put goods on the market in the volume of Q_2 (Figure 4.3). Buyers will also be able to purchase this product at a higher price less- Q_1 . In this case, the excess supply will be Q_2-Q_1 . The excess supply, due to the competition of producers, will have a lowering effect on the price level, and it will begin to decline. As a result, the volume of demand will grow, and the volume of supply will decrease until they become equal.

If the market price is set below the equilibrium (P_2), then there will be a commodity shortage on the market, since the demand for the product will increase, and its supply will decrease. The decrease in its supply is explained by the fact that at a lower price, those producers whose production costs are lower will be able to offer their goods first of all. This allows them to compensate for the production costs at a steady market price, and possibly get a small profit.

In the current situation, excessive demand will put upward pressure on the price. With an increase in the price, the volume of demand will decrease, and the volume of supply will grow, which will eventually lead to the establishment of an equilibrium price in the market that balances demand and supply.

At an equilibrium price, the number of products that consumers intend and can buy corresponds to the number of products that manufacturers intend and can offer for sale. At such a price, market participants will have no motives to change the value of supply and demand, i.e. to change their economic behavior, and, consequently, there will be no tendency to increase or decrease the price.

However, under the influence of non-price factors of supply and demand, the economic behavior of market participants can change, which leads to a violation of market equilibrium. Thus, the growth of consumer incomes leads to an increase in the value of market demand. And since manufacturers cannot

immediately respond to a change in demand by increasing supply, which remains the same, consumers, seeking to purchase the right product, will offer a high price for it. As a result, a higher price will be established on the market, which will encourage producers to increase production and supply. With an increase in supply, with the same market demand, the price will decrease. As a result, a new market equilibrium will be established in the market.

Similarly, the mechanism of self-regulation of the market also works when demand decreases under the influence of non-price factors, as well as when the market supply changes under the influence of non-price factors. Through the reaction of prices to an excess or shortage of goods arising on the market, this mechanism changes the market behavior of buyers and producers, forcing them to either reduce or increase supply and demand, bringing the market into equilibrium.

The above indicates that the market equilibrium is not static, but dynamic, i.e. it is constantly disturbed and restored again. This is due to the very nature of the market, which is characterized by a constant change in prices, and the volume of supply and demand, and their constant adaptation to each other.

TOPIC 6 ELASTICITY OF SUPPLY AND DEMAND

6.1 The concept of elasticity

Elasticity is the reaction of one variable (in this case, supply or demand) to a change in another (price or another factor) associated with the first value. It shows to what extent (by how many percent) a change in one of these values can affect the other.

A. Marshall (Great Britain) introduced the concept of "elasticity" into the economic literature. In the future, J. Hicks (Great Britain), P. Samuelson (USA), developed his ideas etc.

To determine the measurement of the degree of elasticity, the percentage measurement method is used.

The quantitative measure of elasticity is expressed using the elasticity coefficient.

The elasticity coefficient is a numerical indicator that shows for how many percent one economic variable will change as a result of changing another variable by one percent. There are the *following types of elasticity*:

- elasticity of demand by price;
- elasticity of demand by income;
- elasticity of supply by price;
- cross elasticity of demand by price;
- point elasticity of demand;
- arc elasticity of demand;
- elasticity of technical substitution;
- elasticity of a straight line.

6.2 Elasticity of demand

The degree of reaction of the quantity of demand for a product to a change in its price characterizes the elasticity of demand by price. The measure of such a reaction is the coefficient of elasticity of demand by price. It is defined as the ratio of the change in the volume of demand (in %) to the change in price (in %).

$$E_D^P = \frac{\Delta Q, \%}{\Delta P, \%} \quad (6.1)$$

The coefficient of elasticity of demand by price shows by how many percent the demand for a product changes as a result of a change in its price for 1%.

There is the following elasticity of demand by price:

- Elastic demand ($ED > 1$). A situation in which the amount of demand changes largely than prices. For example, a price increase of 1% causes a decrease in demand by 6%.

- Inelastic demand ($ED < 1$). A situation when the amount of demand changes to a less extent than the price. For example, a price increase of 1% leads to a decrease in demand by only 0.5%.

- Unit elasticity of demand ($ED = 1$). A situation when for every 1% change in price, the demand changes by 1%.

- Completely elastic demand ($ED = \infty$). A situation when the value of demand changes infinitely with a small change in price.

- Completely inelastic demand ($ED = 0$). A situation when the amount of demand does not change at all when the price changes.

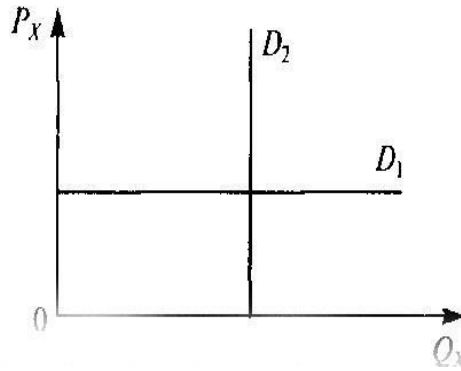


Figure 6.1 – Completely elastic and inelastic demand

Line D1 shows completely elastic demand, and line D2 shows completely inelastic demand.

The following factors influence the value of elasticity of demand by price:

The importance of the product for the consumer. The demand for essential goods is inelastic, while the demand for all other groups is more elastic;

Availability of substitute goods. If the product has substitutes, then the demand will be more elastic

The specific weight of this product in the total amount of income and expenses of the consumer. Products that occupy a significant share of the consumer budget are the most elastic.

The time factor. The elasticity of demand increases in the long term and less elastic in the short term.

The following elasticity of demand by income is distinguished:

- positive, where the volume of demand increases with increasing income.

This form refers to normal goods, in particular to luxury goods;

- negative, where the volume of demand decreases with a decrease in income. This form of character is for goods that act as low-quality goods;

- zero, when the volume of demand does not respond to changes in income.

It is inherent in goods whose consumption is insensitive to income. This elasticity includes essential goods.

To characterize this dependence, the coefficient of elasticity of demand by income is used, which is determined by dividing the value of the relative change in the volume of demand for a product by the value of the relative change in consumer income:

$$E_D^Y = \frac{\Delta Q, \%}{\Delta Y, \%}. \quad (6.2)$$

This coefficient shows by what percentage the value of demand will change with a one percent change in consumer income.

The cross elasticity of demand by price shows the relative change in the volume of demand for one product when the price of another changes, all other things are equal.

The following cross elasticity of demand is distinguished:

- positive – it is characteristic of interchangeable goods (substitute goods). When a change in price (for example, an increase in price) for one product causes an increase in demand for another (butter-margarine);
- negative – inherent in complementary benefits, i.e. those that are used together;
- zero- it is characteristic of goods that are neither interchangeable nor complementary.

6.3 Elasticity of the supply

The elasticity of the supply appears in the following main forms:

- Elastic offer, when the volume of the offer changes by a larger percentage than the price.
- Inelastic offer, when the volume of the offer changes by a smaller percentage than the price.
- Completely elastic offer. When, at a given price, manufacturers are ready to offer any required quantity of goods.

- Completely inelastic offer. When at a given product price, manufacturers are ready to offer any required quantity of goods.

6.4 Point and arc elasticity

Point elasticity is an accurate indicator of the sensitivity of supply or demand to changes in prices, income, etc. Point elasticity reflects the response of supply or demand to an infinitely insignificant change in price, income, and other factors. Elasticity measured at one point of the demand or supply curve; is a constant value everywhere, along the supply and demand line. Point elasticity is an accurate indicator of the sensitivity of demand or supply to changes in prices, income, etc.

Arc elasticity is an approximate degree of demand or supply response to changes in price, income, and other factors.

The arc elasticity of demand is an indicator of the average response of demand to a change in the price of a product.

In fact, the average values for the arc of the price and the volume of demand or supply are used.

The price elasticity of demand is the ratio of the relative change in demand (Q) to the relative change in price (P), which is represented by the point M.

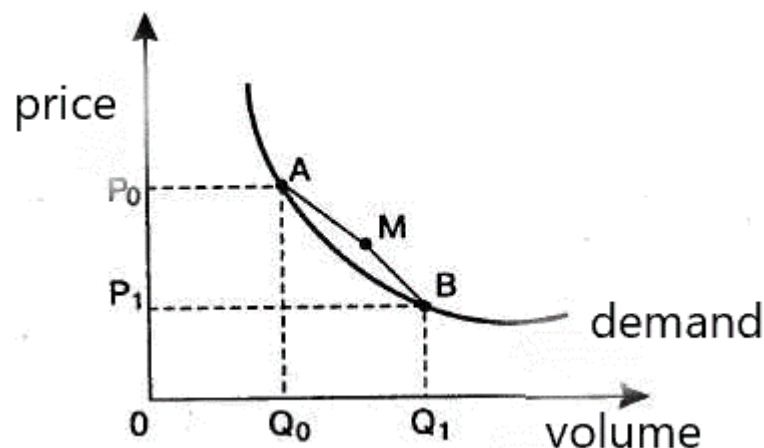


Figure 6.2 – Arc elasticity

The arc elasticity can be expressed as follows:

where P_0 is the initial price; Q_0 is the initial volume of demand; P_1 is the new price; Q_1 is the new volume of demand.

The elasticity of technical substitution is a characteristic of the variability of the cost ratio of production factors at a constant level of output, for example, the ratio of capital and labor costs.

The direct price elasticity of demand characterizes the relative change in demand for the i -th product when its price changes. *The coefficient of direct elasticity of demand by price* is the ratio of the relative change in the volume of demand as a percentage to the relative change in price.

The practice of data usage on the elasticity of supply and demand is necessary for the preparation of economic development projects and economic forecasts.

TOPIC 7 FUNDAMENTALS OF THE BEHAVIOR OF MARKET ECONOMY SUBJECTS

7.1 The main subjects of the market economy

The functioning of the economy is provided by economic entities. Economic entities are active; they act intentionally; they make decisions that ensure the implementation of the plans they have developed. As a result, the process of economic activity acts as a set of plans and decisions that express the activity of various categories of economic entities. The main economic entities of the market economy are the household, firm (enterprise), state. Households represent a large sector of the market economy, where economic resources are formed and offered to other sectors.

A household is an economic unit consisting of one or more individuals that supplies the economy with resources and uses the money (income) received for them to purchase goods and services that meet human needs. In a market economy, households are the owners of most* factors of production (*most of the land, buildings and equipment in the economy belongs to private firms, but all firms ultimately belong to the same households). Through their sale or leasing, households receive their income, part of which is spent on the purchase of goods and services produced by firms (enterprises), and the other part is saved.

A firm (enterprise) is an organization created for the production and sale of material goods and services. The main activity of firms is reduced to the acquisition of factors of production, with the help of which firms produce a variety of material goods and services, the sale of manufactured goods, the maintenance and development of the production base.

In a mixed market economy, one of the main economic entities is the state. It is not easy to quantify the economic role of the *state*. Some indicator of this role may be the share of the state in the national product. In addition to financing production, the government also implements a number of social insurance and

social security programs, redistributing income in the private sector of the economy. In addition, many regulatory measures to protect the environment, protect workers' labor and health, protect consumers from dangerous products, control pricing practices in certain industries and measures to protect competition involve the government in almost all areas of economic activity.

7.2 Household as an economic entity

In a market economy, households act as separate economic units consisting of one or more people whose activities are aimed at satisfying their own needs at the expense of income received from the sale or leasing of economic resources belonging to them.

By distributing their monetary income for the purchase of various goods and services, the household as a consumer acts in accordance with fairly clearly defined preferences. In the process of consumption, it moves from meeting more urgent needs to less urgent ones, while it cannot buy everything that it wants, because it faces budget constraints: its monetary income has a limited amount, and the products that it wants to buy have a certain price. In these conditions, the consumer is forced to choose among the products or economic benefits he needs, giving preference to some of them. Moreover, the basis of his choice is not just the ability of economic goods to satisfy a particular need, but something else. It is the satisfaction that the consumer receives from the consumption of an economic good, i.e. its usefulness. It is utility that lies at the heart of consumer choice.

Usefulness is not something inherent in an economic good as such. Usefulness is a subjective assessment by a consumer of the degree of satisfaction he receives from the use (consumption) of a good. Moreover, a greater or lesser degree of satisfaction or usefulness of a good directly depends on the intensity of the need for which this good is necessary. At the same time, the intensity of the

need is understood as the degree of a person's need for something necessary. Since the intensity of a certain need is not the same for different consumers, then the same good for them will have a different assessment of utility.

The consumer, when making a decision to purchase the necessary goods, seeks to distribute his income in such a way as to get the maximum usefulness from the purchased goods, i.e. he strives to act rationally. Consequently, *a rational consumer* is a market entity that, given its consumer preferences and the existing prices of goods, seeks to use its limited budget in such a way as to get the maximum usefulness from the acquired goods.

There is a distinction between marginal and general utility. Marginal utility (MU) refers to the additional utility, or satisfaction, extracted from each additional unit of a particular good. The total utility (TU) is the sum of the utility of all units of a particular good.

With an increase in the number of units consumed of a particular good, its overall utility increases up to a certain period. But it is increasing at a decreasing rate. This means that the consumer receives less satisfaction from the consumption of each subsequent unit of good. This is due to the fact that as the need for a particular good "saturates", the satisfaction from its use, and, consequently, the usefulness of each subsequent unit of this good decreases. This decrease in the marginal utility of a good with an increase in the volume of its consumption expresses the essence of the *law of decreasing marginal utility*.

The decrease in the marginal utility of a good has a direct impact on demand. After all, if each subsequent unit of good has less utility, then the consumer will purchase additional units of this good only if its price decreases. If this is not the case, then the consumer will give preference to other benefits that will bring him a greater amount of utility, spending the same amount of money on their purchase.

7.3 A cardinalist approach to evaluating utility. The utility maximization rule and the consumer equilibrium condition

The degree of utility of the good, as we have established, is a subjective concept. Each subject evaluates the degree of usefulness of this good based on some kind of subjective rating scale. Therefore, their assessments of the degree of usefulness of this good do not coincide, they are different. After all, due to the lack of a single absolute scale of measurement, like weight or distance, it is impossible to measure the usefulness of a good and reliably determine how many units of this good is more useful than another.

As a rational consumer, when making a purchase, a consumer always compares the benefits with the costs and chooses the best available. Naturally, it takes into account only those factors that can be measured and compared. And such for him is the knowledge of the dependence of the value of the utility of the good on the degree of its rarity and on the degree of saturation of the need for it.

The existence of such a dependence served as the basis for the appearance in the second half of the XIX century. the cardinalist (quantitative) approach to the assessment of the utility of the good and the analysis of consumer choice. The founders of this approach (A. Walras, W. Jevons, K. Menger) allowed the possibility of quantitative measurement of utility by the consumer in certain conventional units of measurement-units. In their opinion, it is the general usefulness of a product set that underlies the consumer's behavior in the market and his consumer choice. It is obvious that a rational consumer, making his choice in conditions of limited funds, seeks to acquire the set of goods available to him that will have the maximum utility for him. The maximum of the total utility, as is known, is achieved when the marginal utility of the unit of good acquired by the consumer becomes equal to zero. But after all, the goods included in the consumer set have different prices. And as a result, the value of the marginal

utility of these goods per one monetary unit spent on their purchase, that is, the value of the so-called *weighted marginal utility* (MU/P), will be different.

In these conditions, the consumer, in order to optimize his consumer choice, that is, to get the maximum total utility, will increase the purchase of goods with a higher weighted marginal utility and reduce the purchase of goods with a lower weighted marginal utility. By redistributing their limited income in this way, the consumer eventually acquires the most satisfactory, from his point of view, a set of benefits that will bring him *the maximum overall utility*. This is achievable only if the rule of maximizing utility is observed, the essence of which, according to cardinalists, is that the maximum total utility is achieved if the last monetary unit spent on the purchase of any good brings the same marginal utility to the consumer.

Mathematically, this rule looks like this:

$$\frac{MU_1}{P_1} = \frac{MU_2}{P_2} = \dots = \frac{MU_n}{P_n} \quad (7.1)$$

where MU is the marginal utility of the good;

P – the price of the good.

7.4 Firm (enterprise) as an economic entity

One of the subjects of the market economy is a firm. A firm is usually understood as an organization that produces goods and services and (or) sells them. In this regard, a firm is a common name for any economic production unit. And since the structure of a firm can consist of either one enterprise or include a number of enterprises, it will be incorrect in all cases to use the concepts of "firm" and "enterprise" as synonyms. This is legitimate only if the firm is understood as an independent production unit consisting of one enterprise. When a firm is understood as a large corporation, which is a complex of a number of enterprises, the independence of which, although limited, is preserved, then the identification of the concepts of "firm" and "enterprise" is unacceptable.

