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# Features of Innovation Activity Management in the Republic of Kazakhstan

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*In the economy of the Republic of Kazakhstan there still continues orientation towards raw materials and dependence on the world raw materials markets conjuncture. The key causes of the low level of the economy competitiveness are related to the decoupling between science and production, insufficient financing of innovation projects, absence of the efficient mechanisms of bringing scientific-technical production to the level of goods, high capital consumption.*
*Renunciation of the raw materials model requires modernization and simultaneous transition to the innovation economy, as Kazakhstan relates its constant stable growth, first of all, to the transition to the innovation way of development. Today Kazakhstan is actively forming a new economy which is being built on the present day knowledge and competitive innovations. Besides, the purpose of institutional transformations is the establishing of the market innovative-active subjects. However, till nowadays the program of reduction of home economy dependence of on raw materials does not give the expected results and until this key problem is left unsolved, it will effect negatively economy's development, especially in case of the sharp worsening of the environment. Unconditionally, there are other domestic problems that will prevent from supporting a stable growth.*
*Kazakhstan's transition to the innovation type of development can be conditionally divided into two stages. The beginning of the first stage is connected with adoption of the Strategy of industrial-innovation development in 2003, formation of the institutional base and the key moments of the national innovation system. In 2010, having adopted the State program of forced industrial-innovation development of the country for 2010–2014 there began the stage of accelerated building of the innovation economy, strengthening of legislative and financial stimulation of the innovation activity.*
*At present the efforts of the state innovation policy are aimed to, firstly, the development of innovation clusters and innovation environment, secondly, the increase of the innovation infrastructure efficiency, thirdly, the development of principally new system of scientific-technological developments' commercialization.*
*Up to 2015 the main priority trends of the state policy on the country's forced industrialization will become realization of innovation-investment projects in traditional export-oriented sectors of economy. The main accent will be made on development of new instruments of the state-private partnership in the sphere of innovations development, as well as target technological programs for co-funding prospective research.*
*Within the frames of the article there is shown the state role in development and support of the innovation sphere, the accent is made on the state regulation of Kazakhstan's industrial enterprises innovation activity.*

Keywords: *Kazakhstan, state regulation, innovation, innovation activity, enterprise.*

## Introduction

Formulating a conception of economic development, Y. Schumpeter distinguished static and dynamic aspects of economy state. The main factor of the transition from one equilibrium state to another state, when substantial changes of the enterprise's organizational and technological structure take place and difficulties of adaptation to the environment occur, he named as *innovation activity*. He interpreted an innovation as a new combination of production factors motivated by the entrepreneur spirit. He related to innovation, alongside with new products and technologies, new methods of commercial use, new outlet and raw materials sources development, changing the branch structure, the firm consolidation. Innovation activity was considered as a component of the society's economics organization combining scientifical-technical and economical components (Schumpeter, 1982; Heertje, 2006; Foster, 2000; Hodgson, 1997).

Growing importance of innovations in the global economy was mentioned in the works of (Aghion & Howitt, 2009; Grossman & Helpman, 1991; Baumol *et al.,* 2007).

A lot of scientists studied very different aspects of the enterprise innovation activity. In particular (Gumilar, Zarnic & Selih, 2011) indicated the role of the enterprise's innovation activity in its adapting to the dynamic environment (Hill & Rothaermel, 2003) considered the impact of radical technological innovations on productivity; the innovation's place in the managerial accounting was studied by (Khajavi & Nazemi, 2010) the results of innovations' impact on production was emphasized by (Melnik, 2012) the growing role of new knowledge in the innovation business and competition was substantiated by (Malhotra, 2000; Du Plessis, 2007; Johannessen *et al.,* 1999; Amalia & Nugroho, 2011; Barrett & Sexton, 2006).

