

Foreign Experience of Competitiveness Increase in the Economy of Kazakhstan

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Increase of innovative activity in the economic development of a state has direct impact on competitiveness of enterprises and the state as a whole. Innovative development is aimed at the achievement of steady growth of the country as well as further dynamic development of society and economy.

Key words: *innovation, innovative process, innovative enterprise, competitiveness, innovative infrastructure.*

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Steady growth of any national economy at the present stage can be provided only on the path to its innovative development. The strategy of industrial and innovative development of the Republic Kazakhstan for 2003-2015 years is aimed at achievement of steady development of the country by diversification of branches of economy and deviation from raw orientation of its development. At the same time innovations are defined as the major factor defining competitiveness of the national economy; full use of innovations for the further dynamical development of economy and society is possible if the state will carry out purposeful innovative policy.

The objective of the paper is to illustrate that it is possible to obtain the increase of economy competitiveness only in conditions of making innovative processes more active in the economy of the country.

In the process of research the following methodology was used: comparison, observation, analyses, appraisal (Delphi technique), and program and target method.

The result of the research is substantiation of widening scientific potential, development of innovative enterprise, creation of multilevel innovative infrastructure, also the creation of financial infrastructure, providing financing of innovative processes.

The results of the market analysis of innovative activity at the industrial enterprises of Kazakhstan for the last 3 years (where innovations were understood basically as innovations of improving and local or branch character) have shown, that the share of expenses on purchase of intellectual property rights (know-how, patents, licenses, etc.) in total amount of investments is only 0,8 %. The situation becomes complicated as there are no elements of estimated infrastructure for innovative sphere, typical for any developed economy. Such infrastructure gives an opportunity for wide layers of economic agents to have an objective picture of actual state of affairs in different spheres of econ-

omy and its real capitalization, thereby, receiving proved information to make investment decisions.

At present the innovative infrastructure in Kazakhstan consists of existing subjects created with assistance of state budget means (republican, local budgets, means of organizations with state participation), and also service development institutes, established by the state. The list of basic functions carried out by subjects of innovative infrastructure includes:

- services assisting the process of organizational and legal formation of innovative development subject;
- complex of business-services (complex consulting);
- informative and communicative provision
- providing with access to the equipment for general use - laboratory, industrial;
- complex of educational services;
- technology transfer;
- representative services (establishment of partnership ties).

The existing infrastructure does not provide the necessary level of interaction between its subjects and is not a system of complex organizations providing all list of services, necessary in the process of activity and interaction of innovative system participants. Quality and quantity of innovative infrastructure organizations, presented in Kazakhstan, don't satisfy the specific character of innovative development of our republic, it is characterized by following:

- territorial dispersal of regions, having innovative potential, and insufficient coverage of innovative infrastructure of regions;
- the necessity of infrastructure support creation as the process of branch, as well as regional innovative development;
- rather low quantity of innovative initiatives at the first stage of industrial and innovative development of Kazakhstan, not demanding plenty of innovative infrastructure objects in one region;
- necessity of observance of the cost expediency principle and its conformity to the potential of the state budget;
- choice of the most optimal forms of innovative infrastructure organizations to except duplication of separate functions by them.
- actual absence and sharp necessity of information provision system creation of all elements interaction and participants of innovative system.

The economic mechanism of any system regulation is a system combination of principles, problems, methods, organizational structure, elements of management agents, legal and infrastructural provision. The economic mechanism of innovative activity regulation is not an exception. In the course of analysis, estimation is conducted to work out technological alternatives under the following schemes:

- estimate of scientific and technical resources;
- estimate of production factors;
- estimate of financial (investment) resources;
- selection of technological alternatives;
- choice and substantiation of alternatives for realization.

The innovative system is subdivided into the following basic subsystems; each includes such elements as:

1) Scientific potential, the necessary factor for innovative development, is formed by the creation of developed sphere of applied researches, carrying out "operational development" of fundamental development up to the level of commercial application. It includes:

- state scientific organizations - national science centers, scientific research institutes, higher educational establishments, project institutes;
- scientific organizations attached to national companies, laboratories attached to large enterprises;
- private scientific research institutes and project institutes;
- small and middle enterprises; engaged in scientific research
- scientific brainpower and individual inventors;
- material and technical base.

Today the scientific potential of the country is presented by scientific organizations of Ministry of Education and Science, branch ministries, private research organizations, and centers of research in the directions of scientific researches, exercising economic vision rights, coordinating activity of institutes of corresponding description, also scientific research institutes which are under the jurisdiction of national companies. All actions on development of the scientific and technical potential of scientific researches must be based on the following principles:

- Financing of R & D on grant basis,

- Co- financing of R & D with private sector,
- Independence of scientific and technical examination,
- Change of organizational structure of scientific institutes, including stimulation of privatization of the scientific research institutes, engaged in applied science.

