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LECTURE 1
NATIONAL ECONOMY: DEVELOPMENT GOALS AND RESULTS

1.1 Subject of macroeconomic theory

Economic theory analyses the economic processes which occur in the production of material goods with limited resources, as well as their distribu- tion, exchange and consumption. Economic analysis can be carried out at different levels of research, starting with the activity of an individual enterprise and ending with the activity of the entire economic system as a whole.

The approach based on the study of economic relations at the level of individual elements of the economic system is called microeconomic. However, in the real economy, individual enterprises do not exist separately. Within the national economy, they are closely connected and interact with each other. Therefore, a unified, holistic approach to all the elements of the economic system within the nation is necessary. This approach is called macroeconomic.

*Macroeconomics studies the interaction between economic processes that determine the functioning and development of the national economy as a whole.*Unlike microeconomics, it does not analyse supply and demand in individual markets of goods, costs and production volumes at individual

enterprises, their impact on prices, etc. It operates not with individual values, but with aggregate values. The sequence of studying the two sections of economic theory is also important. If we want to assess supply and demand, consumption and investment and the volume of production within the national we will need to combine the corresponding values of its individual components. Only after that we can begin to analyze the relationship and interaction of various economic processes at the level of the national economy as a whole.

Macroeconomics was formed as an independent direction of economic theory in the 1930s. Its emergence was caused by the profound socio-economic changes which occurred in Western countries due to The Great Depression and the general crisis (1929-1933). The classical model of economics, which claimed that the free market was able to regulate itself through prices, was unable to explain the situation in the economy. Moreover, it could not offer effective measures to overcome the crisis.

As a response to the urgent problems that life has presented to economists, the model of economic regulation proposed by the English economist D. Keynes appeared. In his book *The General Theory of Employment, Interest, and Money*, Keynes criticized the classical view that the market is self-regulating, that production itself creates consumption, and that the market does not need any government intervention. On the contrary, he argued that only with the help of state regulation we can get out of the crisis. The main idea of his theory is to lead away- to increase real output

and eliminate its decline, it is necessary to expand public spending and reduce taxes. Such expenditures increase aggregate demand and thereby help boost production and revive the economy.

Keynes D. laid the foundations of macroeconomics, defined its basic concepts and identified the most important patterns. Since the publication of his book, the economic situation has changed in advanced market economics. After the end of World War II, *Keynesians* predicted a deep decline in production, but it did not come. But inflationary processes have intensified in different countries, which have worsened since the beginning of the 70s of the XX century. Consequently, criticism of the Keynesian model began. M. Friedman's monetarist model became increasingly popular (Chicago School).

Monetarists oppose government intervention in market regulation. Howe- ver, difficulties in the economy of Western countries in the early 1980s were caused due to rising inflation and stagnation in production (stagflation) and a critical attitude to the monetarist model.

Thus, the main *difference between Keynesians and monetarists* is the question of market regulation. Keynes and his followers believe that such state regulation of the economy is not only possible, but also necessary. Monetarists reject such interference, arguing that the market mechanism will balance itself and organize itself on its own.

However, it should be recognized that the market system is not able to regulate itself, it cannot reach equilibrium between supply and demand.

This equilibrium can be achieved through external intervention and regulation.

1.2 Macroeconomics goals

In the process of functioning, macroeconomics seeks to achieve the following goals:

1. Stable growth of national output. The population and enterprises provide the growth of production in the country with the necessary goods and services. This indicator characterizes the level of development of the economic system and the amount of production per capita indicates the economic well-being of the nation.

2. Stable price level. It means that prices are set on the basis of free market competition and they don't go up too fast.

3. High level of employment. Anyone who wants to have a speciality and get a job in their chosen specialty, finds it, earning according to the product they create. This excludes, of course, the mandatory assignment of an employee to any enterprise.

4. Maintaining a foreign trade balance. It assumes a relative balance between imports and exports, and a stable exchange rate of the national currency.

1.3 Gross national product and its measurement

The economic activity of a company is judged by various indicators. The highest value among them belongs *to the gross national product (GNP). GNP is defined as the total or aggregate market value of the total volume of final production of goods and services produced in a public economy in one year.*

The term "*gross*" product means that we are talking about total, aggregate output. Capital consumption (depreciation) is not deducted when calculating GNP.

The term "national" refers to products manufactured within the entire national economy.

The definition refers to the market value of goods and services, which is measured in money. Monetary dimention makes comparable diverse in nature and purpose goods and services. By measuring the value of goods and services by money, it is possible to judge the performance enterprise and society indicators as a whole within the year.

The description of GNP refers to the final production of goods: all interme- diate goods used for the production of final goods are excluded. Therefore, for example, the GNP does not include the cost of grain, flour, yeast, which are necessary for obtaining the final product-bread. If you do otherwise, the cost of intermediate goods will be counted twice. In this case, there would be a double bill. Intermediate goods differ from final

goods in that they are used to produce other goods. End products and services are purchased for immediate consumption.

Not all goods produced in a given year can be sold: some of them replenish inventory. Any increase in reserves should be taken into account when calcula- ting the value of GNP. GNP is used to measure all current products, regardless of whether they are sold or not.

When calculating GNP, to avoid double counting, you need to make sure that it includes only the value added created by each enterprise. By summing up the added value created by all enterprises in the economy, we can determine GNP, i.e. the market value of total output for one year.

When calculating GNP, all unproductive transactions are excluded, i.e. transactions that do not contribute to an increase in the amount of output produced. This includes financial transactions (transfer payments, securities, sales of used items).

1.4 Methods of calculating GNP

There *are three methods of measuring GNP.* The first method means looking at GNP as the sum of all the expenditures needed to buy back all the output on the market. This is a method of determining GNP by expenditure. Another method assumes looking at GNP in terms of the income generated during the GNP production process. This is a method

of determining GNP by income. The third method is based on summation of added value.

The first two methods can be represented as follows:

1) Calculating GNP by the amount of expenses= Consumer spending households C + Business investment expenses I +Public procurement of goods and services G + Net export X_n.

2) Calculating GNP by the amount of income = expenses and payments not related to the payment of income + wages +Rent payments + Percent + Profit.

Personal consumption expenditures C include household expenditures on durable consumer goods, on goods of current consumption and also consumer spending on services.

Business investment expenses I include three components: all final purcha- ses of machinery, equipment, and machine tools by entrepreneurs; all construc- tion, including housing; and inventory changes (an increase in inventory is not really a consumed product, and this is nothing more than an investment).

Public procurement of goods and services G is a group of government expenditures on the final products of enterprises and on all direct purchases of resources, especially labor, by the State. However, it excludes all State transfer payments (all types of payments for social insurance, pension provision, unemployment benefits and other types of benefits). Such expenses do not reflect an increase in current production.

Net export X_n represents the amount by which exports exceed imports.

The four expense categories include all possible types of expenses. They are used to measure the market value annual production or GNP. This means that

$$GNP = C + I + G + X_n.$$

Let us now consider how GNP will be distributed by income.

Expenses and payments that are not related to the payment of income include:

1. Deductions for capital consumption (depreciation charges), which reduce the profit of enterprises.

2. Indirect business taxes (sales tax, excise taxes, property tax, license agreement and customs duties fees). Businesses view them as production costs.

The largest category of income is *wages*, which are paid by business and the state to those who offer their work. It also includes additions to wages: contributions of entrepreneurs to social insurance and pension funds, medical care and assistance in case of unemployment. These additions to wages represent part of the costs of entrepreneurs and thus are considered as a component of the total cost of the enterprise to pay wages.

Rent payments are the income earned by homeowners who provide economy with property resources.

Interest refers to payments of cash income from a private business to suppliers of cash capital. And finally, profit. It is divided into the profit received by private owners and the profit of enterprises.

In the first case, the income from the profit belongs to the owner of the enterprise, in the second – it is distributed in the form of dividends among shareholders. In addition, part of this profit is received by the State in the form of corporate income tax. The remaining part of the company's retained earnings is invested in production.

These categories of payments represent the income received by the owners of factors of production. Workers receive wages for their labor, lenders – income in the form of interest on capital provided, owners of land and other resources – rental income in the form of rent, private owners of enterprises and shareholders-profit.

Thus, the income received from the production of the total volume of GNP is divided into:

1. The amount of capital consumed (depreciation deductions).
2. Indirect business taxes (sales tax, excise taxes).
3. Salary of employees.
4. Rental fee.
5. Percent.
6. Income from individual (private) investments.
7. Corporate income taxes.
8. Dividends.

9. Retained earnings of enterprises.

The third method of calculating GNP is based on summing up the value added at each stage of production. – in all sectors of the economy.

Value added is the difference between the market value of products produced by an enterprise and the amount paid by another enterprise for purchased intermediate products from them (materials, blanks, semi-finished products, etc.).

1.5 Price index. Nominal and real GNP. GNP deflator

Since GNP is expressed in money, its value can increase due to higher prices without changing the physical volume of production. Therefore, the concept of a price index is introduced to compare GNP for different periods of time. It measures the ratio between the aggregate price of a certain set of goods and services of the current year and the corresponding price of the same goods and services of the base year

$$\text{Price Index} = \frac{\text{Product price in a given year}}{\text{Product price in the base year}}.$$

The most commonly used index *is the consumer price* index. It is calculated based on a set of consumer goods and services (the so-called consumer basket), which includes a set of the most important goods and

services for the population. Consumer baskets are calculated systematically, and they are used to judge the standard of living of the population.

Statistical reporting deals with the actual nominal current prices of goods and services in the markets. But they make it difficult to judge the actual situation in the economy. That is why it has to be adjusted, i.e. to take into account price changes relative to the base year, to make *adjustments for inflation and deflation.* This allows you to measure and compare the total production volume in different years, assuming the same price level. To determine *the real one GNP* nominal GNP expressed in current prices should be divided by the price index

$$\text{Real GNP} = \frac{\text{Nominal GNP}}{\text{Price Index}}.$$

Thus, *real GNP is nominal GNP adjusted using the price index.* It excludes increase in GNP due to rising prices. GNP does not take into account individual labor in the household, and changes in the quality of output are not reflected. Illegal labor activity, i.e. activities hidden from taxation, is also not included in the total amount of GNP. Knowing the nominal and real GNP you can calculate *the GNP deflator*

$$\text{GNP deflator} = \frac{\text{Nominal GNP}}{\text{Real GNP}}.$$

The GNP deflator is a coefficient used to recalculate GNP, calculated in monetary terms, in order to bring it to the price level of the previous year.

1.6 The GNP deflator is a coefficient used to recalculate GNP, calculated in monetary terms, in order to bring it to the price level of the previous year.

A more modern measure of output than GNP is *the net national product (NNP)* indicator. *NNP is obtained by deducting depreciation charges from GNP.* It measures the total annual output that the economy as a whole, including households, businesses, the State, and foreigners, is able to consume without compromising the production capacity of subsequent years.

The company is interested in determining how much it costs, in terms of resource consumption to produce a given net output. The only component of the NNP that does not reflect the current contribution of economic resources is indirect taxes on businesses. The state does not invest anything in production in exchange for indirect taxes on business, which it receives, i.e. the state cannot be regarded as a supplier of economic resources.

Thus, to determine the total amount of wages, rent payments, interest and profit, it is necessary to deduct indirect taxes on business from the NNP. The indicator obtained in this way is called *national income (NI).* From the point of view of resource providers, it is a measure of the income they receive from participating in ongoing production. From the point of view of enterprises, NI is a measure of the prices of factors of production

or resources that were used to create the volume of production in a given year.

National income can also be determined by calculating GNP by income by adding up all types of income distributions, excluding depreciation charges and indirect business taxes.

From calculating personal income as a measure of earned income, you can move on to calculating *personal income* as an indicator of income actually received. To do this, you need to subtract from the personal income tax three types of income that are earned but not received and also add income that is received but not the result of current work activity. This is done as follows:

National income (earned income) — social security contributions insurance —
— corporate income taxes – retained earnings corporate profits + transfer payments (financial support) =
= personal income (received income).

Income held in personal possession is *personal income less individual taxes*, taxes on personal property and inheritance taxes.

Ratios between gross national product, net national product, and national income, personal income and after-tax income look like this

$GNP = (C + I + G + X_n) -$ refund of consumed fuel capital formation $=$

=NNP-indirect taxes on business = NI — contributions to the social insurance — corporate income taxes — retained earnings of enterprises

+

+transfer fees-tags =personal income-individual taxes = after-tax income.

After-tax income is the income that households have at their disposal in the final form, and direct it to consumption and savings.

The GNP indicator includes *net exports* (the difference between the value of goods exported from the country and the value of imported goods). However, the share of foreign trade activity varies greatly from country to country. Therefore, for international comparisons of economic development, *the gross domestic product (GDP) indicator is used)* which represents GNP minus the balance of payments balance (the difference between the value of exports and imports). This indicator takes into account the final results of economic activity only within each country.

1.7 Resident and non-resident institutional units

Residents are all economic units (enterprises, households), regardless of their nationality and citizenship, that have a center of economic interest in the economic territory of a given country (they are engaged in industrial activities or have lived in the country for at least a year).

Thus, in contrast to geographical territory, the concept of economic territory is introduced, which does not include territorial enclaves of other countries (military bases, embassies, etc.), but contains enclaves of the country located on the territory of other countries.

However, not all employees of a country's economic units are residents. Therefore, a part of the value created in the country is paid to non-residents for their participation in GDP production. In turn, residents of a given country can receive part of their income from abroad for their participation in the production of GDP in other countries, for example, in the form of wages, income from property, (interests, dividends and etc.). Therefore, there is a difference between the country in which the national product was created and the country in which it belongs. For example, part of the national product created by guest workers is paid in the form of wages and is further divided into two parts: one is consumed in Russia for the purchase of goods and services, and the other is exported to the homeland.

Judging by where this product was produced, it is included in the national product of Russia. And if you ask yourself which country the corresponding goods belong to and by whom they will be consumed, then you should name the country from which the employee came. To account for these two important approaches to the national product, two different indicators are used – GDP and GNI. GDP answers the question of where the product was created, and GNI – which country it belongs to.

Accordingly, both indicators are interrelated, namely

$$GNI = GDP + \text{balance of income from abroad.}$$

1.8 System of National Accounts

In order to measure national production, the System of National Accounts (S. Kuznets) was created.*National accounts* are a system of interrelated macroeconomic indicators that characterize the production, distribution and use of GNP and ND. The system of national accounts performs for the economy as a whole the same thing as accounting for an enterprise. Various indicators that are included in this system allow you to measure the volume of production at a specific time and reveal the factors that determine the functioning of the economy. Comparing levels NI for a certain period of time, it is possible to construct a curve that characterizes the functioning of the economy in the long term. Its rise or fall will affect the personal income indicator. The information provided by the national accounts is the basis for the formation and implementation of State economic policies. In short, *the system of national accounts* makes it possible to draw up tables of the economic health of a society and intelligently define policies that contribute to improving this health.

1.9 National wealth

All macroeconomic indicators reflect the current volume of production, distribution, and consumption. Meanwhile, for a correct assessment of macroeconomic parameters, accumulated or accumulated indicators, rather than current ones, are crucial. The most important of these is national wealth.

National wealth is the totality of resources and other property of a country that creates an opportunity for economic development goods and services, as well as ensuring the lives of people.

In fact, we are talking about the value assessment of the entire wealth of the country, in whatever form it appears. Its members include enter:

1. *Non-reproducible property* (land, minerals, historical and artistic monuments and keeping records).

2. *Reproducible property* (production assets – fixed and working capital, non-production assets – property and reserves of households and non-profit organizations).

3. *Intangible property* (intellectual property – patents, trademarks, objects of copyright, human capital – products of the service sector, in particular education, healthcare, law, embodied in the knowledge, professional skills and health of the population, the institutional structure of society).

4. *Balance of property obligations and claims* in relation to foreign countries.

National wealth is not a measure of the flow of economic goods in the course of national economic development. It is a measure of its results over many cycles of GNP production.

A significant part of the national wealth consists of natural resources that are not the result of economic human activity. However, the nature of this wealth and its value is related to the level of economic development.

The national wealth indicator can be used to estimate the value of intangible assets.

1.1.0 Intersectoral Balance

Models of social reproduction show the basic conditions of economic equilibrium. But they are not sufficient for solving practical problems – forecasting, studying the structure of the national economy and its changes, the dynamics of capital and materials, problems of employment and foreign economic relations. To address these specific issues, *the Intersectoral Balance Model (IBM)* is used.

The development of intersectoral balance in developed countries is associated with the name of V. Leontiev. It covers the entire process of reproduction – production, distribution, exchange, and consumption and reflects the value and in-kind form of GNP. The IBM model presents all the main characteristics of macroeconomics: spheres and sectors, GNP,

intermediate product, final social product, NI, all material flows, volumes of import and export operations.

The model is called *"input – output"*. It is associated with a twofold consideration of individual industries. On the one hand, they represent aggregate demand and buyers of material goods and services offered by other industries (costs). On the other hand, both as representatives of the aggregate supply and sellers of material goods and services provided by themselves (output). This makes it possible to link the model of V. Leontiev with the system of national accounts.

The IBM is a "checkerboard" table of the GNP structure. The table shows costs in each industry vertically, and output for individual industries horizontally. If you read the table vertically, you can see the consumption of intermediate products by each industry and its contribution to the creation of the final social product and NI. Reading the table horizontally reveals the industry structure of consumption of a part of the intermediate product created in a particular industry, as well as its final product. This grouping allows you to determine the in-kind and cost structure of the final public product.

The method of V. Leontiev is the basis for the models of IBM developed in many developed countries, as well as in international organizations in accordance with the system of national accounts recommended by the United Nations.

1.1.1 Shadow economy

The shadow economy is a set of unregistered and illegal types of economic activity. The results of the shadow economy are not taken into account by official statistics, and therefore are not included in the country's GDP. The shadow economy covers a wide range of activities for the production of life's goods and is carried out for personal gain. It does not recognize the current legislation and public order of income generation by economic entities and it denies the state from participating in their distribution through taxes (the shadow economy does not pay taxes).

The shadow economy has the following features:

1. Economic activity is not registered by the state.

2. Getting rich by hiding income from paying taxes.

3. Gratuitous appropriation of other people's property and redistribution of wealth in favor of criminal elements.

4. Coverage of all phases of social production (production, distribution, exchange, and consumption).

The shadow economy is divided into legal and illegal.

A legal shadow economy is a type of activity permitted by law, the income from which does not go to the treasury state-owned businesses (small-scale trade, apartment repairs, private medical practice, tutoring, etc.).

The illegal shadow economy, in turn, is divided into fictitious and under- ground.

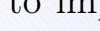
The fictitious shadow economy is the activity of business managers and civil servants who use illegal means for personal enrichment (postings, fraud, etc.).

The underground shadow economy is an activity that is prohibited by law (drug and porn business, smuggling, trade in weapons, manufacture of counterfeit money, etc.).

The shadow economy generates criminal offenses (theft of raw materials and finished products, extortion, corruption – bribery of state authorities, etc.).

Sources of the shadow economy include the creation of state-owned or semi-state companies through which private enterprises are called to perform any functions, licensing of various types of economic activities, making private enterprises dependent on state authorities, and many others.

In order to reduce the shadow economy, it is necessary to implement measures to legalize it by the state, as well as to ensure adequate regulation of the economy as a whole.



1.1.2 Closed and open economy

In many cases, the concept *of a closed economy,* i.e. an economy is used to simplify the observable processes does not participate in the international exchange of goods and services.

A closed economy is the economy of a country that neither exports nor imports goods and services.

However, some problems require the study *of an open economy,* i.e. an economy that participates in international trade and international financial relations with various countries of the world.

The open economy interacts with the economies of other countries *in two ways:* by buying and selling goods and services on global commodity markets, and by buying and selling financial resources on global financial markets.

Just as in any domestic market, the price of goods coordinates the actions of buyers and sellers, so *international transaction prices* allow us to coordinate the behavior of consumers and producers in their interactions on world markets. The most important types of international prices are nominal and real exchange rates.

The nominal exchange rate is the ratio in which the national currencies of two countries are exchanged.

The real exchange rate is the ratio in which goods and services are exchanged between different countries.

The real exchange rate depends on the nominal exchange rate and on commodity prices measured in national currencies. It is calculated using the formula

$$\text{The real exchange rate} = \text{The nominal exchange rate} \cdot \frac{\text{home market price}}{\text{foreign market price}}.$$

The real exchange rate is a key factor in comparing the volume of exports and imports of the economy.

Currency exchange rates can change significantly over time. There is a simple theory that helps to explain determination of exchange rate known as the *theory of purchasing power parity (PPP) has been developed to clarify the definition of exchange rates.)*. It states that a unit of any currency should make it possible to purchase the same amount of goods and services in any country.

This theory is based on *the principle of the law of uniform price,* which states that goods should be sold at the same price anywhere in the country. Otherwise, trading does not take advantage of profit opportunities. In accor- dance with the law of a single price in different countries, for example, for one dollar, you can buy the same amount of goods.

Thus, the theory of purchasing power parity states that any currency should have the same purchasing power in all countries. The name of this theory speaks for itself, since the word "parity" means equality, and the concept of "purchasing power" refers directly to the value of money. It

follows that any currency should have a single real value in any country of the world.

1.13 Industry and sector structures of the economy

The national economy is the totality of all economic processes that take place in a society on the basis of existing property relations and organizational forms of management. The national economy has sectoral and sectoral structu- res.

The industry structure is a set of proportions and relations between individual branches of production activity, where the industry is considered as a set of enterprises and industries that are of the same type in technological terms.

An important role in the development of the economy is played by the proportions between the industries that produce products and the elements of economic systems that ensure the functioning of these industries, i.e. infrastructure.

Infrastructure is divided into production and non-production. *Industrial infrastructure* includes industries that serve material production (energy, gas, water supply, roads, storage facilities, environmental protection structures, etc.). *Non-productive infrastructure* includes industries that serve the reproduction of the labor force and the creation of normal liv-

ing conditions for people (general and vocational education, health care, housing and utilities, recreation, etc.).

On the one hand, industries are divided into sub-sectors, and on the other hand, they are grouped into national economic complexes (fuel-energy, agro-industrial).

It is very common to divide the national economy into sectors. There are primary, secondary and tertiary.

The primary sector includes agriculture forestry, hunting and fishing.

The secondary sector is industry and construction.

The primary and secondary sectors constitute the sphere of material production.

The tertiary sector consists of the production of services (trade, transport, communications, education, health, science, culture, household and communal services, etc.).

There is also a distinction between the real and financial sectors. In *the real sector*, goods and services are created, and *the financial* sector (monetary) is designed to serve the sector in which products are actually produced.

The division of the national economy into the real and financial sectors is somewhat arbitrary. These sectors are differed by the goals, nature of operations, and technical features.

1.14 Reproduction

The process of production, which is considered not as a one-time act, but as a constantly repeating process, is a *reproduction*. There are two types of reproduction: simple and extended.

Simple reproduction is a continuously recurring process of producing economic goods on an unchanging scale. It is typical of the pre-industrial economy, where agricultural and handicraft production based on manual labor prevailed. The peculiarity of simple reproduction is that the entire surplus product goes to personal consumption. Simple reproduction is the basis for extended reproduction.

Extended reproduction is a continuously renewed process of producing economic goods on an enlarged scale. The peculiarity of expanded reproduction is that not only the spent capital (used raw materials, worn-out equipment) is reimbursed, but also more advanced and efficient resources are acquired, and the skills of employees are constantly improved. Extended reproduction is typical of industrial production based on the continuous introduction of scientific and technological progress.

The result of production on a national scale is a social product. Its movement begins in the sphere of production, where goods and services are created, continues in the sphere of distribution, exchange, and ends in the sphere of consumption, which is the ultimate goal of production. Distribution as part of the social economic process includes not only the

distribution of production results and the delivery of final goods and services to the consumer, but also the distribution of resources or factors of production. It is closely related to the existing forms of ownership since production resources belong to specific owners, and this affects the formation of income, in accordance with which economic benefits are ultimately distributed.

Exchange provides for the movement of goods in space and more complete satisfaction of people's needs. Distribution and exchange are considered as areas that not only provide a link between production and consumption, but also actively affect the efficiency of production, the abundance of products and the increase in social wealth.

Consumption is sometimes characterized as negative production, because here, in the process of using goods their usefulness decreases or destroys. But this is one side of consumption – personal consumption and the satisfaction of individual or collective needs. The other side is production consumption, the use of resources, means of production to create new goods. Production can therefore be considered as a process of productive consumption of resources. Consumption as the ultimate goal of production does not always act as its straight goal. Thus, in *a market economy, the direct goal of production for private producers is to make a profit.*

The most important component of aggregate demand is the demand for consumer goods. Consumer demand is defined as effective demand, or as

the amount of money that the population spends on purchasing consumer goods. As a rule, consumer demand is between 50 and 70 % of the total aggregate demand.

The consumption structure of an individual or family is individual. People spend money according to their income and lifestyle. However, there are also common priorities. It is easy to imagine the costs of any family in terms of their significance: food, clothing, housing, transport, medicine, education. At the same time, the expenses of poor families are mainly spent on food and the most necessary daily needs. As family incomes increase, spending on clothing, durable goods, recreation, entertainment, savings, etc. increases.

Consumption that is independent of income level is called *autonomous consumption.*

The cost of goods and services intended to meet individual and social needs represents final consumption. Final consumption of goods and services covers the *final consumption* of households, public consumption of government agencies and private commercial organizations.

1.15 Consumer behavior models

There are some average patterns of consumer behavior. Thus, in accordance with E. Engel's "qualitative patterns of behavior", as income increases, the total consumption of goods increases, but in different pro-

portions: the share of food expenses decreases, but spending on recreation, entertainment, and travel increases. Savings are also growing.

Among the most well-known models of consumer behavior are:

– I. Fischer's model of intertemporal consumer behavior;

– F. Modegliani's theory of the "life cycle";

– theory of permanent income by M. Friedman.

These models link consumer behavior to income, with different interpretations of the reasons for changes in consumer behavior.

So, consumer behavior changes under the influence of many factors, the main one being personal disposable income. Therefore, consumption is defined as the portion of income that is used to purchase goods and services.

LECTURE 2
MACROECONOMIC EQUILIBRIUM

2.1 Private and general economic equilibrium

The problem of partial and general economic equilibrium is the central to economic theory. *Equilibrium* is the provision of stable and coordinated functioning of all parts of the system. Economic equilibrium is a state of the system in which the consistency of the main proportions in the economy ensures the continuity of the reproduction process. *The theory of economic equilibrium* is sometimes called the theory of economic statics. This is a key category of economic theory and economic policy that characterizes the balance and proportionality of economic processes such as production and consumption, supply and demand, production costs and results, material and financial flows. Static equilibrium of the system is the development of the economic system under the conditions of the invariance of the factor proportion and the achievement of equilibrium at the expense of certain ratios of all other proportions.

Equilibrium is divided into *ideal and real. An ideal balance* is achieved through the economic behavior of economic entities with full optimal implemen- tation of their interests in all sectors, sectors and spheres of the national economy. This balance is achieved if the following reproduction conditions:

1. The entire product of the last year should be fully implemented.

2. All consumers must find consumer goods at the market, and entrepreneurs must find factors of production. Perfect balance implies conditions of perfect competition and the absence of external effects. But in the real economy, such conditions are not observed: there is no perfect market, there are side effects in business activity, cyclical and structural fluctuations, unemployment, inflation. All of them throw the economy out of balance. However, this does not mean that the economic system cannot be brought into a dynamic equilibrium that will correspond to market realities.

Dynamic equilibrium of the system is the development of an economic system under the conditions of changing production resources in which the dynamics of production capabilities and the dynamics of all other proportions reach a ratio that ensures a constant rate of economic growth.

Real equilibrium is an equilibrium that is established in the economy under the conditions of imperfect competition if there are external and internal factors influencing the market.

There is also a distinction between partial and general equilibrium.

A quotient is an equilibrium in a particular market.

General equilibrium implies simultaneous equilibrium in all markets, i.e. the equilibrium of the entire economic system as a whole or macroeconomic equilibrium.

The basis of macroeconomic equilibrium is the equality of aggregate demand and aggregate supply (model J.B. Sey).

2.2 Aggregate demand and factors influencing it

Total demand AD is the sum of all individual demands for the final goods and services offered on the market. This implies that aggregate demand shows different real volumes of goods and services that consumers are willing to buy at different possible price levels. Aggregate demand is formed by four main sectors of the economy:

C – aggregate household demand.

I – demand for investment goods from enterprises.

G – demand for goods and services from the state.

X_n – demand for domestic goods from foreign countries – net exports. Thus,

$$AD = C + I + G + X_n.$$

All other things being equal, there is an inverse relationship between aggregate demand and the price level in a country. As the price level P decreases the realized volume of national production Q increases. Accordingly, an increase in the price level causes a reduction in aggregate demand, with constant other factors of the market conjuncture.

The principles of constructing the aggregate demand curve are similar to the principles of constructing the demand curve at the micro level.

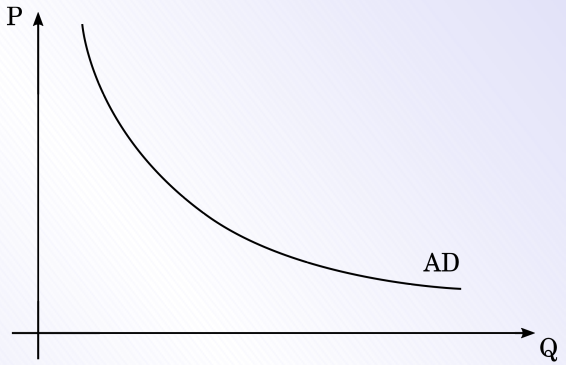


Figure 2.1 – Aggregate demand curve:
P -– price level; Q — real production volume

The main factors influencing the change in aggregate demand are divided into price and non-price factors. *The price factors* of aggregate demand include: the interest rate effect; the wealth effect; and the effect of import purchase taxes.

