

*Kurmanova A.*

### *Innovation Gap Strategy of Kazakhstan*

Today we are speaking of the economic modernization and specific measures of structural modifications in Kazakhstan. A general idea is recourse of the inertial vector of development to innovation orientation, or better to say it is a deviation from pipe economy to economics of knowledge.

Contrasting fuel and energy resources sector with high-tech sector is very important and it looks in the following way: capacity of fuel and energy resources sector amounts to \$740 billion annually, high-tech sector capacity is as larger as almost four times – \$2.9 trillion; and it is predicted that the difference may grow 2.5 times as much in 15 years. These are the global economics objective growth factors, which Kazakhstan should take into consideration to aim at developing both advantages – raw materials and technologies.

Reasoning from the two – knowledge and mineral-raw – angles of global market, in 2004 Economic Strategies Institute in Moscow suggested its Innovation Gap Strategy of Russia. Scientists Kuzyk and Yakovets have studied cycling of the economic, politic and social sphere changes, and determined priorities of Russia's positioning in world. The main conclusion they came was a statement that the strategy of trying to catch up with developed markets should be left out and absolutely different strategy of innovation gap should be made. In our turn, we must make some conclusion for ourselves taking into account the common features in development of the two countries.

What is an inertial market strategy? It is the strategy, in which market plays a decisive role and state gradually becomes eliminated from economy (including such spheres as investments and innovations, science, education and culture), state's social functions and long-term orientation – fall in inflation in all possible ways, further privatization of state property, improvement of economics openness, denial of gap strategy through threatening of subsequent mistakes and demand on intensive state activity, trust in evolution, rejection of strategic and indicative planning – are reduced.

Innovation gap strategy proposes that foundation of the economic growth is innovation upgrade of the existing technologies and production. Primary source of innovation-technology gap is science and inventions. In terms of globalization and economics openness, innovation-technology gap relies on integrating mechanisms and has a global character. Investments into basic capital serve as essentials of mastering and distributing innovations. In inertial scenario, which Russia and Kazakhstan follow today, special stress is laid on masking and simulating innovations, importing technology; in innovation gap

scenario main inflow of investments is turned to base innovation and realization of modern scientific-technological revolution.

Meanwhile, today's time is transit. According to Nikolai Kondratyev, changes in technological modes take place once in 50 years, methods of production change once in several centuries. In scientific environment there are distinguished 5 types of modes. The third mode is the 30s, the fourth mode is the 60s and the fifth mode is 80s of the previous century, when electronics, telecommunications, fiber-optic production and biotechnologies became a part of our life. This process will have continued for more 2-3 decades. Transition to the sixth mode is probably happening already, which is defined as a vast application of micro and nanoelectronics, genetic engineering, nonconventional power engineering and post-Internet generation information networks. Ex-member states of the USSR are in the third mode, i.e. 30-60s of the XX century. In spite of the modern tendencies, we are now becoming witness of opposite tendencies, i.e. fall in innovation and investment sector and on the contrary growth in energy-raw and infrastructural sectors (services, trade). So, we live due to price increase of extracting resources: if crude oil and transit gas production in Kazakhstan increased in 2007 by slightly more 2%, price growth came to 16.5%. A general structure of investments distribution proves oil-gas sector's dominance: share of investments into industry in 2007 amounted to 47.4%; share of investments into manufacturing industry has not changed in 2007 and amounts to 10.5% of total investments in basis capital. Economy of the country depends on fluctuations of world market prices on raw materials, does not generate internal technological capital investments and makes mostly innovation renewal by importing expensive technical equipments and machinery, mainly for raw sector. High prices of hydrocarbon raw stuffs increased monthly export growth in 2007 by 30.3% on the average, similar growth rates in importing amounted to 91.2% (!). In 2007 share of oil and gas with mineral oil on the total came to 63.1%, which absolutely proves that country depends on oil-gas sector.

