The paper allocates a number of key directions in modernization of the economy — modernization of property, upgrade of financial system, modernization of regional governance and modernization of social sphere. The problems that arise in these areas and their solutions are stated. Contents of modernization in the real sector of economy are described. The mechanisms of technological reequipping and structural adjustments, the sources for accelerated modernization of public manufacturing are defined.

Modernization and innovational development are the cornerstones of the strategy of socio-economic development for our country's future. Modernization, or the effective use of leading and newest achievements, covers all aspects of public life.

First of all it is necessary to highlight the modernization of the real sector of economy or the public production. I'll be giving particular details in this paper. Now I would like to list a number of key directions regarding modernization of the economy and the social sector.

I'll start with the need for modernization of property in Russian Federation, which includes:

a) reduction by half (from 65–70% to 30–35%) of gross production based on state ownership through mass privatization of the part which is aimed at its commercial use and not at its state use. As we know, any commercial activity, i.e. making profit is more successful if carried out on the basis of private property;

b) a significant increase of middle-sized and especially small businesses for which favorable economic conditions and incentives for their development should be created.

Another aspect of modernization is updating of the country's financial system, including:

a) modernization of the state budget and tax system in reducing the burden on business and increasing the burden on household incomes while simultaneously increasing wages and incomes of needy families. This will reduce the share of consolidated budget together with non-state non-budgetary funds in the country's GDP from about 40 to 30% by switching to funded pensions, every kind of development of insurance and trust share funds and also a significant increase of the long-term liabilities share of the Russian banks;

c) development and consolidation of banking inside the country with an increase of bank assets share in GDP to at least the lower level of European countries — up to 150% (instead of 70% at present). This implicates an active role of the Central Bank which should become the bank of last instance instead of a departmental organization whose main activity is providing loans to commercial banks at the refinancing rate.

Another important direction of modernization is transformation of regional governance together with agglomeration of administrative-territorial division and transfer of the most regions to self-sufficiency in financing according to long-term standards (currently up to 70% of the regions in Russian Federation are using the grant system which is considered to be one of the worst inventions ever made).

In the social sphere, it's all subject to modernization and radical reform. The central part of this upgrade, in my opinion, should be the reform of wages in close connection with transition to funded pensions, transition to market prices for public utilities and transition to a partial payment of medical insurances by the population and to the health care reform; introduction of real estate tax for the population while orientating people on market prices for housing, land and other real estate should not be forgotten.

All these reforms related to putting additional charges on people's wages and other incomes should be implemented without reducing their real incomes and by reducing the excessive gap in living standards between rich and poor citizens.

Thus, we begin moving to another structure of the population's incomes and expenditures as already implemented in all market economies and we will be able to increase the amount of taxes and mandatory contributions from citizens in order to reduce the tax burden from business and move to the normal tax system where the volumes of business taxation and population taxation are roughly equal to each other.

Of course, this list does not cover all modernization areas of our society, not to mention that I did not go beyond the socio-economic system. Meanwhile, the entire system of justice and law including other systems are in need of upgrading.

In our opinion, the foundation of our society's upgrading is modernization of the real sector i. e.
sector of social production which contains two interrelated areas: modernization of production and technical facilities of the national economy and modernization of the economic structure including diversification of export.

The technological upgrade will, in our view, allow to raise the productivity of social labour during the next 7–10 years by 2 to 3 times and to halve the energy intensity of gross domestic product and reduce consumption of materials by 1.5 times, dramatically improve product quality and create material conditions for production of new, particularly innovative goods and services increasing their share in total sales amount from 5 to 15%.

Economic restructuring, in my estimation, can increase the share of finished high-value-added products from 60 to 80% thereby reducing the share of fuel, raw material and semi-finished product industries by 2 times. The amount of finished products per ton of crude oil and natural gas will increase by 2.5 times, the amount per cubic meter of harvested wood — by 3 times, the amount per ton of melted metal — by 2 times. The share of fuels, raw materials and semi-finished products in the export structure could be reduced from 85 to 40% while the share of finished goods, innovative products and services could be raised up to 60%.