Effect of the interest rate. When the price level rises, consumers and producers are forced to take money on credit. This leads to an increase in the interest rate, a decrease in purchasing power and a reduction in investment. As a result aggregate demand decreases. Out of all this it can be concluded that *the essence of the interest rate effect* is the effect of changing price levels on the interest rate and consequently on consumer

spending and investment. It turns out that an increase in the price level leads to an increase in the interest rate and this leads to a reduction in consumer spending and investments and vice versa.

The wealth effect. When the price level rises the value of stocks bonds and financial assets falls and the population is getting poorer and aggregate demand is shrinking.

Changes in the consumer expenses C	**Changes in the investment expenses** I	**Changes in the government expenses** G	**Changes in the expenses on net export volume** X_n
Consumer income	Interest rate	Changes in the government expenses	Changes in the external environment trading services
Expectations the consumer	Expected profits from investment	Acceptance government programs	National income in foreign countries
Consumer debt	Tax Technology level		Currency exchange rate
Consumer taxes			

Effect of import purchases. This effect occurs when the ratio of prices for domestic and imported goods changes. As the domestic price level rises, demand for domestic goods decreases, while demand for cheaper imported goods increases. If the customs tariffs remain unchanged, there will be an increase in import volumes and a decrease in export volumes.

As a result, net exports will fall, along with aggregate demand. Lower prices will lead to an excess of exports over imports, which will have a very beneficial effect on the volume of aggregate demand.

Non-price factors of aggregate demand. There are several non-price factors that affect the real volume of product that households, businesses, governments, and foreign buyers are willing to buy at a given price level. Non-price factors are divided into four groups according to the main components of aggregate demand:

2.3 Aggregate supply and factors influencing it

The aggregate supply AS is understood as the sum of all individual offers. In other words, aggregate supply refers to the monetary value of the total amount of all final goods and services at the market. If you do not take into account the impact of international trade then AS can be equated to GNP: $GNP = AS = PQ$ or

$$AS = Salary + rent + interest + profit.$$

The aggregate supply is influenced by price and non-price factors. Among *the price factors,* there are:

1. Operating at the micro level and causing a change in the supply of a particular product on the market (production technology, costs, etc.);

2. Macro-level factors, their quality and quantity. In this case, quality is characterized by the productivity of factors (more skilled labor and more advanced equipment). An increase in the number and quality of factors leads to an increase in production capacity, and therefore to an increase in the total supply AS.

Non-price factors of the aggregate supply. The aggregate supply curve establishes a relationship between the price level and the real volume of national production, all other things being equal. Changes in the volume of national production are traced as they move along the AS curve. These changes are called price factors. Changes in one or more "other conditions"
cause the curve itself to shift. These conditions are called *non-price factors.*

There are several non-price factors that shift the aggregate supply curve:

1. changes in resource prices;
2. changes in labor productivity;
3. changes in business conditions.

All non-price factors of the aggregate supply are united by the fact that with their change *unit costs change products.*

Changes in resource prices. An increase in the supply of domestic resources due to irrigation of land, new technical improvements in land cultivation, the discovery of minerals; an increase in the available labor

resources; the allocation of most savings to investment; and an increase in the number of people seeking to engage in entrepreneurial activities lead to lower prices for these resources. As a result, unit costs are reduced and the aggregate supply curve shifts to the right. Conversely, a decrease in the supply of resources increases the price of them and the aggregate supply curve shifts to the left.

Changes in labor productivity. Labor productivity is understood as the ratio of real volume production to the amount of labor used

$$\text{Labor productivity} = \frac{\text{real production volume}}{\text{number of labor resources}}.$$

The increase in labor productivity shows that with the available volume of labor resources, it is possible to obtain a larger real volume of national production i.e. costs per unit of production are reduced, and the aggregate supply curve shifts to the right. Lower labor productivity will increase costs and shift this curve to the left.

Changes in business conditions. Government intervention can either expand or narrow the aggregate supply, depending on the priorities of the economy at a particular stage. For example, an increase in tax rates increases production costs all other things being equal and thereby reduces aggregate supply. On the contrary, state subsidies and various benefits to enterprises help to reduce their production costs and thereby expand the total supply.

Aggregate supply is represented as an *AS* curve, which shows the level of available real output at each possible price level. *The AS curve* shows the direct dependence of output on the price level. At higher prices, there are incentives to increase the volume of production and consequently the supply of goods. Thus, the curve has an ascending form in the same way as the supply curve in individual commodity markets. However, the shape *of the AS curve* depends on whether the aggregate supply is considered for the long-term or short-term period each of which may be different.

As can be seen from the graph (Figure 2.2), the aggregate supply curve differs from the supply curve of a single product and it consists of three segments:

1. horizontal (Keynesian);
2. intermediate (ascending);
3. vertical (classical).

*1. the horizontal segmen*t characterizes the economy during the depression. On this segment of the curve in the short-term such production is carried out underemployed, underutilized production capacity, fixed prices and wages, significant unemployment, i.e. the presence of excess resources. This indicates a state of economic decline. In this situation, production growth can be achieved by using unclaimed resources. Keynes argued that in a depression, it is possible to expand production without fear of rising production costs or prices.

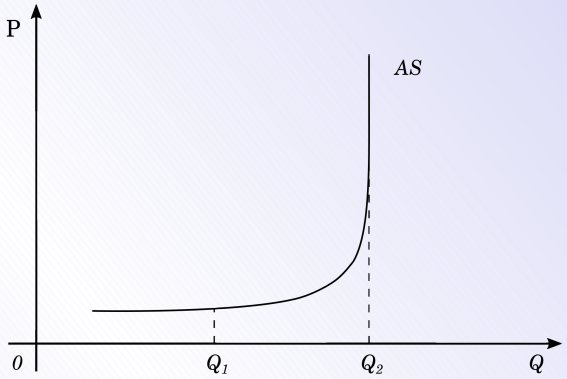


Figure 2.2 – Aggregate supply curve:
P -– price level; Q -– real production volume

2. intermediate segment between Q_1 and Q_2 reflects the state when the economy is close to full utilization of resources. The increase in output is accompanied by higher prices. This is due to the fact that in some industries, excessive resources involved are beginning to be limited and inefficient equipment is often used. Thus, unit production costs increase and higher prices are needed to compensate for them.

3. the vertical segment shows that the economy has reached full employment at output Q_2. The available resources are already involved and it is impossible to further increase production in the short term therefore any increase in prices will not lead to an expansion of production. Therefore, in the long run, the aggregate demand curve tends almost vertically. The segment is called classical in accordance with the conclusions of classical

economics about certain forces inherent at the market economy due to which full employment becomes the norm.

In fact, the shape of the aggregate supply curve is highly controversial. Representatives of the classical or neoclassical school argue that the entire aggregate supply curve is vertical, and changes in aggregate demand are relatively harmless, since they affect only the price level and do not affect production and employment. Keynesians on the other hand believe that the aggregate supply curve is either horizontal or ascending and therefore any decrease in aggregate demand has negative and very costly consequences for production and employment.

2.4 Macroeconomic equilibrium. Ratchet effect

Macroeconomic equilibrium implies *a correspondence between aggregate demand AD and aggregate supply AS*. Aggregate demand corresponding to aggregate supply is called *effective demand.* At the macrolevel, the intersection of the AD and AS curves determines the overall equilibrium price level P and the equilibrium real output Q. The level of GNP in monetary terms in this case is equal to the product of the total price level P and the volume of production Q

$$GNP = PQ.$$

Since the equilibrium price level and the equilibrium real volume of national production are determined by the point of intersection of the aggregate demand and aggregate supply curves, in practice, different variants of their intersection are possible in different sections of the curves (Figure 2.3).

1. Equilibrium on the Keynesian segment of the curve AS. Movement to the equilibrium real volume of GNP is not accompanied by a change in the price level but is caused by the involvement of unused resources in production.

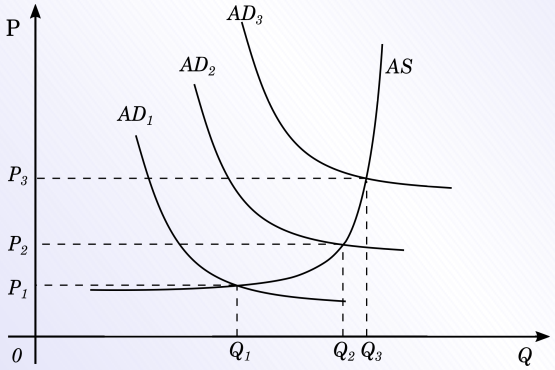


Figure 2.3 – Macroeconomic equilibrium

2. Equilibrium on an intermediate segment of the AS curve. A change in the price level excludes overproduction or underproduction of goods.

3. Equilibrium on the classical segment of the AS curve. Here, an increase in aggregate supply is almost impossible due to the maximum use of production capabilities and the lack of reserves. Consequently, the price level increases.

Thus, the expansion of aggregate demand in the Keynesian segment leads to a significant increase in real GNP and employment without raising the price level. In the interim period, the expansion of aggregate demand will lead to an increase in real GNP and an increase in the price level. In the classical segment, labor and capital are fully utilized, and the expansion of aggregate demand will only affect the price level. Real volume GNP will remain at the level of full employment. It turns out that the shift in the aggregate demand curve increases the price level for in the intermediate and classical segments of the aggregate supply curve, this leads to demand inflation.

A decrease of aggregate demand will lead to a decrease in the volume of national production in the Keynesian segment, with the price level remaining unchanged; in the intermediate segment, a decrease in the real volume of national production and the price level; in the classical segment, a fall in prices, with full employment and the volume of national production remaining unchanged.

But in fact, when the aggregate demand curve shifts to the left, the so-called *ratchet effect occurs.* The reverse movement of aggregate demand may not restore the initial equilibrium, at least for a short period of time.

The difficulty lies in the fact that prices for both goods and resources become inflexible, and do not show a downward trend. Economic indicators that have once increased do not necessarily decline at least to the initial level. In other words, prices rise easily, but do not fall immediately, or do not fall at all. This complicates things in macroeconomic forecasts in respect to a decrease in aggregate demand.

A decrease in aggregate supply leads to cost-driven inflation, i.e., when aggregate supply decreases, the price level increases, employment decreases, and inflation occurs. The combination of a decline in production and inflation is commonly referred *to as stagflation.*

An increase in aggregate supply leads to an increase in the real volume of national production and a decrease the price level in the real volume of domestic production.

Thus, a shift in the aggregate supply curve leads to a change in the real volume of national production at full employment. In particular, the shift of the curve to the right indicates economic growth and indicates an increase in the productive potential of the economy.

Let's find out whether the market mechanism has the ability to ensure equality of aggregate demand and aggregate supply at full employment. Classical theory, on the one hand, and Keynesian theory, on the other, answer this question differently.

Representatives of the classical direction (A. Smith, D. Ricardo) developed the theory of general economic equilibrium, which automatically

ensures equality of income and expenses at full employment. The starting point of this theory is the analysis of such categories as the interest rate, salary, and price level. These key variables, which in the classical view are flexible quantities, ensure equilibrium in the capital market, labor market and money market. Interest balances the supply and demand of investment funds; salary balances the demand and supply of investment funds supply on the labor market; flexible prices ensure the sale of products.

Thus, *the market mechanism in the theory of the classics is itself able to correct the imbalances arised in the scale of the national economy* and state intervention becomes unnecessary.

However, in the early 30s of the XX century classical theory proved incapable of explaining long-term crisis processes. Keynes tried to give such an explanation. It should be noted that Keynes theory pays great attention to psychological factors in the economy. The principles of macroeconomic equilibrium are permeated with psychological coloring: "inclination" , "preference", "expectation", "aspiration". This is not the notorious "idealism" of economic thought but a reflection of the objective reality in which living people with their inherent passions and inclinations act.

2.5 Consumption and savings in the national economy

So, the total expenses of society consist of four components: personal consumption of the population; investment consumption; government spending; net exports.

When analyzing personal consumption of the population, it should be noted that the total amount of consumption depends on the total amount of income. As income increases, people tend to increase their consumption, but not to the extent that income increases. The relationship between changes in consumption and changes in income is *called marginal propensity to consume*

$$\text{MPC} = \frac{\text{consume changes}}{\text{income changes}}.$$

.

The MPC shows how much of the additional income is spent on increasing consumption. The part of income that is not consumed is called saving. It can be represented as the difference between income and consumption.

Similarly, you can determine *the marginal propensity to save*

$$\text{MPS} = \frac{\text{save changes}}{\text{income changes}}.$$

MPS shows how much of the additional income the population uses for additional savings. Since the increase in income can go either to con-

sumption or to saving, then

$$MPC + MPS = 1.$$

Let's plot the consumption function at the societal level (Figure 2.4)

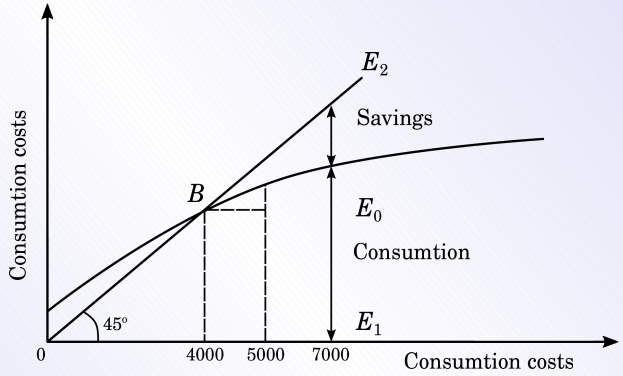


Figure 2.4 – Graph of the consumption function

Net income (after taxes) is plotted on the abscissa axis. On the ordinate axis – consumption expenditures. If expenses corresponded to income, then any point lying on the bisector would reflect this. But in reality such a coincidence does not occur and only part of the income is spent on consumption. Therefore, the consumption curve deviates from the 45 degrees line down. The intersection of the 45 degrees line and the consumption curve at point B indicates the level of zero savings. To the left of this point is negative savings (i.e. expenses exceed income -–

"living in debt"), and to the right is positive savings. For example, if you have an income of 6000 rubles, the situation is as follows: segment E_1E_0 shows the dimensions consumption, and the segment E_0E_2 — the amount of savings. Equilibrium is observed at point B, since here there is an equality of incomes and expenses.

The savings schedule is considered in the same way. As savings and consumption are interconnected, there is a similar relationship between the graphs (Figure 2.5).

In the figure *of savings, there is a mirror image of consumption,* the consumption curve is convex, and the savings — a concave line.

Consumption and savings are affected by the following *factors*:

– higher taxes reduce consumption and savings;

– higher prices lead to different responses in consumption and savings among population groups with different incomes;

– rising social security contributions cause savings to shrink;

– excessive demand contributes to a sharp increase in consumption;

– an increase in supply in the market leads to a reduction in savings.

Practice shows that as incomes grow, both consumption and savings grow, but at *the same time* MPC tends to decrease, while MPS tends to increase.

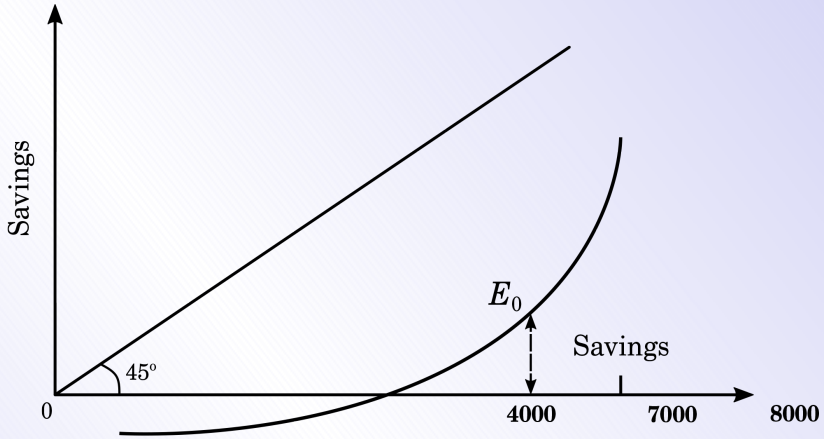


Figure 2.5 – Graph of the savings function

2.6 Investment and savings: problems of equilibrium

An important component of aggregate demand is investment. *Investments* are defined as expenses of enterprises incurred to expand production and improve product quality.

The source of investment is savings. The problem is that savings are made by some economic agents, while investments can be made by completely different groups of individuals or economic entities. *The source of investment is also the accumulation of enterprises.* Here, "saver" and "investor" are the same. However, the role of household savings is very

significant, and the discrepancy between the processes of saving and investing can lead the economy to a state of disequilibrium.

There are three types of investments: gross, net, autonomous and induced (derived).

Gross investment is the total amount of investment regardless of funding sources. Gross investment includes investments carried out at the expense of depreciation charges.

Net investment represents itself gross investment less investments carry out at the expense depreciation amount of fixed assets.

Investments that are not related to the growth of GNP are called autonomous. They are caused by innovations caused by scientific and technological progress. Such investments themselves cause an increase in GNP.

Induced investment is an investment aimed at the formation of new production capacities, the reason for the creation of which is an increase in demand for material goods and services. When demand increases, additional products are produced due to more intensive use of existing equipment. If the increased demand is not met, then new production facilities are built to produce the missing products.

The investment process depends on many factors. First, it depends on *the expected rate of return.* Secondly, when making decisions, the investor always takes into account alternative opportunities and will be decisive here *the level of the interest rate.* Graphically, the relationship between the rate of interest, investment and savings is shown in Figure 2.6.

The graph shows an illustration of the equilibrium position between savings S and investments I. Investment there is a function of the percentage norm $I = I(r)$ and this function is decreasing: the higher the level of the interest rate, the lower investment level.

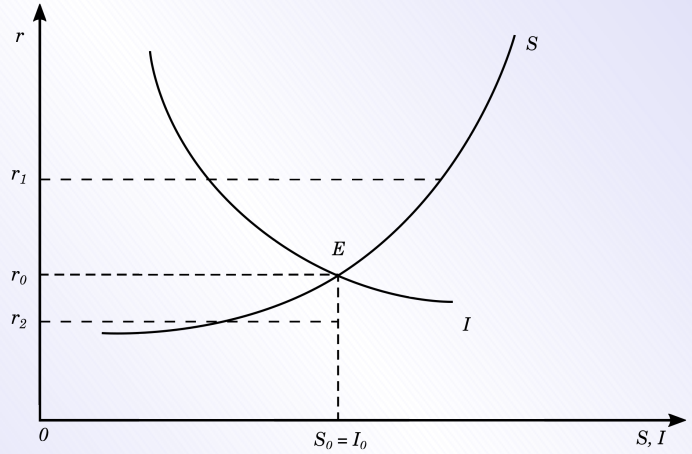


Figure 2.6 – Balance of savings and investment

Savings is also a function of the rate of interest $S = S(r)$, but this function is already increasing: the higher the interest level the higher the savings rate. Percentage level equal to $r0$ ensures equality of savings and investments in the scale of the entire economy. Level r_1 and r_2 deviations from this state.

Such functional connections between interest, investment, and savings were described by classical theorists. In the Keynesian concept of invest-

ment, there is also a function of the rate of interest, but savings are a function of income $S = S(Y)$. Thus, the dynamics of investment and savings are determined by various factors.

Thirdly, investments depend on *the level of taxation.* Too high a level of taxation is not incentived investments.

Fourthly, the investment process responds *to the rate of inflation.* In an inflationary environment, when costs present significant uncertainty real investment processes become unattractive.

The most important macroeconomic proportions reflecting the interaction of investment, savings and GNP can be represented as follows:

$$GNP = C + I,$$

i.e. GNP when used is equal to the sum of consumption expenditures C and investment I. In this case, consumption is a function of income, i.e. $C = C(Y)$.

On the other hand, the GNP produced can be represented as $Y = C + S$, where S is also a function of income.

So, if $C + I = C + S$, then $I = S$, where investment is a function of the interest rate, and savings is a function of income.

The equation $I(r) = S(Y)$ demonstrates the importance of observing certain proportions in the economy for the equilibrium among aggregate demand and aggregate supply and is *a derived condition* of macroeconomic equilibrium.

Now let's define the level of GNP when savings and investments are in a state of equilibrium.

In the graph (Figure 2.7), Line I indicates the constant volume of investment at any level of GNP. As GNP grows savings are increasing. At point E, the lines I and S intersect. The amount of $GNP = ON$ is the level at which the balance between investment and savings is formed. But this level of GNP does not provide full employment — line F. This line runs to the right of the intersection of S and I. The point N indicates the state of equilibrium of GNP, to which the economy will tend whenever the equilibrium between I and$S$ is disturbed.

If the level of S is greater than I, it means that the scale of savings in society exceeds the scale of investment. Part of the marketable products will no longer find sales, inventory will increase, and enterprises will reduce production. The "invisible hand" will push the level of GNP towards point N. If the line S is lower *than* I, the reverse process will unfold.

In both the classical and Keynesian models, equilibrium occurs at the intersection of I and S. *The differences are as follows:*

First, in the classical model, long-term unemployment seems impossible. Flexible response of prices and interest rates restores the disturbed balance. In Keynes' model the equality *of* I and S can also be realized at full employment. Line F shows what full employment would have been if GNP had reached point F. And to do this, you need to raise the line I up until it intersects the point F, which lies on the savings line. In other

words, if the investment process revives, it is possible to achieve equilibrium at full employment exactly to the state which has a crucial role in stimulating investment.

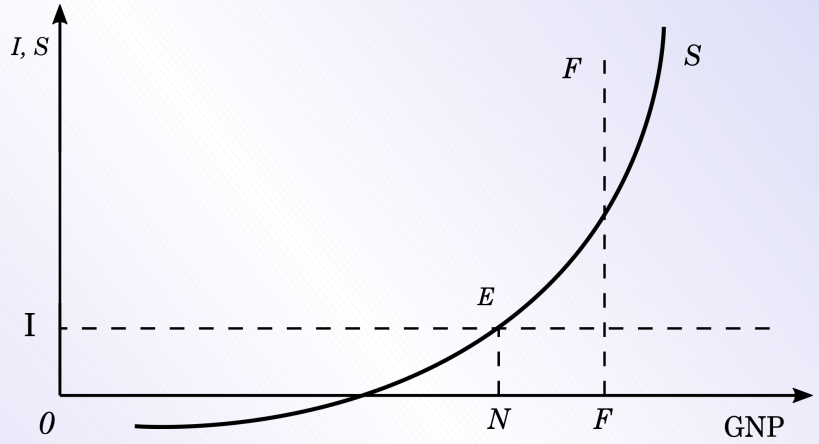


Figure 2.7 – The volume of GNP at the equilibrium of savings and investments

Secondly, the classical model assumes the existence of a flexible price mechanism inherent in the market. Keynes questioned this postulate: entrepreneurs faced with a drop in demand for their products, do not reduce prices. They reduce production and lay off workers. Hence – the "invisible hand" of the market mechanism cannot provide full employment.

Thirdly, savings are primarily a function of income, not just the level of interest, as can be seen from the theory classics.

Thus, the balance between aggregate demand and aggregate supply requires that savings and investments are equal. The fact that investment is a function of interest and savings is a function of income makes the problem of finding equality very difficult.

2.7 Multiplier of total expenses

There is another way to determine the equilibrium level of gross national product – *the model "GNP additional expenses"*. A graphic representation of this method for determining the level of GNP is shown in Figure 2.8.

If income and expenses are equal, the GNP level will be set at S_0, i.e. at the level of zero savings. However, if you add investment to personal consumption expenditures, the line C will move up and take the position $C+I$. Now the $C+I$ *curve* will cross line 45 degrees (the line of equality of income and expenses) at point E. This point will correspond to the volume GNP in the amount *of* ON. Point N approached point F, i.e. the level of GNP that corresponds to full employment. The larger the investment, the higher the $C+I$ *curve* rises and the closer the level of full employment is.

If the state will not only encourage private investment, but also carry out its own spending, then the curve $C+I$ will turn into a $C+I+G$

curve. So, total expenses are the sum of C, I, G and taking into account net exports (X_n) they are equal $C + I + G + X_n$.

Any change in consumer, investment, and government spending that makes up aggregate demand triggers a multiplicative process. It is expressed in the excess of the increment of total income of total supply over the increment of total expenses (total demand).

The aggregate expenditure multiplier is as follows: $\Delta GNP = M\Delta E$, where ΔGNP – increase in GNP; M – number coefficient (multiplier); ΔE – growth of total expenses.

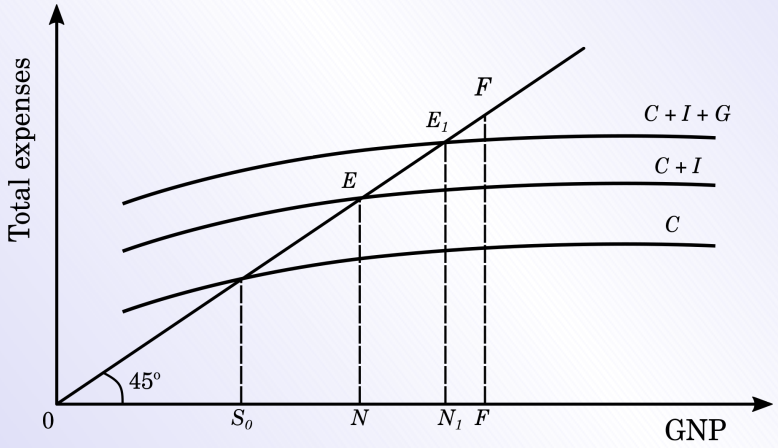


Figure 2.8 – Graph for determining the level of GNP

The mechanism of action of the multiplier is as follows: any additional expense (ΔE) becomes the income of those persons who sell goods and

services in the economic cycle. Thus, in the next round of the economic cycle, this income can again become an expense, thereby increasing the aggregate demand for goods and services.

Consumption and savings are generally stable. Therefore, the multiplier effect is particularly important in cases where investment and government spending changes, which are used as levers of influence on the growth of GNP.

2.8 Investment Multiplier Theory

The Keynesian theory of determining the optimal size of GNP at which the economy reaches a state of equilibrium states that with an increase in investment, GNP growth will occur in a larger amount than the initial additional investment. This is due to the fact that *investments lead to an increasing effect.* This increasing effect in the amount of GNP is called *the multiplier effect. The multiplier* is a numerical coefficient that characterizes the size of GNP growth with an increase in investment.

Let's assume that the increase of investments is 10 billion rubles, which led to an increase in GNP by 20 billion rubles, therefore the investment multiplier is 2.

$$M = \frac{\Delta GNP}{\Delta I} \quad or \quad \Delta GNP = M \cdot \Delta I,$$

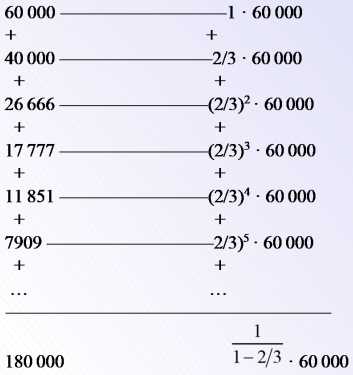
i.e. the multiplier multiplied by the investment increment, shows the increment GNP.

The multiplier effect works like this: for example, an enterprise produces additional products and for this purpose attracts additional workers, paying them 60 thousand rubles/month, i.e. investments are equal to 60 thousand rubles. Let these workers and in society have a marginal propensity to consume (MPC) equal to 2/3 and 1/3 of their income goes to savings. Then workers buy goods for 40 thousand rubles, paying money to their producers, who also have $MPC = 2/3$. 26666 rubles ($40000 \cdot 2/3$). Thus, 26666 rubles is spent on consumption at the second level which are also used for purchasing products.

This process continues at each level until the funds spent on consumption approach zero. At the same time, we take $MPC = 2/3$ everywhere. The initial investment increased by 60 thousand rubles, caused a chain reaction of consumer spending. Based on our reasoning, we can draw the following conclusions about the increase in consumer spending.

Clearly, this is the limit of the sum of terms of a geometric progression. Investing in the economy 60000 rubles caused a chain of consumer spending and led to an increase in GNP by 180000 rubles.

$$M = \frac{GNP}{I} = \frac{180000}{60000}.$$



Thus, for $MPC = 2/3$, the multiplier $M = 3$, or

$$M = \frac{1}{1 - MPC} = \frac{1}{MPS},$$

i.e. *the multiplier* is the value of the inverse of the marginal propensity to save.

Let's sum up the results. First, the *greater the additional consumption expenditures of the population*, the greater the multiplier value and consequently the increase in GNP for a given amount of investment. Secondly, the *larger the additional savings of the population*, the smaller the multiplier value, and consequently the smaller the increase in GNP for a given amount of investment increment.

Using the formula of the multiplication effect we will consider the mechanism of its action (Figure 2.9).

With investments and savings of 200 billion rubles and a GNP of 600 billion rubles, the equilibrium state is characterized by the point E. When investments increase by 100 billion rubles, their graph rises up to level I_1. A new state of equilibrium reached at point E_1. At the same time, the increase in GNP will be three times greater than the increase in investment. A new state of equilibrium in point E_1 it shows that with the growth of GNP by 300 billion rubles, the savings of the population also increased by 100 billion rubles.

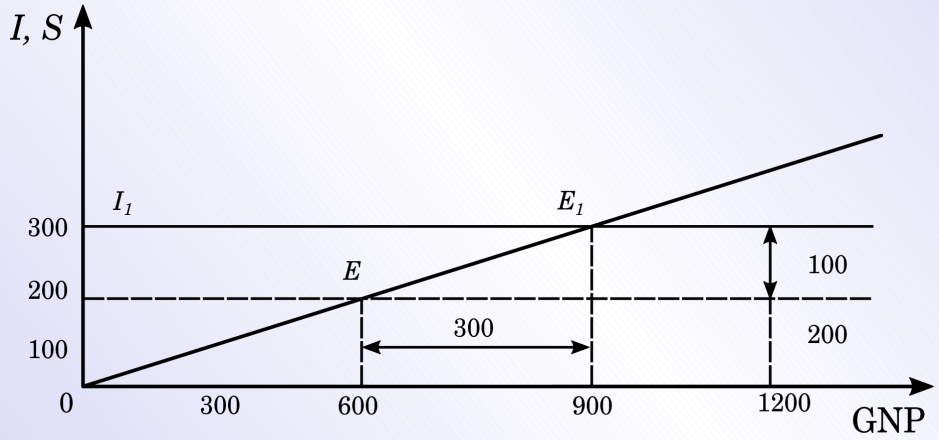


Figure 2.9 – The mechanism of the multiplier effect

The analysis of savings and investments reveals *specific levers* through which aggregate demand, GNP and employment can be influenced. *Household incomes and their dynamics* affect macroeconomic processes. Al-

though the population saves and businesses invest based on different considerations, their mutual balance has an impact on the macroeconomic balance. At the same time, investments are a more active element, since they have a multiplier effect on the volume of GNP.