The production of goods and services that are in demand is carried out by a variety of different enterprises (firms).

An enterprise (firm) is an economic unit that has separate property in its ownership, economic possession or operational management and has rights that allow it to perform specific functions for the production and (or) sale of goods and services under its property responsibility in order to make a profit or provide socially significant services. Depending on the purpose of functioning, enterprises (firms) are divided into commercial, striving to maximize profits, and non-commercial, functioning to provide various kinds of socially significant services available to the general population, regardless of their income (education, healthcare, culture, urban passenger transport, etc.).

Enterprise (firm) as a form of organization of production and economic activity, it is the main production and economic link of the economy, since it is engaged in the creation of economic benefits and (or) their implementation. As a production and economic link, an enterprise (firm) is characterized by technical, production and organizational unity. On the one hand, an enterprise (firm) is a complex of means of production that have technological unity, adapted to create certain economic benefits. On the other hand, an enterprise (firm) is a collective of employees connected with each other in the production process by labor cooperation and common economic interests. Within the framework of this technical, production and organizational unity, the enterprise (firm) acts as an economically separate business entity.

Economic isolation is the most important feature of an enterprise. It is conditioned by the essential nature of the enterprise as a commodity producer, carrying out its individual reproduction. The economic isolation of the enterprise is manifested in the isolation of the resources of the enterprise and their independent movement in the process of reproduction; in the implementation of this reproduction at the expense of the results of management on the principles of

self-sufficiency; in the presence of their specific interests and their management goals. The economic isolation of an enterprise presupposes economic independence, the degree of which to a certain extent depends on the place of the enterprise in the system of property relations, on what functions of appropriation (possession, disposal and use) are implemented by the entities engaged in economic activity at the enterprise. Along with the form of ownership within which the enterprise operates, the degree of its economic independence is determined by the normative acts of the relevant superstructure institutions regulating the activities of the enterprise. The target orientation of such acts, for example, in relation to large and small, public and private enterprises can be very different. Therefore, the degree of their economic independence will also be different.

There are many different enterprises (firms) operating in a market economy, which requires their classification depending on certain criteria. These may be the type of activity, industry, or manufactured products; organizational and legal form; size; form of ownership, etc.

Organizational and legal forms of enterprises. In order to be able to engage in entrepreneurial activity, any enterprise must be registered in the appropriate legal form. Depending on the organizational and legal form, there is a distinction between sole proprietorship (individual entrepreneurship) and an association of entrepreneurs.

Sole ownership is literally the independent conduct of business in their own interests. The owner has the material resources and capital equipment necessary for economic activity, and personally controls this activity, while he bears unlimited responsibility for his obligations.

The association of entrepreneurs is carried out in the form of partnerships and communities. A *partnership* is a form of business organization where two or more individuals agree on the ownership and management of an enterprise. They usually combine their financial resources and business skills. In a similar way,

they distribute risks, as well as profits or losses that may fall to their share, while they bear unlimited property liability for the company's obligations. A *limited liability company* is a legal form of association of investors of capital, where the participants are responsible for the obligations of the company only with their contribution. The contribution made gives the right to receive a part of the profit in the form of dividends and the right to vote. The leading form of limited liability companies is a joint-stock company-corporation. A *corporation* is an association of investors of capital-shareholders, but such an association in which the property of the corporation is completely separated from the property of shareholders. In the event of the company's insolvency, the shareholders are not liable for its obligations to creditors, but only risk a possible depreciation of the shares.

7.5 Production function. Production periods. The production choice of the company in the short term. The law of decreasing marginal productivity

Production is carried out through the usage of certain factors of it. However, production is not just a mechanical connection of the factors of production, but a complex system of their interaction, due to the production technology used. Moreover, the choice of a particular technology is due not only to the specifics of consumer properties and design features of the goods produced, but mainly to the limited resources on the one hand and the need for their effective use on the other. Therefore, an entrepreneur, striving to be an effective manufacturer, uses such production methods that are effective both from a technological and economic point of view.

The production method is technologically efficient if there is no other way to produce a given volume of products with less costs of at least one resource, with the same amount of costs of other resources. A cost-effective production method will be one in which a given output volume is provided at the lowest cost.

Production function. Having the necessary factors of production and combining them in the production process, enterprises produce various benefits. At the same time, the volume of goods produced with this production technology depends on the number of production factors used. This relationship between the number of production factors used and the volume of products produced is characterized by the production function:

$$Q = F(x_1, x_2, \dots, x_n), \quad (7.2)$$

where Q is the volume of products produced;

x_1, x_2, \dots, x_n – the number of production factors used in the production process.

Based on the production function, the entrepreneur determines a technologically efficient method of production.

From various technological opportunities, he makes a choice of the most cost-effective method, guided by the prices of resources, the market price of the product produced and taking into account the fact that production factors, due to their certain interchangeability, can be used in the production process in different proportions, replacing each other. Therefore, the lack of one of the factors (due to its rarity or high cost) can be compensated by an additional amount of the other. However, the replacement of production factors is technologically possible only within certain limits, due to the achieved level of development of science and technology, production technology. The technology imposes restrictions on the proportions in which production factors can be used in the production process, and their interchangeability.

Short-term and long-term production periods. The opportunities of choosing the optimal combination of production factors within the framework of this technology also depend on the time that the enterprise has to change the amount of resources used in production. The fact is that the change in the amount of some resources used (labor, raw materials, electricity, etc.) can be carried out

relatively quickly. An enterprise, for example, can quickly transfer its production to round-the-clock work, hiring additional workers for this, purchasing the necessary amount of raw materials. The amount of other resources used in production (for example, to increase production capacity, expand production areas) can be changed over a long time. Depending on whether the enterprise will be able to change the value of all the resources used or only some of them, there are long-and short-term periods.

A long-term period is a period in the activity of an enterprise during which the enterprise can increase the volume of products produced by increasing the number of all production factors used.

Short-term period is a period of time during which an enterprise can increase the volume of products produced by increasing the amount of only some of the production resources used by it.

The concepts of "short-term period" and "long-term period" do not have a clearly limited duration. It all depends on the specifics of the industry. Thus, in light industry, it takes much less time to change production capacities than, for example, in the metallurgical or energy industries.

Depending on the opportunity to make changes in a given time period in the volumes of factors used in production, the latter are divided into *constant and variable*. The first ones are those whose quantitative volumes of use cannot be increased in a given time period. Such in the short term are usually production areas, machine tools and equipment. The same production factors, the volume of use of which can be increased in a given time period, constitute a group of variable production factors.

The division of production factors into constants and variables is characteristic only for the short-term period in the activity of the enterprise. In the long term, all factors of production are variable.

Changes made in the short-term period in the number of variable factors used in production, with the constant amount of a constant factor, cause changes in the volume of output. We will analyze the existing relationship between the number of variable factor units used in production and the volume of products produced using an example.

Suppose that a firm produces products using only two factors- labor and capital, where capital (production capacity) is a constant factor, and labor (number of employees) is variable. Let us also assume that the company currently has 5 machines and employs 3 employees who produce 30 units of products. Since the price of these products on the market has increased, the company, seeking to make a big profit, decided to increase production. It can do this in the short term only by involving more workers in production. Let us also assume that the company does not immediately recruit the necessary number of additional employees, but does it gradually, consistently hire one employee. With the increase in the number of employees, the volume of production will change.

The results of changes in the volume of production as the number of employees increases are presented in the table 7.1.

Table 7. 1 – Production results with one variable factor

Capital expenditures (units)	Labor costs (people)	Output volume (units)	Marginal product of labor (units)
5	3	30	-
5	4	33	3
5	5	37	4
5	6	39	2
5	7	40	1

Total, average and marginal product. To analyze the impact of changes in the quantity of a variable factor on the volume of production, such indicators as the total, average and marginal product of a variable factor are used.

The total product of a variable factor is the increase in the volume of product output that was provided for a given amount of a constant factor due to the additional involvement of a certain number of units of a variable factor in production. In our example, it is equal to 10 (40-30). *The average product* of the variable factor shows the increase in output, which on average was obtained from each additional unit of the variable factor involved in production. It is determined by dividing the total product of the variable factor by all the number of units of the variable factor that is additionally involved in production and ensured the creation of this common product. The average product in our example is 2.5 (10:4). *The marginal product* of the variable factor is the increase in output achieved by increasing the variable factor by one additional unit. The marginal product characterizes the marginal productivity of the variable factor.

The law of decreasing marginal productivity. The analysis of the dependence of the growth of the total product on the increase in the amount of the variable factor used at a fixed value of the constant factor shows that there is no proportional relationship between them. So, if the usage of the first additional units of the variable factor leads to a faster increase in product output, then in the future (as the subsequent units of the variable factor are involved in production), the increase in production decreases more. This dependence is called the law of decreasing returns or decreasing marginal productivity. This is explained by the fact that the variable factor, as its quantity increases in excess of the objectively required for this production technology, is used more inefficiently due to the lack of a constant factor.

Based on the law of decreasing returns, we will consider the dynamics and relationship of the total, average and marginal products (Figure 7.1).

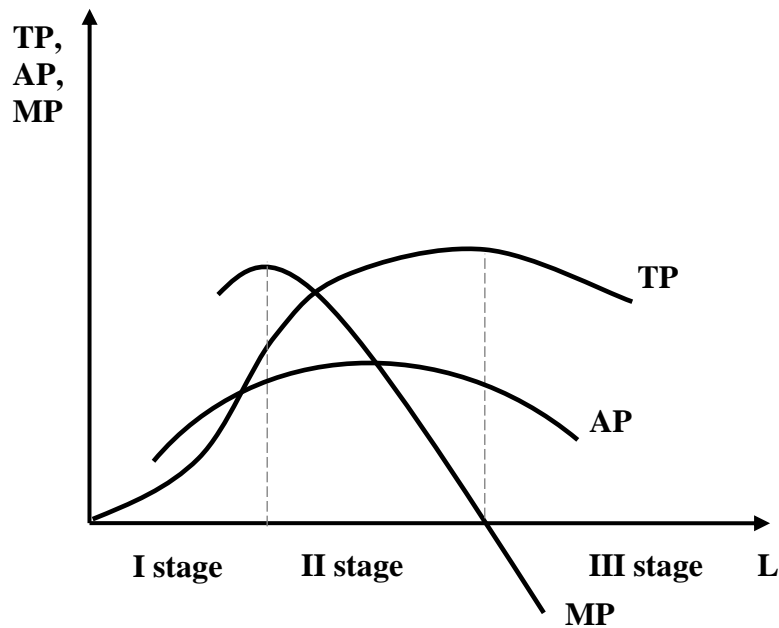


Figure 7.1 – Dynamics and interrelation of total, average and marginal products

There are three stages in the dynamics of the total product (TP). At the first stage, it grows at an accelerating pace, at the second, its growth slows down and, finally, having reached a maximum, the total product begins to decrease at the third stage. This behavior of the total product is explained by the dynamics of the marginal product (MP) or marginal productivity, which characterizes the amount of change in the volume of production due to the involvement of each additional unit of a variable factor in production.

At the first stage, the ratio of the variable factor (labor) and the constant (capital) still far from optimal. Capital is available in excess. Therefore, the involvement of additional units of labor in production causes an increase in the efficiency of capital use and, as a result, a growing return on each additional unit of labor. Having reached its maximum, the marginal productivity at the second stage decreases, since the conditions of the law of diminishing returns come into force. As a result, the growth rate of the total product slows down. When the marginal productivity drops to zero, the total product reaches its maximum and

then, at a negative value of the marginal productivity, begins to decrease. The dynamics of the average (AP) and marginal products are as follows:

- 1) the average product grows until its value is less than the marginal product and decreases when it becomes larger than the marginal product;
- 2) when the average and marginal products are equal, the average product reaches its maximum.

7.6 The production choice of the company in the long term. Isoquant. The maximum rate of technological substitution

The factors of production are to a certain extent interchangeable. Because of this, in the long term, the company has the opportunity to use various combinations of production factors to ensure a given volume of output.

To determine the possible combinations of production factors that can be used to produce a given volume of products, we turn to the analysis of isoquants. At the same time, to simplify the analysis, we assume that the production process is carried out by using two factors: capital and labor. An isoquant is a curve that reflects various combinations of production factors, which usage ensures the same volume of production.

With an increase in the number of production factors used, it becomes possible to produce a larger volume of products. Since there are an infinite number of different levels of production volumes, there is, therefore, an infinite number of isoquants. This multiplicity of isoquants, reflecting the maximum allowable output for any choice of production factors is an isoquant map. The further the isoquant is located from the origin, the greater the volume of production it reflects.

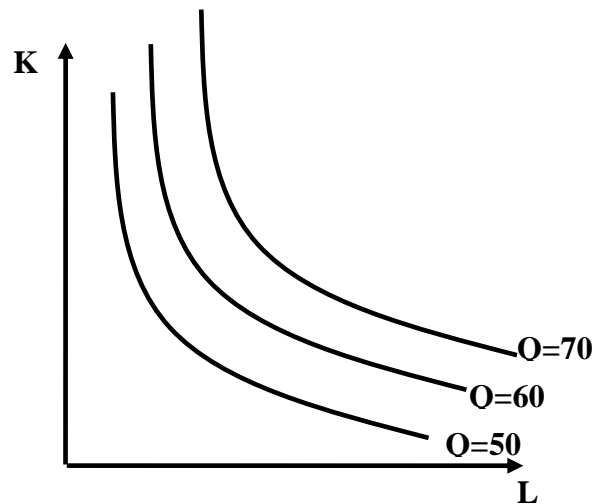


Figure 7.2 – Isoquant map

The isoquant reflects the opportunity for the technological replacement of one factor by another without changing the volume of production. To determine the number of units of one factor that can be replaced by one unit of another factor, if the volume of production remains unchanged, the indicator of the marginal rate of technological replacement of one resource with another is used. Thus, the marginal rate of technological replacement of labor with capital shows the number of units of labor that one unit of capital can replace without causing a change in the volume of production.

The marginal rate of technological substitution depends on the ratio of marginal products (marginal productivity) of production factors. Reducing the quantity of one of the factors leads to a decrease in the volume of output by an amount equal to the product of the marginal product of this factor by the number of reduced units. An increase in the use of another factor will cause an increase in output by an amount equal to the product of its marginal product by an additional number of units of this factor involved in production. Since the volume of output remains the same when one factor is replaced by another, the loss in output from

a decrease in the amount of one factor should be equal to the increase in output from an increase in the amount of another factor.

7.7 Production costs and their classification

Any production of goods and services is always associated with the cost of money, due to both the organization of production (the acquisition of either ownership or temporary usage (lease) of the necessary production resources (land, industrial buildings, equipment)) and the production of products (the cost of raw materials, fuel, electricity, payment of wages to employees, operation of equipment, etc). In this regard, there are *one-time capital costs and current costs* associated with the production of products in a certain period. Since the production process directly or indirectly involves production resources obtained as a result of capital expenditures carried out long before the production of products, capital expenditures are also taken into account in current costs according to a certain methodology in order to compensate them as products are sold.

The need to reimburse all costs associated with the production is due to the fact that economic entities carry out production activities on the principles of self-sufficiency and self-financing. It means that due to the proceeds from the sale of manufactured products, they must reimburse all production costs and still have a profit. Therefore, economic entities are forced to consider what it costs them to produce economic goods, i.e. to know the costs of production. *Production costs* are the aggregate of costs for the production of a particular volume of products expressed in monetary form. In domestic practice, these costs are usually called the *cost price*. Along with production costs, enterprises may have costs associated with the sale of manufactured products. These costs are the costs of circulation. They include expenses related to the transportation and storage of products, rental and maintenance of retail space, payment of sales workers, advertising.

It is known that production resources are rare, i.e. limited. In addition, each type of resource can be used for the production of various goods. It means that the usage of a certain resource for the production of a given good excludes the opportunity of its usage for the production of some other, alternative good. Therefore, any expenditure of production resources on the production of a good is an opportunity cost or a cost of choice.

As a rule, the effect of using a resource for the production of alternative goods is different. Therefore, an entrepreneur, in an effort to reduce the costs of producing his products, attracts into his production, i.e. buys resources that, from his point of view, will be most effective for his production, i.e. will bring maximum return. Buying the necessary resources, he bears certain costs. These costs from the position of an individual manufacturer or enterprise are *economic costs*. In other words, economic costs are all the costs of an entrepreneur associated with attracting (acquiring) the necessary production resources and producing products. These costs are divided into explicit and implicit.