2) Innovative enterprise, providing development of connecting (intermediary) role between scientific - technical and industrial spheres. The ultimate goal of innovative business is the development of enterprise which can react to the current market situation efficiently and adjust the repetition work of competitive high technology production of new generation and increased demand at the world standards level. It includes:

- business-angels;
- enterprises;
- innovative managers.

Important directions of innovative enterprise development for the nearest prospects will be: creation of manpower training system and retraining of personnel in the field of innovative enterprise, including higher education, post higher education, also abroad, and short-term courses, seminars, round-table discussions to improve qualification of already working managers with state participation in financing of such programs.

Stimulation of innovative enterprise should be concentrated on following directions:

- further perfection of tax system with the purpose of creation of favourable conditions to conduct innovative activity by all subjects, irrespective of the form of ownership and financing;
- development of cluster strategies, directed at creation of specialized knowledge networks of and its commercialization - territorial zones of new technologies development;
- development of systems of information exchange and access to data, regulations, databases, etc., necessary in innovative activity;
- assistance in the development of business and information services market for innovative activity - finance and law consulting, patent protection, etc.;
- stimulation of joint innovative enterprises creation by foreign investors;
- assistance in the creation of business associations, promoting simplification of dialogue between state and private business;

- increase of efficiency of state ownership use to make innovative activity more active by transfer of unused working area and resources under the creation of innovative infrastructure elements;
- creation of product standardization system and system of certification of technological processes, goods and services;
- creation of innovative risks insurance mechanism;
- development of managerial and entrepreneur culture, etc.

3) Multilevel innovative infrastructure, defining a complex of interconnected industrial, consulting, educational and informational structures, serving and providing conditions for innovative activity realization. It consists of the following elements:

- national technological parks;
- regional technological parks;
- technological business-incubators, etc.

Technological parks (techno parks) and technological business-incubators should become the basic organizational institutes of innovative infrastructure of Kazakhstan, having organizational structure, financial, peopleware and logistical support, necessary and sufficient to provide assistance to all stages and processes of innovative development. According to foreign experience, a small and middle enterprise in the innovative sphere is the first mass and the most dynamic structural component of innovative potential of industrially advanced countries. Small and middle innovative firms are technological leaders in infant industries of economics, opening new segments of the market, developing new production, raising science linkage, competitiveness of production and thereby promoting the formation of new technological structure.

One of the most effective mechanisms of development and support of small innovative enterprises is the process business- incubation i.e. the process of favorable conditions creation for innovative projects at the earliest, risky stages of its development, when it is difficult to define the probability of success and fast development of technological companies. In accordance with the Strategy of industrial and innovative development of the country up to 2015, in the period up to 2007 year it is supposed to create not less than 12 specialized technological business-incubators in the various regions of the republic consisting of technological parks attached to leading technical, agrarian and medical higher educational institutions of Kazakhstan and 8 educational centers attached to techno parks. From the point of view of innovative project management, the creation of technological business-incubators network will allow:

- to concentrate the necessary material resources for grant financing of the scientific-research funds of hi-tech enterprises in the area of technological business-incubators;

- to make administrative decisions effectively, which allow to reduce duration of innovative cycle;
- to lower the level of overhead maintenance costs of infrastructure;
- to reduce the quantity of bureaucratic procedures in the process of making investment decisions;
- to optimize the managerial structures of innovative enterprises;
- to create conditions for knowledge transfer in innovative system.

The most acceptable for conditions of innovative development of the republic is the division of techno parks into elements and participants of scientific research, according to levels of their influence:

- national scientific and technological parks;
- regional technological parks.

The national scientific and technological parks are created to provide accelerated development of branch, region, and area of knowledge which are priority for social and economic development in accordance with provisions of statutory legal acts. To stimulate innovative activity of national scientific and technological parks, the territory is given the status of special economic zones in accordance with legislation of the Republic Kazakhstan. Regional techno parks are created with the purpose of definition, revelation and development of innovative potential, innovative ability of the region, maintenance of region's economy need in innovative products. In the field of regional techno parks development it is necessary to create four regional techno parks in the following regions to achieve maximum national effect in stimulation of innovative activity:

- The East Kazakhstan region
- The South-Kazakhstan region
- the North-Kazakhstan region
- Astana city
- Almaty city.

Cluster form of innovation activity should play a large role in innovative process to make it more active at present stage of economy development of Kazakhstan. This form leads to creation of special form of innovation – «the cumulative innovative product». Such innovation is the product of several firms' activity or research institutes that allow accelerating their distribution over interrelations network in general regional economic space. Besides variety of different sources of technological knowledge and communications facilitates combination of factors of competitive advantages achievement and be-

comes a precondition of any innovation. Cluster unification on a basis of vertical integration forms not a spontaneous concentration of various technological inventions but the certain system of new knowledge distribution and technologies. Thus, the most important condition of effective transformation of inventions into innovation, and innovations into competitive advantages is the formation of stable connections between all cluster participants.