Keynesian multiplier theory tried to prove that large expenditures made by the Government,businesses, and consumers have a positive impact on national output. Although this theory has been criticized by various schools, it has played a positive role in justifying the concept of effective demand the need and possibility of regulating the market economy.

LECTURE 3
MACROECONOMIC DYNAMICS

3.1 The essence of economic development

The concepts of "economic development" and "economic growth" should be distinguished. *The economic development of a society is a process that encompasses economic growth, structural changes in the economy, the level and quality of life of the population.*

Various models of economic development are known (the Swedish model, the German model, the Chinese model, etc.). But for all their diversity and national characteristics, there are general patterns and parameters that characterize this process.

According to the level of economic development, there are developed countries (USA, Japan, Germany, Sweden, France, etc.), developing countries (Brazil, India), underdeveloped countries (African states), and countries with transition economies that occupy an intermediate position between developed and developing countries (republics of the former USSR, China, Vietnam, Mongolia).

In general, the economic development of a (in the meaning – any) society is a contradictory and difficult in measuring process that does not occur in a straight, but in an ascending line. Development itself is characterized by unevenness, including periods of growth and decline,

quantitative and qualitative changes in the economy, positive and negative trends. It is advisable to consider economic development over a long-term period within a particular country.

To assess the level of economic development, there is a whole system of indicators, among which are: total real GDP; GDP per capita; industry structure of the economy; production of basic products per capita; level and quality of life of the population; indicators of economic efficiency. The total volume of real GDP characterizes the country's economic potential. Production of GDP per capita is the main indicator of economic development. The sectoral structure of the economy presupposes the uniform development of all branches of public production without any restrictions damage to any industry.

Indicators of the level and quality of life are numerous. These are life expectancy, the degree of morbidity, the level of medical care, education, personal safety, social security, the state of the natural environment, the purchasing power of the population, working conditions, employment and unemployment. A generalized indicator is the human development index, which includes life expectancy, education coverage, and GDP per capita. Indicators of economic efficiency are, first of all, labor productivity, profitability of production, capital efficiency, capital and material consumption of products.

3.2 The concept of economic balance

Each company represents a relationship of economic units. Their behavior is similar: they adapt to effective demand and at the same time strive to provide themselves with a constant and stable income. Enterprises are linked by supply and monetary relations. Under these conditions, the possibilities of increasing production in one economic unit should correspond to the same process in related industries, in transport support. And if we take into account that the production of any final product involves a relationship from 200 to 500 enterprises, you can imagine the overall scale of relationships between business units. These proportions are very variable in the market, especially since each production unit has a certain degree of autonomy.

If, while maintaining this mobility in the context of market mechanisms and stable development of the entire economic system, we are talking about balanced, balanced economic growth. Equilibrium, balance is achievable through different combinations of resources. The result is different, so balance can be achieved with different production efficiencies.

Balance or equilibrium characterizes the state of the economic system as a single integral body.

The connectedness of economic processes, the dependence and interweaving of economic ties inevitably presuppose the mutual consistency of

the entire system of general, particular and individual proportions of social production, i.e., the balanced development of the economic system.

In order for the economy to develop in a balanced way, it must rely on reserves that are necessary for economic maneuver. In this case, the market is saturated, assuming some excess of goods over demand. It creates stability of economic relations in the country. The availability of a stock of necessary resources localizes production failures and prevents them from spreading to a wide chain of economic links. This type of overproduction blocks the resulting disproportionality, which strengthens the stability of the economic system.

When the market is saturated, the role of the business contract increases. Violation of a business contract reduces the possibility of sales, leads to loss of income, and deprives the enterprise of competitiveness. Therefore, in a saturated economy, the economic contract is strictly observed. It becomes the real master of enterprise coordination.

If a saturated market accumulates excessive reserves of resources, their deadening is observed, when not all factors of production are used efficiently. The growth of material reserves becomes a signal that indicates that equilibrium growth occurs when resources are used inefficiently. In such an economic system, they say, the structure is redundant, and therefore does not provide effective growth. If the system is not protected by inventory, then it is characterized by a so-called insufficient structure, which is fragile and not protected from production failures.

So, without balance, the development of the society as a system is impossible.

3.3 Economic growth: essence, factors and types

Indicators of economic development are numerous and not always quantifiable. Therefore, due to the difficulties of measuring the process of economic development in macroeconomics, economic growth is most often analyzed.

Economic growth is a component of economic development. It is expressed directly in the change (quantitative increase) in the volume of goods and services produced in the country. At the macroeconomic level, the leading indicators of economic growth dynamics are:

– GDP growth;

– GDP growth rate;

– growth rates of industrial production in general, by major industries, and per capita.

In economic statistics, growth coefficients, growth rates, and rate of increase are used to study GDP dynamics.

The growth factor X is calculated by the formula:

$$x = \frac{GDP_1}{GDP_2},$$

where is GDP_1 and GDP_2 — GDP of the reporting and base period. GDP (economic growth) growth rate is the ratio of

$$\frac{GDPgrowth}{GDP} \cdot 100\% \frac{GDPgrowth}{GDP} * 100\%$$

can imagine it like this:

$$\frac{GDPgrowth}{GDP} \cdot 100\% = \frac{Investment}{GDP} \cdot \frac{GDPgrowth}{Investment}$$

where is the relation $\frac{Investment}{GDP}$ is a rate of accumulation (the share of investment in GDP); and the ratio of $\frac{GDPgrowth}{Investment}$ is limit value capital productivity.

Consequently,*the rate of economic growth is determined by the rate of accumulation multiplied by the marginal productivity of capital.*

The above formula is convenient from the point of view of identifying the influence of growth factors — they can be divided by the nature of the impact on growth rates through the rate of accumulation (quantitative) and through the marginal productivity of capital that affects the effectiveness of investments (qualitative).

In turn, qualitative growth factors may be divided into two groups: those that contribute to the formation of effective market and related to the formation of effective institutions.

The GDP growth rate is equal to the GDP growth rate minus 100. In practice, the growth rate is often understood as the rate of increase.

Economic growth is determined by a number of factors. These include:

– labor (quantity and quality of labor resources);

– land (quantity and quality of natural resources and revolving funds derived from them);

– capital (investments and fixed assets, taking into account their technological level, which is provided by STP);

– entrepreneurial abilities (understood not only as the economic activity of entrepreneurs, but also as the economic activity of entrepreneurs as an economic mechanism that promotes this activity).

In fact, these are already familiar factors of production (production factors), they are also economic resources, but they are called growth factors due to the fact that when considering economic growth, they are analyzed from a slightly different angle.

Factors of economic growth are interrelated. Thus, labor is productive if the employee uses modern equipment and materials under the guidance of a capable entrepreneur in a well-functioning economic mechanism. Therefore, it is very difficult to determine the specific weight of a particular factor of economic growth accurately.

Factors of economic growth are divided into two groups depending on the nature of economic growth: extensive and intensive.

Extensive growth factors:

– increase investment while maintaining the current level of technology;

– increase in the number of employed employees;

– growth in the volume of raw materials, materials and fuel consumed.

Intensive growth factors:

– acceleration of scientific and technological progress (introduction of new equipment and technologies by updating fixed assets);

– professional development of employees;

– improving the use of fixed and revolving funds;

– increase of production efficiency due to its better organization.

When extensive growth factors predominate, they speak of an extensive type of economic development; list of intensive growth factors – about the intensive type.

In the extensive type of development, economic growth is achieved through a quantitative increase in factors of production, and in the intensive typethrough their qualitative improvement and better use. Moreover, in this case, economic growth is possible even with a decreasing rate of capital investment, and even with a decrease in their physical volume.

With the development of science and technology, intensive growth factors become predominant. However, in real life, extensive and intensive types of economic growth do not exist in their pure form. Therefore, it is customary to speak of a predominantly extensive or predominantly intensive type of economic growth.

Sometimes economic growth factors are divided into three groups:

1. Supply factors (natural and labor resources, fixed capital and technology).

2. Demand factors (total expenditure level).

3. Distribution factors (efficient use of resources).

Supply factors make production growth possible and thus ensure the supply of a variety of goods and services. But the ability to increase production is not sufficient for real growth, since it is necessary to make real use of the growing volume of resources (demand factors) and effectively distribute them in order to maximize the number of useful products (distribution factors).

In the real process of economic growth, all these factors closely interact with each other.

Economic growth is greatly influenced by the state's economic policies that stimulate or contain the growth of the economy.

3.4 Modern models of economic growth

The generalization of the practice of economic development of the world's countries in the second half of the XX century allows us to distinguish *three models of economic growth:*

1) sustainable economic growth;

2) catching up with economic growth;

3) breakthrough economic growth.

The first model is typical for countries that have reached a high level of economic development (the United States and most Western European

countries), and whose average annual growth rate of national income is steadily equal to $2-3\%$. These are the countries that were able to extract economic benefits from the implementation of the achievements of scientific and technological development in the second half of the XX century. By switching to an intensive type of economic growth, they have achieved resource savings, ensuring an increase in national income with almost no increase in costs, directing most of the surplus product to the development of science, the social sphere and strengthening defense capabilities.

The model of catch-up economic growth is typical for the newly industrialized countries of Southeast Asia, Japan, China. What they have in common is the high growth rate of the national economy due to the use of equipment and technologies already used in Western countries.

Despite high rates of economic development, all countries of the catch-up model remain developing, rather than developing developed countries. In terms of per capita GDP production, they still lag significantly behind developed countries.

The main reason for the continuing backwardness of these countries is the weak development of education, science and information. Developing countries, having achieved high rates of catch-up development based on borrowing Western technologies, cannot achieve success in scientific develop- ment and production of new technologies.

The model of breakthrough economic growth assumes a breakthrough in certain types of production, for example, extractive industries of a particular sector of the economy or individual industries.

Russia is characterized by a resource-based variant of economic growth. The implementation of this model meets the interests of rich and politically influential Russian financial, trade intermediary and industrial groups. This strategy corresponds to the economic interests of foreign capital, the main share of which falls on the fuel and energy sector. The IMF is sympathetic to Russia's development in the raw material sector. However, such a development option is unpromising for Russia, since it will turn the country into a raw material appendage of the manufacturing industries of Western countries, and the population of Russia he will never get out of poverty and a state of social conflict. The export of raw materials and the inevitable import of consumer goods will contribute to the enrichment of Russian oil and gas exporters and trade intermediaries, while increasing the employment and income of the population of Western countries that supply Russia with manufacturing products.

3.5 Theories of economic growth

Currently, there are *three areas of economic growth:*

1. Neo-Keynesian.
2. Neoclassical.

3. Historical and sociological research.

In the neo-Keynesian direction, economic growth is seen as an unstable phenomenon. Therefore, the formation of demand for investment should play an important role in ensuring growth. Among the models of the neo-Keynesian direction are the *models of R. Harrod and E. Domar.*

Harrod R. formulated a number of dynamic equations, each of which reflects the features of economic growth. At the same time, they are allocated:

a) a "guaranteed" growth rate, i.e., one that creates conditions for equal savings and investment, determining the trajectory of sustainable economic growth;

b) a "natural" growth rate that corresponds to the rate of population growth and labor productivity, i.e., it coincides with the potential production opportunities.

The guaranteed growth rate, as a rule, does not coincide with the "natural"
one. Deviations generate long-term trends in the economy in the form of stagnation or inflation. Therefore, in order to maintain sustainable growth, government intervention in the regulation of aggregate demand is necessary.

Domar model takes into account the dual role of investment, which not only creates income that affects the volume of aggregate demand, but also leads to an increase in production capacity, and therefore to an increase

in market supply. E. Domar sees the main task of economic growth in determining the amount of investment required for such an increase in income, and therefore in effective demand, which would cover the increase in the supply of goods caused by the growth of production capacity. In his opinion, it is possible to find such rates of economic growth, which would ensure the equality of income growth and output growth, and, consequently, the equality of aggregate demand and aggregate supply in the process of economic growth.

R. Harrod and E. Domar models are often considered as a combined Harrod-Domar model. The Harrod-Domar equation for determining the growth rate is as follows

$$T_p = S/C,$$

where T_p is the rate of economic growth; S — the ratio of net savings (investment) to total income (S/NI); C — capital intensity efficiency, defined as the ratio of fixed capital to output (K/NI).

A large value of S (accumulation rate) leads to a high growth rate. The lower the product capital intensity ratio, the more output will be received. Hence, the growth rate is directly proportional to the S-rate of accumulation and inversely proportional to the C — the coefficient of capital intensity of products.

The neoclassical direction in the study of economic growth is used for quantitative analysis of the production function that considers the

dependence of the volume of production on only two factors — capital and labor.

A two-factor model was proposed by American scientists Ch. Cobb and P. Douglas and was named the Cobb-Douglas model. Later, the Cobb-Douglas production function became widely used in the development of models of economic growth with an expanding number of factors of production. So, the American economist R. Solow, in his article "Technical Progress and the aggregate production function", attempted to investigate the functional dependence of the volume of production on technical progress. To describe the macroeconomic system R. Solow used several equations. Its developments provided broader opportunities for analyzing trends in the development of macroeconomic systems, and served as an impetus for the development of numerous models of this type. In general, neoclassical models of economic growth, based on the production function, define a system of quantitative characteristics for assessing the impact of factors of production on economic growth.

Under the neoclassical model of economic growth, the *golden rule of accumulation* applies. It consists in the following: the consumption fund per capita grows at the maximum rate, if the savings rate is equal to the elasticity of production by capital.

The representative of the historical and sociological direction is the Ameri- can economist W. Rostow, the author of the theory stages of economic growth. It identifies the following stages:

– class society: static equilibrium, limited opportunities to use the results of scientific research-technological progress, falling per capita income;

– stage of creating conditions for a run-up: conditions for a run-up are gradually formed due to a certain increase in speed efficiency of production processes;

– run-up stage: by increasing the share of investments in national income, using achievements scientific and technological progress is being overcome by resistance to development;

– path to maturity: economic growth increases, production increases faster than population growth;

– a society of high mass consumption: concerns about restrictions related to the volume of production disappear, the importance of durable goods is growing.

Economic growth models allow us to assess the consequences of many economic processes and create "rules" economic behavior, combining both social and economic aspects.

However, these models differ from each other. So Keynesian models, like the doctrine in general, are based on demand, which ensures balanced economic growth. The main part of demand is capital investments, which increase profits through a multiplier effect. Keynesians do not share the neoclassical position of efficiency of factors of production and their interchangeability.

3.6 Cyclical nature of economic development

In an effort to expand production, to conquer a larger market, business owners periodically face overproduction. The essence of overproduction is manifested in the preponderance of the supply of goods over demand, when the price of goods decreases to such a level that for most producers there is not even a normal profit, let alone an economic one.

Trying to identify the causes of overproduction, economists drew attention to the frequency of such phenomena as an increase or decrease in demand, an increase in production volumes or its stagnation. A certain sequence in the alternation of these phenomena was also revealed. Despite the general recognition of the reality of cyclical development, there are a dozen different interpretations of the causes of cyclical development. The works of prominent economists M. Tugan-Baranovsky, K. Marx, T. Veblen, W. Mitchell, J. Clark, J. Hicks, J. Keynes, J. Schumpeter are devoted to the study of economic cycles.

Particularly noteworthy *is Schumpeter's idea of a three-cycle scheme, i.e., fluctuations in the economy that occur on three levels.* J. Schumpeter believed that the economic system shows the interrelation and interdependence of all three cycles.

The economic cycle is a common feature for almost all areas of economic life and for all countries with market economies. Recognizing the objective nature of the economic cycle, most economists suggest studying

this phenomenon through the analysis of internal and external factors that affect the nature of the cycle, its duration, the specifics and manifestation of individual phases.

External factors of the economic cycle include:

– wars, revolutions, and other political upheavals;

– discovery of large deposits of gold, uranium, oil, gas and other valuable resources;

– development of new territories and related population migration, fluctua- tions in the world's population;

– powerful breakthroughs in technology, inventions and innovations that make it possible to radically change the structure of the global economy.

Among the internal factors of the economic cycle, there are:

– physical service life of the fixed capital (10 – 15 years, during which the machines and equipment are fully wear out);

– personal consumption, which decreases or increases in output and employment;

– investing, i.e., investing in the expansion of production, its modernization, the creation of new workers places;

– economic policy of the state, aimed at direct and indirect impact on production, demand and consumption.

In addition, structural crises, such as the oil crisis, bring major changes to the development of the modern market economy. Unlike cyclical crises,

this crisis is accompanied by rising prices for oil and petroleum products, excessive demand for them, and a lag in supply from demand in the consumer market of liquid fuel.

Structural crises are generated by imbalances between the development of individual spheres and industries, are of a protracted nature and do not always coincide with the beginning of cyclical crises.

The oil, food, energy, and raw material crises are now being supplemented by the crisis of the financial and monetary system and the environmental crisis. By influencing the general state of industrial production, they signi- ficantly changed the traditional picture of cyclical development, smoothing out or exacerbating certain manifestations of cyclical crises.

The general picture of the development of the modern market economy did not coincide with the traditional scheme. For example, the industrial cyclical crisis of the mid-1970s was compounded by the oil crisis, but only in oil-consuming countries. Those countries that had their own sources of energy resources (oil, coal, gas) not only did not suffer as a result of the crisis, but even tended to recover somewhat.

On the other hand, the expected rapid development of industry in the recovery phase in many countries does not occur in the future as a result of a sharp aggravation of the situation caused by the environmental crisis.

In recent years, structural crises have become more complex. Global political processes are increasingly influencing economic problems, includ-

ing the collapse of the socialist system, interethnic and regional conflicts, and the growing role of the Islamic factor.

One of the determining factors in the modern world is instability. Tradi- tional raw material markets are changing, and production is actively develo- ping in areas where there is no environmental control system. In general, the Earth 's civilization entered the new millennium in a state of permanent upheaval.

3.7 The economic cycle and its phases

The main feature of the economic cycle is the crisis phase. An economic crisis is distinguished from a violation of the balance between supply and demand for a particular product or in a particular sector of the economy. *Economic crises arose as a general overproduction, as a profound upheaval of the entire economic system from top to bottom.*

During a crisis, the market becomes crowded; goods continue to flow in, while demand gradually decreases, lags behind supply, and finally stops altogether. Everywhere there are huge stocks of goods, many enterprises continue to work at full capacity due to inertia and throw more and more new masses of goods on the market. It follows a rapid drop in prices, many enterprises cannot withstand their sharp decline, liquidations and collapses begin. First of all, banks and credit institutions are being destroyed, and the trust of market entities is being destroyed to a friend

is undermined. Everyone is demanding payment in cash, loan interest is rising, and unem- ployment is rising.

In times of crisis, only enterprises with large capital and large financial capabilities retain the chance of making a profit by reducing production costs. Thanks to this, large enterprises with a general tendency of the rate of profit to fall during a crisis are able to suspend it. Medium and small enterprises that do not have high-performance equipment and technologies cannot stabilize their economic situation and go bankrupt. But the ruin of technically weak enterprises has its advantages for the economy as a whole, as it leads to an increase in the overall level of productive forces. The consequence of an increase in the overall level of labor productivity is a decrease in the cost of goods and, as a result, a weakening of the fall in the rate of profit.

The post-crisis phase of depression can be very long-lasting. The level of production remains stable, but very low in relation to the state before the crisis. The unemployment rate remains high, but the fall in prices is halted, loan interest is falling, and commodity stocks are stabilizing.

The next phase – recovery-is accompanied by a slight increase in the level of production, a slight reduction in unemployment. Gradually, prices begin to rise, and the loan interest rate increases. The demand for new equipment is growing in the commodity market.

The recovery covers an increasing number of industries, drawing new capital into a new round of the spiral. *The level of production reaches its*

highest level, and the recovery phase begins. Prices are rising, unemployment is falling to a minimum, while wages are rising significantly.

The demand for products of industries that determine trends in the development of scientific and technological progress is sharply increasing. Due to the expansion of production, the demand for raw materials increases, and their prices increase. In the recovery phase, the disproportions inherent in the recovery phase increase. The economy is coming to the next stage.

The pattern of changes in the economic system at different stages of the cycle is classical (Figure 3.1) in a simpler form, it can be represented as follows:

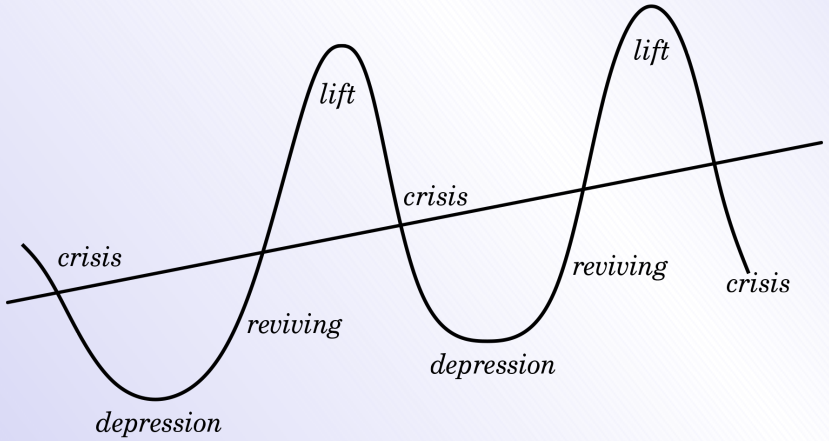


Figure 3.1 – Stages of the economic cycle

Modern economic cycles differ from the cycles of the 19th century and the first half of the 20th century. General patterns are becoming less visible. Some phases of the economic cycle undergo a metamorphosis, or even disappear altogether.

In trying to find the causes of cyclical fluctuations, economists focus on analyzing the phase of the crisis, because this phase concentrates all negative phenomena in the economic process.

One approach suggests that *the possibility of crises in a market economy is already inherent in simple commodity circulation and is related to the function of money as a medium of circulation.* A mismatch of purchase and sale in place and time can create prerequisites for breaking many links in the chain of sales and purchases.

The second possibility of crises is related to the function of money as a means of payment. Any manufacturer cannot guarantee that the buyer of its products will be solvent by the time of payment. Non-payment on one of the obligations can cause a chain reaction that will lead to a breakdown of the circulation system and, ultimately, the production process.

Depending on the length of cycles, there are three types of cycles: short-term, medium-term, and long-term.

3.8 Short- and medium-term economic cycles

Short-term economic cycles are commonly referred to as Kitchin cycles. Kitchin attributed the cycle length, which he assumed to be three years and four months, to fluctuations in global gold reserves (an external factor).

Most economists who support the idea of the existence of short-term economic cycles (40 months) tend to consider them only as an integral part of the general cyclical system, which is based *on medium-term economic cycles, called K. Zhuglyar's cycles.*

Zhuglyar considered the economic cycle as a natural phenomenon, the reasons for which lie in the sphere of monetary regulation requests, or more precisely, loans.

Zhuglyar assessed the crisis – the main phase of the cycle as a positive, healing factor leading to a general decline in prices and the liquidation of enterprises. He believed that the repetition of all economic processes occurs every 10 years.

The duration of the Zhuglyar cycle coincides with the duration of cycles, the main cause of which is some economists see the timing of physical depreciation of the active part of fixed assets.

We should also mention the so-called *construction cycles of S. Kuznets.* The blacksmith believed that oscillatory processes with a cycle duration of

15-20 years are associated with periodic renewal of dwellings and certain types of industrial structures.

The English scientist J. Clark believed that an increase in demand for consumer goods creates a chain reaction leading to a multiple increase in demand for equipment and machinery. This *pattern, which is a key point in the cyclical development process, was defined by Clark as the acceleration principle (accelerator effect).*

In order to achieve the desired level of production of consumer goods, preliminary costs are incurred for the production of means of production for the production of consumer goods. But any increase in the demand for consumer goods can lead to a much more significant expansion of the production of means of production, as a result of which a part of the produced consumer goods will be superfluous on the market.

Disequilibrium based on the current acceleration principle leads to alternating periods of underperformance water supply with periods of over- production.

The accelerator can be represented as a relationship between investment and consumer demand growth, or income

$$V = \frac{I_t}{Y_{t-1} - Y_{t-2}},$$

where V is the accelerator, I is the investment, Y is the income (or consumer demand), and t is the year when the investment was made.

For example, if the increase in consumer demand occurred between 2006 and 2005, then the investment will be implemented in 2007, or

$$V = \frac{I_{2007}}{Y_{2006} - Y_{2005}}.$$

The acceleration principle is considered by all economists who study the economic cycle. But there were and still are disagreements in assessing the significance of the acceleration principle and in the question of its real manifestation.

3.9 "Long waves" and technological structures

To research in the 20-30s. XX century adjoins the concept of large economic cycles. *The essence of the concept economic cycles was described by N. Kondratiev as follows.*

Along with short and medium-term economic cycles, there are economic cycles lasting about $48 - 55$ years. They cannot be explained by random causes. Kondratiev explained the existence of large economic cycles by the fact that the duration of functioning of various created economic goods is not the same. Similarly, they require different time and different means to create them. As a rule, bridges, roads, buildings, and other industrial infrastructure have the longest period of operation. They also demand the longest time and more capital to create them. Hence, it is necessary to

consider the disruption and restoration of economic equilibrium in relation to different periods of time, i.e., large cycles. Their main reason lies in the mechanism of accumulation, accumulation and allocation of capital sufficient to create new infrastructure elements.

In modern economic literature, the concept of large economic cycles is considered in relation to the problem of macroeconomic forecasting. The dominant place in the theories of economic cycles is occupied by the problems of the manifestation of medium-term cycles.

The history of long wave analysis in economics began in the mid-19th century. At first, it was just guesswork. In 1847 J. Clark noted that 54 years had elapsed between the two economic catastrophes of 1793 and 1847. For the first time, he suggested that this interval is not random and that there must be some causes that cause such disasters.

Another English scholar, W. Jevons used statistical data to prove the existence of long-term fluctuations in the economy. He analyzed price series and noticed repeated long periods of growth and decline. But Jevons could not find any positive explanation for this phenomenon and wrote: "I do not know of a single reason that can be considered common to all cases."

In Karl Marx, one can find important elements of the theory of long-term fluctuations, including the relationship between technical progress and profit. At the end of the XIX century the existence of long-term fluctuations was mentioned by the Russian Marxist M. Tugan-Baranovsky.

This problem was dealt with by our compatriot Gelfand, the Dutch De Wolf and Van Gelderin.

Almost simultaneously and quite independently of foreign scientists in Russia, the Soviet economist N. Kondratiev dealt with the problem of long-term fluctuations. Kondratiev's name has been fixed in the history of world economic science in the expressions "Kondratiev long waves", or "Kondratiev cycles".

The main elements of the internal mechanism of a long cycle, according to Kondratiev, are:

1. A capitalist economy is a movement around several levels of equilibrium. The balance of "basic capital goods" (industrial infrastructure plus skilled labor) with all the factors of economic and social life determines this techno- logical structure. When this equilibrium is disturbed, it becomes necessary to create a new supply of capital goods.

2. The renewal of "basic capital goods" does not occur smoothly, but in jerks scientific and technical inventions and innovations play a crucial role in this process.

3. The duration of this cycle is determined by the average lifetime of production infrastructure structures that are one of the main elements of the capital goods of society.

4. All social processes: wars, revolutions, population migrations-are the result of the transformation of the economic mechanism.

5. Replacing “core capital goods“ and emerging from a prolonged recession requires the accumulation of resources in kind and in cash. When this accumulation reaches a sufficient value, there is an opportunity for radical investment, which brings the economy to a new upswing.

It turns out that the “main capital goods“ are industrial buildings, infra- structure structures, as well as qualified labor that serves this technological structure. The stock of “basic capital goods“ must be in balance with the existing industrial structure of production, raw materials and energy sources, prices, employment, public institutions, the state of the monetary system, etc., i.e., with all factors of economic and social life.

Periodically, this equilibrium is disturbed and there is a need to create a new stock of basic capital goods that would correspond to the emerging new technological order. Such a renewal of basic capital goods, reflecting the development of the scientific and technological process, does not occur smoothly and is the material basis for large economic cycles.

3.10 State stabilization policy

The state, in order to smooth out cyclical fluctuations in the period of economic downturn, pursues a policy of activization of all economic processes, and in the period of overheating – tends to restrain business activity.

In modern conditions, *there are a number of new factors that bring to the economic cycles the shades* with which they are based. These factors must be taken into account when implementing a countercyclical policy.

The first is the phenomenon of synchronization of economic cycles, i.e., the coincidence of cyclical fluctuations in different countries and regions. The synchronization process is explained by the increasing internationalization of production, the development of relations between countries, the dissemination of scientific and technological progress, and the deepening of scientific and technical cooperation. When implementing counter-cyclical regulation, the Government should take this into account and seek to synchronize its measures aimed at smoothing cyclical fluctuations with similar measures being implemented in other countries. Ignoring this requirement can lead not only to a decrease in the effectiveness of countercyclical regulation, but even to zero results of efforts in this area.

The second is the fact that such phenomena as inflation, monopolization of the economy, violation of economic proportions, etc. contribute to the deepening of market fluctuations. Therefore, all the measures that are taken to overcome them (anti-inflationary policies, the fight against monopolism, etc.) can also be considered as special cases of regulating the economic cycle.

In the downturn phase, all government measures should be aimed at stimulating business activity. In the area of tax policy, this means lowering interest rates, providing tax incentives for new investments, and

implementing a policy of accelerated depreciation. At the same time, supporters of Keynesian views rely more on the growth of public spending, which is considered as a stimulus for accumulation. Tax measures are more complementary to budget measures, and together they lead to stimulating aggregate demand and, ultimately, production.