Cost structure of economy grows as well due to more expensive imported goods and exclusive price constitution, and in particular non-trading sector, which is protected from competition with import.

Therefore innovation and investment sector of Kazakhstan despite many progressive steps still remains weak and it is obviously seen by the slow development of machine-building and science.

With such kind of the dynamics two available scenarios are possible for long-term prospects. It is an inertial scenario if deformation tendencies, which have been formed during last 15 years, will be continued with one or another modifications and the structural degradation will deepen. It is an innovation gap scenario if it proposes concentration of state forces, capital and science on economic innovation renewal, radical structural changes in favor of consumer

and innovation-investment sectors due to passing over infrastructural and energy-raw sectors hypertrophy.

In many cases, innovation gap must be purposively regulated by state, but for all that it should be available for private sector and highly scientific as well.

The thing is not only in investment amount but also in its feature. It is also important that investments should be accompanied with innovations. The realization of this scenario will demand both large-scale budget investments and active state tax and price policies, aimed at limitation of price growth and exception of exclusive surplus profit for using them in modernization and economic innovation renewal.

For strategies to be realized there are several financing sources, besides natural rent: they are internal borrowing, the accumulated national reserves and means of population. Partially the course Kazakhstan has taken with state's role promotion in vast projects is logical. These state programs will theoretically serve as innovation investments sources for technical retooling high-tech complex and will supply with orders on production of investment equipment.

It is important to know that only state is able to implement long-term programs. Any technological innovation gets involved with significant investments, which do not return at once, but costs; and risks of mastering are high. Therefore primary investments into mastering such innovations need state support in one or another way: direct – when budget means are provided, indirect – when tax and custom preferences, privileged investment credits, state guarantees, development of innovation infrastructure, intensification of legal support for intellectual property are provided. Also main part of investments is considered for science, culture and social sphere.

There is a need of special comprehensive mechanisms, which will allow to control innovation goods and services cost in such way that their promotion to market will be speed up.

But in the long run only state plays key role in the innovation field to make selection. It works out legislative regulations, forms favorable innovation climate, and provides observance of set norms for innovation activity. If State machinery is conservative, and does not support innovations, but hampers them, country is doomed to developmental lag despite private sectors' initiatives. As world practice proves, business will attaches to innovations after the state supplies with resources for developing high priority sectors.

Kazakhstan actually has already made several progressive decisions in this sphere in accordance with development strategy of industry and innovation. Such development institutes as Innovation Fund, Technology Transfer Center, and Science Fund elaborating contest approach are functioning, development budget has already been considered, and free economic zones are established.

But institutional period must not drag out and coordination with business and science must be intensified. There is a need for forming nationwide complex ideology of economic innovation development, starting with

educational elements, large-scale import of technologies and finishing with innovation projects. Intellectual centers must take active parts in the system of long-term prognosis of investment and innovation development, including analysis of breaking trends in science in the nearest 30-50 years.

Reasoning from these prognoses, which consider state's role, and scientific and business opinions, development strategy of industry and innovation may be considerably enlarged. It means the state remains key realize, but ideology must take into consideration interests of science and business. It is probably needed to define innovation component and to prolong its date with increasing attention to basic education and science, and to assess intervening criteria of effectiveness. According to the existing criteria, we have to increase share of science in GDP structure almost to 2% in 10 years...

Today world science and technologies are moving with great strides. Lots of modern and casual things and processes seemed unreal several decades ago. In next decades we will become witness of new technological clusters.

Therefore we share the Russian scientists' opinions about today coming turning-point before choosing the two scenarios of further development. With inertial scenario we expect the more developed countries to become sources of raw stuffs and finished products' market and gradual exhausting of energy and natural resources.

The innovation gap scenario's realization allows to implement technological modernization of economics and to improve its competitiveness. But it will be real if the state elaborates national long-term strategy and forms system and innovation integrations between state and economy, science and education.