The share of knowledge-based economy (science, education, healthcare, IT and biotechnologies) in the structure of gross domestic product will rise from 15 to 40% and the innovative development of the country will become a major source of economic growth. If we take into account that nowadays Russia ranks between 60 and 80 of two hundred nations of the world according to the current overall efficiency, labour productivity, product quality, progressiveness of national economy structure and level of innovative development, as a result of our country's modernization we could come close to the most developed countries in the world.

First of all let us examine each of the designated social production modernization areas.

1. Technological upgrade. Our capital fund is the material foundation of social development, which is hopelessly outdated in today's Russia. Depreciation of fixed assets in Russia is approaching 50% and depreciation of machinery and equipment has already exceeded this critical milestone. Average service life period of machinery and equipment in the advanced countries is about 8 years.

During the current crisis the investments into Russia's capital fund decreased by 17% and all the indicators are deteriorating. We need at least 3–4 years to achieve the pre-crisis level again.

Some of the national economy sectors have been already partially upgraded, these are iron and steel industry, pipe industry, a number of sectors in food industry, communications, electrical engineering (partly), health care is currently undergoing upgrade. All these industries make up about 10% of the national economy and the overwhelming part of it is extremely backward in technical terms. This particularly applies to energy, light industry, heavy machinery, machine tool building, petroleum refining and many branches of chemistry, railways, pipeline systems, housing and utilities.

It makes economic sense to conduct fundamental and technical renovation of all major industries during the next 10–12 years. This will give a significant effect if we stake on the highest technologies, best machines and equipment. Another important condition is special attention to the training of highly qualified personnel which is capable of effectively using this new technique and technology.

According to rough estimates, such modernization will require about 2 trillion rubles of additional investments (about 70 billion USD) annually. The average payback period is considered to be 5–7 years.

2. Economic restructuring. It is known that the current economic crisis has clearly demonstrated the one-sided development of our economy, its strong dependence on prices and demand for oil, gas and other raw materials that make up the bulk of our export. It became clear to everyone that the long-run objective of the Russian economy is to get rid of this dependence on the «oil curse», to diversify the economic and export structure. The direction of this diversification is to significantly increase the share of export (i.e. also in the structure of social production) of finished products with high added value, innovative products and services.

In my opinion, first of all, we have to achieve the comprehensive development level of those branches where deep processing of raw materials available in Russia is done and finished product is made from these raw materials. In Russia there are best conditions in the world for the comprehensive development of petrochemical industry and deep timber processing industry. We could eventually become number one in
the world in production of finished goods made of synthetic materials and forest products.

Russia could also take first place in the world in mass production of regional jets and take second place in the world in production of heavy-tonnage and heavy-lift cargo aircrafts and in air transportation of the appropriate goods.

We could take the second place in the world in the areas where we have a large manufacturing float: production and export of power-plant engineering, electric machinery industry and electrical engineering as well as nuclear power and nuclear power-plant construction. We currently take a firm second position in the space industry which has a great potential for development in Russia.

Within the next five years Russia could take the lead over Germany and become number one in Europe in production and sales of passenger cars. To achieve this, up to 70% of the materials, parts and components for those cars should be manufactured in Russia. Extension of our offshore software development, engineering and programming also has great prospects, it recently reached the amount of 3 billion USD a year. In the next 3-4 years we should come to 10 billion USD, and in 6-7 years — to 20 billion USD (today's India reached the volume of 35 billion USD and is on the second position while the United States is the leader, although 15 years ago India was behind us). Russia will require up to 2 trillion rubles of investments a year for the restructuring of industry and export.

Transport infrastructure should also be raised up to the modern standards, it is necessary to begin building a large number of highways and high-speed railways, which will additionally require over 1.5 trillion rubles of additional investments (taking into account the cost of construction works like in France and Germany). So if we wish to achieve in the foreseeable future the minimum levels of Western European countries in terms of housing security and comfort, we must build at least 150 million square meters of comfortable housing per year (in 2008 64 million square meters were built), that will require costs reduction to 800 USD per 1 square meter and additionally at least 1.5 trillion rubles of investments including funds for the appropriate development of housing and social amendment services.