Neoconservative advocates pay more attention to taxes, whose reduction leads to an increase in business activity, but in general they see fiscal policy as a complement to monetary policy.

Monetary policy in a downturn pursues the same goals as fiscal policy and involves credit expansion. Its goal is to revive economic life in the country with the help of additional loans. At this time, a "cheap money" policy is being implemented. In practice, this means that interest rates for loans issued are reduced, banks' credit resources are increased, which leads to an increase in investment, increased business activity, and reduced unemployment. However, this can also have negative consequences, as in the long run it leads to an increase in inflation.

*During the period of rising*economic conditions, the state, in order to prevent overheating of the economy, pursues a policy of containment, including opposite measures in the field of fiscal and monetary policy.

Fiscal policy in the recovery phase is characterized by higher tax rates, reduced government spending, and restrictions on the implementation of depreciation policies. It is the fiscal policy that proponents of Keynesian regulatory methods focus on. Fiscal measures lead to a decrease in pur-

chasing power, and hence demand, which ultimately leads to a decline in economic activity.

3.11 Comparative analysis of the effectiveness of tools macroeconomic policy of the State

Since there are different views on the causes of cyclical fluctuations, there are also different approaches to the problem of their regulation. However, despite the wide range of views, in general, it can be said that all concepts of cycle regulation tend to one of two areas of regulation: neo-Keynesian or neoconservative, which develops on the basis of the classical school. *The first focuses on the regulation of aggregate demand, the second-on the regulation of aggregate supply.* For clarity, you can present their differences in the form of table 3.1.

Depending on the guidelines, proponents of a particular direction solve the problems of smoothing cyclical fluctuations in different ways, and use the tools available to the state in different ways. For example, *proponents of Keynesian prescriptions pay more attention to budget and tax policy, while proponents of neoconservative prescriptions pay more attention to the problem of money and credit.* The problem of state participation in the ongoing processes is also solved in different ways – in the policy of regulating the economy as a whole and in the field of smoothing cyclical fluctuations.

Table 3.1

Direction	Neocainesianism	Neoconservatism
Orientation	On demand	On supply
Goals	Regulation of the economy as a whole (macroeconomics)	Creating incentives for individual enterprises (microeconomics)
Regulatory priorities	1. Fiscal policy 2. Monetary policy	1. Monetary policy 2. Fiscal policy
Assessing the role of the State	Promotion	Restriction

Despite the differences, there is a common understanding between these concepts that, firstly, the state is able to smooth out cyclical fluctuations, and, secondly, the state should do this in order to achieve and maintain economic stability. There is also a general understanding of what should be the state's policy of behavior aimed at overcoming cyclical fluctuations.

3.1.2 The concept of hysteresis

When analyzing the economy in the short and long run, neo-Keynesians and neoclassicists view price dynamics differently. Neo-Keynesians emphasize the inflexibility and rigidity of prices in the short term and emphasize that actual and potential GNP do not always coincide. Moreover, actual GNP depends on aggregate demand and fiscal and monetary poli-

cies that affect the value of aggregate demand can be used to change the equilibrium volume of GNP.

Neoclassicists do not deny that there is some inertia in setting prices and wages in the short term. However, in the long run, prices and wages are flexible, respond to changes in the market environment, and ensure an overall economic equilibrium at full employment. They argue that changes in aggregate demand have an impact on GNP and employment only in the short term. In the long run, the economy returns to its natural levels of output, employment, and unemployment.

Neo-Keynesians raise objections to the hypothesis of a natural level of GNP. They believe that *changes in aggregate demand affect GNP, employment, and unemployment not only in the short-term, but also in the long-term.* This phenomenon is called hysteresis.

LECTURE 4
FINANCIAL SYSTEM AND FINANCIAL POLICY OF THE STATE

4.1 The essence and functions of finance

Finance is an economic relationship that occurs in the process of education, distribution and use of cash flows.

In the economic life of the society, monetary relations constantly arise between:

1. The state and enterprises (organizations) in the form of payment of taxes to budgets, deductions to various funds the provision of benefits, the application of sanctions.

2. Companies (organizations) regarding the conclusion and execution of business contracts, payment of penalties, fines, penalties, and bonuses for meeting the customer's special requirements.

3. Enterprises and employees when calculating and issuing wages, bonuses, withholding taxes, paying taxes, etc. union dues, receiving benefits.

4. The state and individual members of the company when paying taxes, rent, and insurance payments.

5. Separate parts of the budget system.

6. States when receiving loans.

Thus, each state has several areas of financial relations. Each of the spheres has its own specific features, which are manifested in the forms and methods of mobilizing financial resources and their use. For example, enterprises in the real sector generate financial resources from profit, deprecia- tion charges, and proceeds from the sale of securities. The state budget is formed mainly at the expense of taxes from enterprises and the population. The channels for channeling of financial resources between enterprises and the state budget are also not the same.

The essence of finance is shown in its functions: distributional, control, incentive, fiscal.

The distributional function is to provide business entities with the necessary financial resources. Through taxes, funds are concentrated in the state budget, which is then directed to state problems solving.

Finances associated with the movement of the value of a social product in monetary terms allow us to systematically control the economic proportions of social reproduction that are developing in the society, which reflects their *control function.*

The stimulating function of finance is manifested in the following: by maneuvering tax rates, benefits, fines, changing the conditions of taxation, the state creates conditions for the accelerated development of certain indu- stries and branches, contributes to problem solution that are relevant to society. With the help of taxes, benefits, and sanctions, the state can

encourage technological progress, increase the number of jobs, and capital investment in expanding production.

The performance of*the fiscal finance function* is achieved by the removal of part of the income of enterprises and citizens for the maintenance of the state apparatus, the defense of the country and the part of the non-production sphere, which does not have its own sources of revenues (libraries, archives), or they are insufficient to ensure an adequate level of development (basic science, theatres, museums).

4.2 Financial system

The financial system is a set of separate but interrelated links of financial relations designed to ensure the State to exercise its functions.

The financial system of the Russian Federation includes the following components: public finances, municipal financial institutions, finance of the enterprises (organizations) and finance of the citizens.

The most important parts of the financial system are state and municipal (local) finances, which provide state and local self-government bodies with funds to perform their functions. State and municipal finances cover the part of monetary relations related to the distribution and redistribution of GDP that is accumulated in the hands of the state and local authorities to cover their expenses.

Public finances include federal finances and finances of the constituent entities of the Russian Federation. Municipal finances are allocated into an independent structural level, since local self-government is separated from the state management system.

The main link of the financial system is the state budget – the largest centralized monetary fund at the disposal of the government. With its help, the government concentrates in its hands the vast majority of NI redistributed by financial methods. This makes the budget the main financial base for the state to perform its functions. This is where the largest revenues and the most significant investments are concentrated important national expenditures. It links the main financial institutions – taxes, domestic loans and expenditures.

The second most important financial link is the local finance system. Under the influence of the development of productive forces, the role of local authorities is increasing. The scale of local economy is growing and the functions of local authorities are expanding and becoming more complex. All this increases the importance of local finance, increases its role and share in the financial system.

Local finance covers a wide group of taxes, a system of local credit, special funds. A special place in this link belongs to local budgets, which are not part of the state budget and have a certain independence.

This part of the financial system is increasingly used for economic purposes, to regulate economic processes, including smoothing out imbalances

in the allocation of productive forces, and to increase the competitiveness of the national economy in international markets. For this purpose, a significant part of local budget funds is allocated to the development of economic and social infrastructure.

Local budgets serve as a guide to the social policy of central authorities. They are used to reproduce the labor force, increase social spending as a result of increasing the requirements for improving the quality of life. Thus, there is a process of involving local finances in solving problems that are becoming increasingly difficult for central authorities to cope with.

An important element in the system of state and municipal finances is *the state social extra-budgetary funds* (Pension Fund of the Russian Federation, Social Insurance Fund of the Russian Federation, Federal and territorial funds of compulsory medical insurance of the Russian Federation). They are used for social protection of citizens and economic development. The allocation of such funds as separate units of the financial system is due to the need to ensure guarantees in the targeted use of funds formed mainly at the expense of targeted mandatory deductions.

A specific element of state and municipal finances is a state and municipal loan, which is one of the sources of covering the budget deficit in the form of issuing state and municipal securities.

A special place in the country's financial system is occupied *by the finances of enterprises (organizations)* various forms of ownership. Finances of enter- prises (organizations) are a set of monetary relations re-

lated to the formation and distribution of monetary incomes and savings of business entities and their use for various purposes; fulfillment of obligations to the financial and banking systems, financing of social services and material incentives for employees, payment of dividends, payment of bills of exchange, rent, etc. The finances of enterprises are the leading link in the financial system, since it is at the level of the finances of enterprises that the sources of financial resources are formed.

The next link in the financial system is *the finances of citizens*. They represent monetary relations that arise in the process of formation, distribution and use of funds between citizens and other economic entities. Citizens' finances are associated with the formation of citizens' incomes and their use for current expenses, the acquisition of property, and the creation of a financial portfolio.

All parts of the financial system are closely interconnected and constantly interact.

4.3 Budget system

The budget system of the Russian Federation consists of three levels:

1. Federal budget.
2. Budgets of constituent entities of the Russian Federation.
3. Local budgets.

Budgets included in the budget system of the Russian Federation are independent and are not included into each other, i.e., budgets of constituent entities of the Russian Federation. The Russian Federation is not included in the federal budget and local budgets are not included in regional budgets.

The consolidated budget of the Russian Federation is a set of budgets of all levels of the budget system of the Russian Federation. Consolidated budgets are not approved by legislative bodies. This is a statistical set of budget indicators that characterize income and expenses – sources of funds and directions of their use for the territory as a whole and for individual subjects.

Financial relations between different parts of the budget system are built on the basis *of the federalism budget principle.* It provides for:

– independence of budgets at various levels;

– differentiation of budget responsibility and expenditure powers between budgets of different levels;

– budget regulation, i.e., balancing lower-level budgets at the expense of higher-level ones and the balancing process state budget planning.

Budget regulation is carried out using the following methods:

– subsidy (transfer to the income of the lower budget of a part of the income of the higher budget on a gratuitous basis without payment);

– grant (issued in a fixed amount to cover the cash gap);

– subvention (share of the higher-level budget in the target activities of the lower-level budget);

– credit resources (funds transferred on a paid basis with or without interest).

4.4 The State budget and its functions

The budget can be understood as the state's money bag and its contents.

The state budget can be viewed from two perspectives: as an economic category and as a financial plan.

In its economic essence, the state budget represents monetary relations that arise between the state and individuals and legal entities regarding the redistribution of personal income in connection with the formation and use of budget funds.

As a financial plan, the state budget consists of revenues and expenditures. Being the main financial plan of the state, it gives the authorities a real economic opportunity to exercise their powers. The budget reflects the amount of financial resources required by the state and thus determines the tax policy in the country. The budget fixes specific areas of spending, redistribution of NI and GDP, which allows it to act as an effective regulator of the economy.

The state budget performs the following functions: distributive; stimulating; social; control service.

The distribution function of the budget is manifested through the formation and use of centralized funds at the levels of state and territorial power. With the help of the budget, the state regulates the economic life of the country, directing budget funds to support or develop industries and regions.

By regulating economic relations, the state increases or restrains the growth rate of production, accelerates or weakens the growth of capital and private savings, and changes the structure of demand and consumption. This is *the incentive function* of the budget.

The social function of the budget is to accumulate funds in the budget and use them for the implementation of social programs aimed at developing health care, culture, education, and support for the poor.

The control function of the budget presupposes the possibility and obliga- tion of state control over the budget revenue and use of budgetary funds.

The redistribution of GDP through the budget has two interrelated and simultaneously occurring stages:

1) formation of budget revenues;

2) use of budget funds (budget expenditures).

Budget revenues are funds that are irrevocably placed at the disposal of the state budget bodies government of the Russian Federation, constituent entities of the Russian Federation, and local self-government bodies.

Budget revenues are tax and non-tax in nature. The source of tax revenue is newly created value and income received as a result of distribution (profit, wages, value added, loan interest, rent, dividends, etc.), as well as savings.

Non-tax revenues are generated either as a result of the economic activity of the state itself, or by redistributing already received revenues to the levels of the budget system. Non-tax income includes: income from the sale of state and municipal property; income from foreign economic activity; income from the sale of state reserves.

Budget expenditures – funds allocated for financial support of the tasks and functions of the state and local self-government.

State budget expenditures include the following main groups: for national defense, for economic development, social and cultural needs, maintenance of the state administrative apparatus, and for servicing the state debt.

The state budget is the main link of the financial system and one of the most important mechanisms that allow the state to implement economic and social regulation. It gives the political authorities a real opportunity to influence the economy and the course of social reproduction. It is through the budget that the state promotes the development of priority

sectors of the economy, regulates the volume of aggregate demand, and thereby affects short-term fluctuations in the economic environment.

The budget mechanism serves as an important tool for long-term structural policy. It is used for major structural changes, faster development of knowledge-intensive industries, progressive scientific and technological changes in the national economy, and the recovery of economically lagging regions.

In the modern world, the budget has become a powerful regulator of macroeconomics. Currently, in Western countries, from 1/3 to 1/2 of GDP is redistributed through the budget. The increased regulatory role of the budget makes it possible to consider it as a financial plan that serves as a means of economic stability.

4.5 Budget deficit and public debt

One of the most pressing issues of public finances is the problem of budget deficits and public debt. The budget deficit and the amount of public debt are thermometers of the state of the economy. Therefore, this problem is given considerable attention by both the population and economists.

Budget deficit is the amount by which budget expenditures exceed budget revenues in a given year. The budget deficit reflects certain changes in the reproduction process and captures the result of these changes. The

sources of covering the budget deficit are government loans and the issue of paper money.

Public debt is the sum of budget deficits accumulated in a country over a certain period of time, minus the budget surpluses that are available at the same time. There is a distinction between external and internal public debt.

The external public debt, i.e., the debt to foreign states, organizations and individuals, lay down the greatest burden on the country, since it is forced to give away valuable goods, provide certain services in order to pay interest and repay the debt. It should also be remembered that the lender usually dictates certain conditions, after which the loan is granted.

Internal debt of the state – causes, first of all, the redistribution of income among the population within the country. Payments of the national internal debt lead to transference of money from the pockets of the less well-off strata to the more well-off ones, since usually the latter are the holders of government bonds. No less dangerous is another consequence: raising tax rates (as a means of paying off public debt) can reduce interest in investing in new risky enterprises, research and development work (RaDW) and so on, as well as increase social tension in the society.

Budget deficits and public debt are closely linked. Firstly, government loans are the most important source of covering the budget deficit. Secondly, it is impossible to determine how dangerous the budget deficit is without analyzing the amount of public debt. It should be noted that

budget deficits do not reflect the health of the economy at all. You need to have a clear idea, what processes take place within the reproductive cycle?

An increase in public debt has the following consequences. First, paying interest on the national debt increases income inequality, as a significant part of the country's GDP increases part of the state obligations is concentrated in the wealthiest part of the population. Consequently, those who own the bonds will become even richer.

Second, raising taxes to pay interest on the national debt or reducing it may lead to a reduction in the government's debt burden undermine economic incentives.

Third, the existence of external debt implies the transfer of part of the created product abroad.

Fourth, when the government takes out a loan on the capital market to pay off debt or pay interest on the state loan. This leads to an increase in the interest rate on capital. But an increase in the interest rate causes a reduction in investment.

It is also possible to note a purely psychological aspect: with the growth of public debt, there is an increase in sentiment uncertainty of the country's population in the future.

4.6 Economic theory of taxation

Any State needs funds to perform its functions. The source of these financial resources can only be funds that the government collects from its subjects (in the form of individuals and legal entities). These mandatory fees, implemented by the State on the basis of State legislation, are taxes.

Tax is a mandatory payment levied by the state from individuals and legal entities in accordance with the legislative procedure, in the established form and within the established time frame. Taxes express the obligation of all legal entities and individuals who receive income to participate in the formation of public financial resources. Therefore, taxes are the most important link in the state's financial policy.

As a factor in the redistribution of national income, *taxes are designed to:*

– correct any failures that occur in the distribution system;

– to interest (or not to interest) citizens in the development of certain forms of activity.

For as many centuries as the state has existed, so have taxes, and so has economic theory principles of optimal taxation.

Smith A. formulated four fundamental principles of taxation that are desirable in any economic system.

1. The subjects of the State must share in the maintenance of the Government according to the income which they enjoy under the protection

and protection of the State. Compliance with this provision or disregard for it leads to the so-called equality or inequality of taxation.

2. The tax that each individual is required to pay must be clearly defined (the time limit for payment, the method of payment, payment amount).

3. Each tax must be collected at the time or in the way that is most convenient for the payer pay for it.

4. Taxes must exceed the cost of maintaining an army of officials to collect these taxes.

To date, there *are two principles (two concepts) of taxation.*

The first principle is that individuals and legal entities should pay taxes in proportion to the benefits that they get it from the state. It is logical that those who have benefited most from the goods and services offered by the government should pay the taxes necessary to finance the production of these goods and services. For example, someone who uses good roads must pay the cost of maintaining and repairing these roads.

But the universal application of this principle is associated with certain difficulties. For example, in this case, it is impossible to determine what personal benefits and how much each taxpayer receives from state expenditures on national defense, health care, and education.

The second principle assumes that the tax depends on the amount of income received, i.e., individuals and legal entities, those with higher incomes also pay higher taxes, and vice versa.

The rationality of this principle lies in the fact that there is, of course, a difference between a tax that is levied from the expenditure on the consumption of luxury goods and a tax that is deducted even to a small extent from the expenditure on basic necessities.

The fact is that consumers always act rationally, i.e., first of all they spend their income on goods and services of basic necessities, then already on not so necessary goods.

The tax policy of the government is structured in accordance with the socio-economic essence of the state, in particular: depending on the views of the ruling political party, the demands of the moment, and the government's need for revenue.

The modern tax system uses both principles of taxation, depending on the economic and social feasibility.

4.7 Tax system

Tax system - a set of different types of taxes, in the construction and calculation methods of which the following are implemented: certain principles.

The tax system is based on the relevant legislative acts of the state, which establish specific methods for constructing and collecting taxes, i.e., tax elements are defined. These include:

– *tax subject or taxpayer* – a person who is required by law to pay tax. However, through the price mechanism, the tax burden may be transferred to another person. Therefore, they also consider the tax carrier- the person who actually pays the tax;

– *tax object* – income or property from which the tax is calculated (wages, profits, securities, movable property, goods, etc.);

– *source of income* – income from which the tax is paid;

– *tax rate* – an important element of the tax that determines the amount of tax per unit of taxation (monetary unit income, unit of land area, unit of product measurement, etc.).

There are fixed, proportional, progressive, and regressive tax rates.

Fixed rates are set in the absolute amount per unit of taxation, regardless of the amount of income (for example, per ton of oil, cubic meter of gas).

Proportional rates apply in the same percentage ratio to the tax object without taking into account the difference (for example, a payroll tax of 13%).

With a regressive tax rate, the tax rate decreases as income increases. A regressive tax may bring a large absolute amount, or it may not lead to an increase in the absolute value of the tax with an increase in income.

In general terms, progressive taxes are those taxes that place the greatest burden on high-income individuals. Regressive taxes hit individuals and legal entities with low incomes the hardest.

According to solvency, taxes are classified into direct and indirect.

Direct taxes are directly levied on the tax subject: personal income tax, corporate income tax, profit tax, property and inheritance taxes.

Indirect taxes are taxes on certain goods and services that are levied through a price premium. Types of indirect payments taxes: value added tax, excise taxes, customs duties.

The tax system provides for the introduction of a large number of local taxes. In Russia, local governments have been granted the right to set 22 types of taxes, the proceeds of which will be directed to the budgets of the respective regions. There are four mandatory ones among them. In addition to the property tax of individuals, this includes land tax, registration fee and payments for the use of natural resources. The remaining 18 are set as necessary, based on the financial situation of the territory and the goals of regional policy.

4.8 The Laffer Curve

Taxes are considered as one of the most important factors of economic growth and regulation of the economy. Reducing the tax burden leads to rapid growth of business and investment activities and vice versa. The American economist A. Laffer established the mathematical dependence of budget revenues on the level of tax rates.

Graphically, the so-called "Laffer effect" is displayed by a curve that shows the dependence of incoming data on the budget of tax amounts as a function of income tax rates (Figure 4.1).

The following critical points are marked on the Laffer curve:

– the tax rate is zero: there are no budget revenues;

– the tax rate is equal to 100%: there are no budget revenues (no one works in the legal economy everyone goes to the shadow economy).

For all other values of r, taxpayers will pay taxes, and the state will receive them. At point A with the value r

But the maximum amount of tax revenues to the budget is reached and r_A but it is considered the optimal level tax rates; T_A – the maximum amount of tax revenues to the budget.

If the tax rate will increase in comparison with r_A, then the tax amount will decrease rather than increase budget revenues, i.e. at $r_B > r_A$, $T_B < T_A$, but since higher tax rates reduce incentives for labor and social development, business activity.

The essence of the "Laffer effect" is as follows: if the economy is located to the right of point A (for example, at point B), then reducing the level of taxation to the optimal level (r_A) in the short term, this will lead to a temporary reduction in budget revenues, and in the long term – to an increase in them, as incentives for labor and entrepreneurial activity will increase, and enterprises will transition from the "shadow economy" to the legal one.

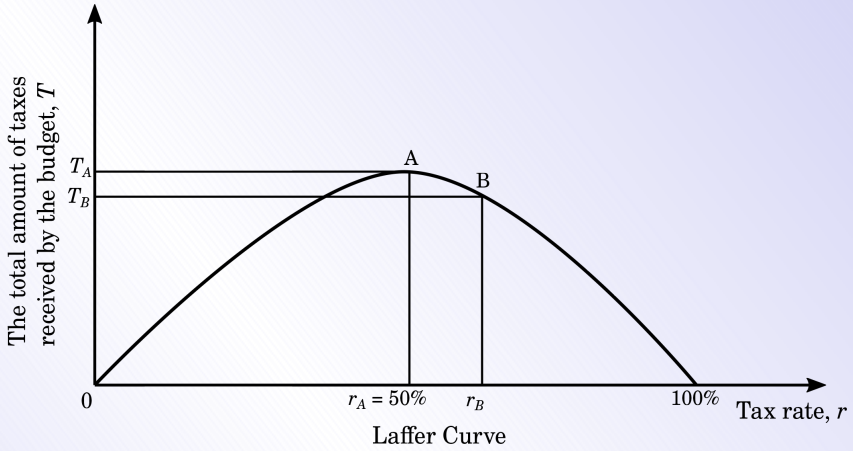


Figure 4.1 – Laffer curve

In other words, if the rates are too high, then the incentives for innovation are undermined, and economic activity decreases, some entrepreneurs go to the "shadow economy".

Thus, tax cuts cause an increase in national production and income, which in turn not only does not reduce tax revenues to the budget and does not cause a budget deficit, but at lower tax rates provides an increase in budget revenues due to the expansion of the tax base (in accordance with the "Laffer effect").

4.9 State financial policy

Measures taken by the State to mobilize financial resources, distribute them, and use them on the basis of the country's financial legislation are called financial policy. The directions of financial policy depend on the economic state of the country, the socio-economic and other tasks being solved. The crisis state of the economy determines the financial policy aimed, on the one hand, at stopping the decline in production and stimulating production, at mobilizing financial resources in order to effectively invest them in certain sectors of the economy. On the other hand, it is aimed at curbing social programs, reducing defense spending, etc. Accordingly, when the economy moves to a different state, the directions of financial policy also change.

The financial policy of the state consists of two interrelated areas of activity:

1. In the field of budget regulation (budget policy).

2. In the field of taxation and regulation of the structure of public expendi- tures with the aim of influencing the economy (fiscal policy).

4.10 State budget policy

The budget policy of the state is understood as measures of the state to manage budget revenues, and also a budget deficit.

In economic theory, two concepts of state budget policy are known.

The first concept of fiscal policy is based on the idea that the budget should be balanced annually. However, this state of the budget reduces the effectiveness of the state's fiscal policy. Let's say the economy is facing a long period of unemployment. As a result, the income of the population falls, and tax revenues are automatically reduced. In an effort to balance the budget, the government either raises tax rates, reduces public spending, or uses a combination of these two measures. However, these measures will further reduce aggregate demand.

The desire to balance the budget annually can also stimulate inflation. For example, in conditions of inflation, when the monetary income of the population increases, tax revenues automatically increase. To prevent a possible surplus, the government either lowers tax rates, increases government spending, or uses a combination of these two measures. This will lead to higher inflation.

The second concept of fiscal policy involves balancing the budget not annually, but during the economic cycle. This means that the Government exercises countercyclical influence and simultaneously seeks to balance the budget. So, to counteract the decline in production, the government reduces taxes and increases public spending, i.e., deliberately goes to a temporary budget deficit. During the subsequent recovery, the government raises taxes and reduces government spending. The resulting budget surplus is used for the following purposes: covering the deficit that occurred

during the downturn. Thus, the government simultaneously implements a countercyclical policy and balances the budget over a period of several years, but not annually.

However, when implementing this concept, the following problem arises. Recessions and upturns in the economic cycle can vary in depth and duration. For example, a long and deep downturn can be followed by a short period of recovery. The budget deficit that appears during a downturn will not be covered by a small budget surplus during a period of economic recovery. Consequently, there will be a cyclical budget deficit.

Today, the main objectives of the budget policy of the Russian Federation are:

– improving the budget system and budget process;

– ensuring budget balance while fully fulfilling all expenditure obligations;

– reducing the dependence of the federal budget on the external economic environment;

– improving budget legislation;

– development of medium-term (three-year) budget plans;

– maintaining and building up the financial reserve;

– centralization of all federal budget revenues and funds in the accounts of Federal Treasury bodies;

– conducting an audit of federal target programs in order to optimize them;

– public debt restructuring;

– inventory of external and internal borrowings and the results of their use.

4.1.1 Fiscal policy of the State

The fiscal policy of the state is a system of regulation related to the government's spending and taxes.

Government expenditures are defined as government purchases of goods and services. These can be various types of purchases (construction of roads, schools, medical institutions, cultural facilities at the expense of budget funds, purchases of agricultural products, foreign trade purchases, purchases of military equipment, etc.). The main feature of these purchases is that the state is the consumer. Public procurement is divided into two types: procurement for the state's own consumption and procurement for market regulation.

Public spending plays a significant role in ensuring the stability of socio-economic development, formation of a new quality of economic growth.

The second important tool of fiscal policy is taxes.

Taxes are a delicate tool, and you need to use them very carefully and thoughtfully, because they do not perform the following tasks: not only the fiscal function of accumulating funds to the budget but also the distribution, incentive and control functions. High tax rates lead to

the fact that working hard and earning good money become unprofitable and low tax rates can hit budget revenues. If a tax instrument is used correctly, it can bring considerable benefits; if it is used incorrectly, it can cause irreparable harm.

The policy of state expenditures and taxes is one of the most important instruments of state regulation of the economy, aimed at stabilizing of economic development. Government spending and taxes have a direct impact on the level of total spending, and consequently on output and employment.

4.12 Impact of government spending on aggregate demand

Let's use the macroeconomic equilibrium graph (Figure 4.2).

On the abscissa axis, we set aside the value of GNP, and on the ordinate axis – total expenditures, which consist of expenditures of the population, enterprises, and the state for the purchase of material goods and services, i.e., the sum of consumption, investment, and government spending.

Government spending causes the equilibrium point to move upward in a straight line of 45 degrees. They increase the value of aggregate expenditures in the market and stimulate the growth of aggregate demand, and, consequently, the production of GNP. As a result of public procurement, aggregate demand increases by the amount of government spending on these purchases.

The reduction in government spending will cause the equilibrium point to be shifted down in a straight line of 45 degrees. This means a reduction in total expenditures and a reduction in the equilibrium GNP.

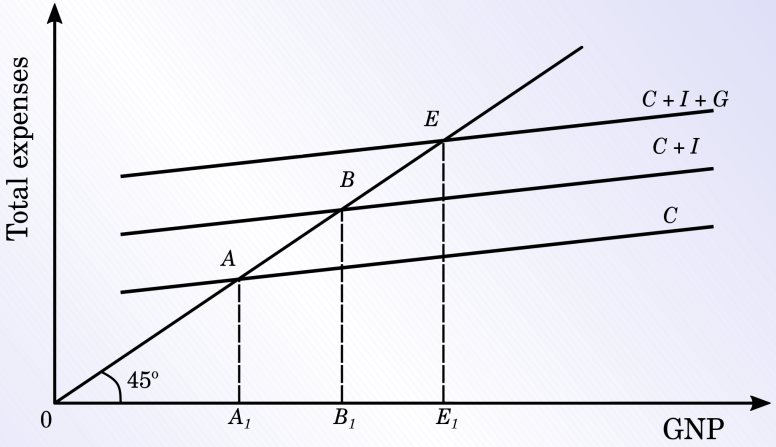


Figure 4.2 – Impact of government spending on aggregate demand

Thus, *government spending has a direct impact on national output and employment*. Like investments, they also have a multiplier effect. *Government expenditure multiplier* (M_G) shows the increase in GNP as a result of the increase in government spending

$$M_G = \frac{\Delta DNP}{\Delta G},$$

where from $\Delta DNP = M_G \Delta G$.