Explicit costs are the actual costs of the factors of production in monetary terms for the production of a certain number of products. These are the costs of raw materials, fuel, electricity, payment of wages, payment of various services, operation of equipment and industrial buildings, etc. All these costs or expenses are explicit, since they receive a monetary assessment, are reflected in the accounting statements of the enterprise, and therefore they are also called *accounting costs*.

However, not all costs of resources owned by the enterprise and used in the production process can receive a monetary assessment and be reflected in the accounting statements. For example, the owner of a small company may not charge himself a salary for the management of the company, do not charge depreciation of his premises used for production purposes, and he does not receive a percentage on the monetary capital invested in the business. Therefore, these

costs associated with the use of their own resources and not receiving a monetary assessment are hidden in nature, are essentially unpaid. In this regard, they are called *implicit costs*.

Implicit costs do not receive a monetary assessment. But this does not mean that it is impossible to determine their value. Quantitatively, implicit costs are equal to the amount of monetary income that an entrepreneur could receive in the event of another, alternative use of these resources that are owned by him. So, working as a manager in another firm, he would receive a salary, renting out his premises, he would receive income in the form of rent, and placing his money capital invested in the business in the bank, he would receive income in the form of interest on the deposit.

Therefore, implicit costs can be considered as a kind of sacrifice of the entrepreneur in the form of non-received interest for the money invested in the business, or rent, or remuneration for managing the enterprise, for performing entrepreneurial functions. Naturally, in order to retain and use these resources at this enterprise, it is necessary that their owner receives such an income that would exclude the possibility of alternative, more profitable usage of these resources on the side. Therefore, a kind of compensation to the entrepreneur for the usage of his own resources becomes a normal profit.

Normal profit is the minimum fee or income that the owner of the enterprise should receive in order for him to have an interest in using his resources, his entrepreneurial abilities in this field of activity. The normal profit is the content of the implicit costs.

7.8 Production costs in the short term

Depending on how the volume of production affects the amount of costs in the short term, there are fixed and variable costs.

Fixed costs (TFC) are such costs, the value of which does not change with changes in the volume of production. These costs are associated with the very existence of the enterprise and the enterprise bears them even when it does not produce anything. Such costs include expenses related to the operation of buildings and structures, equipment, rent payment, payment of insurance premiums, maintenance of security and a minimum number of administrative and managerial personnel.

Variable costs (TVC) are costs whose value changes depending on changes in the volume of production. These are the costs of purchasing raw materials, fuel, energy, and paying workers. With an increase in the volume of production, the costs for these purposes increase and, accordingly, variable costs increase.

It should be noted that there is no proportional relationship between the increase in production volume and the increase in variable costs. Initially, the increase in production volume outstrips the growth of variable costs. Then, when a certain volume of production is reached, variable costs begin to increase at an ever-increasing rate compared to the growth of production. This behavior is caused by the law of diminishing returns. The fact is that initially each additional unit of variable resource gives an increase in output. In the future, each additional unit of variable resource begins to give an ever-decreasing increase in the volume of production.

The sum of fixed and variable costs is the total cost of production (TC). Total costs characterize the total amount of costs for the production of a specific volume of products.

Average costs (ATC), or costs per unit of production, are determined by dividing the total costs by the number of units produced.

There are also average fixed (AFC) and average variable costs (AVC), which are determined by dividing the corresponding costs by the volume of production.

In economic analysis, along with the considered costs, the so-called marginal costs are also used. Marginal cost (MC) is additional costs associated with the production of one additional unit of production. The value of marginal costs is determined by dividing the amount of the increase in total costs by the increase in production volume $MC = \frac{\Delta TC}{\Delta Q}$. And since these additional costs are mainly represented by variable costs, since the value of fixed costs does not change in the short term, the dynamics of marginal costs, as well as variables, is explained by the law of diminishing returns or productivity.

Marginal costs show how much it will cost an entrepreneur to increase the volume of output by one unit or how much he can "save" in the event of a reduction in production by one unit. Therefore, all decisions regarding the volume of production in the short term are usually based on the value of marginal costs.

7.9 Production costs in the long term. Scale effect

In the long term, the number of all production factors used, including production capacities, can be changed. Therefore, there is no division of costs into fixed and variable in this period. All costs act as variables in this period.

An increase in production capacity causes an increase in production volumes and an increase in total costs. In turn, the change in the volume of production or the scale of production, as practice shows, also affects the value of average costs, i.e. the cost of production. This phenomenon is called *the scale effect*. The scale effect can be positive, negative, and permanent.

A positive scale effect occurs when, with an increase in production volume, average costs decrease under the influence of a number of factors. Thus, the enterprise has the opportunity to use high-performance equipment more effectively, deepen the specialization of production and on this basis increase

labor productivity, receive wholesale discounts when purchasing large quantities of raw materials, produce by-products from waste.

The negative effect of scale is manifested in the growth of average production costs with an increase in production volumes. It may be due to the difficulties of managing large-scale production, the increase in the cost of delivering the necessary raw materials and finished products to consumers.

A permanent scale effect occurs when the average costs do not change with an increase in the scale of production.

Considering the dynamics of average costs in the long term, it is necessary to take into account the following two circumstances. Firstly, the company does not continuously increase its production capacity, but does it, as a rule, at certain intervals of time. In this regard, there is every reason to believe that during these intervals the enterprise functions as in the short-term period. Therefore, the curve describing its costs at each of the intervals will be a curve of short-term average costs.

Secondly, the change in production capacities in the direction of increase and, as a result, the growth of production volumes, affects the value of average costs. Initially, an increase in production volume entails a reduction in average costs. In the future, starting from a certain point, the reduction of average costs stops, and then it begins to grow. This is due to the effect of the scale effect. Because of this, the curve of long-term average costs will have an arc-shaped shape. However, this curve will not be smooth, but "bumpy", reflecting an abrupt increase in production volume due to an increase in production capacity.

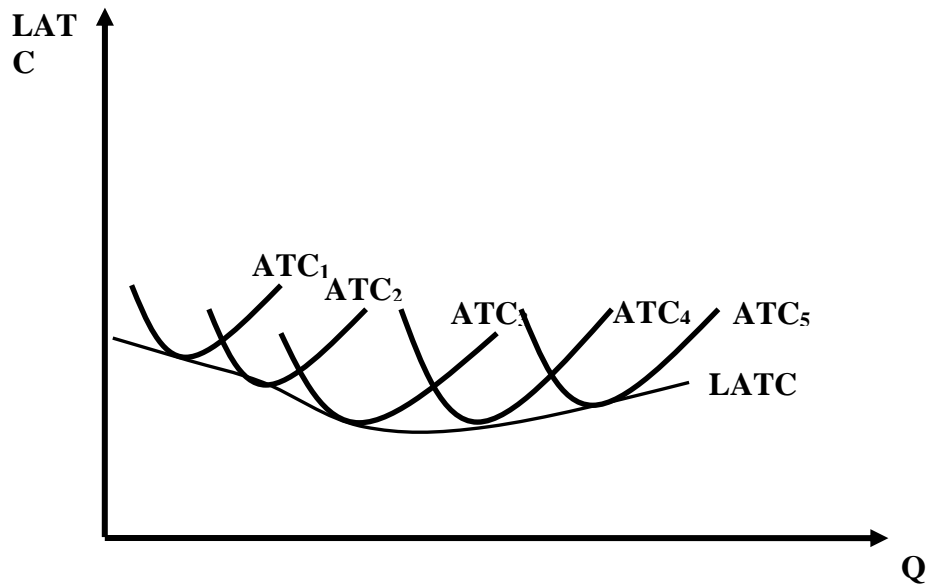


Figure 7.3 – Long-term average cost curve

The dynamics of long-term average costs is important for determining the optimal size of the enterprise. Such is the size of the enterprise (production volume), in which the long-term average costs will be minimal. And since the duration and depth of the various effects of scale in different industries are ambiguous, then the optimal size of the enterprise in each of the industries will be different.

7.10 Isokosta. Manufacturer's equilibrium

In the long term, the entrepreneur, in an effort to increase production and reduce average costs, carries out an increase in production capacity. And since the same volume of production can be obtained by applying the factors of production in different combinations, the entrepreneur faces the problem of choosing such a combination of them that would allow achieving a given volume of output with minimal costs.

To find the most economical combination of production factors, we turn to the analysis of isocost. The isocost is a straight line that reflects all possible combinations of factors of production, for the purchase of which the entrepreneur spends the same amount. Therefore, the isocost is also called the direct equal cost. The angle of inclination of the isocost is determined by the ratio of prices for factors of production, and its graphical location is determined by the financial capabilities of the entrepreneur. Naturally, with the expansion of financial opportunities at this price level, an entrepreneur can acquire a greater number of necessary factors. Accordingly, the isocost, reflecting its large costs for the acquisition of factors of production, will be located higher. Therefore, it is possible to give a graphical description of different levels of costs for the acquisition of necessary factors of production in the form of an isocost set or an isocost map.

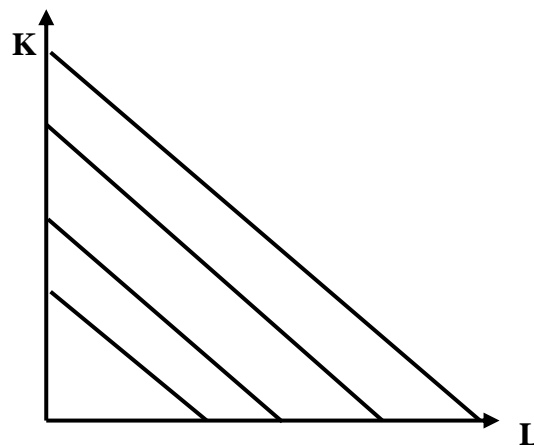


Figure 7.4 – Isocost map

7.11 Income and profit of the enterprise

The result of the economic activity of the enterprise is income, which is understood as the funds received by the enterprise from the sale of manufactured products or services. There are three types of income: general, average and marginal. *Total (gross) income* (TR) is the amount of revenue received by the enterprise from the sale of a certain amount of products. *Average income* (AR) is

the amount of cash revenue per unit of products sold. It is calculated by dividing the total income by the number of products sold.

The need to determine the average income is caused by the fact that in the conditions of an imperfect competition market, firms often use different prices for the same products. So, when selling large batches of goods, they can represent wholesale discounts, and when selling goods in small batches, higher prices are used. The average income shows how much the company received on average from the sale of one unit of products sold.

Marginal income (MR) is an increase in total income that is obtained as a result of the production and sale of an additional unit of production. It is calculated by dividing the amount of the increase in total income by the increase in the volume of products sold

$$MR = \frac{\Delta TR}{\Delta Q} \quad (7.3)$$

In a market of perfect competition, the marginal and average income are equal to the price of the product. This is explained by the fact that a single competitive firm, having a small market share, cannot achieve a higher price, limiting the volume of production. Nor does it seek to establish a lower price for its products in order to increase sales, since it still sells its insignificant volume of manufactured products at the current price on the market. Therefore, in such a market, each additional unit of production is sold at the same price.

An integral part of income is profit, which in quantitative terms represents the difference between income and costs. But since there are two approaches to the definition and measurement of costs, then profit should be considered in two aspects – accounting and economic. In this regard, there is a distinction between accounting and economic profit.

Accounting profit is the difference between total income and accounting (explicit) costs. *Economic profit* is the difference between total income and economic costs, of which normal profit is an integral part.

The distribution of total income into economic costs and economic profit, and their ratio to accounting costs and normal profit can be represented by the table.

Table 7.2 Distribution of total income

Total income				
Economic costs			<i>Economic profit</i>	
External (explicit) costs		Normal profit as compensation for implicit costs		
Fixed costs	Variable costs	% on the invested capital		Entrepreneurial income
Accounting costs		Accounting profit		

Economic profit is not included in economic costs and is a part of the income received in excess of normal profit. The origin and availability of economic profit is explained by a number of reasons:

1) the ability of individual entrepreneurs to manage the risk associated with the organization and management of resources and innovations, their ability to make the right decisions in conditions of uncertainty;

2) the current favorable market conditions for a particular entrepreneur (an increase in market prices for his products);

3) the ability of individual subjects of the imperfect competition market to influence market transactions to their advantage.

Economic profit is not a permanent, but, as a rule, a temporary phenomenon. It arises, disappears, and reappears. The fact is that the presence of economic profit is an incentive for new competitors to enter this business. The

emergence of new firms leads to an increase in the supply of goods and increased competition between firms. Therefore, in order to sell successfully, firms are forced to reduce prices, incur additional costs for sales support. As a result, the economic profit decreases and, eventually, disappears. This means that in the long-term period of economic profit, there is a tendency to strive for zero, provided that there are competing firms in this field of activity.

Profit is the driving motive of entrepreneurial activity. After all, profit is a source of investment and improvement of the technical base of production, improvement of working conditions and wage increases. Therefore, every entrepreneur strives to maximize profits. There are two approaches to determining the level of production that maximizes profit. One of them is to compare the absolute values of total income and total costs. The maximum profit is achieved when the output volume is such that the difference between the values of total income and total costs is the greatest.

The second approach to determining the volume of output at which the profit will be maximum is based on a comparison of marginal income and marginal costs. The firm, striving to obtain the maximum amount of profit, will increase the volume of output as long as the marginal income exceeds the marginal costs. After all, in this case, the total amount of its profit increases. As soon as the marginal costs become equal to the marginal income, and the firm does not receive a profit from the sale of the last unit of production, it will stop increasing the volume of production. Thus, the firm maximizes profit with such a volume of output that the marginal income and marginal costs are equal.

To characterize the amount of profit, its absolute indicator is used – *the mass of profit*, which is measured in rubles. The main factors affecting the mass of profit received by a firm for a particular period are the volume of products sold, the quality of the production resources used and the efficiency of their use, changes in market prices, the type of market structure or market model, the

activities of the government. The company can influence some of these factors, while others are external, not controlled by the company's activities.

However, by the absolute amount of profit received, it is impossible to judge the degree of profitability of a particular activity in general and the degree of profitability of the production of a particular product in particular. Therefore, to characterize the degree of profitability of production in general and the degree of profitability of the production of individual products, such a relative profit indicator as the profitability of production is used. It is calculated as a percentage by dividing the profit received from the production and sale of products by the production costs of these products, or its cost price. The resulting result is multiplied by 100%.

7.12 The state as an economic entity. Microeconomic regulation, its goals and tools

The development of a modern market economy is impossible without the active participation of the state, which is one of its economic subjects. As an economic entity, the state receives income in the form of taxes from households and organizations (firms) and provides society with benefits that cannot be produced by other economic entities. In addition, the state is forced to interfere in the process of functioning of the market system in order to increase the efficiency of its functioning, supplementing and correcting the market mechanism. Because of this, the modern market economy is a synthesis of the market mechanism and elements of state regulation.

From the point of view of the level of state influence on the economy, there is a distinction between macroeconomic and microeconomic regulation. Macroeconomic regulation is related to the economic policy of the state aimed at regulating the parameters of the economic system that are common to all

economic entities. This regulation is carried out through fiscal, monetary, social policy. The subject of the monetary paragraph is macroeconomic regulation.

Microeconomic regulation is a set of measures of state influence on economic entities in order to increase the economic efficiency of the functioning of the market mechanism and solve the problems facing the economy at a particular stage of development. From the standpoint of the target orientation of macroeconomic regulation measures, they are divided into two groups:

- 1) aimed at improving the efficiency of the functioning of the market economy;
- 2) are focused on achieving the goals of socio-economic development.

Microeconomic regulation is carried out by using methods of direct and indirect impact on the activities of business entities. Methods of direct regulation significantly restrict the freedom of economic choice of economic entities, sometimes reducing it to zero, forcing them to make decisions based on state regulations, and not on their independent economic choice. These include antimonopoly regulation, the introduction of fixed prices for certain groups of goods, state orders, the establishment of a minimum wage, targeted financing, etc.

Methods of indirect regulation do not restrict the freedom of choice for economic entities that retain the right to freely accept market relations. These methods only create prerequisites for the fact that, when making an independent choice, business entities prefer options that correspond to the goals of the state's economic policy. Such methods of regulation include taxes and tax incentives, the rate of interest on loans, export subsidies, customs duties, etc.

Depending on the current economic situation in the country and the tasks of economic development, the state determines in each case specific methods and measures to influence economic entities and thereby regulate their activities.

TOPIC 8 MAIN MACROECONOMIC INDICATORS

8.1 The concept of the national economy and its structure

The national economy is most often defined as a system of social reproduction, in which the branches, types and forms of social labor that have developed as a result of the long historical evolutionary development of a particular country are closely interrelated. The peculiarities of the national economy are influenced by the historical and cultural traditions of the country, the geographical location of the state, its role in the international division of labor and other factors.