The role of clusters and new products in the innovation activity management is considered in the works of (Tan, 2006; Plambeck, 2012; Birkinshaw & Mol, 2008; Birkinshaw & Mol, 2006; Massa & Testa, 2008; Baumol, 2002). (Brachos *et al.,* 2007; Sedziuviene & Vveinhardt, 2010; Carneiro, 2000; Melnikas, 2008; Banyte & Salickaite, 2008) present the results of studies on the role of innovations in increasing competitiveness.

For the purposes of this study the author used a widened interpretation of "innovation activity" in accordance with the methodology adopted by the Organization of economic cooperation and development, including both implementation of principally new products and services, production technologies and business-processes (innovations in a narrow sense) for the world market or significantly improved ones, and borrowing and adaption of the existing innovation products, technologies and processes (i.e. modernizing) (OECD, 2005).

In the article for the first time there are generalized the author's many-years studies of various aspects of innovation activity management in the Republic of Kazakhstan (RK). There is posed the aim to show the role of the state regulation in activation of the innovation activity of enterprise forming a company town in the real sector of economy. The tasks are as follows: to show the results of industrial enterprises participation in various state programs of innovation development; to emphasize the role of the state in activation of enterprise's transition from technologies transferring to implementation of high-technology innovation projects; to show what new instruments stimulating innovation development are planned for implementation by the state. The objects of the study are industrial enterprises of Kazakhstan. The subject of the study is the system of economic and managerial relationships connected with the innovation activity of enterprises. The main propositions expounded in the works of scientists-economists on the problems of management of the enterprise's innovation activity served as theoretical and methodological basis of the study. Scientific-methodological apparatus includes retrospective, cause-effect relationships, current analysis and synthesis, comparison, generalization, and a system approach used in management of the enterprise's innovation activity. General basis of the analysis contains the methods, conceptions and ideas traditionally used in studies of enterprises' economy.

## Main trends of innovation activity stirring up

The author's studies show that implementation of innovation technologies, business-processes and innovations in the scales of local markets or even separate enterprises, i.e. those oriented to borrowing and adaptation, also provide a significant part of innovation dynamics in the national economy (Aubakirova, 2012). There is nothing amazing in it: as present day economic studies show for such countries as Russia and Kazakhstan, dropping behind the front edge of productivity, this borrowing and adaptation can become the main source of the fast growth of the efficiency (OECD, 2009; Innovation 2009; Innovation, 2010; Innovations in Firms, 2009). Adaptation of already existing innovation products, technologies and processes makes a significant segment of enterprises' innovation activity in Kazakhstan.

In 1991–2001, enterprises managed *within the frames of existing technologies* and insignificant updating of the production-technical base to hold on their market positions by means of adapting to the new environment. In 2003–2010, general costs of innovations grew by 8,7 times, besides, the main source of their funding became the own assets of enterprises. Specific weight of the implemented or technologically modernized production grew from 14,6 % in 2003 to 89,8 % in 2010, the share of modernized production reduced from 72,3 % to 9,5 %. Recently in the innovation activity there were observed progressive *structural changes,* though, as before, the main limiting factors preventing from the innovations implementing are lack of own assets and high cost of innovations. In 2011 the share of innovation-active enterprises increased to 5,7 %, the amount of innovation products grew by 65 %, domestic costs for research and development increased by 29 % enterprises' innovation activity made 4,2 %. By 2015 there is posed the task to increase the share of innovation-active enterprises up to 10 %.

For the purpose of stimulation of innovation projects funding and implementation, the RK Law "Of state support of industrial-innovation activity" stipulates the measure of supporting innovations: a simplified scheme of conferment of innovation grants that stipulates permanent receiving of applications for conferment of innovation grants within a calendar year; there have been reconsidered the types of innovation grants and defined the most demanded ones, among which there is an innovation grant for patenting in foreign and/or in regional patent organizations; tax holidays for the corporate income and property taxes, land tax for investment strategic projects; reducing of the taxed income by 50 % of the amount of the costs incurred for purchasing of shares in venture foundations (The Republic of Kazakhstan Law No 534-IV of January 9, 2012 "Of industrial-innovation activity state support").