Let's show the essence of this animation effect graphically (Fig. 4.3). Assume that at a given level of consumption, investment, and government spending, the equilibrium state is macroeconomics was achieved at point E with the volume of GNP = 600 billion rubles. Let the volume of government spending increase by 100 billion rubles. Therefore, the straight line $C + I + G$ will move up by 100 billion rubles to the position of the $C + I + G_1$. Now

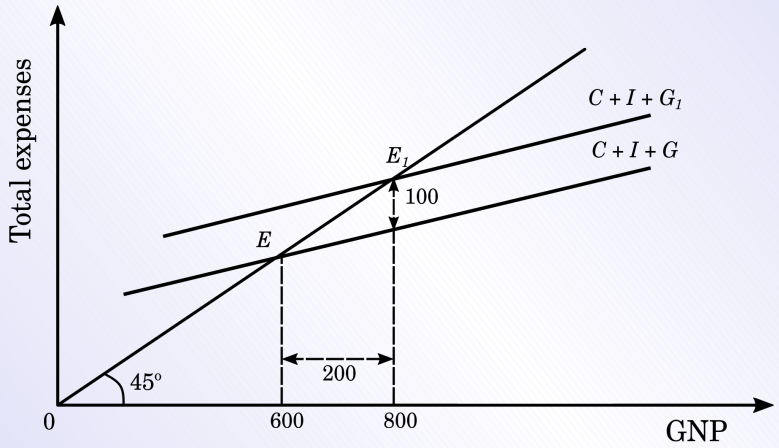


Figure 4.3 – Government expenditure multiplier

the equilibrium state will be reached at point E_1. In which GNP is already 800 billion rubles. Thus, an increase in government spending by 100 billion rubles led to an increase in GNP by 200 billion rubles. Based on this, we can say that M_G equal to 2. In fact, M_G according to its

model, it coincides with the investment multiplier. And if we assume that $MPC = 1/2$, then

$$M_G = \frac{1}{1 - MPC} = 2.$$

4.1.3 Impact of taxes on aggregate demand

Consider how taxes, another component of fiscal policy, affect aggregate demand. An increase in tax rates leads to a decrease in the real net income of the population, and, consequently, to a reduction in consumer spending, which will affect the entire amount of total expenditures. If the size of investment and government spending are the same, then a decline in consumer spending will cause the $C + I + G$ line on the graph to be shifted down. This will cause a reduction in GNP and employment.

The increase in taxes causes a decrease in the population's income. But not all income goes to consumption. Some of it goes into savings. If this did not happen, then the entire amount of taxes would mean only a deduction from consumption. But since disposable income is divided into two parts – consumption and savings, then, consequently, *a decrease in income will cause a reduction in both consumption and savings.* Let's assume that the state imposes a tax that is equal to the same amount at any level of GNP. Let this tax amount to 200 billion rubles. At $MPC = \frac{1}{2}$, consumption and savings will decrease for 100 billion rubles each.

Let's consider graphically how the tax affects the consumption function (Figure 4.4).

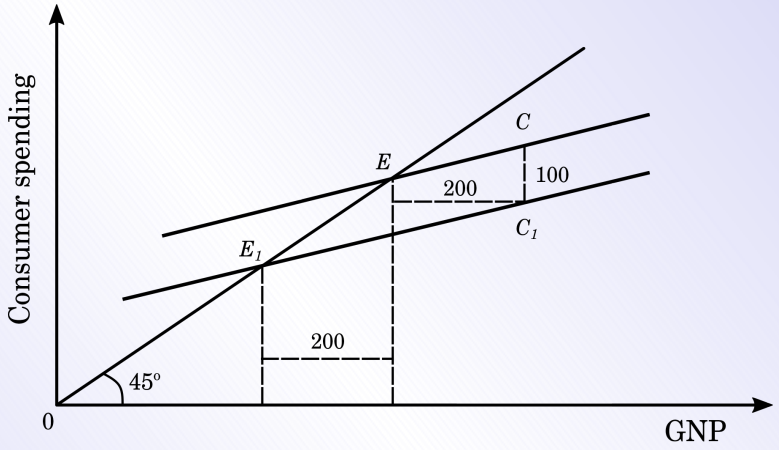


Figure 4.4 – Impact of taxes on consumption

Direct line C reflects the state in which the population's taxes are zero. If the tax amounts to 200 billion rubles, then consequently, the income of the population will decrease by the same amount, which will lead to a decrease in the equilibrium value of GNP.

This position is expressed in the shift of the straight line from the left by 200 billion rubles. But since $MPC = 1/2$, consumption will decrease only by 100 billion rubles, which will mean a shift in the straight line with a decrease of 100 billion rubles.

Tax increases thus cause a decline in disposable income, which leads to a reduction in consumption and savings at each level of GNP. At the same time, the amount of reduction in consumption and savings is determined by such parameters as MPC and MPS. To find out how much savings will decrease when taxes increase, you need to multiply the tax increment by MPS ($\Delta T \cdot MPS$). Consumption reduction is calculated in the same way ($\Delta T \cdot MPC$).

Like investment and government spending, taxes also have a multiplier effect. But unlike government spending, which puts more pressure on total spending, taxes have a much smaller impact on it. This follows from the fact that government spending is one of the components of total spending, while taxes are a factor affecting one of the variables – consumption. So, it can be stated that*the tax multiplier has a smaller impact on reducing aggregate demand than the multiplier of the state budget endowment costs for its increase.*

An increase in taxes leads to a reduction in GNP. In order to compensate for this drop, it is necessary to increase the amount of public spending.

It is easy to see that an increase in government spending by 1 currency unit will shift the$C + I + G$ line up by 1 currency unit, and an increase in taxes by 1 currency unit will shift the $C+I+G$ line down by $1/2$ currency unit, since $MPC = 1/2$. The following situation arises: taxes and government expenditures have different effects on total expenditures, because

the tax multiplier is less than the multiplier of government expenditures. The formula looks like this: $M_T = MPC \cdot M_G$.

The explanation for this fact is as follows. Every monetary unit spent by the Government on purchasing goods and services directly affects GNP. And when the state reduces taxes, only part of them goes to increase consumption, while the other part goes to savings.

4.1.4 Discretionary fiscal policy

Fiscal policy, depending on the mechanisms of its response to changes in the economic situation, is divided into two forms: discretionary and non-discretionary.

Discretionary fiscal policy involves the deliberate manipulation of taxes and government spending by the Government in order to change the real volume of national production and employment, control inflation, and accelerate economic growth. In other words, discretionary policy is the government's deliberate regulation of aggregate demand.

The main instruments of discretionary policy are:

– government employment program or community service;

– arious social programs or social expenditures;

– changes in tax rates.

The goal of fiscal policy is to eliminate unemployment or inflation. During the market downturn by the end of the day, the issue of stimulating fiscal policy arises, which includes:

1) increased government spending;

2) lower taxes;

3) a combination of (1) and (2).

In order for the regulation of aggregate demand to have a stabilizing effect, it is necessary to choose the right time. But in the case of a discretionary fiscal policy, this is extremely difficult to achieve. No one ever knows whether aggregate demand is growing or falling at the moment. The economy doesn't have a speedometer that shows its speed. What happens to GNP in the current quarter, you can find out only at the beginning of the next. The policy of economic stabilization is forced, therefore, to rely on forecasts. However, they also cannot predict when the fiscal policy measures taken will take effect. The time lag between a particular event and its impact is usually from several months to several years. Therefore, discretionary fiscal policy is a means of achieving economic stability, which, at best, is available only when the right moment for its application has passed.

4.1.5 Non-discretionary fiscal policy

In addition to a discretionary, fiscal policy that presupposes freedom of choice, there is also *an automatic, non-discretionary fiscal policy, in which the necessary changes in the levels of government spending and taxes are introduced automatically.* This is the so-called automatic, or built-in stability. It arises from the fact that the tax system provides for the withdrawal of such a tax, which varies in proportion to the amount of GNP. *Tax revenues increase as GNP increases.* In particular, the individual income tax has progressive rates and is subject to the growth of GNP gives a proportional increase in tax revenues. Moreover, as GNP increases and purchases of goods and services increase, corporate income tax revenues increase. Similarly, payroll taxes increase as new jobs are created during the economic recovery. On the contrary, if GNP falls, tax revenues from all these sources will fall.

The next built-in stabilizer is considered to be unemployment benefits and other social benefits. Once a person has lost their job, they start receiving payments from the unemployment benefits fund. If the employee returns to work, the benefit payment is terminated. Taxes that finance unemployment benefits increase when employment is high. Therefore, the reserve fund of funds increases during the boom period. On the contrary, in times of weak employment, the reserve fund is used to pay out income in order to support consumption and mitigate the downturn.

Other types of benefits, such as *charitable payments outside the framework of the social insurance system,* also belong to the stabilizing type due to their automatic counter – cyclical action.

Farmer assistance programs work like built-in stabilizers. When farm produce prices fall, the government pays money to farmers and purchases surplus produce. When inflation looms and prices rise, government warehouses throw goods on the market.

Built-in stability mitigates the severity of economic fluctuations. However, built-in stabilizers are not able to fully correct for inflation and economic downturns. They can only reduce GNP fluctuations by about a third. Therefore, *to maintain full stability, discretionary fiscal measures* on the part of the Government are required, i.e., changes in tax rates, tax structure, and the amount of government spending.

LECTURE 5
MONETARY SYSTEM AND MONETARY POLICY

5.1 The essence and functions of money

Money is a special commodity. The essence of money lies in the fact that it serves as a necessary element of the economic activity of a society and an integral part of economic relations between various participants and links in the economic process.

Money is one of the most important categories of economic theory. *Money can be anything that can be accepted as payment for goods and services* In the natural economy, when producers manufactured everything for themselves, one commodity was exchanged directly for another. But for this it was necessary to match the wishes of the one and the other product owners to have exactly the product that the partner wants to sell. The exchange of one good for another is called barter.

As the sphere of product circulation expands, one or even several most convenient goods from the total mass of goods in the exchange is distinguished (selected) for performing the role of an intermediary means. Such a product becomes a universal equivalent – all other goods are equated to it.

Although anything may, in principle, be money the material for money should have the following qualities:

1. *Stability.* The value of money should be more or less the same today and tomorrow. In a society where the value of money fluctuates, people will either save it in the hope that its value will increase, or spend it, believing that tomorrow it will be devalued. Both have a negative impact on the economy.

2. *Portability.* Modern money should be small and light enough for people to carry it with them.

3. *Wear resistance.* The chosen material must be sufficiently strong, have a significant durability of life.

4. *Uniformity.* Money of the same denomination must have equal value.

5. *Divisibility.* One of the most important advantages of money over barter is the ability of money to be divided into parts.

Money should be easily recognizable and difficult to fake. Paper quality and case watermarks make forgery very difficult.

Gold was most popular in the past and still is today. This is due to its physical properties — it does not rust, does not tarnish, and is easily divided. In addition, it is quite limited in nature, and this allows a relatively small amount of gold to be exchanged for a large number of different goods.

Money is a commodity, and like any other commodity, it has value and price. In this regard, when the price of gold falls, all commodities should simultaneously rise in price. However, under modern conditions, a change in the price of gold does not lead to a decrease or increase in the prices of

all other goods. The matter is that the money-commodity was replaced by paper money. *Paper money represents the value of all commodities, not gold.*

Money is what it does (money in English always singular; it does not have plural). Everything that performs the functions of money is money. *There are five functions of money:*

1. *Means of circulation.* First of all, money is a medium of circulation: it can be used when buying and selling goods and services.

2. *Means of payment.* Money is easily accepted as a means of payment. In this capacity, money acts with the emergence of credit relations, when the sale of goods is carried out with deferred payment. This convenient social invention allows society to avoid the inconvenience of barter exchange.

3. *A measure of value.* Money is also a measure of value. The Society considers it convenient to use the monetary unit as a scale for measuring the relative values of heterogeneous goods and resources. Due to the monetary system, it is not necessary to express the price of each product in terms of all the other products for which it might be exchanged. Using money as a common denominator means that the price of any product can only be expressed in terms of a monetary unit. Such a use of money makes it easy for the participants in a transaction to compare the relative value of a single unit of personal goods and services.

4. *A means of saving.* Since money is the most liquid asset, it is a very convenient form of storing wealth. Owning money does not bring monetary income, unlike securities. However, money has the advantage that it can be used immediately by businesses or households to fulfill any financial obligation.

5. *World money.* World money is a universal means of purchase in the current exchange of goods and services between states; a means of international payment; a universal embodiment of national wealth in the provision of loans, subsidies, etc.

The evolution of forms of value and money as a specific commodity was analyzed in the framework of the concept of labor theory of value (A. Smith, D. Ricardo, K. Marx). The main postulate of this concept is that the cost is determined by labor costs.

The modern economy is dominated by complex commodity exchange, which is served by money. Money, becoming an intermediary between the seller and the buyer, expanded the scope of trade transactions, made the market more capacious and gave it greater dynamism. A. Smith compared money to highways, which facilitate the movement of people and goods, thereby accelerating economic development. Indeed, the faster the product is sold, the sooner the producer, having received income from sales, will resume, and possibly expand or modernize production, which will mean an increase in GNP.

As long as gold played the role of money, money was a commodity that had its own value. Gold production is measured by the amount of labor spent on gold mining. The era of money as a commodity was replaced by the era of paper money. Gold has lost the ability to serve as a measure of value, to perform the function of a universal equivalent. It has passed into the category of ordinary goods, the price of which is determined by market supply and demand.

The development of commodity production and exchange led to the fact that the function of money was mainly to measure the values of various goods, i.e., to find out how much one product offered for the exchange is more expensive or cheaper than another one. The functions of the measure of value gradually lose their significance under the influence of a combination of factors: the growth of the commodity mass and the development of exchange, changes in the conditions of gold mining and the attractiveness of paper money itself for commodity exchange, etc. Therefore, from the standpoint of commodity circulation, it is important that money serves only as a representative of value and accelerates the exchange of goods. In this case, paper money as a representative of value and intermediary in exchange may not have its own value.

Modern paper money is not a full-fledged money, like gold. It gets its own content only through the functions it performs. Consequently, *modern paper money is a functional form of money, a sign of value.*

Paper money represents (serves as) the representative value of goods in circulation.

Money as a universal equivalent performs a number of functions in the social economy. But its main task is maintenance improving the process of exchanging of goods and services. To meet this challenge, it must retain its purchasing power.

5.2 Purchasing power of money

The purchasing power of money is the amount of goods that can be purchased for one monetary unit. For many years, the purchasing power of money was associated with the material security that was seen in gold in the same amount of money. This view was associated with the idea that paper money is a substitute for gold and therefore can be exchanged for gold.

Today, the maintenance of the purchasing power of money is not provided by the gold equivalent, but mainly in cash total gold reserves of the country and the total commodity mass produced.

The German economist R. Hilferding pointed out that *the material content of money is related to the value of circulating goods.* If the supply of goods increases, the money supply becomes more stable, its purchasing power stabilizes.

The need to measure the purchasing power of money arises in business. A business can be successful if the rate of expected income exceeds the rate of inflation.

Measuring the purchasing power of money is necessary for the government and monetary authorities, which ensure the stability of money circulation. *The purchasing power of money decreases if prices rise.* Therefore, it is necessary to monitor price indices that are used to measure the rate of inflation and analyze the dynamics of the purchasing power of money.

The development of production and an increase in the supply of goods contributes to the preservation of the purchasing power of money. But to do this, two conditions must be met on the part of the state and the population:

1. Money must be issued on behalf of the state authority and under its guarantees.

2. Money should be trusted by the people. Otherwise, the population will not recognize it.

The purchasing power of money in different markets may differ, because the price fluctuations for them do not coincide (for example, the prices of computers may fall, and real estate may rise). Therefore, it is necessary to calculate price indices in different markets.

The purchasing power of money depends not only on the market it circulates in. It also differs in respect to various components of the circulating money supply.

5.3 Purchasing power parity. Fixed and floating exchange rates

The monetary unit of a country is the currency. The ratio between two (or more) currencies in terms of their purchasing power to a particular set of goods and services is called *purchasing power parity.* Depending on the product range of the set, purchasing power parity can be private (for a specific product group) or general (for the entire public product).

The price of a currency unit of one country, expressed in the currency units of other countries, is called *the exchange rate.* The exchange rate of national currencies is often applied in relation to international currency units, such as the dollar or the ECU. Currently, the exchange rate is based on the purchasing power of currencies and is very flexible. Among the main factors influencing the exchange rate are the state of the balance of payments, the level of inflation, interstate migration of short-term capital, as well as political and military factors. *Direct quotation applies in all countries*, where the exchange rate is set as the ratio of the unit of foreign currencies to the national currency (except for the United Kingdom, where the reverse quote is accepted).

Changes in the currency exchange rate affect the foreign trade balance. The depreciation of the national currency encourages exports and restricts imports, and consequently increases the foreign trade balance. The strengthening of the national currency has a polar effect: imports increase, exports decrease, and the foreign trade balance decreases.

There is a difference between floating and fixed currency exchange rates. A *floating exchange rate* provides a certain freedom of choice of the exchange rate regime, which implies linking changes in the latter with the dynamics of the exchange rates of individual currencies of other countries or a set of currencies – a currency basket.

A *fixed exchange rate* is an officially established agreement between national currencies based on legally determined parities. It involves fixing the content of national monetary units directly in gold or convertible currency, while strictly limiting fluctuations in market exchange rates within one percent. In practice, this means that all currencies in international trade are tightly linked to the dollar.

The ability of national money to be exchanged for the money of other countries is *the convertibility of the currency.*

5.4 Money supply. Monetary aggregates

Total number of issued banknotes, including cash, cheques, and funds of individuals and organizations held in bank accounts and other credit institutions, as well if there are monetary obligations to pay, there is a money supply. The release of excessive amounts of money into circulation causes their depreciation and the appearance of inflation. The central Bank monopolizes the issue of cash, organizes its circulation, sets benchmarks for

the growth of the money supply, which serves as one of the main tools and methods of monetary policy.

The money supply has a certain structure. *The criterion for structuring the money supply is liquidity*, i.e., the ability to exchange for other forms of savings. The principle of constructing the money supply is based on ranking its aggregates – from absolutely liquid to aggregates with decreasing liquidity. At the same time, a decrease in the asset's liquidity is associated with an increase in its profitability. Thus, the most liquid cash does not bring additional income to its owner. The sale of a certificate of deposit provides such income. The composition of monetary aggregates varies by country. The formation of monetary aggregates in Russia is based on American system (Figure 5.1).

Monetary aggregate M_1 includes cash and demand deposits (check deposits of individuals and businesses in commercial banks).

Monetary aggregate M_2 equal to the monetary aggregate M_1 plus time deposits in banks and savings deposits.

Monetary aggregate M_3 equal to the monetary aggregate M_2 plus certificates of deposit and government debt obligations.

In macroeconomics, the aggregate L *is also distinguished*, which includes in addition to M_3 treasury saving obligations, payment obligations of banks, commercial securities.

Of these indicators of the money supply, the main one is M_1.

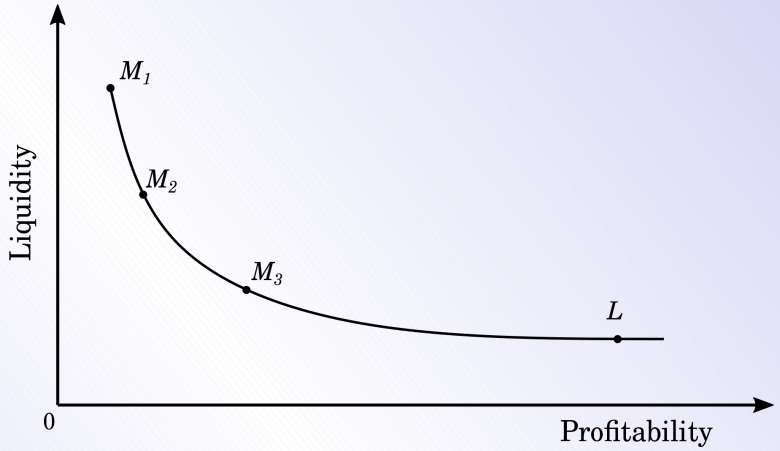


Figure 5.1 – Ranking of monetary aggregates

Each aggregate differs not only in its purchasing power and scope, but also in the speed of money in circulation. Due to the introduction of new technical means in the banking system, settlement and payment operations have significantly accelerated, but still the difference in the speed of circulating monetary aggregates remains.

In Russia, the monetary aggregate M_1, in fact, represents only the amount of cash without checking deposits, which have not yet been widely adopted.

Unit M_2 is considered as the sum of cash and non-cash money circulating in the economy. Usually, the unit M_2 is much higher than the

aggregate M1 due to non-cash turnover. Cash is only traded on the consumer account the market.

To identify the structure of the money supply, it is used the ratio M_2M_1, which shows the degree of development of the market relationships. In developed countries, this ratio is 9, in Russia – 3.

5.5 Quantitative theory of money. The classic dichotomy

A certain amount of money is needed to regulate the circulation of commodities. *The starting point for calculating the amount of money is the sum of the prices of goods* to be sold during a certain period, such as a year. Therefore, the more goods there are, the more money is needed to sell them.

In addition, *the amount of money is affected by the turnover rate of each currency unit.* Processing speed of the value of money is measured by the number of turns that each currency unit makes during the year to secure transactions.

Taking into account the required sum of prices of goods and the speed of money circulation, *an exchange equation was obtained, which allows us to calculate the required amount of money.* This exchange equation is associated with the name of I. Fischer and it looks like this

$$MV = PQ \text{ or } M = \frac{PQ}{V},$$

where M is the mass of money that is necessary to ensure normal monetary circulation; V is the speed of money circulation; PQ is the sum of the prices of goods in circulation.

This formula indicates the certainty of the required amount of money, which cannot be arbitrary. For example, if prices rise, then even with the same volume of production and the same rate of circulation of money, their mass should be increased. If the rate of circulation increases or decreases, and prices and output are unchanged, then the country will need, respectively, less or more money.

The representation of the national economy in the form of two separate sectors (real and monetary) is called a classical dichotomy. This distinction allows us to study the nominal indicators, abstracting from the real ones. Neoclassical macroeconomic theory is based on the idea of money neutrality, according to which changes in the amount of money do not affect real variables: the volume and structure of output, employment, and relative prices.

The neoclassical claim that money affects only nominal GNP figures is based on an implicit premise about the stability of the speed of money circulation. In fact, if in the quantitative exchange equation $MV = PQ$, V is a constant, then a change in M will cause a proportional effect on PQ, i.e., nominal GNP. The expansion of the money supply increases aggregate demand and nominal GNP by an amount proportional to the increase in the money supply.

5.6 Interest and interest rate

An important factor influencing money demand is the interest rate r. But before we talk about the interest rate let's define the interest.

Interest is the income received by the lender for the borrowed money. Interest rate (rate of interest) – this is the amount (percentage) expressed as a percentage for one year that the borrower pays to the lender for using the money.

There is a distinction between nominal and real interest rates. Real interest rate – the rate that takes into account the inflation rate.

Having a variety of opportunities to apply their income, a person chooses the form of assets that will bring the greatest benefit. Therefore, the amount of cash (including in the form of check deposits) depends, on the one hand, on the intentions of the owners of money to acquire a certain amount of goods, on the other hand, on the benefits that they will receive if they manage their amount of money in a different way.

Thus, a person is constantly faced with an alternative to more profitable use of their funds.

According to the Keynesian theory of liquidity preference, there are three motivations for economic agents to save a portion of their wealth (portfolios of assets) in the form of money:

1. *Transaction motive.* Part of the wealth has to be kept in cash for the purpose of using the money in the future as a means of payment and means of circulation.

2. *A precautionary motive.* It is associated with the desire to be able to dispose of some of your wealth in monetary form in the long run, in order to realize the benefits of unexpected opportunities or meet unexpected needs.

3. *Speculative motive.* This motive is caused by the desire to avoid capital losses associated with storing it in the form of securities, during periods of decline in their exchange rate value.

5.7 Money supply and demand

There is a demand for money. *The first reason for money demand* is people's need for money as a medium of circulation, i.e., as a way of entering into transactions for the purchase of goods and services. Households must have enough money on hand to buy goods, pay their mortgages, and pay for utilities. Businesses need money to pay for labor, materials, energy, etc. The money needed for all these purposes is simply called *the demand for money for transactions (transactions).*

The amount of money needed to complete transactions is determined by the general monetary equation: $(MV = PQ)$, or nominal GNP. The greater the total monetary value of goods and services in exchange, the

more money will be required to complete transactions. *The demand for money for transactions varies in proportion to nominal GNP.*

Let's graphically represent the ratio between the demand for money for transactions D_t and the interest rate r (Figure 5.2). The amount of money required for transactions is not related to a change in the interest rate, i.e., a change in the interest rate will not reduce the amount of money required for transactions.

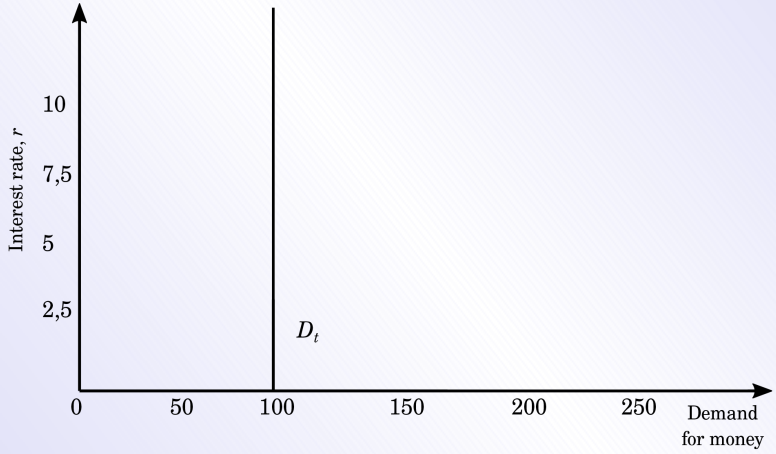


Figure 5.2 – Demand for money for transactions

*The second reason why there is a demand for money*comes from its function as a store of value. People can hold their financial assets in various forms – for example, in the form of corporate shares, private and government bonds. This is the so-called *demand for money from assets.*

Each of the various forms in which financial assets can be located has its own advantages and disadvantages. *The advantage of owning money is its liquidity*, i.e., the money can be used immediately to make purchases. Money is especially attractive when prices for goods, services, and other financial assets are expected to fall. The disadvantage of owning money compared to owning bonds is that *they do not generate interest income.*

Therefore, it is necessary to decide how many financial assets are to be hold in securities, and how much in money. The decision depends on the interest rate. When the interest rate is high, it is not profitable to have significant liquidity, and the amount of assets in the form of money will be small. In other words, when it is unprofitable to own money, people keep less of it. Thus, *the demand for money from assets varies inversely with the interest rate* (Figure 5.3).

Total demand for money D_m it can be determined by shifting the horizontal axis of the direct demand for money from the service station. The amount of money required for transactions is increased by an amount equal to the demand for money for transactions (Figure 5.4).

In other words, the total demand for money is the sum of the demand for money for transactions and the demand for money from assets.

There is no consensus among economists or government officials about what individual elements make up the money supply in the economy. *In a narrow sense, the money supply is M_1 it consists of two elements:*

1. Cash, i.e., metal and paper money in circulation.

2. Checking deposits, i.e., deposits in commercial banks, various savings institutions, to which checks can be issued.

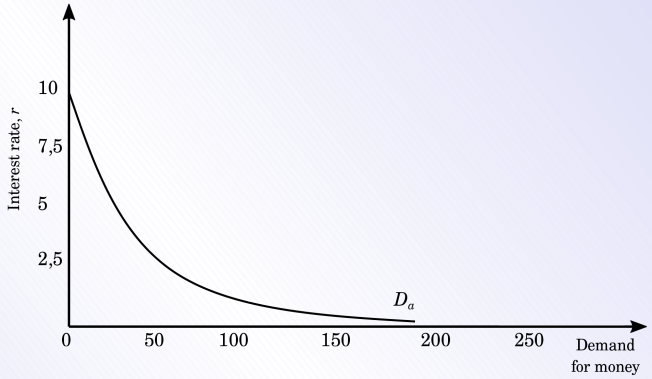


Figure 5.3 – Demand for money from assets

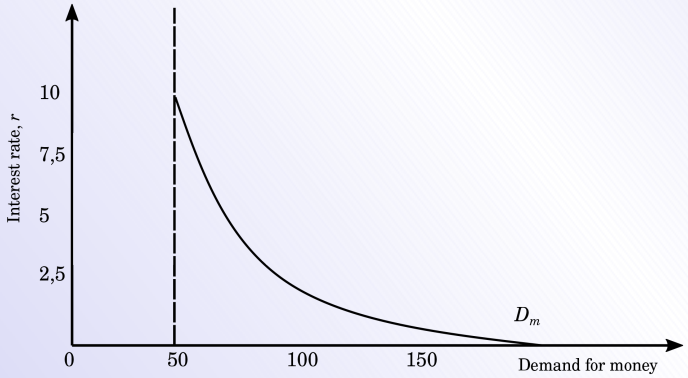


Figure 5.4 – Total demand for money

Metal and paper money are obligations of the state. Current accounts represent liabilities of commercial banks and savings institutions. They are part of the money supply and are widely used as a medium of circulation. Such deposits can be immediately converted into paper and metal money upon request. Checks issued on these deposits in practical use replace money.

5.8 Money Market

Let's combine the supply and demand of money in order to describe the money market and determine the equilibrium interest rate. To do this, we will draw a vertical line S_m, denoting the money supply. The representation of the money supply in the form of a straight line is based on a simplified premise, according to which monetary authorities and financial institutions supply the economy with a certain amount of money. Adding Figure 5.4 money supply S_m, we get a graphical image of the equilibrium in the money market (Figure 5.5).

A decrease in the money supply creates a temporary shortage of money in the money market. Business entities are trying to get more money by selling bonds. Therefore, the supply of bonds increases, which lowers the price of bonds and raises the interest rate. With a higher interest rate, the amount of money decreases. Consequently, the amount of money offered and required is again equal at a higher interest rate (Figure 5.6).