The national economy is characterized by a certain composition and structure. **The structure of the national economy** is a stable quantitative relationship between its various components. There are reproductive, sectoral, territorial structures of the national economy and its infrastructure.

The reproduction structure includes five phases: production, distribution, exchange, consumption and utilization.

The sectoral structure reflects the division of the national economy into branches – qualitatively homogeneous groups of economic units that perform the same socio-economic functions in social reproduction. For example: industry, agriculture, construction, etc.

In turn, the industry may have sub-sectors. For example: in industry-mechanical engineering and metalworking: automotive, machine tool construction, instrument making, etc.

The territorial structure determines the location of productive forces on the territory of the country and means the division of the national economy into economic regions. In Belarus – the western and eastern economic regions.

The infrastructure includes industries, institutions, organizations that serve production. It is represented by communications (railway and automobile), energy, water, gas supply, communications, exhibition complexes, customs system, banking network, etc.

It is necessary to improve the infrastructure to ensure the sustainable development of the economy and increase its efficiency. A special block of problems is the integration processes in the CIS, the formation of a single economic space of Russia, Ukraine, Kazakhstan, Belarus and other countries, the problem of creating a union state of Russia and Belarus.

8.2 The system of National Accounts. Key macroeconomic indicators

A set of statistical macroeconomic indicators that characterize the value of the total product (output) and total income and allow assessing the state of the national economy forms the system of national accounts (SNA). The system of national Accounts was developed in the late 1920s by a group of American scientists, employees of the National Bureau of Economic Research, under the leadership of the future Nobel Prize winner Simon Kuznets. After the Second World War, most countries of the world began to use it, which dramatically simplified cross-country macroeconomic comparisons. Russia (USSR) has joined the use of the SNA methodology since 1987.

The SNA consists of three indicators of total output (production):

gross national product (GNP);

gross domestic product (GDP);

net national product;

and three indicators of total income:

national income

personal income;

disposal personal income.

Currently (due to the internationalization of the economy), the main indicator characterizing the total volume of production is the gross domestic product (GDP), that is, the cost of all final services and goods produced per year on the territory of the state, in all sectors of its economy for export, consumption

and accumulation, with the help of production factors of this state, regardless of the nationality of economic agents. GDP is the final goods and services, those that are ready for usage. The product that is processed is called intermediate and is not included in the GDP. Also, the GDP does not include: free labor, self-employment, the shadow economy, resale of goods, state transfer payments (pensions, scholarships, unemployment benefits), purchase and sale of securities, private transfer payments (parental assistance to children, gifts).

Gross national product (GNP) is the total amount of all final goods and services that are expressed in money and produced by residents of a country for a given period of time, mainly for a year. In contrast to GDP, where the criterion is the territory of the country, when determining GNP, the criterion is the factor of nationality of the factor of production.

The net national product is the sum of all final goods and services produced in a country for a certain period, usually for a year and expressed in money, minus some part of the investment that was used to replace worn-out and outdated equipment. I.e., unlike the GNP indicator, it characterizes the national volume of production "cleared" from the transferred value of previous years.

National income is one of the generalizing indicators of the country's economic development, the newly created value in material production. The purpose of the national income is to form a population consumption fund and an accumulation fund for expanding production, therefore, on the one hand, it characterizes the level of well - being of the population at present, and on the other hand, the possibilities of economic growth in the future. It can be calculated in two ways:

- 1) if indirect taxes are deducted from the NNP:

$$NI = NNP - \text{indirect taxes} \quad (8.1)$$

- 2) if you sum up all the income:

$$\begin{aligned} \text{NI} = & \text{salary} + \text{rent} + \text{interest payments} + \text{income of owners} + \\ & + \text{corporate profit} \end{aligned} \quad (8.2)$$

Personal income, in contrast to national income, is the total income received by the owners of economic resources. To calculate the PI, it is necessary to subtract from the NI everything that does not come to the disposal of households, that is, it is part of the collective, not personal income, and add everything that increases their income, but is not included in the NI:

$$\begin{aligned} \text{PI} = & \text{NI} - \text{social insurance contributions} - \text{corporate income tax} - \text{retained} \\ & \text{earnings of corporations} + \text{transfers} + \text{interest on government bonds} \end{aligned} \quad (8.3)$$

Disposable personal income (DPI) is the income available to households. It is less than personal income by the amount of individual taxes paid by the owners of economic resources in the form of direct (personal income, property and inheritance) taxes:

$$\text{DPI} = \text{PI} - \text{individual taxes} \quad (8.4)$$

After-tax income is income that the people who received it use at their discretion. This income goes to consumption and savings.

8.3 Methods for calculating the gross domestic product

GDP can be calculated using three methods: by expenditure (end-use method); by income (distribution method); by value added (production method). Using all these methods should give the same result.

GDP, **calculated by expenditures**, is the sum of expenditures of all macroeconomic agents who were the final consumers of goods and services produced in the economy and spent money on their purchase. Household expenditures, firm expenditures, government expenditures and foreign sector expenditures are summed up.

Consumer spending is household spending on the purchase of goods and services. They include expenses for current consumption (food, clothing); expenses for durable goods (furniture, household appliances); expenses for services.

Investment expenses are the expenses of firms for the purchase of investment goods, that is, goods that increase the stock of capital. They include investments in fixed assets (purchase of equipment, industrial construction); investments in housing construction (household spending on housing purchase); investments in inventory (inventory).

Public procurement of goods and services is another element of total expenditures and includes public consumption (expenditures on the maintenance of public institutions, as well as the payment of salaries of employees of the public sector of the economy); public investment (investment expenditures of state-owned enterprises). The concept of "public procurement of goods and services" is distinguished from the concept of "public spending". The latter also includes transfer payments and interest payments on government bonds, which, as already noted, is not taken into account in GDP, since it is neither a good nor a service, but only the result of the redistribution of total income.

When calculating GDP by income, GDP is considered as the sum of the income of the owners of economic resources, that is, the sum of factor income. Factor income is:

- 1) Wages of workers and salaries of employees of private firms, which is income from the "labor" factor, that is, payment for labor services and includes all forms of remuneration for labor, including basic wages, bonuses, all types of material incentives, overtime pay, etc. (the salary of civil servants is not included in this indicator, since it is paid from the state budget and is part of public procurement, and not factor income);

2) Rent payments is income from real estate, which includes payments received by the owners of real estate (land plots, residential and non-residential premises);

3) Interest payments, which are income from capital, payment for the use of capital used in the production process (therefore, the amount of interest payments includes interest paid on bonds of private firms, but does not include interest paid on government bonds (the so-called "servicing of public debt"), since government bonds are issued not for production purposes, but for the purpose of financing the state budget deficit);

4) Profit, that is, income from the use of the production factor (entrepreneurial abilities).

In addition to factor income, the GDP calculated by income includes elements that are not the income of the owners of economic resources – indirect taxes on business and depreciation. Indirect business taxes (T) are a part of the price of a product or service. Another element that should be taken into account when calculating GDP by income is amortization (A), since it is also included in the price of any commodity. So,

$$\text{GDP by income} = W + R + P + Pr + T + A \quad (8.5)$$

The third method of calculating GDP is the summation of added values for all sectors and types of production in the economy (calculation of GDP by value added). It is obvious that the GDP value calculated by different methods should be the same (the difference can only be at the level of statistical errors). This conclusion follows from the fact that the sum of the values added by each firm (at each stage of production) is equal to the cost of the final product. On the other hand, value added is the difference between the company's revenue and the costs of buying products from other firms, therefore, it is equal to the company's net income.

TOPIC 9 MONETARY SYSTEM

9.1 The essence of money and its functions. The evolution of money

At a certain stage of the development of commodity production and exchange, money appeared, which became an intermediary in the movement of goods and services, a link between all economic objects. In economics, there are different opinions about the origin of money and its essence. Among them, the most recognized are the rationalistic and evolutionary theories of the origin of money.

According to *the rationalist theory*, money arose as a result of the agreement of people in order to ensure the exchange and co-measurement of various benefits.

The evolutionary theory proceeds from the fact that money appeared as a result of the historical development of commodity production and exchange and the aggravation of the contradictions of exchange. The essence of these contradictions was that commodity producers were forced to make many exchanges in order to get the right product. Therefore, gradually, from the entire mass of goods, one, the most popular commodity, recognized as a universal equivalent, stood out, which began to perform the role of money. With the advent of money, the exchange was significantly simplified: commodity producers exchanged their goods for money, for which they could buy the goods they needed.

Money performs the following functions: a measure of value; means of circulation, they act as an intermediary in the exchange of goods (goods – money – goods); a means of accumulation (savings), when money is withdrawn from circulation and accumulated for the purpose of making some purchases in the future; a means of payment, when they are used to pay for goods purchased on credit; world money, when used for various settlements between economic entities of different countries.

Initially, with the advent of money, their role was performed by gold and silver in the idea of coins. But gradually silver was forced out of circulation, and the role of money was fixed for gold. However, in the future, due to the wear and tear of gold coins and the fleeting role of money in the exchange of goods, paper money began to be used along with gold coins to serve commodity exchange. The system of monetary circulation, when gold coins and paper money exchanged for gold were used as money at the same time, was called the gold standard.

The gold standard existed in most countries until the First World War, with the beginning of which the exchange of paper money (banknotes) for gold was discontinued. The fact is that with the growth of military expenditures, countries were forced to widely use the issue of paper money, not exchangeable for gold, to cover them. Gradually, in the 20-30 years of the XX century, gold was withdrawn from the internal circulation of all countries, and the role of money passed to paper money that was not exchanged for gold and defective coins. As a result, a paper-money standard was established.

In the XX century, the process of money evolution accelerated. Cash gradually began to be replaced by non-cash, mainly demand deposits. In the seventies, plastic credit cards became widespread, which facilitated payments and allowed you to dispose of money stored in a bank account. With the arrival of computers in the banking system, electronic money appeared – information carriers that do not have a real expression, are nominal (can only be used by a specific person) and have an international character.

9.2 The monetary system of the country and its structure

The monetary system is a historically established and legally fixed form of organization of monetary circulation in the country. It is a set of credit and financial institutions that perform specific functions for the accumulation and distribution of funds. The developed monetary system consists of three levels, the

criterion for distinguishing which is the functional specification of its individual institutions: the central bank of the country, commercial banks, specialized credit and financial institutions. The first two links together form the country's banking system.

A special place in the credit system is occupied by the central bank. The main task of the central bank is to manage the issuing, credit and settlement activities of the credit system. Its main functions are:

- development and implementation of monetary policy;
- issue and withdrawal of money from circulation;
- storage of the country's gold and foreign exchange reserves;
- performing credit and settlement operations for the government;
- provision of various services to commercial banks and other credit and financial institutions (storage of mandatory reserves, provision of loans, etc.).

The second level of the credit system is represented by the system of commercial banks. Commercial banks perform the following functions:

- acceptance and storage of deposits;
- disbursement of funds from accounts and credit and settlement customer service;
- placement of funds by issuing loans, buying securities, etc.

The operations of commercial banks are divided into three groups: passive (raising funds), active (placing funds) and intermediary (performing operations on behalf of clients).

The main type of active banking operation is the provision of loans. However, banks do not have the right to issue loans for the entire amount of funds raised (deposits). They are obliged to keep part of their deposits in the form of a mandatory reserve, the amount of which is set by the central bank in the form of a standard. The requirement to keep part of deposits in the form of reserves is explained, on the one hand, by the need to control the ability of commercial banks

to lend to their customers, and on the other hand, by the desire of the central bank to exert the necessary influence on the amount of money in circulation and on the macroeconomic situation as a whole with the help of the reserve rate.

The third level is specialized credit and financial institutions. These include savings institutions, insurance companies, pension funds, investment, leasing, etc. Specialized credit and financial institutions operate in relatively narrow areas of the loan capital market, perform a small number of operations and complement the activities of commercial banks.

9.3 Credit and its forms. Creation of money by banks.

Economic relations, through which the lender provides a loan to the borrower in monetary or commodity form on the terms of urgency, repayment and payment. The totality of these economic relations reflects the economic category credit.

Credit functions:

- 1) redistributive – with the help of a loan, monetary and material resources are redistributed between enterprises, industries and regions;
- 2) stimulating – the need for repayment and various conditions for granting loans encourage borrowers to effectively usage of the loans received;
- 3) substitution – through loans, cash is replaced by credit (non-cash payments).

Credit comes in various forms. Its main forms are: commercial, banking, consumer, state, leasing credit and international.

Commercial credit is provided by some economic entities to others in commodity form in the form of deferred payment.

A bank loan is provided by banks in cash to economic entities, the population, and the state. This is the main form of credit. According to the term

of its provision, it is divided into short-term (up to one year) and long-term (over a year).

Consumer credit is the sale of goods to the population with installment payments.

A state loan is a set of relations in which the state acts as a borrower and banks, the population – as a lender. Borrowing of funds is carried out by issuing and selling government bonds.

Leasing takes place when the lessor provides expensive equipment and machines for long-term lease, while retaining ownership of them.

An international loan is a loan provided in monetary or commodity form by a lender of one country to a borrower from another country.

Among the various forms of lending, a bank loan is predominant, issued in the form of cash loans by commercial banks. It is these banks that have received a special license from the central (national) bank for the right to attract funds from the population and firms and provide them with loans that form the basis of the country's credit system. In the process of lending, banks are able to create new money, i.e. to carry out the so-called non-cash deposit and credit issue of money and thereby influence the amount of money in circulation.

We will consider the mechanism of creating money by banks on the example. Let's assume that the mandatory reserve rate is 10%. In this case, the bank that received a deposit in the amount of 1000 money units can issue a loan in the amount of excess reserve, i.e. in the amount of 900 $[1000 - (1000 \cdot 0,1)]$. As a result, the amount of money in circulation increased from 1,000 to 1,900 money units, where 900 money units are money created by the bank.

But this is not the end of the process of creating money by banks. The borrower who received 900 money units, uses them to purchase the necessary goods, as a result of which this amount will be credited to the account of some company in another bank (and possibly in the first one). 90% of the newly

received amount, i.e. 810 money units, the bank, in turn, can use for issuing a loan. This loan will be spent on the purchase of some goods and will be received as a deposit to a third bank, which can also provide 90% of the amount received for a loan, etc.

This process will continue until the entire amount of the initial deposit is used as a mandatory reserve. As a result, all banks, taken together, will create such an amount of non-cash money that will exceed the amount of the initial deposit several times. This is the process of creating money by banks. Theoretically, with a mandatory reserve rate of 10%, every 1 money unit invested in the bank will lead to the creation of 10 money units. Therefore, there is a multiplier effect, which is measured using a monetary multiplier.

The money multiplier is an indicator that characterizes the degree of increase (multiplication) of money on deposit accounts of commercial banks during their movement from one bank to another. It is equal to one divided by the standard of mandatory reserves.

$$M_M = \frac{1}{R}. \quad (9.1)$$

TOPIC 10 THE FINANCIAL SYSTEM

10.1 The concept of finance and its functions

The state needs money to carry out its functions. It can receive these funds only through the distribution and redistribution of the national product. Therefore, with the advent of the state, economic relations arise related to the distribution and redistribution of the national product, the creation and use on this basis of funds necessary to meet public needs. These relations are called financial relations.

Finance in the *narrow* sense of the word is a system of monetary relations conditioned by the existence and functioning of the state. In a *broader* sense, finance is a set of monetary relations that arise in the process of formation and expenditure of financial resources. However, not all monetary relations are financial. For example, the purchase and sale of goods is accompanied by the movement of money, but these relations are not financial. Financial relations are those monetary relations that arise when a part of income passes from one owner to another and this transition is not mediated by the movement of goods. Thus, finance is all the cash flows in the company, the consequence of the movement of which is the formation and expenditure of various funds.

Finance functions. In order for the national economy to exist and develop, it is necessary not only to systematically compensate the means of production, but also to direct part of it to the expansion of production (net investment). The society should allocate funds (resources) to meet the social needs of the population (health care, education), to maintain the administrative apparatus and defense, to provide social assistance and protection of vulnerable segments of the population; to create reserve (insurance) funds, etc.

In a market economy, the distribution of social product and the satisfaction of both personal and social needs is carried out through the formation and use of

funds of monetary resources of economic entities, the state, and the population. Thus, finance performs a *distributive function*.

Cash flow is quantified by various financial indicators that show how financial resources are allocated and used. This allows you to control the process of creating funds, their distribution and expenditure for the intended purpose, to evaluate and stimulate the effectiveness of these processes. This is the *control function* of finance.

Regulatory function. The state, with the help of such financial levers as subsidies, export-import duties, has the opportunity to influence the development of enterprises and entire industries in the direction necessary for society.