4) Financial infrastructure, providing complex financing of research-and-production, educational processes in the sphere of is innovative-technological development, which is based on combination of various mechanisms of direct and indirect state support of innovative enterprise and infrastructure. It consists of the following elements:

- state institutes of development;
- venture funds;
- enterprises;
- sole proprietors;
- banks of the second level; and others.

The state should influence demand and venture capital, as well as its supply. The state stimulation of venture capital supply will be carried out by:

- participation in the creation of venture funds;
- creation of conditions for institutional investors participation and financial institutions in venture investment;
- assistance in individual investors' network development;
- maintenance of the venture investments liquidity;
- partnership in R&D financing with private capital and innovative projects;
- creation of the state system of insurance investments in realization of innovative projects;

If the state stimulation will cover all above-mentioned measures at the initial stage, in the future, in the process of "exit" of state from venture funds and companies, the given means will be directed towards financing of applied R&D and elements of innovative infrastructure. The state stimulation will be mainly carried out in the form of R&D financing and also in indirect form (taxation, etc.).

In conformity with the Strategy of industrial and innovative development of Kazakhstan it is supposed to bring the size of produced added value in high technology and hi-tech branches from 2 billion tenge in 2000 year to 126, 6 billion tenge by 2015 year (more than 60 times as much) with growth of science services and scientific-innovative

activity from 24 billion tenge in 2000 year to 157 billion tenge in 2015 year (6 times as much). The volume of science services and scientific-innovative activity (where researches and development enter) will increase in 2, 7 times by 2015 year in comparison with 2000 year in comparable prices. By 2010 year it is supposed to increase financing of science up to 2 % from gross national product (and in 2015 year up to 2, 5-3 %) in comparison with 0, 2 % now. Thus, we notice, Kazakhstan (as some developed countries, for example, Australia or Canada) has quite appreciable competitive advantages in certain resources, it influences any planned and carried out policy and it should be considered and used to provide competitiveness of the national economy.

As planning implement in the economic mechanism of management of investment activity, the program target approach has received further development. Financing of scientific researches is carried on a basis of legislatively fixed program target principle through the formation and realization of target scientific and technical programs, within the limits of which the scientific organizations receive a state order to carry out research and development. The program target financing of scientific research and scientific technical programs is carried out on the competitive basis. It is obligatory to make the state scientific and scientific technical independent examination of offered programs and results of scientific researches. The program target method of financing of applied R&D should be based on the following principles: concreteness of purposes, problems and contents of the scientific and technical program; openness of the researches results.

At present stage within the limits of the program target method, the formation and realization of the following scientific and technical programs is carried out:

- fundamental researches on that limited number of priority science directions, scientific and technical progress which have a purpose to receive essentially new knowledge about natural and social systems and development of the scientific basis of economy system transformations, steady development of society, culture and science;
- republican target scientific and technical programs as the major means of the state scientific and technological policy realization, capable to concentrate scientific and technical potential on general priorities of industrial-technological and social economic development;
- applied (branch, inter-branch and regional scientific and technical) programs which are concrete and complex inter-branch directions of the scientific technical activity, applied and promotional researches and developments;
- priority programs of the scientific researches for the region;
- projects of Science Fund having a purpose to stimulate "risky " and perspective fundamental and applied researches within the limits of certain priority directions and to promote the development of scientific researches in regions.

Transition of the national economy to innovative way of development is impossible without susceptibility of all society to innovations and sufficient number of staff, able to

manage innovative processes and realize innovations. Despite of available scientific and technical potential, the absence of enterprise, carrying out the basic kinds of innovative activity in Kazakhstan, such as creation of innovative product and intermediary services connected with promotion of innovative product in the market, is one of the reasons of low innovative activity in the country.

As conclusion we can say that in order to increase innovative activity in Kazakhstan it is necessary to consider the following factors:

1) Scientific potential, the necessary factor for innovative development. It includes:

- state scientific organizations - national science centers, scientific research institutes, higher educational establishments, project institutes;
- scientific organizations attached to national companies, laboratories attached to large enterprises;
- private scientific research institutes and project institutes;
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2) Innovative enterprise, providing development of connecting (intermediary) role between scientific - technical and industrial spheres. It includes:

- business-angels;
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- innovative managers.

3) Multilevel innovative infrastructure, defining a complex of interconnected industrial, consulting, educational and informational structures, serving and providing conditions for innovative activity realization. It consists of the following elements:

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