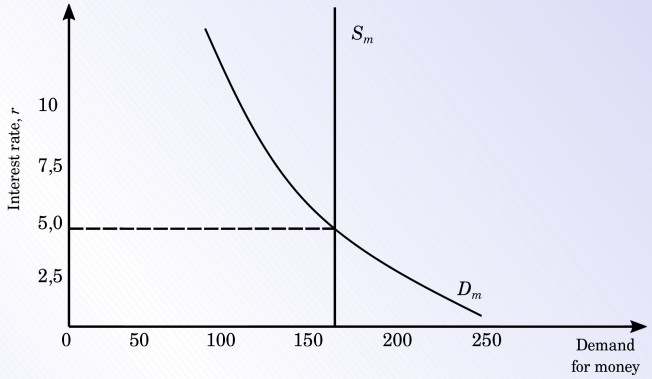


Figure 5.5 – Money market equilibrium

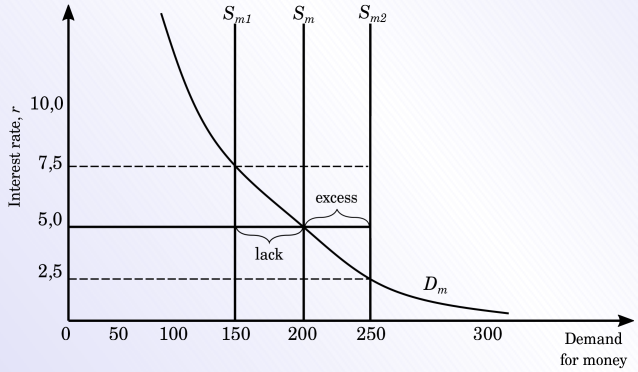


Figure 5.6 – Disequilibrium in the money market

An increase in the supply of money creates a temporary surplus which

increases the demand for bonds and the price of bonds. It gets higher on them. The interest rate falls and the money market rebalances.

5.9 The nature and forms of the loan

In a market economy, money must be in constant circulation, make continuous circulation. Temporarily available funds should immediately enter the loan capital market, accumulate in credit and financial institutions, and then be placed in those sectors of the economy where there is a need for additional investment.

A loan expresses the economic relationship between a lender and a borrower about a loan. Loan – transfer of money or material assets from one participant of the loan agreement to another on the terms of repayment, with the payment of interest and within a certain period of time.

Thus, *a loan is a movement of loan capital carried out on the basis of urgency, repayment and payment.* In the course of historical development, credit has acquired various forms, the main of which are commercial and bank credit.

A commercial loan is a loan provided by economic entities to each other. Commercial credit is granted in commodity form, primarily through deferred payment. In most cases, a commercial loan is issued as a promissory note. A *bill* of exchange is a security that provides a monetary obligation

of the drawee to pay a certain amount of money to the owner of the bill of exchange upon maturity.

The widespread use of commercial credit is hindered by the fact that it is limited by the size of the reserve fund of the lender's enterprise. When presented in commodity form, it cannot be used to pay wages. Finally, it can only be provided by enterprises that produce the means of production to those enterprises that consume them, and not vice versa.

This limitation of commercial credit is overcome by developing bank credit.

A bank loan is a loan provided by credit and financial institutions (banks, funds, associations, etc.) to any economic entities (private entrepreneurs, enterprises, organizations, etc.) in the form of cash loans. Bank loans are divided into short-term (up to 1 year), medium-term (from 1 year to 5 years) and long-term (over 5 years). These loans can serve not only the circulation of goods, but also the accumulation of capital.

Having overcome the limitations of commercial credit in terms of the direction, terms and amounts of transactions, *a bank loan is pre-approved turned into the main and primary form of credit relations.*

Other common forms of credit include:

Inter-farm monetary credit granted by economic entities to each other by issuing a credit card to each other enterprises and organizations of shares, bonds, participating credit cards, and other types of securities. These opera- tions are called decentralized finance and enterprise lending.

Consumer credit is granted to individuals when purchasing consumer durables. It is implemented either in the form of selling goods with deferred payment through retail stores, or in the form of providing a bank loan for consumer purposes. High interest rates are charged for using a consumer loan, and repayment of this loan places a heavy burden on family budgets.

Mortgage loans are provided in the form of long-term loans secured by real estate (land, buildings). Mortgage bonds issued by banks and enterprises serve as a tool for providing such loans. Mortgage loans are widely used in housing construction and contribute to the concentration of capital in this area.

A state loan is a system of credit relations in which the state acts as a borrower, and the population and private business act as money lenders. The source of public credit funds is government loan bonds, which can be issued not only by central, but also by local authorities.

The state uses this form of credit to cover the state budget. As a result of the issue of government bonds and their distribution, a huge public debt is formed.

International credit is a movement of loan capital in the sphere of international economic relations. It is provided in commodity or monetary (currency) form. Lenders and borrowers are banks, private enterprises, governments, international and regional organizations.

5.10 Monetary system

In the modern credit system, there are three main links: *the central bank; commercial banks; and specialized credit and financial institutions.* The central bank occupies a dominant position in this system. It is to the central bank that the state grants the exclusive, monopoly right to issue banknotes. It performs a number of important functions, including:

– issue of banknotes;

– storage of state gold and foreign exchange reserves;

– storage of the reserve fund of other credit institutions;

– lending to commercial banks and providing cash services to state institutions;

– performing settlements and transfer operations;

– control over the activities of credit institutions.

Commercial banks are the main "nervous" centers of the credit system. A modern commercial bank is a universal credit and financial institution. It not only accepts deposits from individuals and businesses, issues loans, but also performs financial customer service.

The operations of a commercial bank are divided into passive (raising funds) and active (placing funds). In addition, banks can engage in intermediary operations (property management, securities).

A special place in the modern market economy is occupied *by specialized credit and financial institutions*, such as the pension fund, insurance

companies, investment and mortgage banks, loan and savings associations, etc. Accumulating huge monetary resources, these institutions are actively involved in the processes of accumulation and efficient placement of capital.

A bank, like any other enterprise, is based on profit. But, if the industrial an enterprise produces goods and services, while banks create money.

5.1.1 Creation of money by banks. Money supply multiplier

Let the bank receive 10 million rubles in deposits. In theory, it should keep all this money in his safe in order to give out the necessary amounts to depositors at any time. But then the bank would not pay interest on deposits, but the depositors themselves would have to pay the bank for storage. But in order to be able to give money to the depositor at any time, there is no need to keep the entire amount in the bank. Only a part of the deposits is sufficient for this purpose.

Currently, in different countries and in different banks, the proportion of cash needed in case of issuance to the depositor, it ranges from 3% to 20% of the total amount of deposits. This amount is called reserves. For example, take the reserve ratio of 10%. Then our bank's balance sheet will look like this:

Liabilities	Assets
Deposits of 10 million rubles.	Reserves of 1 million rubles. Loans of 9 million rubles.
Only 10 million rubles.	Only 10 million rubles.

When issuing a loan, the bank transfers the corresponding amount to the current account used by customers or pays it in cash. As a result, the bank received new money in the amount of 9 million rubles. The bank's actions were simple: 9 million rubles were extracted from the bank's vaults (where they were not money) and transferred to customers. A cash transfer or withdrawal already makes this amount new money.

Thus, the amount of money has increased from 10 million rubles to 19 million rubles. Of these, 9 million rubles are money that the bank created.

But the process doesn't end there. The one who took out the loan will spend the money buying what they need, while the one who sells will receive the money and invest it in another bank. This bank will receive deposits, leave a reserve, and give the rest of the money to a loan. History repeats itself, and the balance sheet of another bank will look like this:

Liabilities	Assets
Deposits of 9 million rubles.	Reserves of 0.9 million rubles. Loans of 8.1 million rubles.
Only 9 million rubles.	Only 9 million rubles.

The second bank created an additional 8.1 million rubles. Now, the person who received a loan from the second bank will spend it by paying for services to some third parties, who, after receiving the money, will put it in the third bank. Obviously, the process of creating money will continue until the entire amount of the initial deposit is used as reserves.

Based on this, you can calculate what is the total amount of money created, knowing the initial contribution and the share of reserves. In our example, the amount of money created will be equal to:

$$10 + 9 + 8,1 + \ldots = 10\left(1 + 0,9 + 0,9^2 + 0,9^3 + 0,9^4 + \ldots\right) =$$

$$= 10\left(\frac{1}{1 - \frac{9}{10}}\right) = 10\left(\frac{1}{0.1}\right) = 100 \text{ million rubles.}$$

Thus, with a reserve requirement level of 10%, an initial deposit of 10 million rubles generated the multiplier effect of expanding bank deposits, which led to an increase in the money supply by 100 million rubles.

The money supply multiplier (deposit multiplier) allows us to estimate the scale of expansion of the money supply as a result of the creation of new money by banks. It is calculated using the formula

$$M_m = \frac{1}{reserves\ share}.$$

So, each ruble of reserves in our example creates 10 new rubles. The multiplier of the money supply is equal to 10, i.e., it is equal to the ratio of new money to reserves.

Our example is an ideal scheme, when all the money is placed in a bank, and the banks themselves keep only *the number* of reserves and no one withdraws deposits.

If someone does not want to invest money in the bank, then the number of reserves will certainly decrease and, consequently, total amount of money created.

In the event that banks wish to keep a larger share of reserves than is recommended by the central bank then the amount of money created will be reduced, since the multiplier of the money supply will be different.

But if someone withdraws money in order to go abroad or buy government bonds, the process will go in the opposite direction: *withdrawal will lead to a reduction in the amount of money in the entire monetary system.*

5.12 Monetary policy

Monetary policy is a set of government measures in the field of money circulation and credit aimed at regulating economic growth, curbing inflation, ensuring employment and equalizing the balance of payments. It serves as one of the most important methods of state participation in the process of reproduction in order to ensure favorable conditions for the functioning of enterprises.

Monetary policy is implemented by the central bank in close contact with the Ministry of Finance and jointly with other government agencies. It is carried out systematically and has a certain impact on the general state of the loan capital market and on money circulation. By stimulating or hindering the issuance of loans by banks, regulating the issue of payment instruments, the central bank influences the investment process, the scale and direction of consumer demand, the level of commodity prices, and other factors that determine the state of the economy.

Widely used methods of monetary policy include: changes in the interest rate, open market operations, changes in the norms of banks' mandatory reserves, as well as selective methods of regulating certain types of credit.

Changing the central bank's interest rate is the oldest method of monetary policy. The increase in the interest rate makes it difficult for commercial banks to learn a loan from the central bank. As a result, the opportunities for expanding banking operations with the clientele are reduced. Changes in interest rates are used especially intensively in conditions of balance of payments imbalance and worsening currency crises.

Another method of monetary policy – *open market operations* is the purchase and sale by the central bank of government securities, as well as some types of private obligations (bank acceptances, promissory notes of large industrial enterprises). Open market operations affect the amount of available resources available to banks. When the central bank sells se-

curities on the open market and purchases them by commercial banks, the correspon- ding amounts are debited from reserve accounts and transferred to the central bank's account, which reduces the risk of possibility of granting loans. Open market operations should be carried out systematically when there is a large public debt and the government securities market is actively functioning.

An important method of monetary policy is to periodically *change the norms of mandatory reserves,* which commercial banks are required to keep with the central bank as collateral for their deposit obligations. The increase in mandatory reserve ratios implemented by the central bank reduces the amount of free cash available to credit institutions to expand their active operations. Reducing the reserve ratio, on the contrary, increases the ability to provide loans. In general, changes in the norms of mandatory reserves are used less often than operations on the open market, but the impact of this method on the state of the credit system is more noticeable.

The Central Bank makes extensive use *of various selective methods of regulating certain types of credit.* These methods of monetary policy, in comparison with the "general" ones, have a more rigid, administrative character and are aimed at regulating various forms of credit. Selective methods include: limiting operations for various credit institutions and individual banks; setting acceptable amounts for crediting operations with securities, regulating the conditions for issuing consumer loans for

the purchase of durable goods and mortgage loans for the purchase of residential buildings. When regulating consumer credit, the minimum cash contribution and the loan repayment period are set.

In the conditions of destabilization of monetary circulation, falling purchasing power of the national currency, the need for an active monetary policy increases, which becomes an independent element of macroeconomic regulation.

An important prerequisite for the correct circulation of cash, in addition to observing macroeconomic proportions in the economy, is the balance of the entire money turnover – the correspondence between credit investments and the normal volume of the entire mass of money, including the non-cash component, as well as the balance of the state budget.

5.1.3 Equilibrium in the commodity and money markets

Equilibrium in the money market depends on the amount of GNP, which affects both the supply of money and the demand for money. With the growth of GNP, incomes of the population increase, savings grow, which leads to an increase in the bank's credit resources, and with them -- to lower interest rates and increase investment. If the volume of GNP decreases, this process will proceed in the opposite direction.

In turn, GNP is determined by the level of aggregate supply, which depends on investment and consequently on the level of bank interest.

This means that the equilibrium state of both GNP and the level of bank interest is formed in interaction, ensuring the balance of the commodity and money markets. The description of equilibrium in these markets is presented in *the IS–LM model*, where IS – investment and savings; LM-liquidity and money.

This model describes the commodity and money markets as a single system.

The IS-LM model shows the mechanism of interaction between the commodity and money markets at constant prices, i.e., when the economy operates in the short-term period, in which the price level is less mobile.

The features of the IS–LM model are as follows:

– the interaction of the commodity and money markets is considered in unity;

– the level of bank interest is determined not only by the state of one money market, but also by the state of the commodity market, i.e., the level of supply of GNP.

The IS-LM model is designed to find the optimal ratio of different markets and choose the best option economic stabilization policy.

This *model justifies the priorities* of combining fiscal and monetary policies, as well as the directions of macroeconomic correction of interest rates, investment, and GNP. In this model, aggregate demand analysis is considered in two sectors: production and money.

In the manufacturing sector, the equilibrium state is achieved on the basis of equality of savings S and investment I.

In the money sector, the equilibrium is represented by the equality between the demand for money as a liquid commodity L and the supply of money supply M, i.e., $L{=}M$.

The IS curve is constructed on the assumption that savings are a function of income, and investment is a function of interest.

The case of equilibrium between investment and savings is shown in the graph (Figure 5.7).

Point E shows the balance of savings and investment at certain values of GNP and bank interest. Changes in GNP and bank interest will change the amount of savings and investments and point E in each case will move along *the I curve,* reflecting the equality of investment and savings. Consequently, the investment curve, which is a set of equilibrium points I and S, becomes the *IS curve.*

In other words, *any point on the IS curve reflects the equilibrium level of savings and investment (a balanced market of goods) at various combinations of GNP and interest rates.* This is natural, since the condition of equilibrium in the commodity market is the equality $I = S$.

Only the points located on the IS curve correspond to equilibrium in commodity markets (Figure 5.8). Points A and B represent disequilibrium situations of investment, savings, and income.

At all points above *the IS curve*, the volume of expenditures is less than GNP, i.e. there is an overproduction of goods. All points below the IS curve are characterized by a shortage in the commodity markets.

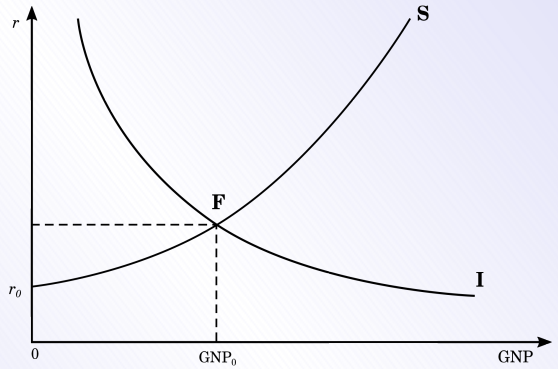


Figure 5.7 – Balance of savings and investment

We have considered how the situation in the commodity markets changes depending on changes in the volume of GNP and the level of the interest rate.

Now we will establish how the level of the interest rate is determined, which is dictated by the equilibrium state of the money market.

The equilibrium ratio of the money market is achieved when the demand for money $D_m(L)$ and the supply of money $S_m(M)$ are equal. As a result of the equality of L and M the equilibrium interest rate is formed (Figure 5.9).

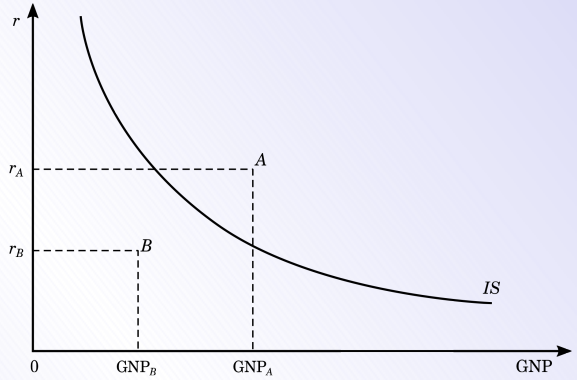


Figure 5.8 – View of the IS curve

However, the level of the equilibrium interest rate is always different when the level of GNP changes. If we take different values of interest rates and the level of GNP, then the equality of L and M will be achieved at different points lying on the LM curve (Figure 5.10). Thus, the equilibrium state of the money market is displayed by the LM curve.

The LM curve shows a set of such combinations of interest rates and the level of GNP at which the money market is in equilibrium, i.e., the demand for money (liquidity) extends to the entire mass of issued money.

Points A and B that lie outside the LM curve reflect the state of disequilib- rium in the money market, which should disappear under the influence of market forces. At all points below the LM curve, the demand for money is greater than its supply $L > M$, and at all points above the

LM curve, the supply of money is greater than the demand for it $L < M$. The mechanism of restoring equilibrium is associated with a change in investment demand, which entails a new level of GNP and, accordingly, bank interest.

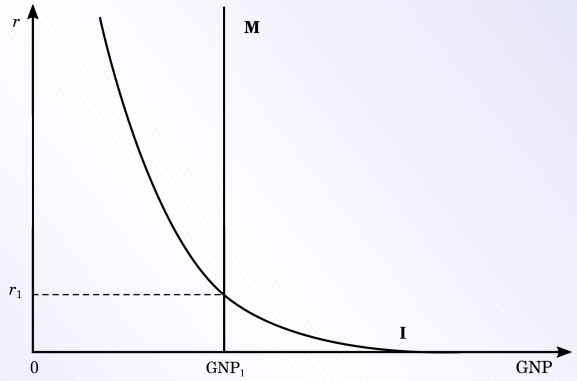


Figure 5.9 – Money market equilibriumt

The IS and LM lines on the graph represent the conditions under which the commodity market and the money (asset) market are in equilibrium (Figure 5.11). To achieve a general equilibrium, it is necessary that the interest rate and GNP are at a level that ensures equilibrium in both markets at once.

On the graph, point E shows the interest rate r_0 and the volume of GNP_0, which provide a state of equilibrium in both the commodity market and the money market. The economy uses fluctuations in supply and

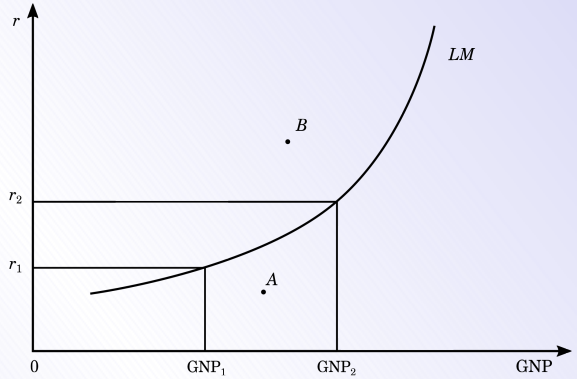


Figure 5.10 – View of the LM curve

demand, especially the interest rate, to restore the general equilibrium when it is disturbed.

In the money market, equilibrium is established faster than in the commodity market, since money is more liquid compared to goods. As a result, the equilibrium level of interest in the money market is established almost instantly. Therefore, we can assume that the money market is always in equilibrium.

The market of goods restores equilibrium more slowly, because producers need to change the production program. This requires some time, especially if we are talking about expanding production or updating it.

Consequently, the high mobility of the money market makes it possible to influence the commodity market by regulating the interest rate. This

can be achieved by using open market operations (to compress or expand the money supply). In the first case, the level of the interest rate will increase, in the second it will decrease.

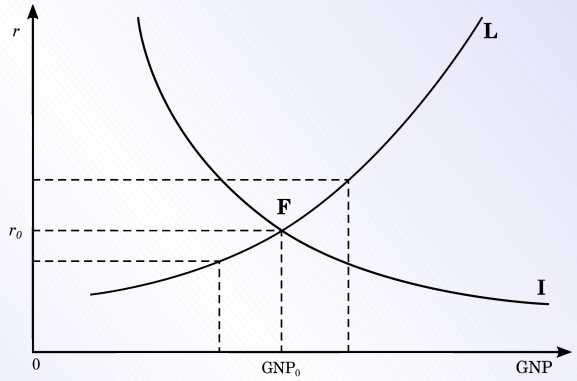


Figure 5.11 – Joint equilibrium in the commodity and money markets

If it is necessary to reduce the cost of credit, the central bank should increase the money supply by reducing the mandatory reserve rate or conduct an additional issue of money. In such a situation, a new equilibrium will be formed, which will correspond to a lower level of the interest rate, which will increase aggregate demand and GNP will reach a higher equilibrium level.

So, monetary policy affects the economy through its influence on the interest rate, and then on aggregate demand and, accordingly, on the level of GNP.

LECTURE 6
INFLATION AND ANTI-INFLATIONARY POLICIES

6.1 The essence of inflation and its forms

Inflation is a crisis state of the monetary system. It belongs to the category of severe and difficult to treat diseases of the economy. No country is immune from it.

Usually,*inflation refers to any increase in the overall price level when the purchasing power of money decreases.* Such an approach follows from the quantitative theory of money. Meanwhile, the inflationary process is much more complex and does not simply change the ratio between goods and money.

Inflation is a monetary phenomenon. More specifically, the depreciation of money occurs in the economy because there is more money than it is necessary. P. Heine notes that not only the prices of goods change, but also the measurement of their value, i.e., money. "It's not about the increase in the length of the item, but about the reduction in the scale of the ruler used to measure the length".

Inflation or "bloating" is seen as the process of devaluation of money and, consequently, increase in prices that occur in the country as a result of overflowing channels of money supply formation in excess of what is necessary for commodity exchange.

Inflation is expressed in a long-term general disequilibrium of markets in the direction of demand. But not every disequilibrium of this kind should be considered inflationary. A short excess of demand over supply signals only about the operation of the market mechanism and has nothing to do with inflation. When the disequilibrium is prolonged, becoming a characteristic feature of not of one or two markets, but of many at once, we can talk about the development of the inflationary process.

Continuous price increases are not the only sign of inflation. The cyclical phase of recovery is also characterized by an increase in prices. However, it is not based on inflation, but on expanding the scale of production, updating fixed capital. Inflation can occur even with stable prices, if they are combined with a chronic lag in supply from demand.

Thus, *inflation is such a depreciation of money, which is accompanied by a violation of the laws of monetary circulation and the loss of money of all or part of its basic functions.* In its extreme form, inflation leads to a loss of confidence in banknotes and a revival of natural exchange.

Depending on the forms the inflationary disequilibrium of markets takes place, *there is a distinction between open and suppressed forms of inflation.*

Open inflation tends to increase prices. We emphasize: the general trend measured by the national economic price index. It follows that open inflation is quite compatible with periodic price declines in individual commodity markets or with a slowdown in their growth. And if so, then it

turns out that open inflation, seriously distorting the market mechanism, but does not violate it. It is curable and is treated by economic methods.

Open inflation takes various forms: *creeping or moderate* (when prices change slowly, usually up to 10% per year), *galloping* (when growth becomes rapid), and finally *hyperinflation* (price growth is more than 1000% per year), leading to a complete breakdown of monetary circulation.

With subdued inflation, prices are controlled by the state. Therefore, the increased demand for goods is expressed in the appearance of a gap between supply and demand. Since the state price is lower than the equilibrium price, the incentives to increase the quantity and improve the quality of goods are blunted. The consequence is the occurrence of a deficit.

Since *administrative regulation of prices is an obligatory sign of suppressed inflation*, the market mechanism is inevitably destroyed. The symptoms of inflation can be suppressed in this way, but the market system will also be suppressed.

Subdued inflation undermines the stability of the monetary system and confidence in money. It is incurable, it can be "anethtesized".

Schematically, the forms of inflation (Figure 6.1) can be represented as follows:

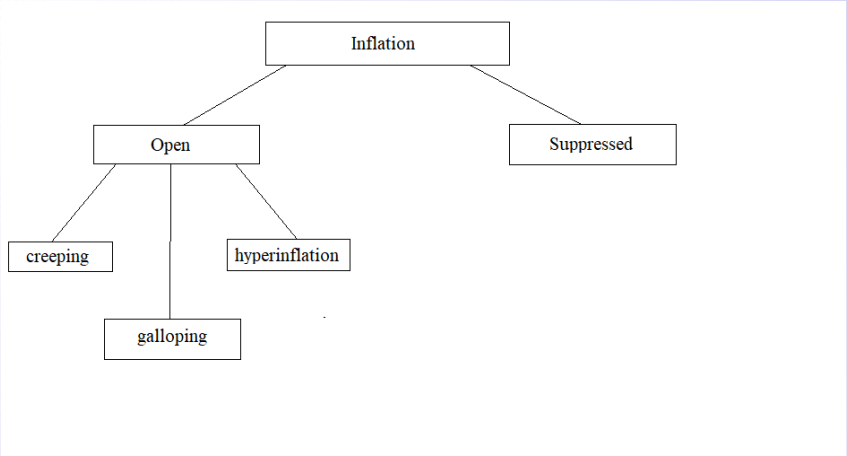


Figure 6.1 – Forms of inflation

6.2 Causes and indicators of inflation

The main causes of inflation include the following.

1. Inflation originates in the money market. It is precisely in the deformations of monetary circulation that its causes should be sought. Due to the*incorrect monetary policy of the central bank*, it occurs as a result of additional issuance, an excess, unsecured mass of money in circulation. The situation is aggravated by the incorrect regulation of bank interest, the transformation of short-term monetary savings into long-term loans,

and the use of credit resources to cover the financial deficit of the state budget.

2. Modern *money circulation is carried out by paper signs, which have broken all connection with gold.* In the era of gold money, its excess was overcome by the withdrawal of gold from the sphere of circulation to the sphere of accumulation. But paper money, which is only a means of circulation, is pointless to save like gold. But unlike gold money, paper money simply has nowhere to go: the sphere of circulation is its only abode.

3. *The constant growth of government spending*, which is due to the expansion of the public sector is being implemented by the state regulation of the economy, implementation of social programs.

Militarization of the economy increases the tension in the expenditure side of the budget, distorts reproduction. Military industry causes a net increase in demand in the consumer market without a corresponding supply.

4. As the economy becomes more open, *the risk of imported inflation increases.* In the conditions of unchanging hens-country currency, the economy is affected by an external increase in prices for imported goods. In addition to the channels of world trade, inflation can be transferred through the channels of movement of short-term capital from one country to another due to national differences in bank interest rates.

5. *The emergence of large institutions of private power* – monopolies and oligopolies, which receive super-profits by curbing supply and maintaining high prices. Large financial and industrial groups are engaged in lobbying, preventing the passage of antimonopoly decisions of the government.

Oligopolies and monopolies are the basis of price growth, they do not allow the market mechanism to work, so there is no competition, and prevent state anti-inflationary regulation.

6. *Incorrect actions of the state in the field of taxation.* When tax rates become high, entrepreneurs respond by raising prices. As a result, the volume of sales and consequently production is slowed down. Too high a tax rate on high incomes creates prerequisites for artificially increasing costs including due to a rapid increase in representative expenses (high travel expenses, etc.).

7. *Strengthening the role of trade unions* that seek to increase wages by reducing the labor supply (lobbying for laws on reducing working hours, tightening migration legislation in order to protect the domestic labor market from foreign labor). Raising wages increases aggregate demand on the one hand, and production costs on the other. Both are a factor in rising prices.

8. *Indexation of monetary incomes of the population* becomes a factor in the formation of an excess solvent population demand.

9. *The predominance of the share of employees in the service* sector (service-oriented economy). Labor productivity in the service sector is growing more slowly than in the manufacturing sector, and wages are growing at a higher rate. This increases the imbalance between aggregate demand and aggregate supply.

So, inflation is a manifestation of disproportionality in the development of social reproduction, which is caused by a violation of the law of monetary circulation.

Inflation indicators are price indices that should include:

– consumer price indices;

– producer price indices;

– consumer price indices for industrial products and services;

– deflator index.

The consumer price index measures the change in the cost of a fixed set of basic consumer goods and services (consumer basket) and is the main indicator that characterizes the level of inflation in a country and its regions.

The producer price index is calculated based on the actual sales prices of products shipped to the domestic market without VAT, excise taxes, other indirect taxes, transport and loading and unloading costs.

The price index for products and services for industrial and technical purposes includes, in addition to producer prices, transportation costs,

indirect taxes, payment for services of trade organizations and covers both domestic products and imported ones consumed by domestic enterprises.

GNP deflator – the level of prices for goods and services that form GNP. It is used to analyze the dynamics of GNP and is calculated as the ratio of the current year's GNP volume in current prices (nominal GNP) and the same volume in constant (comparable) prices of the base year (real GNP).

The inflation rate (price growth rate) is calculated, for example, based on the consumer price index, as:

$$\text{Inflation rate} =$$

$$= \frac{\text{consumer price index of the analyzed year} - \text{consumer price index of the base year}}{\text{Consumer price index of the base year}}.$$

Inflation is also characterized using the rules of the number 70. To determine the number of years, you need to double prices, the number 70 is divided by the annual rate of inflation.

6.3 Demand and cost inflation

There *are two types of open inflation: demand inflation (buyer inflation) and cost inflation (seller inflation).* In essence, these are two interrelated, but not equivalent, inflations: one – on the demand side (excess

cash from buyers), the other on the supply side (increase in production costs).

Demand inflation is a type of inflation generated by an excess of aggregate demand, which supply, and therefore production, cannot keep up with. Excessive demand leads to higher prices. An excess of money is formed when there is a shortage of goods.

To finance additional expenses, the state issues paper money that is not backed by commodity currency by weight.

Demand inflation makes sense at a low rate of economic growth, the presence of underutilized capacities. In this case, spurring demand serves as an incentive to activate production. When prices rise to 10%, *the population buys more, because in the future purchases will cost even more. This encourages producers to increase their supply, and the market becomes saturated faster.*

However, inflationary price growth can also occur in conditions when demand does not grow, but falls. In this case, the reason should be sought from the supply side. This is a different kind of inflation – *cost inflation.* Inflation begins to unwind due to the fact that costs are rising.

Costs are starting to increase for three main reasons:

1. As a result of wage raise under pressure from trade unions and workers' demands.

2. Due to the rise in the cost of raw materials and fuel (rising import prices, changing production conditions, increased transport costs etc.).