10.2 The financial system and its structure

Financial relations arise in a special sector of economic activity, for which a special financial apparatus and financial links of economic, managerial and control apparatus (financial authorities, tax service, banks, etc.) have been created. This sector of the economy is called the financial sector, since its functioning is connected with the activities of financial institutions. The totality of financial relations and the institutions that implement them form the financial system.

From the point of public financial management view, the financial system includes centralized and decentralized finance.

Centralized finance includes: 1) the state budget; 2) budgetary and extra-budgetary funds (the republican fund for support agricultural producers, the republican fund for nature protection, the republican road fund, innovation funds, etc.); 3) the fund of state, property, personal and other types of insurance; 4) state credit (the state attracts financial resources of the population, enterprises and organizations by selling bonds on the financial market). The main task of centralized finance is to provide the state with the funds that it needs to perform economic and political functions.

Decentralized finance consists of: 1) finance of economic entities (finance of commercial and non-profit organizations). Enterprises use the proceeds from the sale of their products to reimburse production costs and form a depreciation fund, a salary fund, a production development fund to finance the expansion of production, the development of new equipment, etc.; 2) household finances.

In recent years, a different approach to characterize the structure of the financial system has become widespread in the educational literature, according to which public and private finance are distinguished. The first group includes the state and local budgets, the finances of state-owned enterprises, and special government funds. The second group includes the finances of non-state enterprises and corporations and household finances.

10.3 Taxation: the essence, principles, types of taxes

The main source of state income is taxes. Taxes are mandatory payments levied by the state, represented by its central and local authorities, from economic entities of the national economy (individuals and legal entities).

Taxes in the economy perform two functions: fiscal and regulatory. Performing its first function, taxes ensure the flow of funds to the state treasury. The second function is that through a system of differentiated tax rates and benefits, it is possible to influence the process of social reproduction: to stimulate the development of individual industries, to expand or reduce the effective demand of the population, etc.

Principles of taxation. The totality of taxes in a particular country, the forms and methods of their construction, the organization of collection form the tax system. The following principles are the basis for the construction of tax systems:

universality, tax coverage of all business entities;

mandatory: business entities are obliged to pay taxes in full and within a strictly defined time frame. Non-payment is punished by law;

equidistant: collection of taxes at uniform rates, regardless of the business entity;

single-time: preventing the tax from being collected from the object more than once for a specified period of time;

stability: tax rates and the procedure for calculating them should remain unchanged for a long time;

simplicity and accessibility for perception;

flexibility: the tax system should stimulate the development of priority sectors of the economy.

When building a tax system, it is necessary to take into account the relationship between tax rates and the volume of tax revenues to the state treasury, which can be represented using the Laffer curve. The Laffer curve is a graph showing the relationship between the value of tax rates and the volume of tax revenues to the budget (Figure 10.1).

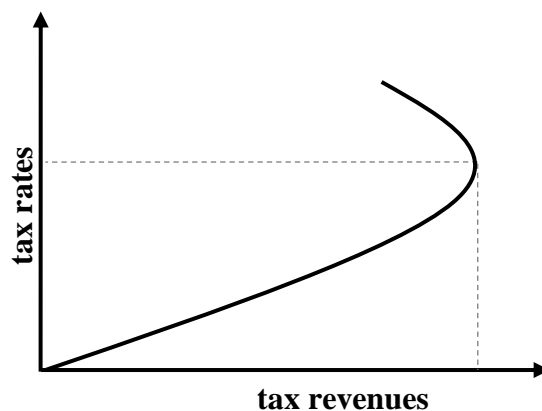


Figure 10.1 – Laffer Curve

According to this curve, the maximum tax receipts to the budget are provided by a certain (optimal) rate of the corresponding tax. Exceeding this rate

reduces business activity, undermines incentives for labor and investment, slows down economic growth, which ultimately reduces tax revenues to the budget.

Types of taxes. The tax system of any country includes various types of taxes.

Depending on the object of taxation, taxes are divided into direct and indirect. *Direct taxes* are taxes on the income of individuals and legal entities (income tax etc.) or on individual objects of property (real estate tax, land tax). In direct taxes, the person whose income or property is taxed and the person paying the tax are one and the same. *Indirect taxes* include taxes on certain types of products (excise taxes, value added tax, etc.). They are included in the price of a product or service, increasing it. Such a tax is actually paid by the consumer, but it is transferred to the tax authorities by entrepreneurs who receive revenue from the sale of the product.

According to the principles of construction, there are:

proportional taxes, the rate of which remains unchanged when income increases or decreases;

regressive taxes, the rates of which decrease as the taxpayer's income increases;

progressive taxes, the rates of which increase as income increases and decrease as it decreases.

Depending on the usage, taxes are divided into general and special taxes. Special taxes have a strictly targeted purpose.

There are also national taxes and local taxes and fees.

10.4 The state budget and its functions

The leading link in the financial system of any country is the state budget. In its economic essence, the state budget is a set of financial relations that arise between the state and all other subjects of the national economy (legal entities and

individuals) regarding the creation, distribution and usage of national funds. More often, they define the state budget as a financial document, while they understand it as an annual estimate (list) of state revenues and expenditures.

The budget performs the following functions:

1) distribution. From 20 to 60% of the national income is redistributed through the state budget;

2) control. The movement of budget resources informs about the financial state of the economy and allows you to control it;

3) regulatory. Changes in expenditures and revenues of the state budget make it possible to mitigate the decline in production, reduce the unemployment rate, i.e. stabilize the economy.

Revenues and expenditures of the state budget. The budget consists of expenditure and revenue parts. Budget revenues are funds received free of charge and irrevocably, in accordance with the legislation, at the disposal of state authorities of the appropriate level. Budget revenues are organized at the expense of:

- taxes (up to 90% of all income);
- non-tax income (administrative fines and economic sanctions; income from the usage of state-owned property; other non-tax income);
- contributions to state social insurance (mandatory insurance contributions of employers and working citizens).

Budget expenditures are the process of allocating and using financial resources accumulated in the budgets of all levels of the budget system. The task of budget expenditures is to ensure that the state performs its internal and external functions. Important major expenditure items of the state budget in countries with market economies are expenditures on economic development, socio-cultural needs, education, healthcare, national defense, maintenance of the state apparatus, payment of interest on the state debt.

The State budget of the Republic of Belarus. In Belarus, the state budget according to the law “On the Budget System of the Republic of Belarus” includes the budget of the republic and local budgets. It is developed by the Ministry of Finance and approved by the legislature in the form of a state law. The budget has the form of a balance sheet and consists of revenue and expenditure parts. The main part of income is formed at the expense of taxes (value added tax, income tax and profit of legal entities, excise taxes, emergency tax). Together, they provide about 80% of all income. The main expenditure items of the state budget are: financing of the national economy; financing of socio-cultural institutions and events; expenses for the elimination of the consequences of the Chernobyl accident. The priority areas of budget expenditures are increasing salaries for public sector employees, as well as ensuring other protected expenses (food, medicines, payments on the state debt, transfers to the population).

To determine the unified budget policy of the state and individual regions, to identify existing trends in the dynamics of income and expenses, independent budgets of the lower level are included in the budget of the corresponding administrative entity: district, city, region, republic as a whole. This consolidated budget is called *the consolidated budget*.

10.5 Budget surplus and budget deficit

The budget is balanced when the equality of its revenue and expenditure parts is achieved. When budget revenues exceed its expenditures, there is a budget surplus. But this rarely happens. The opposite situation often occurs – a budget deficit, when the state budget expenditures exceed its revenues. The budget deficit is the amount by which government expenditures in a given financial period (usually a year) exceed its revenues. It can be caused by the following reasons: the need to implement major state programs for economic development, militarization of the country, wars, natural disasters, economic crises, etc.

There are *structural and cyclical deficits*. The deficit embedded in the structure of income and expenditure when forming the state budget, when the economy is operating in full employment mode (with a natural level of unemployment) is called a structural deficit. However, the real deficit may be greater than the structural one. The main reason for this in market economies is the decline in production. It leads, on the one hand, to a reduction in the income of entrepreneurs and the population, which reduces tax revenues to the treasury. On the other hand, the recession leads to an increase in unemployment and other social benefits, which increases government spending. The difference between the real and structural deficit is called the cyclical deficit of the state budget.

Is the existence of a budget deficit dangerous for the country's economy? There is no clear answer to this question. If the deficit is caused by public investment in the production sector, it is not dangerous. After all, these investments will bring income in the future. If the reason for the budget deficit is an increase in current expenditures (social spending, wages, payment for goods and services), then this can lead to inflation, an increase in public debt, and the depletion of foreign exchange reserves. Currently, most developed countries have budget deficits. It is considered that the financial situation of the country is normal if the budget deficit does not exceed 2-3% of GDP or 8-10% of the expenditure part of the budget.

TOPIC 11 GENERAL MACROECONOMIC EQUILIBRIUM: THE MODEL OF AGGREGATE DEMAND AND AGGREGATE SUPPLY (MODEL AD-AS)

11.1 Aggregate demand, its elements and factors

One of the basic concepts of macroeconomics is aggregate demand (AD), which represents the total volume of goods and services that make up the effective demand in the country's economy. In other words, **aggregate demand** (AD) is the volume of goods that consumers, enterprises and the government (state) want and can buy at any possible price level in a certain period of time. In value terms, it is the sum of all expenditures on final goods and services produced in the economy. Based on this, in the structure of aggregate demand, we can distinguish 4 macroeconomic entities that affect the volume of demand: **AD = C+I+G+X_n**

1) aggregate household demand I – consumer demand for goods and services (minus expenses related to housing construction);

2) firms demand for investment (I);

3) demand for goods and services from the state (G), which includes state investment programs, housing and road construction;

4) foreign demand for domestic goods from foreigners-net exports (X_n) – the difference between foreign demand for domestic goods and domestic demand for imported goods.

At the same time, in reality, some components of aggregate demand are capable of changing rapidly (investment, government spending), while others are relatively stable in terms of volume and are changing slowly (consumer spending).

The formation of aggregate demand is directly influenced by many factors, however, as well as for individual demand, one of the most significant factors affecting aggregate demand is price. But a distinctive feature of aggregate demand is that nothing else but GDP will have to be bought here. This means that when

forming aggregate demand, the price parameter cannot be expressed in the form of a price for a specific product. Therefore, when analyzing aggregate demand, such a concept as “the level of aggregate price” is used, which expresses the dynamics of the entire aggregate of prices for final products.

To graphically reflect the degree of dependence of the aggregate demand value on the price factor, a two – sector model “price-volume of demand” is used. Vertically, the price level (P) is postponed, and horizontally – the volume of aggregate demand, or the volume of purchased GDP (Y). **The aggregate demand curve** illustrates the change in the volume of expenditures of the household, business, government and foreign sectors at each possible price level. The aggregate demand curve acts as a geometric place of points, each of which corresponds to a certain combination of output volume and the general price level in the national economy.

It is believed that, all other things being equal, there is an inverse relationship between aggregate demand and the general price level in the country: the lower the price level, the greater the aggregate demand (that is, the greater the volume of the national product consumers can purchase) and, vice versa.

The aggregate demand curve has a distinct negative slope. It turns out that the lower the price level in the country, the greater the volume of GDP (Y) will be redeemed with the same mass of funds in circulation. This dependence is explained by the following effects in the economy:

1) **Interest rate effect.**

The interest rate is a fee for the use of borrowed funds. An increase in prices in the economy with a constant amount of money in circulation leads to an increase in demand for money. This means that the price of money – the interest rate-increases. As a result, buyers will postpone some purchases, and entrepreneurs will refuse loans if investing in production does not give them the necessary profit. On the other hand, a high interest rate is an incentive for the

population to save more. The result of this will be a reduction in demand for the real national product.

Thus, the effect of the interest rate is that a higher price level increases the demand for money, thereby increasing the interest rate, which causes a reduction in demand for the real volume of the national product, and vice versa.

2) The wealth effect.

The wealth of the country's population is expressed in the real value, or purchasing power, of accumulated financial assets (term deposits, bonds, shares, etc.). With an increase in the price level, the value of assets (accumulated wealth) decreases. In this case, the population will really become poorer. In this situation, the population seeks to compensate for losses by reducing current consumption and increasing deductions to savings. So, the owners of financial assets are forced to reduce their expenses, and the amount of aggregate demand is reduced.

Thus, the wealth effect is that, depending on the increase or decrease in prices, the real value of the wealth of the population (those financial assets that can be used as a means of payment) decreases or increases, which (all other things being equal) leads to a decrease or increase in the aggregate demand for goods and services.

3) The effect of import purchases.

The volume of exports and imports depends on the ratio of prices within the country and abroad. If prices increase within the country above foreign prices, buyers of this country will reduce the demand for domestic goods, and will buy more imported goods. At the same time, the export of domestic goods abroad will also decrease, as foreigners will refuse to buy goods at high prices and will refocus on purchasing similar goods in other countries.

As the net export indicator will decrease, as a result, the volume of aggregate demand will also decrease.

Thus, the effect of import purchases is that an increase or decrease in prices for domestic goods leads to a decrease or increase in aggregate demand for them and thereby a decrease or increase in net exports.

As a result of these three effects, there is a movement along the aggregate demand curve.

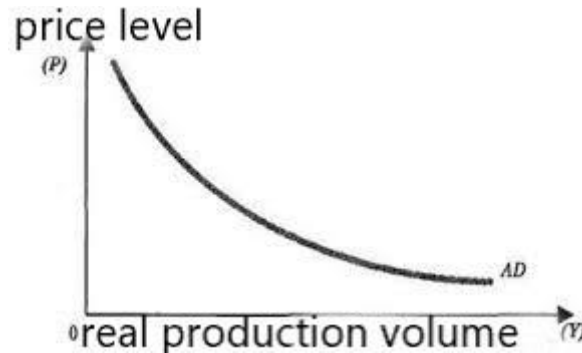


Figure 11.1 – Aggregate demand curve

In addition to price factors, non-price factors have an impact on aggregate demand and its deviation. The effect of non-price factors will lead to a horizontal shift in the aggregate demand graph. It is impossible to list all the non-price factors that cause changes in aggregate demand, since it is impossible to cover all the reasons that cause changes in the national market or foreign economic conditions that affect aggregate demand in one way or another, therefore, based on the components that form aggregate demand, there are also four groups of non-price factors that affect household consumer spending, business investment spending, the volume of public purchases of goods and services and the value of net exports.

Changes in consumer spending, depending on the level of consumer welfare, that is, the amount of their income (with an increase in income, consumer spending increases, and vice versa); forecasts and expectations of consumers (if they believe that in the future their real income will increase, then their expenses, and, consequently, aggregate demand will begin to increase); inflation expectations; debt for previously purchased goods (a high level of debt, formed as a result of previous purchases on credit, can force consumers to reduce today's spending, and vice versa); and also from taxation (a reduction in income tax, for

example, will cause an increase in consumer income, and, consequently, an increase in aggregate demand).

Changes in investment costs that depend on the level of interest rates (their increase leads to a decrease in investment costs); the amount of taxes from firms; expected profits from investments; technologies used (the introduction of new production technologies stimulates investment spending, forcing firms to demand new means of production to maintain their own competitiveness); the presence of excess capacity (their increase reduces aggregate demand, and vice versa).

Changes in government spending, which may be associated with the adoption of various state programs, the implementation of infrastructure projects, changes in the share of state ownership in the economy, etc. An increase in the amount of government spending at a given price level and unchanged interest and tax rates will lead to an increase in aggregate demand, a decrease – to a decrease in aggregate demand.

The change in the value of net exports – with its increase, aggregate demand increases, with a decrease-it decreases. Aggregate demand is also affected by changes in the exchange rate of the national currency (with its growth, goods produced domestically become more expensive for buyers from the foreign sector, which negatively affects the value of net exports and, as a result, aggregate demand).

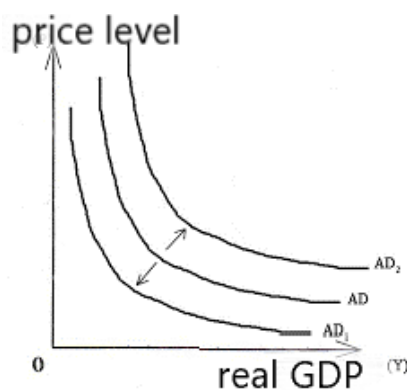


Figure 11.2 – The impact of non-price factors on the aggregate demand curve

11.2 The aggregate supply, its elements and factors

The aggregate supply (AS) is the sum of all final goods that are produced in the country and services that an enterprise can offer on the market at a certain time at each possible price level. The aggregate supply can be equated to the value of the gross national product or to the value of the national income.