3. Doubling the rate of investment is a necessary condition for accelerated modernization. As can be seen, the whole modernization of social production will require at least 7 trillion rubles of additional investments per year. In 2008, before the crisis, overall investments into fixed assets in Russia almost reached 9 trillion of 41 trillion rubles gross domestic product. Thus we are talking about almost doubling the investment rate, increasing it from 20 to 35–40%. 20% rate of investment in Russia is one of the lowest in the world, such rate equals to the one in the developed countries for which it is sufficient to maintain annual economic growth rate of 2.5-3%, these countries already have well-developed infrastructure, sufficient supply of comfortable housing and relatively modern fixed assets, machinery and equipment.

We have fundamentally different conditions and other tasks. In addition, we need to increase GDP by 5.5–6% a year and at least 20 years of time to join the advanced world in terms of economic development and basic social indicators, and need at least 30 years to reach the level of most advanced countries.

What could be the sources of additional investments for the medium term? In my opinion, it is possible to use 300 billion USD as mutually enriching investment loans from 460 billion USD of Russian gold and foreign exchange reserves, that would be 60 billion USD or nearly 2 trillion rubles per year. Another source is large-scale privatization of state enterprises and organizations engaged in commercial activities and self-enrichment while not performing public tasks. Today the state owns 60-70% of all property of the country including about 40% of GDP which is occupied by extrabudgetary state funds, another 20-30% owned by Gazprom, Rosneft, Russian Railways (RR), nuclear and hydroelectric power plants, Svyazinvest, Aeroflot and many many others. If the state keeps only about 30-40% of the necessary property to carry out state tasks, the amount of annual privatization at market prices could rise up to 1.5 trillion rubles (50 billion USD) annually.

It is also possible, for example, to double the marginal share of investment in the country's consolidated budget during the next 3 years by using it first of all in infrastructure and social housing development and it will taking such measures will attract further 1-1.5 trillion rubles (40-50 billion USD) every year.

As you know, our state has the lowest external economic debt, 3% of GDP, while Western European countries, for example, have this debt on the average level of 80% of GDP. Our state could easily start borrowing about 40 USD annually by,
for example, issuing government bonds for foreign and Russian investors.

Investment loans of our banks are relatively small, less than 1/10 of the loan portfolio. These loans can be doubled if acts on the possibility of irrevocable long-term deposits in our banks for foreign and Russian investors are passed. This will provide up to 30 billion USD of additional investment resources every year.

At present, enterprises are the main investors in Russia. If you set benefits for them, such as taxation reduction with finding additional investment sources (both at the expense of accelerated depreciation and at the expense of their profits), this would involve up to 30 billion USD investments every year.

Other additional sources of investments are likely to be found. As one can see, there are such possibilities.

If the problem is considered in the long date, we should raise the question regarding the formation of «long-term» money market funds in Russia, namely:

— transition to funded pensions (the existing example of Kazakhstan). If we could have switched to such a system in 1997 like Kazakhstan, we would have an additional accrued pensions fund of 200 billion USD to date and we would have a rate of investment not 20% but 30% like Kazakhstan (developing countries keep this rate at 35%);

— development of insurance companies through the introduction of compulsory insurance for all sources of heightened danger (as it is customary in other countries) and massive development of mutually beneficial life insurance. All these measurements will involve the «long-term» money into the insurance funds from which funds for large investments could be borrowed;

— encouragement of population investing into mutual funds and the rapid build up of mutual funds capacity;

— approval of Russian banking system development program; the national banking system assets are still at the level of only two thirds of GDP (compared to 200–300% in the developed European countries), this will lead to doubling or tripling of investment bank loans.

However we should understand that if tomorrow we start implementing such a program to establish «long-term» money market funds, it will take at least 7–10 years to accumulate «long-term» money turn it into real source of additional large investments.

I understand that my paper contains disputable and probably not fully justified proposals; however I think that everyone will agree with me that we must act, act decisively and constructively, we must find all means for modernization and innovation development in the name of future.

UDC 338.242
Keywords: modernization of public manufacturing, technological reequipment, structural adjustments, investment policy