3. Producers raise prices by exploiting their monopolistic position or creating it through collusion.

Unlike demand inflation, supply inflation has some prerequisites for self-repayment. Higher prices as a result of rising costs lead to a reduction in production, and this is inevitably accompanied by increased competition, the search for funds aimed at improving the organization of production, reducing production and transaction costs.

In reality, it is quite difficult to distinguish two types of inflation. Inflation that combines elements *of demand and demand cost inflation is called structural inflation.*

6.4 The relationship between inflation and unemployment. The Phillips Curve

The Phillips curve indicates a relationship between the price level (and wages) and the unemployment rate. This connection was established by O. Phillips. He drew attention to the fact that in the conditions of depression, which is characterized by a decline in prices, there is an increase in unemployment. With the onset of the recovery, there is an increased demand for goods, prices rise and the unemployment rate decreases.

This relationship is explained as follows. As you know the level of wages and the level of employment are interrelated. As wages rise, employment increases and unemployment declines. But higher wages mean higher costs

and therefore higher prices. Higher prices, on the other hand, usually mean lower unemployment. It turns out that *inflation acts as a payment for reducing unemployment.*

Inflation and unemployment are two acute and interrelated phenomena. *The higher the inflation rate, the lower the unemployment rate is.* And vice versa. This is a real, although empirically established pattern.

Analyzing data from more than 100 years, Phillips came to the conclusion that there is a certain *natural rate of unemployment*, 6-7%, at which the level of wages is constant and its increase is zero. When unemployment falls below this natural level, there is a faster raise in wages, and vice versa. Later using the thesis of a strong relationship between wage growth and prices, this pattern was transformed into the relationship between unemployment and the rate of price growth (inflation). The appearance of the Phillips curve is shown in Figure 6.2.

The graph shows a curve that characterizes the functional relationship between the two quantities.

Practice has shown that the Phillips curve is applicable to economic situations in the short term. In the long term, even a low level of employment does not save from an increase in inflation.

Phillips' inflationary curve was replaced by *the theory of the natural rate of unemployment. The essence of this theory is that in the long run, a moderate level of inflation is possible only with a natural level of unemployment, which is* 6-7%.

When developing economic policy, you have to choose: either inflation or unemployment. It's about search of the most acceptable combination of two "evils".

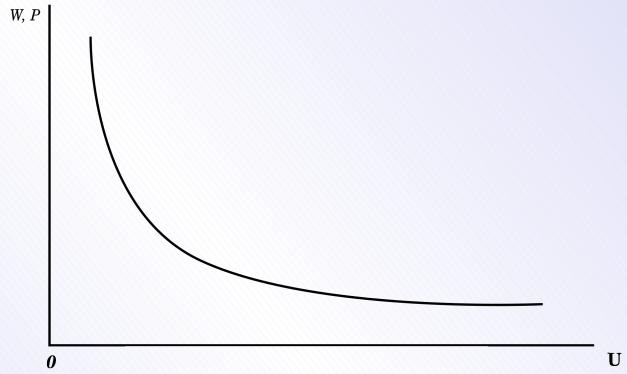


Figure 6.2 – The Phillips curve W – nominal wage growth rate; P – inflation rate; U is the unemployment rate in %

6.5 Adaptive and rational expectations

The Phillips curve shows the relationship between rising inflation and falling unemployment. Measures to reduce the unemployment rate and stimulate GNP growth lead to higher inflation. It is also impossible to solve the problems of reducing inflation without increasing the unemployment rate.

However, in developed countries, the 70s-80s of the XX century were marked by a simultaneous increase in inflation and unemployment, that is, stagflation. The Phillips curve does not explain this phenomenon.

Friedman, M. and Phelps, E. explained this phenomenon using the theory of adaptive expectations. This theory justifies the Phillips curve by the presence of economic agents' inflationary expectations that do not coincide with actual inflation in the future, i.e., incorrect inflationary expectations. The actual rate of inflation in the next period each time exceeds the government's planned rate of inflation. As long as entrepreneurs and workers continue to underestimate inflation, stimulating fiscal and monetary policies work, resulting in a short-term increase in the rate of inflation – increase the real output and reduce the unemployment rate.

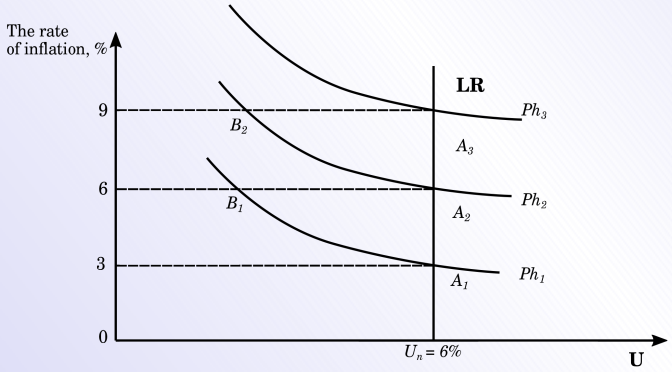


Figure 6.3 – Long-term Phillips curve according to with the theory of adaptive expectations

Let's assume that in 2004 the expected rate of inflation is 3%, and the unemployment rate is 6%, which corresponds to its natural rate level at point A_1, in figure 6.3.

The policy of stimulating aggregate demand leads to a 6% increase in the price level in 2005. However, it is more economical agents continue to believe that inflation in 2005 will be 3% per year. When the prices of their goods increase, entrepreneurs have an incentive to produce more. They hire additional workers, reducing unemployment in the short term, which corresponds to moving the unemployment rate from point A_1 to the point B_1. At point B_1 the expected inflation rate is 3%, while the actual rate is already 6%.

In the long run, economic agents find that the increase in commodity prices and nominal wage rates was purely inflationary. After comparing their estimate of inflation with the actual one, they begin to adapt to the new higher level of inflation. Employees, wanting to maintain their real wages, demand an increase in their nominal rate. Entrepreneurs, realizing that the increase in prices is not related to the expansion of demand for their products, and wage costs have increased, reduce output to the previous level, returning the unemployment rate to the level of 6%. This adaptation is shown by moving from a point to B_1 to point A_2 due to the shift of the short-term Phillips curve to a new direction Ph_2. If the trade unions and the government continue to fight to reduce the natural rate of unemployment by the same methods, the same situation will be

repeated, but at a higher level of inflation. Unemployment will decrease for as long as expected inflation is below its actual level. The short-term Phillips curve will move from point A_2 to point B_2. At point B_2 the expected inflation rate is 6%, while the actual one is already 9%. But as soon as the "false" inflation expectations are corrected, unemployment will return to the level of 6%, but at a higher rate of inflation (9%). So, in the long run, the economy will move from point A_1 to point A_2, then in point A_3 and so on, and the Phillips curve will take a vertical position.

Extended*R. Lucas' theory of rational expectations is based on the assumption that economic agents are well aware of how the economy functions.* Their inflation expectations *are rational* and exactly match up with actual inflation in the future. When the government applies a stimulating fiscal or monetary policy, entrepreneurs already know that it is not the demand for their products that will increase, but the overall price level in the country that will increase. Bankers put inflationary expectations in the nominal interest rate, making credit conditions worse for borrowers. Workers do not increase the supply of labor, because they anticipate that the real wage rate will not change in the next period. Aggregate demand stimulated by the Government is not accompanied by an increase in aggregate supply. This causes the economy to move from point A_1 to point A_2, and then to point A_3, bypassing points $B_1, B_2, \ldots$ (figure 6.4).

The vertical position of the long-term Phillips curve shows that in the presence of rational expectations, there is state unemployment rate U_n it

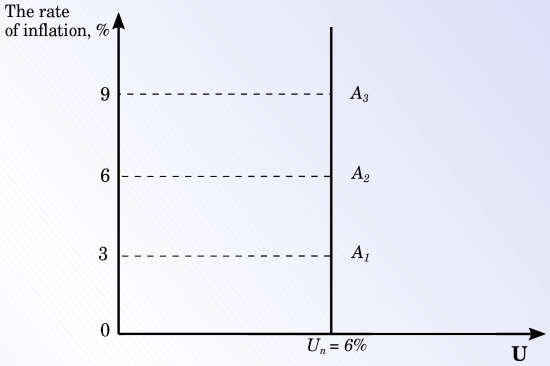


Figure 6.4 – Long-term Phillips curve according to the theory rational expectations

is not sensitive to changes in the overall price level either in the short or long term. Since the expected and actual inflation rates are the same on the vertical Phillips curve, no data is available government attempts to reduce the natural rate of unemployment through discretionary policies will not succeed.

Analysis of the long-term Phillips curve in the framework of the theory of adaptive and rational expectations shows that attempts to achieve production expansion in the context of stimulating aggregate demand inevitably leads to high inflation and serious socio-economic consequences.

From the theory of adaptive and rational expectations, it follows that the main direction of government action should be *the stabilization of the money supply in circulation* Its increase leads to an increase in production

only until the "full employment economy" is reached, i.e., until the natural level of unemployment is reached, and then only leads to an increase in prices.

6.6 Price of inflation

The "price" of inflation refers to the final results of its impact on the income of society as a whole and its structures. In other words, *it is a question of who benefits from the price increase and how much, and for whom it is ruinous.*

In practice, there are three main variants of the "price" of inflation: positive (which means an increase in income), *zero* and *negative* (unprofitable).

Inflation brings income to the state. The issue is a privilege of the state. And when the government does not dare to increase direct taxes to finance its expenditures, it organizes money printing through the central bank in such a way that the budget deficit is covered.

However, the issue reduces the value of old money held by the population. This kind of cash tax is called *an inflation tax. The value of the inflation tax is equal* to the product of the inflation rate and the amount of money available to the population

$$T_I = I \cdot M,$$

where T_I is the amount of the inflation tax; I – the level of inflation; M – the amount of money available to the population.

It is quite obvious that *the real income of the population decreases* by the amount of the inflation tax. Tax on personal money accounts for a significant share of the state's income.

The income of the state received as a result of an increase in the money in circulation is called *seigniorage. It is equal to the difference between the amount of additional money issued and the cost of issuing them.*

In addition to the state, *commercial banks profit from inflation.* When inflation occurs, commercial banks fail to meet their deadlines payments and other payments in order to give the money on credit at high interest rates.

Monopolies gain a lot from the price increase. They regularly create an artificial shortage, raise the prices of goods, thereby causing additional demand.

The zero option is "automatic indexing" of monetary income.

6.7 Socio-economic consequences of inflation

Inflation is an integral attribute of the market economy which has an ambiguous impact on the economy. As a result of inflation, the money supply grows. A certain increase in the money supply (up to 10% per year) creates an incentive to increase the volume of output, accelerates

the payment turnover, promotes the activation of investment processes, and increases the concentration of production. In turn, the growth of production leads to the restoration of the balance between the commodity and money supply at a higher price level.

But whatever the positive functions of inflation, it has a whole range of effects on the course of economic development *negative phenomena.*

1. Rising prices lead to a depreciation of unused capital.

2. People who have lent their money lose out from inflation.

3. Inflation narrows the motives for working, because it undermines the possibility of normal realization of earnings.

4. High rates of inflation lead to the "flight" of capital abroad.

5. Exports are declining and imports are increasing, the balance of payments deficit is growing, proportions are being violated, the disorganization of the economy is increasing, public wealth is being destroyed.

6. The standard of living of consumers is falling, personal savings are devalued, and current consumption is decreasing.

7. There is a rapid social stratification of the population, deepening property (wealth) inequality.

8. Unassuarance and uncertainty in the future increases, and the risk of entrepreneurial activity increases. Investments are reallocated from long-term objects to short-term ones, and they become speculative. A significant part of capital leaves the sphere of production and rushes to the sphere of circulation and the financial sector of the economy.

9. Inflation hinders the economy's recovery from the crisis. Unemployment is growing, and social problems are becoming more acute.

10. Inflation weakens the position of government agencies. Confidence in programs and activities planned and implemented by the Government is decreasing. The reaction of the population to the deterioration of conditions in the consumer market and in production takes acute forms.

11. Uneven price growth increases the disparity between economic sectors.

12. Uncertainty and unpredictability of the future development of the economy lead to changes in the economic interests of the population, social conflicts, personal and family tragedies, an increase in crime and a decline in the moral foundations of society.

Thus, the list of negative consequences of inflation is very long. And yet the main problem is that *inflation makes the national economy poorly managed.*

The steady increase in prices puts the state in a dilemma: on the one hand, the population that is not involved in the occurrence of inflation must be compensated for losses, on the other – compensation for losses will lead to the fact that the cost inflation mechanism will work at full capacity, and this will cause a new jump in prices. In other words, if today the state takes pity on consumers and treats them fairly, then tomorrow there will be another decrease in their welfare.

It is necessary to organize state anti-inflationary compensation in such a way that it affects the monetary income of the population less. Here, compensation in the form of food and other goods is appropriate. As for people with high incomes, they should accept small losses and support the government's measures to avoid social conflicts.

6.8 Government's anti-inflationary policy

One of the most difficult issues of economic policy is managing inflation. Management methods are ambiguous and contradictory in their consequences. These methods on the one hand should contain inflation and on the other stimulate production, create conditions for saturation of the market with goods.

Inflation management involves the use of measures that combine a slight increase in prices with stabilization of incomes. Process management tools differ depending on the nature and level of inflation, the specifics of the economic situation, and the specifics of the economic mechanism. In general, the rate of inflationary growth can be kept within fairly narrow limits.

Two types of economic policies are used for anti-inflationary regulation. The first type is aimed at reducing the budget deficit and limiting the issue of money. Cash flow growth rate mass is regulated within certain limits – in accordance with the growth rate of GNP.

The second type involves the regulation of prices and incomes, which aims to closely link wage growth with price growth. One of the tools is income indexing, which is determined by the level of the subsistence minimum or standard consumer basket and is consistent with the dynamics of the price index. In order to contain undesirable phenomena, limits are set for increasing or freezing wages, limiting the issuance of loans etc.

Various anti-inflationary compensations and methods of social protection of the population do not concern the causes and mechanism of inflation, but only its consequences. Therefore, these measures are not anti-inflationary. It is not legitimate to classify administrative control over prices as anti-inflationary regulation. Such a policy can only temporarily but not completely, remove the price symptoms of inflation. Inflation becomes depressed and causes considerable damage to the economy. *Suppressed inflation cannot be defeated, and only open inflation can be resisted.* Suppressed inflation is switched to open mode and only then are anti-inflationary control methods used.

And in the conditions of open inflation, the state is not able to maintain a final victory over it. *The goal of the government's anti-inflationary policy is* to make inflation manageable and moderate enough.

The entire arsenal of anti-inflation tools is divided into:

– an anti-inflationary strategy with long-term goals and methods;

– an anti-inflationary tactic that produces results within a short period of time.

The anti-inflationary strategy consists in dampening inflationary expectations in order to reverse the psychology of buyers, relieve them of the fear of depreciation of savings, and prevent the current demand from being inflated due to the steady rise in prices of goods and services.

Inflationary expectations can be prevented if:

– fully strengthen the mechanism of the market economy (price liberalization, suppression of monopolism, stimulating production and sales, encouraging small businesses, easing customs restrictions, etc.);

– the existence of a government committed to the permanent eradication of unmanageable inflation and trusted by the majority of the population;

– the introduction of strict limits on annual increases in the money supply. This indicator consists of the long-term growth rate of real production and the level of inflation that the government considers acceptable and undertakes to strictly control;

– reducing the budget deficit with the prospect of its complete elimination. To solve it, there are two ways to go – to increase taxes or reduce government spending. The second way is preferable;

– minimizing the impact of external inflationary impulses on the national economy, especially the movement of speculative short-term loans (capital);

– using currency appreciation. It causes a decline in prices for goods and services imported from abroad, therefore, it pushes down the overall price level.

When the inflationary situation becomes intolerable, long-term measures alone cannot be avoided. It is necessary to realize the tactical potential of anti-inflationary regulation. *Tactical methods do not eliminate the causes of inflation*, but only reduce inflationary tension for a while. This can include the privatization of state-owned enterprises, preferential taxation in order to expand the production of goods and services, an increase in the savings rate, etc.

The state also has such a radical option in reserve as a confiscation-type monetary reform. But these factors are not related to the nature of inflation.

Experience shows *that it is almost impossible to stop inflation through organizational measures*. This requires a structural reform aimed at overcoming the imbalances in the economy.

Specific methods of controlling inflation depend on the correct definition of its nature and the factors that spur the unwinding of inflationary processes. Each inflation is specific and involves the application of measures that correspond to its depth and nature. Therefore, the methods of combating inflation should also be comprehensive.

LECTURE 7

INCOME DISTRIBUTION AND SOCIAL SECURITY STATE POLICY

7.1 Market mechanism of income distribution

One of the most important problems of a market economy is the distribution of income. From the degree of the distribution unevenness of income depends not only the welfare of the population, but also on the political stability of society.

The income of society members is the most important indicator of their well-being. Income determines the material and spiritual life of the family, the possibility of recreation, education, and health maintenance. It is in the family that every person daily solves socio-economic problems of their own well-being. *Income can be defined as the total amount of money earned or received over a given period (usually for a year).*

The market distribution of income adheres to one justice: the incomes of all owners of factors of production are formed on the basis of the laws of supply and demand, as well as the marginal factors productivity. From this point of view, the low income of unskilled workers, for which there is little demand, is fair. Also, a high income of a broker who was able to predict the price dynamics will be fair. *The market mechanism in no*

way provides a guaranteed level of well-being. Anyone who wants to work earns according to the product they create.

But in real life, the income distribution is not only the result of the free play of market forces, but also the basis of state regulation of various income streams by redistributing them.

The concept *of "income" is an indicator of the results of the economic value of the newly created value* as the excess of the value of the product produced over the cost of its production, as well as the share of each class, social group or individual in the product produced and assigned to them. Among the factors that have a direct impact on the amount of income of the population, in addition to the size of wages themselves, are the dynamics of retail prices, the degree of saturation of the consumer market with goods, etc.

To assess the level and dynamics of household income, indicators of nominal, disposable and real income are used.

Nominal income – the amount of money received by individuals during a certain period. Nominal income includes wages, dividends, interest, and cash transfer payments such as social security and unemployment benefits. This also includes the provision of goods and services under a number of government programs, subsidies for housing and food stamps, assistance for education, income from increasing the value of stocks, bonds, and real estate.

Disposable income – income that can be used for personal consumption and personal savings. Disposable income is less than nominal income by the amount of taxes and mandatory payments.

Real income is the amount of goods and services that can be purchased with disposable income during a certain period, i.e., adjusted for changes in the price level.

Nominal monetary incomes of the population are formed from various sources, the main ones being: factor income; cash receipts from government assistance programs in the form of payments and benefits; receipts from the financial system (from banks, savings banks, insurance institutions); other cash receipts.

The funds received by the employed population make up a crucial part of the income of this group of people (salary, income from one's own household).

Payments under state aid programs (transfer payments) have a significant impact on the formation of the population's income. At the expense of these sources, pension provision, maintenance of temporarily disabled citizens, payments of various types of benefits (for child care, medical care, low-income families for children, unemployment) are carried out.

The ratio of the share of transfer payments and salaries in the population's income plays an important role in shaping the economy psychological behavior of the individual, his labor motivation.

With the dominant role of wages in the formation of the total amount of income, such qualities as entrepreneurship and initiative are formed. In the case of increasing the role of payments under state aid programs, a passive attitude towards production activities and the psychology of dependency is formed.

Monetary income of the population received through the financial and credit system is presented in the following format:

1. State insurance payments.

2. Bank loans for individual housing construction, economic acquisition of young families, members of consumer associations (garden construction).

3. Interest on deposits in savings banks calculated based on the results of the year.

4. Income from the increase in the value of shares, bonds, winnings, and loan repayments.

5. Lottery winnings.

6. Temporarily availablefunds generated as a result of purchasing goods on credit.

7. Payments of various types of compensation (injuries, damage).

Other cash receipts include household income from the sale of items through commission and purchase magazines, etc.

The level of income determines the quality of consumption, the possibilities of consumer spending of the population. Income is divided into

low, medium, above average and large. Recipients of different incomes belong to different social groups. These are families: the beggarly, the poor, the low-income, the well-off, the rich, the super-rich. They all differ dramatically in the direction of spending.

The ultimate goal of the functioning of the national economy is to create conditions for normal human life and achieve a certain standard of living.

Adequate working conditions, full-fledged education, affordable health care, quality food, housing, etc. are necessary for normal life. The degree of satisfaction of people's needs depends on both individual and family incomes.

The standard of living is the provision of the population with the necessary material and spiritual benefits for life, or the degree of satisfaction of the need for these benefits.

The UN has proposed a combined quality of life indicator. *Quality of life* is a General socio-economic index, which includes not only the level of consumption of material goods and services, but also the spiritual needs, health care, life expectancy, level of education, the conditions of the human environment, the level of employment, the solvency of the population, access to political life, the moral and psychological climate, peace of mind. Taking into account the increased social requirements for the definition since 1990, the Human Development Index (HDI) has been introduced. The main indica- tors that determine HDI include:

– life expectancy;

– level of education;

– real GDP per capita.

To determine the dynamics of the standard of living, legally established standards are used, which are a system of social guarantees for the population. Among them are the cost of living, the minimum consumer basket, the minimum wage, etc.

The cost of living reflects the level of income that should ensure the consumption of the minimum set of goods and services necessary to maintain human life in accordance with the level of economic development. It assumes the role of a social standard, which regulates social payments and evaluates the standard of living of the population.

The cost of living is closely related to the minimum wage indicator, which plays the role of social standard for each individual of the society. The minimum wage is the payment of less skilled, simple labor.

The minimum consumer basket is a set of minimum consumption norms for a certain set of food products and services. Its cost determines the lower limit of the cost of living in the country.

The cost of living and the consumer basket represent two sides of the same minimum of funds that a person needs to live. The difference is that the "basket" expresses the natural side of items and services, and the cost of living-their cost assessment.

7.2 Social justice and social equality

Social justice should be understood as the provision of work for every able-bodied person, receiving decent wages, social security for disabled people and children without parents, free access of citizens to education, health care, culture, sports, etc.

In a market economy, competition forces the entrepreneur to direct his efforts to meet the needs of society. But it does not prevent a successful entrepreneur from getting rich if the correctly captures the requirements of the market. This creates a strong motivation for entrepreneurial activity and contributes to the progress of the economy. But at the same time, the market system encourages the social polarization of society.

Economic power is concentrated in the hands of resource owners. On the contrary, a significant part of the population is deprived of ownership of productive resources, which creates its economic dependence. It is no coincidence that in society some people act as employers, while others act as employees. There is a differentiation of income, property stratification, enrichment of some and impoverishment of others. In other words, the market system itself does not automatically ensure social justice.

Opportunities for implementing the principle of social justice in each country at a certain stage of its development are determined by the actual state of the economy.

Social justice can only be achieved at high rates of economic growth, which creates financial opportunities for solving social problems not only by the state, but also by other entities.

A high level of socio-economic development of the country, stable rates of economic growth, a system of distribution and redistribution of income, maintaining a minimum acceptable standard of living for the disabled population are necessary conditions for achieving the principle of social justice.

Alongside with the concept of social justice, there is also the concept of social equality.

Social equality is the creation of relatively equal conditions for the comprehensive development of each person and his ability to work, maintaining the maximum permissible differences in income of the population, equal responsibility of all citizens before the laws of the country, regardless of personal wealth and position held. The implementation of the principle of social equality meets the economic interests of each individual and society as a whole. By creating conditions for the normal development of each person, the state multiplies the economic returns of the entire population of the country and increases social investments in each person.

The social function of the market economy is limited, which requires its expansion at the macro level by the social activity of the state and at the micro level by the social activity of other economic entities (enterprises

and organizations), various non-governmental organizations (trade unions, foundations, as well as public, religious and charitable organizations).

The market economy distorts the principles of social justice and social equality.

7.3 Differentiation of household incomes

Whatever the distribution system is fair, income inequality is inevitable in any modern society. *Differences in the level of income per capita or per employee are called income differentiation.*

A society with a rational and relatively uniform income differentiation is most stable due to a large middle class, has social mobility, and strong incentives for social advancement and professional growth.

A society with a sharp differentiation of income of the extreme pole groups of the population is characterized by social instability, lack of incentives for professional growth, and significant criminality of social relations.

Various indicators are used to quantify income differentiation. In economic theory, *the Lorentz curve is used* as an indicator that reflects the unevenness of the distribution total income of the society between different population groups (Figure 7.1).

The theoretical possibility of an absolutely equal distribution of income is represented by the bisector. It indicates that this percentage of fam-

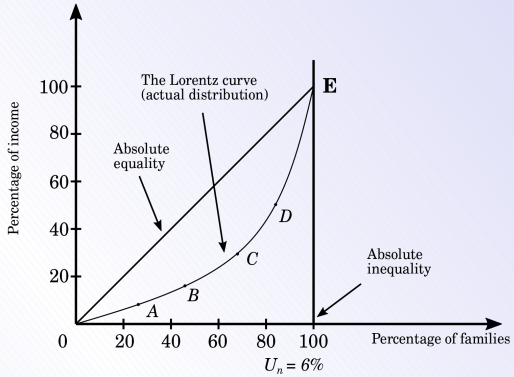


Figure 7.1 – Lorentz curve

ilies receives the corresponding percentage of income. This means that if 20% of all households receive 20% of their total income, 40% – 40%, and 60% – 60%, etc., then the corresponding points will be located on the bisector. Such an ideal location of income destroys the system of motivation for work among employees and entrepreneurs, reduces the efficiency of production. In reality, income is distributed unevenly, and, as a rule, a smaller share of the population owns most of the country's income. The actual distribution of income is shown by the Lorentz *OABDE curve. The further the Lorentz curve is located from the bisector, the higher the degree of inequality in the distribution of income.*

Another indicator used to determine the degree of income differentiation is *the coefficient Gini.*

The Gini coefficient is calculated by dividing the area of the OABDE by the area of the OKE triangle. The larger the area of the *OABDE* figure, the larger the Gini coefficient, and the higher the degree of income inequality. The value of the Gini coefficient varies from 0 to 1. However, it can never reach these values, since "0" is absolute equality, and "1" is absolute inequality.

The Lorentz curve can be used to compare the distribution over different time periods, or in different countries, or between different groups.

What is the optimal degree of inequality? This is the most important issue in determining the strategy regarding income inequality. There is no generally accepted answer to this question, since there are arguments "for" and "against" strengthening equality.

The main argument in favor of equal income distribution is that income equality is necessary to maximize the satisfaction of the consumer's needs. The main counterargument is that income equality undermines incentives to work, invest, and take risks, and thus reduces the amount of income distributed.

7.4 State policy of income redistribution

The distribution of income generated by the market system is unfair in the sense that it does not guarantee everyone an income that provides them with a decent life, regardless of the outcome of economic activity,

and therefore it is unacceptable. There is a need for state intervention in the redistribution of income. Assuming responsibility for the observance of the human right to a decent life, it organizes the appropriate redistribution of income.

The State policy of income redistribution is aimed at solving two main tasks: providing assistance to the most vulnerable segments of the population through the social security system and neutralizing the inflationary depreciation of incomes and savings of the population.

This policy consists in redistributing income through the state budget through differentiated taxation of various groups of income recipients and social benefits. At the same time, a significant share of national income is transferred from high-income to low-income segments of the population.

Today, all developed countries have created *social support systems for the poor* Transfers play a special role in the system of social support for the poor. *Social transfers are a system of monetary or in-kind payments to the population* that are not related to their participation in economic activities, as well as maintaining domestic demand.

The state, by organizing the redistribution of income through the budget, solves the problem of increasing the incomes of the poor, creates conditions for the normal reproduction of the labor force, helps to ease social tension, etc. The extent to which the State influences the process of income redistribution is measured by the amount of social spending at the expense of budgets at various levels, as well as by the tax rate on income.

The State's ability to redistribute revenues is limited by budget revenues. Increasing social spending in excess of tax revenues leads to an increase in the budget deficit and inflation. Excessive social spending by the state budget requires higher tax rates, which can undermine market incentives.

The mechanism of social transfers includes the withdrawal in the form of taxes of part of income from high-income segments of the population and the payment of benefits to the most needy and disabled, as well as unemployment benefits. The State also redistributes income by changing prices (to farmers) and introducing a minimum wage.

The State also intervenes in *the primary distribution of monetary income* by setting an upper limit on wage increases. Revenue policy is used by the state to restrain wages in order to reduce production costs, increase the competitiveness of domestic products, encourage investment, and curb inflation.

The most effective means of state regulation of wages is *the determination of the minimum wage (DOMW)*. It is based on the minimum wage that negotiations are conducted between entrepreneurs and trade unions on the conclusion of collective agreements, which stipulate bonuses, surcharges, etc.

It is also important to *protect monetary income from inflation.* For this purpose, *indexation is used* to partially compensate for the increase in the cost of consumer goods and services. However, income indexation

negatively affects the desire for more strenuous work, and also does not contribute to anti-inflationary measures.

The state, by requiring entrepreneurs to pay workers a certain minimum wage, issuing unemployment benefits, allocating funds from the budget for the maintenance of large families, providing food stamps, education and health services to the poor, becomes a full-fledged participant in the reproduction of the labor force. The retraining system created by him makes it easier for workers to find jobs, reduces the time of unemployment, and therefore contributes to a better distribution of resources between economic sectors. It turns out that *the state in many ways takes care of the formation of the labor supply*, tries to make sure that it meets the demand presented by entrepreneurs.

If the reproduction of the labor force is established, then the entire process of social reproduction becomes more proportional.

By invading the sphere of income distribution and, consequently, weakening the degree of socio-economic inequality, the state should never seek its complete elimination. *Inequality is not only a product of the market system, but also a prerequisite for the effective functioning of the market.* Only it can create truly effective motivations for work and investment.

7.5 Limits of state participation in income redistribution

Government intervention in income distribution has lower and upper limits. As for *the lower limit of state intervention* in the process of income distribution, it is very mobile.