The graphical expression of the aggregate supply value is **the aggregate supply curve**, which reflects changes in the aggregate real volume of production of goods and services with changes in the price level. At a higher price level, there are incentives to increase the volume of production and, consequently, the aggregate supply, that is, the aggregate supply curve has an ascending form, as well as the supply curve in individual commodity markets. However, the nature of the influence of the price level on the volume of national production and, consequently, the type of the aggregate supply curve depends crucially on the duration of the time period under consideration.

The aggregate supply curve consists of three segments: 1) Keynesian (or horizontal); 2) classical or vertical); 3) ascending (or intermediate).

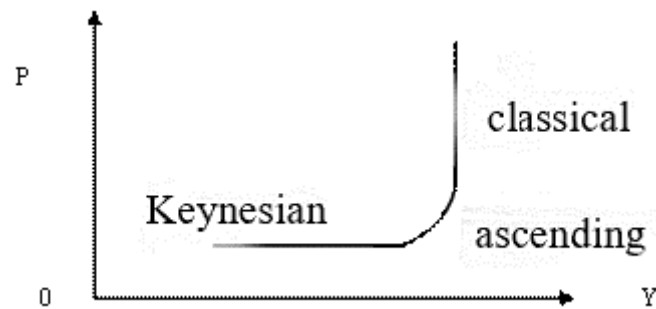


Figure 11.3 – The aggregate supply curve

On the Keynesian segment of the aggregate supply curve (that is, in the short term), national production is characterized by underemployment, underutilization of production capacities, a fixed level of prices and wages, a significant level of unemployment, resources that are not in demand by the economy. All this indicates that the economy is in a state of depression. In this

situation, the growth of output can be achieved without price incentives due to the introduction of unused resources into production.

The ascending (or intermediate) segment of the aggregate supply curve reflects the state when the national economy is close to the full usage of resources. There is a simultaneous increase in the gross public product and an increase in prices. The increase in prices is associated with an increase in the cost of producing an additional unit of production.

The classical segment of the aggregate supply curve reflects the state of the economy, in which its production capabilities are fully used. This is reflected in the full employment of labor resources, the maximum utilization of production capacities and, consequently, the impossibility of further production growth. Despite the growth of demand, the supply does not grow, but only its monetary revaluation occurs. The increase in prices is due to the scarcity of production resources, since in these conditions, the expansion of the output of individual producers requires high costs and can be achieved only through a significant increase in prices for the goods produced. Thus, in the long-term period, the aggregate supply curve tends to the vertical.

In addition to the price level, the aggregate supply is also affected by **non-price factors** that shift the aggregate supply curve to the right (growth of aggregate supply), or to the left (reduction of aggregate supply). The non-price factors of the aggregate offer include

Changes in resource prices – all other things being equal, their increase leads to an increase in unit costs and a reduction in aggregate supply. On the contrary, when the prices of resources decrease, the costs decrease, the aggregate supply increases.

The change in productivity, which expresses the relationship between the volume of products produced and the amount of costs associated with the production of these products. An increase in labor productivity means that the

total labor costs per unit of production are reduced or a larger volume of production is accounted for per unit of costs. Consequently, productivity is oppositely dependent on production costs. Since the cost of goods is determined by labor costs, a decrease in these costs leads to a decrease in production costs per unit of production, which increases the aggregate supply, shifting the supply curve to the right.

Changes in the economic policy of the state. For example, an increase in tax rates, all other things being equal, increases production costs. This is equivalent to an increase in the prices of raw materials. The result will be a reduction in the aggregate supply. And, conversely, state subsidies and lower taxes on business help to reduce costs and thereby expand the aggregate supply.

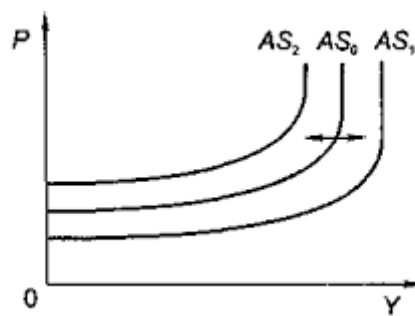


Figure 11.4 – The impact of non-price factors on the aggregate supply

Thus, the shift of the aggregate supply curve in one direction or another means that the economic conditions of economic management are significantly changing in the country. In addition to the above factors, it is necessary to take into account the impact on the aggregate supply of geopolitical changes, scientific and technological progress, the intellectual potential of the nation, the state of the existing production apparatus, the implemented management models, the presence or absence of economic transformations.

11.3 Macroeconomic equilibrium in the model AD-AS.

Macroeconomic equilibrium means a state of the national economy in which the value of the aggregate output offered for sale by all producers is equal to the value of the aggregate demand presented by all macroeconomic agents. To express graphically the macroeconomic equilibrium, there is an AD – AS model, which is the initial basic model for analyzing the macroeconomic equilibrium. On the graph, the equilibrium corresponds to the intersection point of the aggregate demand curve with the aggregate supply curve. The coordinates of this intersection point allow you to determine the value of the equilibrium volume of national production Y_e (equilibrium GDP) and the equilibrium price level (P_e).



Figure 11.5 – Macroeconomic equilibrium in the model AD-AS

In modern conditions, the aggregate demand is recognized as the most dynamic component in the AD – AS model. At the same time, the aggregate demand line may initially move to the right, and then to the left. With such a sequence of shifts in the aggregate demand curve, the so – called “ratchet effect” is observed (a ratchet is a mechanism that allows you to turn the wheel forward, but not backward), the essence of which is that prices (which are inflexible in the modern economy) easily rise, but hardly fall. Therefore, once the economic indicators have increased, they do not necessarily decrease, at least to the initial level. Suppose that the rapid development of national production and income

growth led to the fact that the line of aggregate demand took the position of AD_2 . The equilibrium point E_2 was formed, which corresponds approximately to the volume of GDP of the “full employment economy” (Y_2), as well as the price level (P_2). Let’s assume now that the expansion of imports and the curtailment of exports led to a decrease in the volume of demand for domestic products. A decrease in the volume of demand for domestic goods leads to the fact that after some time, monetary income and GDP will necessarily decrease. This is reflected as a shift of the aggregate demand curve to the AD_1 position.

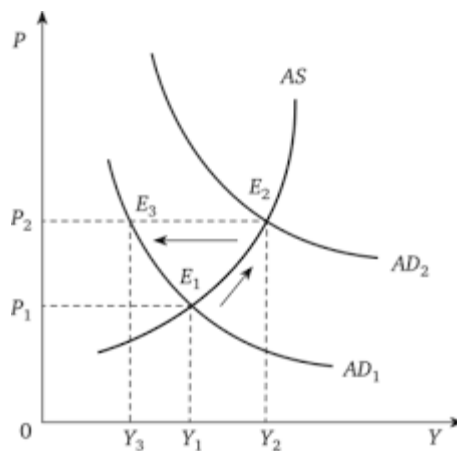


Figure 11.6 – Ratchet effect

This is how a new equilibrium point E_1 is determined. This equilibrium point corresponds to the volume of production Y_1 and the price level P_1 . But in reality, you need to be prepared for a different scenario. The fact is that workers are unlikely to agree with a reduction in nominal wages. In addition, previously concluded contracts for the supply of raw materials, contracts for the rental of premises and equipment, as well as credit agreements do not allow to quickly reduce production costs, following a reduction in production volume. Therefore, the reverse decrease in aggregate demand from the state from AD_2 to AD_1 will lead to the establishment of a new macroeconomic equilibrium in the economy at the point E_3 , at which the price level P_2 will remain, and the volume of production will decrease to Y_3 .

The consequences of an increase in aggregate demand depend on which segment of the aggregate supply curve – Keynesian, intermediate or classical-the economy is located. In other words, there are three types of macroeconomic equilibrium.

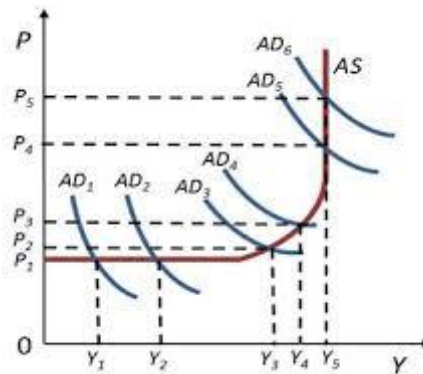


Figure 11.7 – Equilibrium in the AD-AS model

In the **Keynesian segment**, characterized by a high level of unemployment and a large number of unused production capacities, the expansion of aggregate demand (from AD_1 to AD_2) will lead to a significant increase in the real volume of national production (from Y_1 to Y_2) and employment without raising the price level (P_1), due to the involvement of unused resources in production.

If the curves of aggregate demand and aggregate supply intersect on a **vertical (classical) section**, a further increase in aggregate supply is impossible due to the maximum usage of production capacities and the lack of reserves. An increase in aggregate demand in this segment (from AD_5 to AD_6) leads to an increase in the price level (from P_4 to P_5), while the real volume of national production does not change (Y_5).

The economic mechanism for establishing short-term and long-term equilibrium in the economy, if the aggregate supply curve has a positive slope (intermediate section) is similar. However, with the growth of aggregate demand, firms not only sell off stocks and increase production, but also raise prices for

their products. At first, the economy moves along the curve of the short-term aggregate supply, since only the price factor acts and the value of the aggregate supply increases. As a result, the economy falls into a point of long-term equilibrium, which corresponds not only to a higher output volume (from Y_3 to Y_4), but also to a higher price level (from P_2 to P_3). Since the prices of resources (for example, the nominal wage rate) have not changed, and the price level has increased, real incomes (real wages) have decreased. Owners of economic resources begin to demand an increase in resource prices (nominal wages), which leads to an increase in costs (the impact of a non-price factor) and a reduction in aggregate supply (a shift to the left-up, which leads to an even greater increase in the price level. As a result, the economy gets to a point corresponding to the long-term equilibrium and the potential volume of output.

Therefore, an increase in aggregate demand leads to:

a) on the Keynesian (horizontal) segment, it leads to an increase in the real volume of national production of final goods and services, but does not affect the price level;

b) on the classical (vertical) segment, it leads to an increase in the price level, while the real volume of national production cannot go beyond its level “with full employment”;

c) on the intermediate segment, it leads to an increase in both the real volume of national production and the price level.

TOPIC 12 MACROECONOMIC INSTABILITY AND ITS FORMS OF MANIFESTATION

12.1 Cyclical nature of economic development and its causes. The economic cycle and its phases

Macroeconomic instability manifests itself in a reduction in the volume of production and a decrease in its efficiency, in price spikes, in a decrease in labor income and savings, in the braking of scientific and technological progress. It was noticed that this state of the economy manifests itself periodically, that is, in its development, the economy seems to be “pulsating”: periods of recovery are replaced by recessions, then the recovery starts again. Graphically, the macroeconomic dynamics can be represented by a wave-like line, where each wave corresponds to the full cycle of economic development.

Cyclicality is the frequency of repeated disturbances of equilibrium in the economic system, leading to the curtailment of economic activity, recession, crisis.

The characteristic features of cyclicality include the following:

- movement is not in a circle, but in a spiral, i.e. cyclicality is a form of progressive development;
- each cycle has its own phases and duration;
- cycles are unique, i.e. each cycle has no analogues in historical development;
- all cycles in nature and society are interconnected.

The economic cycle consists of the following phases: crisis, depression, recovery, rise.

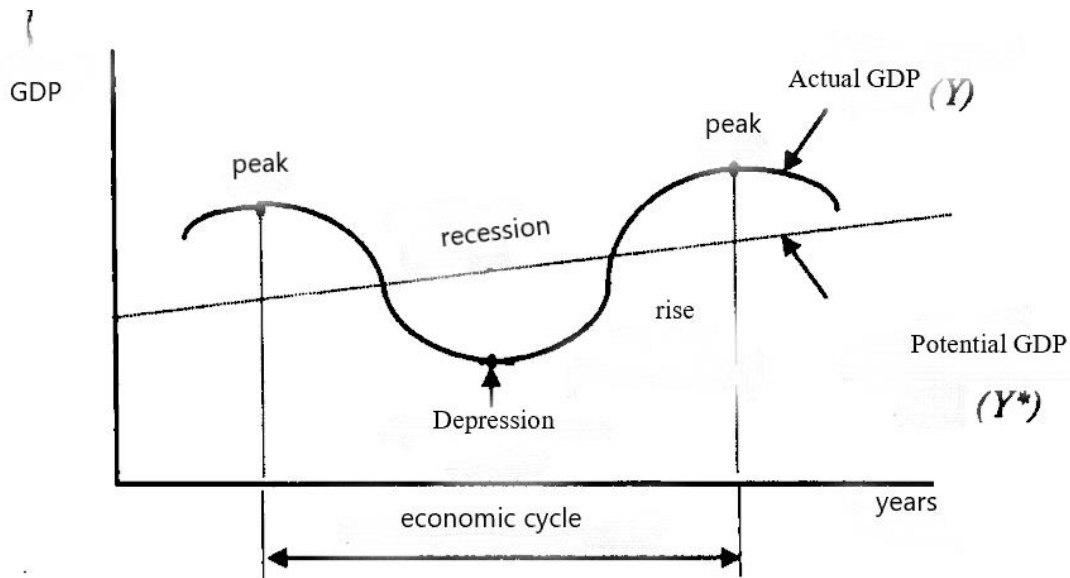


Figure 12.1 – Economic cycle

The most destructive phase of the economic cycle is the **crisis** (recession). The balance in the entire economy is disturbed. Before the crisis, the economy is in a phase of recovery, when it is thriving in all respects. The market at some point in time turns out to be overflowing with goods, but many enterprises continue to work, supplying the market with new goods. The demand begins to decrease gradually, lagging behind the supply. Difficulties with sales lead to a reduction in production and an increase in unemployment. The period of mass bankruptcy of enterprises, as well as financial and credit institutions, begins, since the non-repayment of loans is massive. In conditions of a lack of liquidity to pay off debts, banks increase the loan interest rate and the loan becomes inaccessible to the bulk of entrepreneurs.

The crisis is followed by the second phase of depression (stagnation), which is of a long nature, sometimes being the longest in time. **Depression** is characterized by stagnation of production, underutilization of resources, failure of outdated fixed capital (primarily machinery and equipment), which is an important prerequisite for reducing production costs in order to adapt to the

established low price level. Weak economic activity causes unemployment and the actual GDP is less than the potential one.

The third phase of **recovery** is characterized primarily by the activation of economic activity, a partial renewal of fixed capital, an increase in production volumes, and an increase in interest rates. Prices and profits of enterprises are beginning to grow. Since the actual GDP approaches its potential level, and then exceeds it until it reaches its maximum, which will again lead to a boom phase.

The recovery is followed by the IV phase – **the rise** (boom, prosperity). The criterion for the transition of the economy from recovery to the rise phase is the achievement of the pre-crisis level of production. The recovery is determined by the continuation of the economic growth started in the previous phase, the achievement of relatively full employment, the expansion of production capacities, their modernization, the creation of new enterprises.

The recovery phase reaches its peak after a while, the gap between production and the effective demand of the population begins to grow, which inevitably slides into a new crisis.

All the theories explaining the causes of cycles and crises can be generalized and two main groups can be distinguished.

1) External, according to which cycles are caused by external factors. This includes wars, revolutions and political upheavals, population growth rates. It is believed that these external factors influence the change in investment, which in turn affect the volume of production, employment and prices.

2) Internals explain the economic cycle by internal factors inherent in the economic system itself. Such as fluctuations in consumer and investment demand, violations in the sphere of monetary circulation, failures in the functioning of the market mechanism as a result of state intervention in economic processes, changes in the country's position on the world market, slowing down the pace of scientific and technological progress, etc.

According to the duration in the economy, the following types of economic cycles are distinguished:

- century-long cycles lasting a hundred or more years and associated with the emergence of new scientific discoveries and inventions that produce a real revolution in production technology (the change of the “century of steam” of the XIX century to “the century of electricity” of the XX century, and then the “century of electronics and automation” of the XXI century);
- “Kondratiev cycles”, lasting 50-70 years, and associated with the expiration of the service life of industrial and non-industrial buildings and structures (the passive part of physical capital) (for example, the crisis of 1873, the Great Depression of 1929-1933, the stagflation of 1974-1975, etc.);
- classical cycles that last 10-12 years and are associated with a massive renewal of the active physical capital (production equipment); due to the increasing importance of obsolescence of equipment, the duration of such cycles in modern conditions has been reduced to 4-6 years;
- Kitchen cycles lasting 2-3 years, associated with the mass renewal of durable goods by consumers (cars, audio, video, household appliances, etc.).

12.2 Inflation, its definition and measurement. Causes, forms and consequences of inflation

Inflation is a phenomenon that means the overflow of the sphere of circulation with an excess mass of money in comparison with the needs of commodity turnover, their depreciation and, as a result, an increase in prices for goods and services. So, **inflation** is a decrease in the purchasing power of money due to rising prices. However, not every price increase is inflationary in nature. Thus, it will be economically justified to increase prices due to improving the quality of products, worsening the conditions for extracting raw materials, changing the structure of demand. At the same time, the systematic increase in

prices for goods without improving their quality characteristics is explained by inflation.

The reasons.

First, inflation occurs as a result of the wrong monetary policy of the central bank, when there is an excess money supply that is not provided with goods.

Secondly, the reason for inflation is the budget deficit. In the case of an additional monetary issue, inflation develops in large leaps, devaluing the national currency. In another case, through regular government loans from the central bank. In such a situation, inflation is still inevitable, but it proceeds smoothly.

Thirdly, incorrect actions of the state in the field of taxation lead to inflation. First of all, we are talking about high income tax rates, which cause significant difficulties in financing capital investments in production for firms and they are forced to raise prices for products, which creates inflationary processes.

Fourth, the monopolization of markets affects the intensity of inflation. In an effort to maintain a dominant position in the market, monopolies not only set and maintain high prices, but also reduce the size of production and supply of goods. This leads to an increase in the gap between aggregate demand and aggregate supply, stimulating inflationary processes in the economy.

Fifth, the cause of inflation may be the inflationary expectations of the population. People, faced with an increase in prices for goods and services for a long period of time and losing hope of their reduction, begin to purchase goods beyond their current needs. At the same time, they demand an increase in nominal wages and thereby push the current consumer demand to expand. The expansion due to inflationary expectations of current demand stimulates further price growth.

All of the above can be attributed to the internal causes of inflation.

External causes should also be distinguished. External causes include a negative balance of foreign trade and balance of payments, unfavorable conditions

on the world market, for example, a drop in prices for exported goods and an increase in prices for imported products, as well as an increase in external debt. In addition, it is possible to transfer inflation from short-term capital that moves abroad in search of the highest interest rate.

Let's dwell upon inflation on the demand side and on the cost side in details.

If the cause of inflation is the growth of aggregate demand, then this type is called demand inflation. Such an expansion can be caused either by an increase in any of the components of aggregate expenditures (consumer, investment, government or net exports), or by an increase in the money supply. The growth of the money supply leads to an increase in the price level (from P_1 to P_2) in both the short and long term.

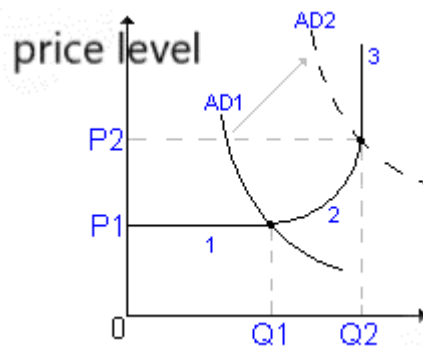


Figure 12.2 – The impact of demand inflation on the change in aggregate demand

If inflation is caused by a reduction in aggregate supply, then this type of inflation is called supply (or cost) inflation. The main sources of it are the increase in wages and prices for raw materials and energy. Cost inflation leads to stagflation – a simultaneous decline in production (from Q_2 to Q_1) and an increase in the price level (from P_1 to P_2).

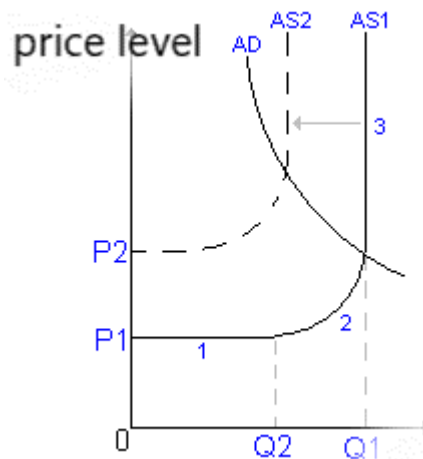


Figure 12.3 – The impact of cost inflation on the change in aggregate supply

In reality, it is difficult to distinguish between inflation caused by an increase in demand and inflation caused by an increase in costs. Demand inflation leads to the fact that a number of enterprises are forced to raise prices for their products in a situation where full employment has been achieved, since production costs have increased (for example, salary costs). However, in this case, for many firms, demand inflation looks like inflation caused by rising costs (for example, raw material costs).

Depending on what forms the inflationary disequilibrium takes, there is a distinction between **open and hidden** (or suppressed) inflation.

Hidden inflation manifests itself in a situation when the economy is faced with a shortage of goods, and prices, in fact, remain unchanged. In this case, there is a depreciation of money, expressed in a shortage of goods. Usually, this situation arises as a result of excessive state intervention in pricing mechanisms, as well as in the case of natural disasters and military conflicts.

Open inflation is easily detected when the price level rises. It lets you know about the manifestation of price inflation directly. The increase in prices indicates that the balance between aggregate demand and aggregate supply is disturbed.

The main indicator of inflation is the rate (or level) of inflation (π), calculated as a percentage of the difference between the price levels of the current and previous year ($P_t - P_{t-1}$) to the price level of the previous year (P_{t-1}):

$$\Pi = \frac{P_t - P_{t-1}}{P_{t-1}} \cdot 100\% \quad (12.1)$$

According to the rate (level) of inflation, there are:

- moderate inflation, measured by percentages per year (from 3-5 to 10%); such inflation is considered normal for the modern economy and even acts as an incentive to increase output;
- galloping inflation, also measured as a percentage per year, but already in double digits, which is considered a serious economic problem for developed countries;
- high inflation, measured in percentages per month, and amounting to 200-300% or more percent per year, which is observed in many developing countries and countries with economies in transition.
- hyperinflation, measured by percentages per week and even per day, the level of which can exceed 1000% per year.

The following negative effects of inflationary processes on the national economy can be distinguished:

- 1) A decrease in real income, that is, the amount of goods and services that can be bought with nominal income (the amount of money received).
- 2) A decrease in the purchasing power of money, that is, the number of goods and services that can be bought for one monetary unit (the difference between the values of the purchasing power of money at the beginning and at the end of the period during which inflation occurs is the so-called inflation tax).
- 3) Periods of high and especially hyperinflation – a process called “flight from money”, that is, the rapid disposal of people from their available cash. Inflationary psychosis is found in the fact that the population of the country ceases to trust local banks and savings institutions.

However, as strange as it may seem, inflation can also benefit the economy. For example, moderate inflation can have a positive impact on the course of many macroeconomic processes. First of all, the increase in prices significantly reduces the propensity of the population to save, warms up the inflation expectations of households, which immediately activates effective demand and, as a result, economic growth. The increase in prices is accompanied by an increase in the profitability of products, which automatically activates the business activity of the business, contributes to the growth of GDP and the level of employment of the population.

Government intervention in pricing is necessary, because often the market cannot balance the price level itself, trying to regulate the aggregate supply and demand. Therefore, in order to cut off the development of inflationary processes at the root, the state is developing a comprehensive pricing policy that takes into account the interests of both producers and consumers. Measures of influence on producers on the part of the state can be both direct and indirect.

Indirect regulation includes measures that affect demand, supply, the level of competition and other factors of macroeconomic balance. They also include the adoption and improvement of antimonopoly legislation, stimulation of small and medium-sized businesses, reasonable tax policy, denationalization and privatization, the provision of subsidies; control and regulation of income of the population.

The main methods of direct price regulation include:

- 1) setting an upper absolute price limit, the so-called “price ceiling”;
- 2) limiting price growth by regulating the standard of profitability as a percentage of cost;
- 3) establishment of restrictions on intermediary remuneration;
- 4) determination of the lower price limit, the so-called “price floor”.

Thus, the state regulation of prices occupies an important position in the modern economy. In addition, state intervention in pricing stimulates the development of market relations by limiting the share of monopoly power of firms and creating favorable conditions for competition.

12.3 Unemployment. Types of unemployment. Determination of the unemployment rate. Economic and social consequences of unemployment.

An important phenomenon that characterizes macroeconomic instability and has a cyclical nature of development is unemployment. **Unemployment** is a situation in the economy when a part of the working-age population does not have a job, but is actively looking for it.

The population of the country from an economic point of view is divided into two groups: those included in the number of labor force (L) and those not included in the number of labor force.

People are not included in the number of the labor force (economically inactive population), this includes people who are supported by society and state institutions (for example, children under 16), as well as those who do not want or cannot work and are not looking for work (for example, full-time students, housewives, vagrants).

The active part of the working-age population (or the labor force) includes people who can work, want to and are actively looking for work.

There are two components:

1) employed E – people who have a job, as well as people who are temporarily not working, because they are on vacation, are ill, due to weather conditions;

2) unemployed (U) -people who do not have a job, but are actively looking for it; at the same time, job search is the main criterion that distinguishes the unemployed from people who are not included in the labor force.

Thus, the total number of workers is equal to:

$$L = E + U \quad (12.2).$$

The main indicator of unemployment is **the unemployment rate** (u), that is, the ratio of the number of unemployed to the total number of the labor force, expressed as a percentage:

$$u = \frac{U}{L} \times 100\% \quad (12.3)$$

Depending on the reasons, there are several types of unemployment:

Frictional unemployment is associated with the search for, waiting for work. The peculiarity of frictional unemployment is that ready-made specialists with a certain level of professional training and qualifications are looking for work. Therefore, the main reason for this type of unemployment is the imperfection of information (information about the availability of jobs). This type includes those who quit voluntarily; seasonal workers; people who are dissatisfied with earnings or working conditions, the socio-psychological climate in the team, the location of the enterprise, etc.; people who are just starting their working life and are busy looking for a job.

Structural unemployment occurs in connection with technological changes in the structure of aggregate demand and aggregate supply, is associated with structural transformations in a particular industry, in the economy as a whole. The reason for structural unemployment is the discrepancy between the structure of the labor force and the structure of jobs. It means that people with professions and qualifications that do not meet modern requirements and the structure of the economy, being dismissed, will not be able to find a job. Structural unemployed, in addition, include people who first appeared on the labor market, including graduates of higher and secondary specialized educational institutions, whose profession is no longer required in the economy.

In total, frictional and structural unemployment forms natural unemployment, which corresponds to the state of full employment of the labor

force. Currently, in economically developed countries, it is considered that the natural unemployment rate is equal to 4–6 %.

Actual unemployment may exceed its natural level. This happens during a recession in the economy. Unemployment caused by a recession is **cyclical unemployment**. It means that there is an underemployment of resources in the economy, that is, the actual unemployment rate is higher than the natural one.

Excessive unemployment entails economic and non-economic **consequences**.

The economic consequences of unemployment at the individual level are the loss of all or part of income, as well as the loss of qualifications. At the level of society as a whole, part of GDP is under-produced, since the economy is not able to create enough jobs for everyone who wants and can work. The relationship between GDP and unemployment was studied by Arthur Oaken. This dependence is called the Oken law: the excess of the actual unemployment rate by one percent over its natural level leads to a decrease in actual GDP compared to the potential GDP by an average of 2.5%.

Since unemployment is a serious macroeconomic problem and acts as an indicator of macroeconomic instability, the state implements a **state policy to combat unemployment**, which includes the following measures: common for all types of unemployment (payment of unemployment benefits, creation of employment services), specific measures to combat frictional unemployment (improvement of the system for collecting and providing information on the availability of vacant jobs), specific measures to combat structural unemployment (creation of a system for retraining the unemployed), specific measures to combat cyclical unemployment (implementation of a stabilization policy).

TOPIC 13 THE WORLD ECONOMY AND CURRENT TRENDS IN ITS DEVELOPMENT

13.1 The world economy and the prerequisites for its formation.

The world economy is a set of national economies that interact and cooperate with each other countries.

The basis for the formation of the world economy was the geographical location of countries, the international division of labor, which was manifested in the specialization and cooperation of individual countries in the production of certain types of goods and services, as well as the aggravation of global problems.

Structure of the world economy.

To classify the structure of the world economy, it is common to use the following indicators: GDP per capita, the sectoral structure of the economy and knowledge-intensive industries, and the level and quality of life of the population.

In the modern economic literature, it is common to distinguish several main features for classifying countries of the world:

- according to the level of development, countries are divided into developed and developing.

- according to the degree of development of the market economy in international practice, all countries of the world are often divided into three main groups: developed countries with market economies, countries with transition economies and developing countries.

The group of developed countries with market economies includes countries with a high level of socio-economic development, whose GDP per capita is more than 20 thousand dollars. These are all the countries of Western Europe, the USA, Canada, Japan, Australia, New Zealand. In 1997, the IMF assigned South Korea, Singapore, Hong Kong, Taiwan and Israel to this group of countries.

The group of countries with economies in transition consists of the States of Central and Eastern Europe, the countries of the former Soviet republics, Mongolia, China and Vietnam, which are making the transition from a command and administrative economy to a market economy.

The third group is the so-called developing countries. This group is the most numerous and very differentiated, since it unites countries at different stages of economic development, some of which have not yet passed the stage of industrialization. Because of this, among developing countries, there are:

- First, the group of oil exporting countries, the core of which consists of 12 member countries of the Organization of Petroleum Exporting Countries (OPEC). Despite the fact that many of this group of countries have a fairly high level of GDP per capita due to their oil exports, they cannot be classified as industrially developed countries;

- Secondly, countries with a relatively high level of development, rapid and drastic changes in the structure of the economy, stable economic growth and exports. These are countries such as Brazil, Mexico, India, Turkey, Indonesia, Malaysia, Thailand, etc.;

- Third, underdeveloped and economically backward countries. These include most countries in Africa, Latin America, and a number of Asian countries. These countries, in turn, are divided into the poorest with a GDP per capita of 500 to 800 dollars per year (Ethiopia, Chad, Bangladesh) and countries with an average level of development (GDP per capita of 500 to 3 thousand dollars per year).

13.2 Forms of international economic relations

The main forms in the structure of international economic relations are:

- international trade in goods and services.

- international labor migration. It manifests itself in the movement of the working-age population in order to get a job outside the country of residence for a certain time period.

- international capital movement. This is due to the migration of capital between countries, mainly business and loan funds.

- international monetary and financial relations. They are determined by international agreements and are based on the development of monetary circulation and the international division of labor.

- international economic integration. Among the types of integration, there are three groups: bilateral integration associations, multilateral and continental.

- international cooperation in solving global problems. It manifests itself in the joint actions of the entire world community to overcome poverty and backwardness, solve environmental, demographic, and food problems, maintain peace and fight terrorism, and promote human development.

- scientific and production cooperation. It is carried out in the form of joint programs of research and design work by combining scientific, financial and material resources, creating joint research groups of specialists or organizations.

13.3 Fixed and floating exchange rates. The demand for currency. Currency supply

In order to ensure the functioning of trade and financial relations and conduct operations between countries, a certain ratio is established between their national monetary units. The monetary unit of a country is called the national currency. The ratio of national currencies - the exchange rate.

There are fixed and floating exchange rates.

A fixed exchange rate is a constant exchange rate set by the central (national) bank, which is not influenced by market forces. In this situation, the

maintenance of a stable exchange rate is carried out with the full support and participation of the state.

A floating exchange rate is the exchange rate of currencies, the establishment of which is not influenced by either the state or the central bank, which is determined by market conditions of functioning, changes in supply and demand.

The exchange rate is formed by the interaction of supply and demand. The price of a foreign currency, like any other commodity, is determined by supply and demand. Just as the price of any commodity is influenced by supply and demand, the exchange rate is subject to a number of factors, among which the supply and demand for a particular currency play a certain role.

13.4 The Republic of Belarus in the world economy

The Republic of Belarus is geographically the center of Europe. Its territory is 207.6 thousand square kilometers or 0.15% of the world's territory, the population is 9.7 million people (0.18% of the world's population), of which 72.8% live in cities.

The Republic of Belarus does not have a strong raw material base, including fuel and energy. However, the republic has significant forest and water resources, such minerals as potash and rock salt, raw materials for the production of construction materials.

The republic has a fairly developed production potential – qualified personnel. And, as a result, a highly developed industry, dominated by manufacturing industries, a high proportion of mechanical engineering, chemical and petrochemical industries. The most developed are automobile, tractor and agricultural engineering, machine-tool construction, electrical and radio engineering industries, instrument making.

The republic occupies an advantageous geostrategic position and has a sufficiently developed infrastructure corresponding to the geographical location of the country (railway transport, a network of highways and other communications). The Belarusian tourist potential is significant, which is based on the attractiveness, sometimes uniqueness of the country's natural landscapes, cultural, historical monuments and values.