Consumer stereotypes have an impact: sometimes people get used to living in poverty, content with little, consider such standards of well-being a "decent life" and in fact do not claim budget supplements to income. Much depends on the current state of the economy, demographic situation, and other circumstances.

It is much more difficult to determine the upper permissible limit of the state's participation in the distribution, the limit line that it should not cross under any model of a market economy.

First of all, *the amount of social benefits must be coordinated with the financial capabilities of the state.* It is absolutely unacceptable for them to run rampant beyond the limits of tax revenues and turn them into one of the factors of budget deficits and inflation. If this happens, the very content of redistribution disappears, replaced by a purely inflationary increase in nominal incomes. Those who receive cash supplements will hardly benefit, as they will be quickly destroyed by the continuous increase in prices.

In fulfilling its obligations to the public, *the State must act with extreme caution, avoiding excessive taxation* that could undermine market

incentives. If the state wants to quickly benefit the poor, regardless of the actual circumstances, then deep deformations of the market mechanism are not excluded, which can slow down economic growth and accelerate inflation, which is harmful to everyone, including those for whom the redistribution of income itself was conceived. Moreover, when exorbitant social expenditures entail an increased risk of the level of taxation also has an undesirable macroeconomic effect — a persistent savings' deficit. Indeed, if you take away an increasing part of the consumer's income, he has no choice but to reduce savings. But it is savings that form the financial basis of expanded reproduction and make the investment process possible.

If income is redistributed primarily to guarantee human rights, then what about the distribution of labor? It turns out that the distribution of labor is generally incompatible with the structure of a market economy, since it is dominated by income that has a non-labor origin. However, the labor and non-labor components of income in a market economy are inseparable and form the main motive of economic activity. Therefore, *rid the market economy of unearned income, by distributing it to labor with the help of funds public policy is hopeless, both theoretically and practically.*

7.6 Social justice and economic efficiency

In connection with the policy of income redistribution, economists consider the contradiction between social justice and economic efficiency. *The essence of the contradiction is that the desire for greater equality results in losses in the economic efficiency of social production.*

Thus, there is a risk that economic incentives will be eroded, productive activity will be reduced, and the amount of national income distributed will decrease. Consequently, the very way in which social wealth is distributed affects the size of the aggregate product created. In addition, there are losses during the income redistribution process. The American economist A. Oken called the problem of social assistance a "leaky bucket". Leaks are associated with an expensive, bureaucratic, and clumsy management system. Part of the benefits goes into the pockets of highly paid administrators, consultants and employees of various tax and social services. Calculations show that the leak from the "leaky bucket" is more than half of the amount taken from wealthy citizens to transfer to the poor. Such a loss is a very high price to pay for equality.

In addition, the number of people classified as poor is increasing as a result of government efforts to combat poverty. The fact is that income redistribution in general and transfers in particular change people's economic behavior. People try to change their behavior in such a way as to

get a social transfer, and not in such a way as to increase their incentives to work with the help of state support.

Thus, too deep income inequality undermines the stability of society, and income leveling reduces incentives for work and entrepreneurship, and therefore efficiency. It *follows that greater equality comes at the price of reduced efficiency.* Therefore, the most difficult thing in implementing the social policy of the state is to find an acceptable payment for a more even distribution of income.

7.7 The Society's compromise between efficiency and equality

Faced with the problem of poverty amid universal abundance, all countries are taking measures to help poor citizens. However, everything that goes to the poor must be taken away from the rich. This is undoubtedly the main reason for the resistance to the introduction of redistributive taxation (progressive tax).

The most difficult to achieve ideal is *the ideal of equality of economic result.* In an ideal society, people have the same level of consumption regardless of whether they are smart or stupid, energetic or lazy, lucky or unlucky. "From each according to his abilities, to each according to his needs" is the basic principle of this philosophy.

Today, even the most radical socialists realize that *for an economy to function effectively, differences in economic output are necessary.* Equality of results would make it much more difficult for the economy to function.

By taking measures to redistribute income from the rich to the poor, *the State can harm economic efficiency* and reduce the amount of national income available for distribution. *Income redistribution measures, such as a progressive income tax, will reduce real output by reducing incentives to work and save.* Therefore, when the State considers income distribution policies, it should compare the benefits of greater equality with the costs that arise from lower national income (the economic costs of redistribution).

This statement can be illustrated using the income redistribution curve:

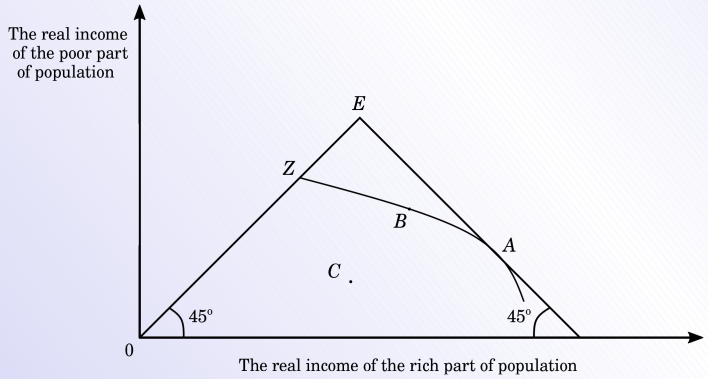


Figure 7.2 – Income distribution curve for different population groups

This graph (Figure 7.2) describes the income of various groups under the action of state income redistribution programs.

At point A, or point before the reallocation program, there are no taxes or transfer payments, so people live on their market incomes. In a competitive economy, point A is efficient and does not require any redistributive policies in order to maximize total national income. Unfortunately, at point A, the rich part of the population receives much more money than the poor. The State may seek to achieve equality through the introduction of tax and transfer programs, hoping to get closer to point E, where your income is equal. If such measures can be taken without compromising national output, the economy will move in a straight line from point A to point E. The angle of inclination *of the EA straight* line is 45°; this reflects the theoretical assumption that every dollar taken from the rich population increases the income of the poor population by exactly one dollar. Along the entire straight line with a slope of 45°, total national income is constant, which means that it is not affected by redistributive programs.

If the State redistributes income by imposing high taxes on the wealthiest citizens, their savings and labor costs may be reduced or otherwise misused, resulting in a reduction in the total amount of real national income.

It turns out that out of every $100taken from the rich as a tax, only $50 goes to the poor, and *the rest goes to useless waste or administrative*

expenses. Reallocation turns out to be ineffective: it is represented using the ABZ curve. Here, the hypothetical real income boundary deviates from the 45° slope line, as taxes and transfers contribute to inefficiency.

Experience shows that in some cases the distortions caused by government intervention can be so great that *an attempt to help one class at the expense of another can lead to damage to both* of them. Or, in the opposite case, an action that on the surface benefits the rich can actually benefit everyone and everyone.

7.8 Social policy

Social policy is understood as a set of measures aimed at meeting the social needs of the population by the state, maintaining an acceptable standard of living for the country, correcting sharp differences in income and consump- tion of the population, providing social services to the population, and ensuring social guarantees enshrined in the Constitution.

Social and economic policies of the state are interrelated and interdependent. The effectiveness of social policy, the scale and financial possibilities of its implementation are mainly determined by the efficiency of the functioning of the real sector of the economy and the level of economic development of the country. At the same time, social policy has a huge impact on the efficiency of national economic development. The effectiveness of social policy depends not only on the economic situation of the

country, but also on the state itself, as the main subject that determines the economic situation in the country and implementing this policy.

In the social policy of the state, *an integral part is the income policy*, which is designed to reduce the income gap between different categories of the population, without undermining the interest in work, including entrepreneurship.

The next component of the state's activity is related to supporting at least *the subsistence level* of those who could not provide a better life, as well as reducing the number of people living below the poverty line. Otherwise, an increase in the number of poor people is fraught with social explosions and instability in society. *Reducing the number of poor* people is one of the main tasks of the state's social policy.

It should also be noted that differences in the level of consumption may also depend on factors that are not related to the characteristics of labor and its quality in the employee himself. These factors include: the size of the family, the ratio of the number of employees and dependents in the family, health status, geographical and climatic conditions, etc. The function of the state's redistribution of GDP is to reduce these differences and provide more favorable material living conditions for all members of society. The form of realization of such a goal is the distribution of products and services, transfer payments, etc. payments, as well as government programs to stabilize incomes. *Government programs for income stabi-*

lization take place in different countries, but the order of their formation is different.

One part of the funds of such programs is generated through the state budget and used centrally.

The other part of the funds is generated from the profits of enterprises and various funds.

Through the channels of state aid programs, the needs for educating new members of society are met, maintaining the elderly and disabled, providing education, and maintaining health.

The distribution of funds under aid programs is carried out in three directions:

The first direction is characterized by the fact that part of the income received by the population depends on of labor.

The second direction is determined by the fact that the payments made are not related to the employee's work, and the size of the needs for which these payments are directed is taken into account. These payments cover child allowances for employees with many children, single mothers, specialized medical treatment, and state subsidies for keeping children in orphanages and boarding schools. The amount of such a grant depends on the number of children and the level of income of parents.

The peculiarity of the third direction is that the main part of them, acting in the form of benefits and services, goes to the population in kind through the relevant institutions of the non-industrial sphere. This part

of the allocated funds forms a kind of additional income: they do not pass through the family budget. Such incomes are distributed without taking into account the measure of labor and are entirely determined by the interests and capabilities of society.

Assistance program payments are designed to mitigate differences in income levels caused not by differences in work, but by reasons outside the work process itself, as well as to help meet a number of needs that are most important in terms of developing the ability to work, personal development, achieving general education and cultural standards, affordable healthcare, and pension provision.

The State's social policy also includes the harmonization of relations between market economy participants in the form of social partnership. Trilateral commissions with the participation of the Government, employers and trade unions, which annually conclude agreements regulating the dynamics of wages and certain social benefits, are an instrument of such interaction.

Social partnership agreements regulate the activities of employers (timely payment and indexation of wages, creation of new jobs, etc.) and employees (compliance with technological discipline, etc.).

However, excessive state intervention in redistributive processes and income equalization leads to a decrease in business activity in society and a reduction in production efficiency in general. On the other hand, reducing the role of the state in regulating the population's income leads

to an increase in income differentiation, social tension, aggravation of social conflicts and, as a result, to a drop in production and a decrease in its efficiency. *Achieving optimal scale involves resolving the contradiction between efficiency and social justice.* The conflict between efficiency and social justice lies in the economic and spiritual spheres of human life.

LECTURE 8
TRANSITION ECONOMY

8.1 The nature of the transition period

A transitional economy involves moving from one state to another. Moreover, these states should be characterized by a certain stability over a long historical period. At the same time, the transition economy as a whole should be characterized by mobility. At the same time, it is necessary to recognize some significant changes in the very foundation of society, in the system of principles and factors, when some of them begin to lose their leading role and recede into the background, while others increase their significance and influence in socio-economic processes.

Considering the characteristics of the transition economy, it is necessary to proceed from different states of development of the economy and society. Despite the fact that the economic system in the research is considered as if in its pure form, nevertheless, we must not forget that the economy itself is located in a certain spiritual and cultural environment and constantly experiences its impact through everyone and everyone at the same time. Therefore, when talking about the transition of the economy, it is necessary to speak in a certain sense about the mobility and variability of society itself, which cannot but experience itself effects of changing economic relations.

The transition period in the economy is a historically short period of time during which the dismantling of the administrative and command system is completed and the system of basic market institutions is formed. This period of time is often referred to as the transformation period. It is obvious that economic transformation is part of profound, fundamental changes in society – in the political and state-administrative structure, in the social sphere, in ideology, in domestic and foreign policy. In this series, economic transformation takes one of the most important places in the world, the success and failure of economic reforms largely determine the overall socio-political situation.

The beginning of transformation is a change in the political system and the arrival of a new government. The duration of the transition period is usually 10-15, maximum 20 years.

After a change in the political system, those organizations that performed the functions of state management of the economy simply cease to exist or are dissolved by orders of the state authority. One of the main and relatively simple forms of dismantling the former system is *liberalization*, i.e., the abolition of restrictions and prohibitions related to economic activity, for example, price liberalization, foreign trade liberalization, etc.

8.2 Economic liberalization

In a planned economy, commodity-money relations existed. But there was no real market mechanism behind the external form of money, price, sales transactions, etc. The demand did not affect the price, there were no equilibrium prices, and there was no competition. Prices were formed centrally on the basis of costs; they were divorced from prices on world markets. Relative prices reflected production imbalances, etc. Therefore, *the main task for the transition to real market relations is to abandon planned farming, i.e., to liberalize the economy.*

Economic liberalization implies opening up wide opportunities for economic entities to develop various markets. This is a way to form competitive structures in those sectors of the economy and in those markets that were characterized by a state monopoly. We are talking about lifting various bans and removing barriers that prevent competitors from accessing a particular market. Liberalization, without directly affecting the ownership of state-owned enterprises, promotes the formation of new economic entities whose activities cause competition.

Economic liberalization proceeds in three directions:

1. The liberation of the price formation process from centralized regulation is the most important starting point of liberalization.

2. Introduction of free trade for individuals.

3. The subordination of producers ' activities to the requirements of market demand is the most profound and difficult moment of liberalization.

All these transformations dramatically change the economic system, the very way of life and thinking of people, generate complex problems and contradictions in society.

The "release" of prices leads to their significant increase, which causes a decrease in real incomes of the population, a decrease in living standards, a change in the structure of consumption, etc.

In economic theory, there *are two variants of price release*: one-stage ("shock") and gradual (gradualist). In fact, real liberalization is rather mixed, leaning towards one or the other option. The less developed market relations are at the beginning of liberalization, the less effective the "shock" option is.

The liberalization of the economy creates sharp contradictions in the production sector. Firstly, a lot of enterprises, especially in the military-industrial complex, that worked for state orders, lose sales for their products. Secondly, enterprises in market conditions are uncompetitive in the market. Thirdly, difficulties in marketing give rise to the problem of purchasing raw materials, i.e., the problem of functioning itself. Fourthly, the difficult situation of producers is compounded by a reduction in public demand. Fifthly, industries that have received subsidies from the state (primarily agriculture) are in a difficult situation. Sixthly, the liberaliza-

tion of the economy contradicts the existing mentality of the management corps, which was brought up by the conditions of the planned system to perform tasks from above, not caring about the sale of products and obtaining the necessary resources.

An absolutely necessary consequence of the liberalization of domestic economic relations *is the liberalization of the country's foreign economic relations*. A market mechanism in an economy can only be created if it is closely linked to global markets. At the same time, the unity of economic and legal forms of relations between different countries is important. External economic liberalization expands the possibilities of assistance in carrying out transformations in the transition process, i.e., as it were, accelerates the solution of the tasks of the transition economy.

The main forms of such liberalization are the expansion of access to foreign investment in the country; the elimination of the centralization of foreign economic relations; the removal of protectionist restrictions on imports (the abolition of duties, quotas, licenses and benefits); ensuring the convertibility of the national currency. All these forms enhance the effectiveness of the current market mechanism.

However, *the policy of foreign economic liberalization* in the transition economy should be optimal, i.e., on the one hand, ensure the accelerated development of domestic market relations and their inclusion in the world economy, and on the other hand, prevent damage to the development of domestic production.

8.3 Denationalization of property

For the transition to a market economy, it is necessary to transform the production sector – to create a large number of economic entities that conduct business on the basis of free entrepreneurship. This line of transition to the market is associated with significant transformations of property relations. The main content of such transformations is the denationalization of property.

The denationalization of property should be understood as the process of gradual change in the role of the state as a direct subject of economic relations, reducing its role in a particular sector of the national economy, in a particular market of goods and services.

One of the directions of denationalization is privatization, which is understood as the process of transformation of state property into private property.

Another direction of denationalization is *the commercialization* of state-owned enterprises, which consists in their transfer to commercial settlement, subordinating their activities to the principles of the market mechanism. Commercialization of state-owned enterprises involves eliminating the non-market environment that surrounds them. At the same time, the state either reduces or completely stops their budget financing. The commercialization of objects prepares the ground and clears the way for

privatization, as it allows you to identify non-viable enterprises that later become the object of privatization.

The process of denationalization of property in the transition economy consists in ensuring the real voluntariness of all its members, independence in economic activities, all opportunities and rights as subjects of market relations. The elimination of totalitarian restrictions in the field of personal property is manifested in overcoming equalization in distribution, eliminating restrictions on the rights to own certain personal property, and the emergence of multi-channel sources of personal income.

An important aspect of property transformation in the transition economy is *the rapid development of private property.* This is the most dynamic segment of the transition economy. Privatization is an important means of creating an economic structure of production that is adequate to the market system. It is connected with the formation of not only individual private property, but also with the formation of collective-private property in the form of joint-stock companies (the process of corporatization).

The need for privatization in modern society arises as a result of the inefficient operation of state-owned enterprises. But privatization itself is primarily a formal act. It does not automatically create the expected efficiency gains. It is closely linked to other conditions that may not exist. We need institutions of market infrastructure, an appropriate legal system, and a different (market-based) type of economic thinking should be formed, etc.

In Russia, privatization was carried out in two ways: small enterprises were sold at auctions (contests); large companies are transformed into joint-stock companies.

8.4 The need for social orientation of the transition economy

The market economy has demonstrated its advantages in terms of ensuring the accelerated development of scientific and technological progress, the mobilization of individuals and economic entities in the interests of achieving their own well-being. At the same time, it is a system of economic relations in which there is no social justice, a humane component, and only market power is recognized. Moreover, it is guided solely by economic efficiency, discarding everything that does not fit into the current cost estimates. It is poorly focused on social and environmental issues to the extent that they are dominated not by material, but by spiritual values, which *necessitates adjustment and intervention of society and the state in economic relations.*

In connection with the above, it is necessary to determine the nature of the market economy both from a general historical perspective and from the point of view of a specific transition economy. In the transition from an administrative-command economy, state regulation becomes of primary importance as an integral attribute of maintaining continuity and smooth entry into the market, and as an essential element of the functioning of

relatively developed market economies. Therefore, *another requirement should be the regularity of the market economy and industrial relations.*

The regularity of the transition economy implies its social orientation. The essence of this orientation is primarily associated with arousing the economic interest of the overwhelming majority of society in active creative activity. Only through entrepreneurship and labor activity is it possible to increase the real level of consumption and ensure economic recovery. Therefore, we are talking about implementing an active investment policy that will ensure employment growth and prevent job losses.

When solving the problem of improving well-being, the principle of social justice in the sphere of consumption cannot be ignored. The gap between the richest and the poorest segments of the population acts as a kind of criterion for the implementation of the principle of social justice. The situation becomes dangerous when a large part of the country's population falls below the poverty line, while a small stratum of society lives in luxury, constantly and obsessively demonstrating their success in appropriating the wealth of the nation.

8.5 Development of market infrastructure

One of the most important tasks of forming real market relations is the creation of market infrastructure institutions. *Market infrastructure is a system of economic and legal institutions.* It serves a complex mechanism

of interconnections between numerous producers and consumers by organizing the movement of commodity and cash flows, their distribution in time and regional aspects, taking into account the needs of the smooth functioning of the market mechanism. In the transition economy in the process of forming different markets relevant institutions are emerging: commodity exchanges and labor exchanges, various types of employment and retraining bureaus, stock and currency exchanges, and a qualitatively new banking system is being formed.

During the transition period, market infrastructure institutions can arise independently, without any state involvement, in response to the needs of economic agents. At the same time, however, socially inappropriate institutions may arise. Therefore, the state should play an active role in the formation of market infrastructure institutions, including through the selection of socially inappropriate ones.

The formation of market infrastructure institutions in a transition economy has a number of features. Firstly, many of them are formed anew, on an "empty place". Thus, during the years of the planned economy, there were no commodity, stock, or currency exchanges. Secondly, in this regard, their formation occurs in quantities that are not adequate to the needs of the market (the number of commercial banks was more than 2,600). Thirdly, initially, not all institutions perform their inherent functions (commodity exchanges were engaged not only in organizing commodity transactions for mass raw materials and food products, but

also in trading all kinds of goods). Fourthly, institutions are sometimes formed without a proper legal framework, which makes their functioning more difficult and leads to abuse. Fifthly, fraudulent organizations and financial pyramids, etc. are becoming widespread in this area.

Fundamental changes are taking place in the banking sector. Instead of the unified state banking system typical of a planned economy, a two-tier system is being formed that meets the needs of a market economy. Its lower level consists of a wide network of commercial banks that act as intermediaries between producers and consumers. Their activities are controlled by the central bank by setting an accounting rate of reserves.

8.6 Structural adjustment of the economy

The national economy is a complex system consisting of many interrelated macroeconomic elements. The ratio, the proportions between these elements is the *economic structure*.

The economic structure is of great importance for the balance of the national economy and its efficient and sustainable growth. The economic growth of most Western countries is largely due to profound structural changes that have ensured the overall dynamism and quality of national production.

The structure of the economy can be viewed from different points of view, reflecting the ratio of various elements economic system. There is usually industry, reproduction, regional and foreign trade structures.

The industry structure represents the ratio of various industries and sub-sectors in the national economy system. Under the influence of scientific and technological progress, cyclical economic development, and a number of other factors, the industry structure undergoes quantitative and qualitative changes. The industry structure is formed on the basis of the social division of labor.

The division of the national economy into the main sectors of the economy (agriculture and forestry, industry, construction, transport, trade and other branches of the service sector) expresses the general division of labor. There are a number of industries in each of these areas. So, in the industry there are mining and processing industries. In the manufacturing industries, light and food industries, mechanical engineering, instrument making is distinguished, and in mechanical engineering – machine tool construction, instrument making, etc. Finally, in many industries there are sub-sectors that reflect the intra-industry division of labor.

Throughout the 20th century, the sectoral structure of the economy has repeatedly changed. At the beginning of the century, the creation of the gross product of Western countries was dominated by the primary processing of natural raw materials, agriculture, and mechanical engineering began to develop. By the middle of the century, the share of raw materials

and agriculture in GDP production had declined, and the share of services had increased dramatically.

The transition to a post-industrial society at the end of the XX century was accompanied by cardinal changes in the sectoral structure of developed countries. They were expressed in the following:

– the share of agriculture, forestry, extractive industries, and heavy industry in GDP creation declined;

– there was a faster growth of knowledge-intensive branches of material production (electronic engineering), rocket and space technology, control and measuring devices);

– the share of the service sector (healthcare, science, education, social security, etc.) grew.

Structural changes in the economy cause similar trends in the structure of employment.

The reproduction structure is a cross-section of the economic system that reflects the opportunities for economic growth and development its effectiveness. The relationship between consumption and accumulation is most important, as it is the main condition for expanded reproduction. The higher the share of gross savings, the higher the growth rate of the economy. The Soviet economy was characterized by a rate of gross accumulation of 30 to 40% of GDP. In the future, this rate decreased and in 1990 in Russia was at the level of 20.7%. Structural adjustment of

the Russian economy is being carried out in the context of a shortage of investment.

By reducing investment, consumption can be temporarily expanded, especially if it is possible to improve the efficiency of investment. However, in the long run, the curtailment of investment programs may negatively affect the overall dynamics of the national economy.

In developed countries, there are unstable proportions between accumulation and consumption. Much depends on the cyclical economic environment. Most often, savings fluctuate between 15-20% of national income. However, for example, in Japan, in some years the savings rate was more than 30%.

A regional structure is a set of proportions that characterize the distribution of productive forces across regions. It reflects the territorial division of labor within a particular country and is expressed as the share of territories in GDP produced.

In the conditions of a deep social division of labor, there are permanent links for the production of certain types of products, i.e., production cooperation is formed. As a rule, cooperative ties correspond to the geographical location of productive forces and ensure minimal costs for cargo transportation.

The country's regional policy should be aimed at overcoming the depressive state of individual regions and equalizing their socio-economic development, ensuring a sufficiently high standard of living for the popu-

lation in each region, and stabilizing the socio-economic situation in areas with harsh climatic conditions.

The foreign trade structure is characterized by the ratio of various product groups in exports and imports. It is a kind of mirror of the structure of the national economy. Industrial countries are characterized by a high share of exports of final, high-tech and high-tech products. The exports of most developing countries are dominated by raw materials, energy carriers, and products of environmentally harmful industries. At the same time, these countries actively purchase equipment, machinery, and vehicles, making extensive use of the advantages of the international division of labor.

The structure of exports in Russia is similar to that of developing countries.

The economic structure does not remain fixed once and for all. It is undergoing restructuring as a result of changes in the and the use of government levers to accelerate progressive structural shifts.

Abrupt changes in the structure can lead to profound and acute consequences that cover both the national and international environment and the global economy.

It is advisable to start restructuring the economic structure according to the market option when the market basis itself matures in the economy. The state should help rebuild the structure of the economy and create optimal supply-demand ratios.

Since today the market foundations in the Russian economy have been created, certain steps in the field of structural adjustment can already be taken. To do this, the country must:

1. Find your face in the global economy. It is necessary to develop a production model that defines the range of main areas of international specialization of countries with an open economy.

2. To work out a system of economic methods of influencing the sectors of the national economy, including through privatization, as well as differentiated support for the private sector in different sectors.

The main task of structural adjustment of the transition period is state support for domestic production that competes with imports, as well as state assistance in the formation of competitive industries and enterprises that supply a significant part of their goods and services to the foreign market.

During the transition period, a financial system is formed that is able to accumulate temporarily free funds of the population and direct them to invest in the real sector of the economy. The solution to this problem is carried out both through direct state participation in investments and the provision of guarantees, and on the basis of tax and monetary regulation in order to make the most profitable investments in the most important objects of the real sector. The state's structural adjustment measures create conditions for sustainable economic growth in output, which is in effective demand in the domestic and foreign markets.

8.7 The impact of globalization on strategy selection national economy

The artificial isolation of the Soviet economy from the world market was one of the main reasons for the lag of our industry, as well as the technological level of production. Domestic enterprises have not been able to take advantage of the international division of labor. The closed economy was accompanied by autarky, i.e., the formation of a self-sufficient economic system in which the entire range of industrial products was produced, although many types of products could be purchased cheaper abroad. Soviet enterprises did not face competition foreign goods, losing incentives to improve the quality and expand the range of their products. Economic theory asserts that *a closed economy leads to the decline of industry and economic backwardness*. There is no developed country with an autarkic economy.

The current stage of internationalization of production and capital is reflected in a sharp expansion of the scale of activities of transnational banks in the development of integration economic processes. The global economy has moved to a new quality that allows us to speak *about the beginning of the next stage of internationalization, called globalization.*

Ideas about the globalization of economic processes began to dominate when a steady economic recovery began in Western countries, accompanied by rapid growth and the spread of new information and electronic

technologies. Thanks to these technologies, the free movement of goods and services has dramatically accelerated, but most importantly, the free movement of ideas and capital, the movement of huge masses of financial resources. The growth of multinational corporations and their control over the production of the vast majority of new high-tech goods allow We can talk not only about financial, but also about industrial and infrastructural globalization, about financial, commodity, and production flows that permeate the borders that have become transparent. This is especially true for direct investment, financial transactions, and the globalization of financial markets, which has led to a close relationship between the movement of exchange rates, bank interest, and stock adjustments in different countries. All this is often interpreted as the onset of a fundamentally new state of the world economy, which is characterized *by the features of globalization, merging the economies of individual countries into a global economy.* The merger of economies is carried out not only through trade, but also on the basis of expanding the network of transnational economic relations, maturing social planetary conditions for the formation of integrated ties, global programs, projects, etc. In the legislative acts of countries on a number of economic issues, the world regime is already used, not national, but global. Thus, *the functioning of national economies extends beyond their territorial borders* and, accordingly, their economic conjuncture is formed in transnational conditions.

At present, a qualitatively new mechanism of global macro-regulation is being born, based on the following world economic relations:

– financial (regulation of financial flows at the interstate level);

– organizational (creation and functioning of various international economic governmental and non-governmental organizations);

– informational (collection of economic information necessary for macro-regulation, for example, through the system of national accounts, etc.);

– production (processes of integrating production at the global level);

– reproduction (selection of the type, pace and main proportions of the national economy, taking into account its inclusion in the global economic system).

The dynamics of modern economic life is characterized by the further development of the process of globalization and the formation of a global world economic system on its basis. Attempts to ignore this objective trend may result in the loss of economic sovereignty for the country that tries to prevent its economy from being drawn into the global system on its own. The solution is seen in the creation of several interacting economic centers that express the interests of groups of countries, designed to implement a policy of balancing the economic interests of different countries.

Thus, there is currently a qualitative change in the economic space in which the Russian economy operates. Subjects of global macro-regulation affect all reproduction processes of the Russian economy.

The processes of globalization are not a distant future, but a new reality that has to be reckoned with when making this or that economic decision.

Globalization implies that countries transfer part of their national functions to supranational bodies. This is especially evident in the example of the WTO's activities.

Without a doubt, *Russia's entry into the global economy is important in order not to remain on the "sidelines" of civilization.* The importance of integration into the world economy is now particularly enhanced due to the rapid globalization of economic life, the internationalization of science and the increasing role of information and knowledge as a source of economic development. Knowledge is disseminated not only through the transfer of patents and licenses, but also through educational systems, scientific literature, and people-to-people contacts. Therefore, the higher the openness of the country, the more opportunities it has to increase its scientific and technical potential due to the "overflow" of new knowledge from abroad.

Russia's choice of a new model of economic development after independence requires *the development and implementation of an adequate concept of its integration into the world economy.* Such a concept should be based on the search for ways to optimize the international specialization of the branches of the Russian economy, taking into account national socio-economic realities and trends in the development of world economic

relations, i.e., on the basis of the existing and potential competitiveness of its individual industry divisions.

The formation of a new international specialization in Russia will take more than a decade. The problem of increasing the export potential of the Russian economy, primarily the industrial sector, can be solved only on the basis of a close relationship between active targeted measures of state industrial and foreign trade policies.

The most important principle of state assistance to improve the international specialization of the Russian economy is *a complex combination of various directions and means of regulating economic processes.* At the same time, the ultimate goal is to improve the quality of life of the population, and the main point of application of efforts is to increase the competitiveness of enterprises. In principle, Russia has a real opportunity to take its rightful place in the world economy, to participate in the processes of globalization as its full-fledged and equal subject, and not as a peripheral object.