The Republic of Belarus is a country with an open economy integrated into the global world economy.

The structure of Belarusian exports generally meets the criteria of an industrial state. It is based on machinery, equipment, vehicles, products of the chemical industry, metal production and metalworking, agricultural machinery and consumer electronics, etc.

In recent years, the republic's foreign economic relations have significantly intensified, which indicates positive trends in the development of the economy, increasing its competitiveness.

It shows that the Republic of Belarus has a number of competitive advantages that create prerequisites for the further development of foreign economic relations and exports, in particular. It is obvious that the position of the Republic of Belarus in the world economy largely depends on the level and efficiency of using potential competitive advantages.

**SECTION 2 PRACTICE
TUTORIAL PLANS**

Topic 1. Economic theory: subject and method (2 hours)

1. The economy as a sphere of society's vital activity. Production and its importance for the development of society.
2. Economic sciences. General and private economic sciences. The subject and functions of economic theory. Positive and normative economic theory.
3. Methods of economic science.
4. The main scientific schools and modern trends in the development of economic theory.

Topics of reports and abstracts

1. The usage of graphs in economic analysis.
2. Formation and development of economic science. Modern trends in the development of economic theory.

Topic 2. Needs and resources. The problem of choice in economics (4 hours)

Tutorial 1

1. Needs as a prerequisite for production. Types of needs. The law of the elevation of needs.
2. Economic resources. Classification and characteristics of resources. Factors of production, their types and characteristics.
3. Fixed and working capital. Depreciation of fixed capital and depreciation.

4. Economic benefits: types, main characteristics. Interchangeability and complementarity of benefits.

Tutorial 2

1. The company's production capabilities and their boundaries. The problem of choice in economics.

2. Alternative (imputed) costs. The law of increasing imputed costs.

3. Production, reproduction and economic growth.

Topics of reports and abstracts

1. Characteristics of the resource base of the economy of the Republic of Belarus.

2. Economic growth: "for" and "against". A new quality of economic growth.

Topic 3. Economic systems (2 hours)

1. Economic systems: concept, elements and levels.

2. Property in the economic system, its concept, objects. Types and forms of ownership.

3. Classification criteria and types of economic systems.

4. Ways of coordinating economic life: traditional, market, team, mixed economy.

Topics of reports and abstracts

1. Modern theories of price.

2. Types and forms of ownership in the Republic of Belarus. Problems of reforming property relations.

Topic 4. Market economy and its models (2 hours)

1. Market: concept, conditions of occurrence, functions. The market economy and its main features.
2. Competition in the market mechanism: concept, types.
3. The structure and infrastructure of the market economy.
4. Imperfections (fiasco) of the market. The role of the state in the market economy.
5. Models of the market economy.

Topics of reports and abstracts

1. A model of the circulation of resources, products and income in a market economy.
2. Stock exchange as an element of the market infrastructure: features of functioning.
3. Socially oriented market economy: origins and principles.

Topic 5. Demand, supply and market equilibrium (2 hours)

1. Demand: concept, factors. The law of demand.
2. Supply and the factors that determine it. The law of supply.
3. Industry market equilibrium. The consequences of changes in supply and demand.
4. The benefit from the exchange: the surplus of the consumer and the producer.

Topics of reports and abstracts

1. Cobweb model of industrial market equilibrium.

Topic 6. Elasticity of supply and demand (2 hours)

1. The concept of elasticity. Elasticity of demand: concept, factors, indicators.
2. Price elasticity of demand. Point and arc elasticity. Cross-elasticity of demand.
3. Elasticity of supply: concept, indicators, factors.
4. The practical significance of the elasticity analysis and the total income of the commodity producer.

Topic 7. Fundamentals of the behavior of subjects of the modern market economy (8 hours)***Tutorial 1***

1. The household as an economic entity. The concept of a rational consumer.
2. Utility: the concept, general and marginal utility. The law of decreasing marginal utility.
3. The cardinalist approach to the assessment of utility. Consumer equilibrium and the utility maximization rule.
4. Firm (enterprise) as an economic entity. Organizational and legal forms of the enterprise.

Tutorial 2

1. Production and technology. Production function. Short-term and long-term periods. Constant and variable factors of production.
2. The production choice of the company in the short term. Total, average and marginal product. The law of decreasing marginal productivity.
3. Isoquants. The maximum rate of technological substitution.
4. The production choice of the company in the long term.

Tutorial 3

1. The concept and classification of costs. Internal and external costs. Accounting and economic costs.

2. Production costs in the short term. Fixed and variable costs. Total, average, marginal costs, their dynamics and interrelation.

3. Production costs in the long term. Scale effects, their types. The problem of the optimal size of the enterprise.

Tutorial 4

1. Isocosts. The balance of the commodity producer. The rule of minimizing costs. The growth trajectory.

2. The company's income. Total, average and marginal income: the concept, trends of change, the relationship.

3. The company's profit and its types. Profit indicators. The rule of profit maximization.

4. The state as an economic entity. Microeconomic regulation, its directions and tools.

Topic 8. Key macroeconomic indicators (2 hours)

1. The national economy and its general characteristics.

2. National accounting and the system of national accounts. The system of macroeconomic indicators.

3. Gross domestic and gross national product. Methods of calculating the gross domestic product.

4. Price indices and their role in the calculation of macroeconomic indicators. Nominal and real GDP.

5. National wealth: structure and methods of measurement.

Topics of reports and abstracts

1. The structure of the national economy of the Republic of Belarus and the need for structural adjustment during the transition period.

Topic 9. Monetary system (2 hours)

1. The origin and essence of money. Functions of money.
2. The monetary system, its links and their functions. Operations of commercial banks.
3. Credit and its forms. Creation of money by banks.
4. Monetary system of the Republic of Belarus.

Topics of reports and abstracts

1. The banking system of the Republic of Belarus.
2. Credit and its role in the functioning of the economy.

Topic 10. Financial system (2 hours)

1. The concept of the financial system, its structure and functions.
2. The tax system. The essence and principles of taxation. Taxes, their functions and types.
3. The state budget and its functions. Budget revenues and expenditures.
4. Budget deficit and budget surplus.
5. The financial system of the Republic of Belarus.

Topics of reports and abstracts

1. The State budget of the Republic of Belarus.
2. Taxes as a tool for regulating economic processes.

Topic 11. General macroeconomic equilibrium: a model of aggregate demand and aggregate supply (2 hours)

1. Aggregate demand: concept, elements. The aggregate demand curve. Non-price factors of aggregate demand.
2. Aggregate offer. The total supply curve. Factors of the aggregate supply.
3. Macroeconomic equilibrium. Short-term and long-term equilibrium in the AD – AS model. Ratchet effect.

Topics of reports and abstracts

1. Classical and Keynesian models of macroeconomic equilibrium.

Topic 12. Macroeconomic instability (4 hours)

Tutorial 1

1. Macroeconomic instability and its forms of manifestation.
2. The cyclical nature of economic development and its causes. The economic cycle and its phases.
3. Employment and unemployment. Types of unemployment. Determining the unemployment rate.

Tutorial 2

1. The economic costs of unemployment. Oken's law. Inflation, its causes, methods of calculation, forms. Socio-economic consequences of inflation.
2. Inflation and unemployment in the Republic of Belarus.

Topics of reports and abstracts

1. Unemployment in the Republic of Belarus: level, dynamics, structure.
2. Inflationary processes in the Republic of Belarus and the main directions of anti-inflationary policy.

Topic 13. The world economy and current trends in its development**(2 hours)**

1. The world economy and the prerequisites for its emergence. The structure of the world economy.
2. Forms of international economic relations.
3. Current trends in the development of the world economy.
4. Exchange rate: concept, types. Factors affecting the exchange rate.
5. The place of the Republic of Belarus in the system of world economic relations.

Topics of reports and abstracts

1. International scientific and technical cooperation.
2. Principles of functioning of the Jamaican monetary system.

SECTION 3 KNOWLEDGE CONTROL**EXAM QUESTIONS**

1. Economics and economic sciences. Economic theory and its subject. Economic categories and laws.
2. Functions of economic theory. Positive and normative economic theory.
3. Main scientific schools and modern trends in the development of economic theory.
4. Methods of economic analysis.
5. Needs and benefits, their characteristics and classification.
6. Resources (factors) of production. Classification and characteristics of resources and factors of production. Labor, land and capital. Fixed and working capital. Depreciation of fixed capital. Depreciation.
7. Limited resources and the problem of choice in the economy. The production capabilities of the economy and their boundaries. The law of increasing imputed costs.
8. Production, reproduction and economic growth.
9. The concept, elements and levels of the economic system. Criteria for identifying types of economic systems.
10. Property, its essence and place in the economic system. Types and forms of property.
11. Property reform: nationalization, denationalization and privatization. Property reform in the Republic of Belarus.
12. Ways of coordinating economic life: traditions, market, team. Natural economy and market (commodity) economy: conditions of development, types, features. Typology of modern economic systems.
13. Market: concept, functions. The role of private property, free pricing and competition in the market. Types of competition.

14. Market economy, its structure and infrastructure.
15. Imperfections (fiasco) of the market. The objective necessity of state intervention in the functioning of the market economy. Methods of regulating the market economy.
16. Models of the market economy. Liberal and socially-oriented market models. Features of the Belarusian national model.
17. Supply and demand in the market mechanism and the factors determining them.
18. Industry market equilibrium. Consequences of price deviation from the equilibrium level.
19. Elasticity of demand: concept, dimension, factors, types. The practical significance of elasticity analysis.
20. Elasticity of supply: concept, dimension, factors.
21. The household as an economic entity. The concept of general and marginal utility. The law of decreasing marginal utility. Utility and demand.
22. Enterprise (firm) as an economic entity. Types of enterprises.
23. Production function. Constant and variable factors. Long-term and short-term production periods.
24. The total, average and marginal product of a variable factor: the concept, measurement, relationship. The law of decreasing marginal productivity.
25. Interchangeability of production factors. Isoquant. The maximum rate of technological substitution.
26. The concept and classification of costs. Accounting and economic costs.
27. Production costs in the short term. Fixed and variable costs. Total, average and marginal costs, their dynamics.
28. Production costs in the long term. The effect of scale. The optimal size of the enterprise.

29. Isocosts. The rule of minimizing costs. The growth trajectory.
30. Income and profit of the company, their types. The rule of profit maximization.
31. The state as an economic entity. Microeconomic regulation and its main tools.
32. National economy. National accounting. Gross domestic product and the principles of its calculation.
33. Nominal and real GDP. Price indices. GDP deflator.
34. Aggregate demand, its elements and factors.
35. Aggregate offer, its elements and factors. Total supply curve.
36. Macroeconomic equilibrium in the AD – AS model. Changes in the balance. Ratchet effect.
37. Cyclical nature of economic development and its principles. Phases of the economic cycle.
38. Unemployment: concept, types, reasons. Consequences.
39. Inflation, its causes, measurement, forms, consequences.
40. The essence and functions of money.
41. Monetary system, its links and functions.
42. Principles of lending. Credit and its forms. Creation of money by banks.
43. Financial system, its structure and functions.
44. State budget and its functions. Budget expenditures and revenues. The budget of the Republic of Belarus.
45. The essence and principles of taxation. Taxes: their functions and types.
46. Budget deficit and budget surplus: reasons, consequences.
47. World economy: the concept, the prerequisites for its emergence. The structure of the world economy.

48. International trade and its main forms.
49. International capital movement: reasons, types, consequences.
50. Labor migration, its reasons and consequences.
51. Exchange rate and the factors determining it.
52. The place of the Republic of Belarus in the system of world economic relations.

**SECTION 4 ADDITIONAL SECTION
CURRICULUM FOR THE DISCIPLINE "ECONOMIC THEORY"**

Topic 1. Economic theory: subject and method

The economy as a sphere of society's vital activity. Production and its importance for the development of society.

Economic sciences. General and private economic sciences. The subject and functions of economic theory. Positive and normative economic theory.

Methods of economic science.

The main scientific schools and modern trends in the development of economic theory.

Topic 2. Needs and resources. The problem of choice in economics

Needs as a prerequisite for production. Types of needs. The law of the elevation of needs.

Economic resources. Classification and characteristics of resources. Factors of production, their types and characteristics.

Fixed and working capital. Depreciation of fixed capital and depreciation.

Economic benefits: types, main characteristics. Interchangeability and complementarity of benefits.

The company's production capabilities and their boundaries. The problem of choice in economics.

Alternative (imputed) costs. The law of increasing imputed costs.

Production, reproduction and economic growth.

Topic 3. Economic systems

Economic systems: concept, elements and levels.

Property in the economic system, its concept, objects. Types and forms of ownership.

Classification criteria and types of economic systems.

Ways of coordinating economic life: traditional, market, team, mixed economy.

Topic 4. Market economy and its models

Market: concept, conditions of occurrence, functions. The market economy and its main features.

Competition in the market mechanism: concept, types.

The structure and infrastructure of the market economy.

Imperfections (fiasco) of the market. The role of the state in the market economy.

Models of the market economy.

Topic 5. Demand, supply and market equilibrium

Demand: concept, factors. The law of demand.

Supply and the factors that determine it. The law of supply.

Industry market equilibrium. The consequences of changes in supply and demand.

The benefit from the exchange: the surplus of the consumer and the producer.

Topic 6. Elasticity of supply and demand

The concept of elasticity. Elasticity of demand: concept, factors, indicators. Price elasticity of demand. Point and arc elasticity. Cross-elasticity of demand.

Elasticity of supply: concept, indicators, factors.

The practical significance of the elasticity analysis and the total income of the commodity producer.

Topic 7. Fundamentals of the behavior of subjects of the modern market economy

The household as an economic entity. The concept of a rational consumer.

Utility: the concept, general and marginal utility. The law of decreasing marginal utility.

The cardinalist approach to the assessment of utility. Consumer equilibrium and the utility maximization rule.

Firm (enterprise) as an economic entity. Organizational and legal forms of the enterprise.

Production and technology. Production function. Short-term and long-term periods. Constant and variable factors of production.

The production choice of the company in the short term. Total, average and marginal product. The law of decreasing marginal productivity.

Isoquants. The maximum rate of technological substitution.

The production choice of the company in the long term.

The concept and classification of costs. Internal and external costs. Accounting and economic costs.

Production costs in the short term. Fixed and variable costs. Total, average, marginal costs, their dynamics and interrelation.

Production costs in the long term. Scale effects, their types. The problem of the optimal size of the enterprise.

Isocosts. The balance of the commodity producer. The rule of minimizing costs. The growth trajectory.

The company's income. Total, average and marginal income: the concept, trends of change, the relationship.

The company's profit and its types. Profit indicators. The rule of profit maximization.

The state as an economic entity. Microeconomic regulation, its directions and tools.

Topic 8. Key macroeconomic indicators

The national economy and its general characteristics.

National accounting and the system of national accounts. The system of macroeconomic indicators.

Gross domestic and gross national product. Methods of calculating the gross domestic product.

Price indices and their role in the calculation of macroeconomic indicators. Nominal and real GDP.

National wealth: structure and methods of measurement.

Topic 9. Monetary system

The origin and essence of money. Functions of money.

The monetary system, its links and their functions. Operations of commercial banks.

Credit and its forms. Creation of money by banks.

Monetary system of the Republic of Belarus.

Topic 10. Financial system

The concept of the financial system, its structure and functions.

The tax system. The essence and principles of taxation. Taxes, their functions and types.

The state budget and its functions. Budget revenues and expenditures.

Budget deficit and budget surplus.

The financial system of the Republic of Belarus.

Topic 11. General macroeconomic equilibrium: a model of aggregate demand and aggregate supply

Aggregate demand: concept, elements. The aggregate demand curve. Non-price factors of aggregate demand.

Aggregate offer. The total supply curve. Factors of the aggregate supply.

Macroeconomic equilibrium. Short-term and long-term equilibrium in the AD – AS model. Ratchet effect.

Topic 12. Macroeconomic instability

Macroeconomic instability and its forms of manifestation.

The cyclical nature of economic development and its causes. The economic cycle and its phases.

Employment and unemployment. Types of unemployment. Determining the unemployment rate.

The economic costs of unemployment. Inflation, its causes, methods of calculation, forms. Socio-economic consequences of inflation.

Inflation and unemployment in the Republic of Belarus.

Topic 13. The world economy and current trends in its development

The world economy and the prerequisites for its emergence. The structure of the world economy.

Forms of international economic relations.

Current trends in the development of the world economy.

Exchange rate: concept, types. Factors affecting the exchange rate.

The place of the Republic of Belarus in the system of world economic relations.