In 2010–2011, for the first time there was put in action the program of technological business-incubation in technological parks that present a state instrument of assistance for innovators and innovation enterprises – already existing and being organized. The program stipulates rendering of free services to organize and develop the enterprises, presenting the complete spectrum of business-incubation; there was increased the amount of funding of one project support: as compared to 2011, when there were 6,5 mln. tenge per a project on average, in 2012–2013 there are planned 26 mln. tenge per two years (Strategic plan of the Ministry of Industry and New Technologies for 2011–2015, 2010).

In 2012 the National Agency on Technological Development developed new instruments for support of start-ups in the field of innovations implementation. To open the access for Kazakhstan's innovators to the advanced west technologies and accelerate their transfer to the country, there is stipulated an organization of venture investment institutions with the foreign (Russia, USA, Israel, Germany and Malaysia) capital investment assets in the technological innovation business.

In 2010–2012 the costs for scientific-research and experimental-design works were 0,25 % of the gross home

product, while in the countries of the Organization of Economic Cooperation and Development which make over 70 % of the general amount of the attracted in Kazakhstan economy foreign investments, they are equal to 2,24 %. Increase of the funding of scientific-research and experimental-design works to 2% is planned as a result of realization of the first stage of the Conception of innovation development of Kazakhstan till 2030 (Conception of the Republic of Kazakhstan innovation development till 2030, 2012).

Further growth of enterprises' innovation activity is closely connected with their participation in the Map of Industrialization that includes industrial-innovation projects with high degree of the readiness, satisfying the criteria of the State program of the forced industrial-innovation development of Kazakhstan for 2010–2014 (The RK Map of Industrialization for 2010–2014, 2010). In 2010–-2012 in accordance to the Map of Industrialization there were realized 779 projects, 537 projects were put into action, among them 277 projects (or 51,6 % of the number) are loaded by 50 % and more, 141 projects are working at full blast, 305 enterprises produce final products, 36 enterprises exported production for 520 bln. tenge, 106 new products were put into production, new enterprises yielded production for 1 trl.400 mln. tenge.

Besides, there were formed 220 thousand work places for the period of construction and 181 thousand work places for the period of operation; 200 projects were financially supported by banks, 227 projects were supported in the infrastructure provision, 44 projects were given preferences within the frames of the Law of investments, there were given grants for purchasing of innovation technologies, export costs compensated, a number of projects were given land plots, rendered assistance in accelerating of the licensing procedures.

Introduction of new production capacitiess in processing industry within the frames of the industrialization program will help to increase the share of processing till 2017 up to 13 % in the structure of the gross domestic product. By the Map of Industrializtion from 2012 to 2017 in processing industry there is planned to put into action 146 new projects with the general amount of investments of 1,8 trl.tenge.

In spite of the fact that in accordance to the Map of Industrialization there were mainly implemented the projects presenting a *transfer of technologies* and the projects of low processes (70 % among 389 projects implemented at the initial stage of realization of the program of the forced industrial-innovation development are related to the first three levels of technological complexity, though initially the main attention was concentrated on high-technology innovation projects), nevertheless, it became an instrument of monitoring and management of the enterprises' innovation activity through rendering of point measures of the state support.

By the Republic President's order in 2012 there were changed the criteria of selection of projects: a preference was given to the projects with the final production oriented towards developing of highly productive work places, innovation character and energy efficiency, with a high level of technological processing. Nowadays 70 % of all the projects suppose high level of processing, 30 % - a low level of technological complexity (the projects of agro-industrial complex). Besides, in 2012 there was formed the Map of innovations and fixed personal responsibility of the project designers for their realization accounting for risks, needed resources, technologies and knowledge up to 2014. All the projects are included taking into consideration the Forecast scheme of territorial-spatial development of the country and the Scheme of rational locating of production capacities up to 2015.

The innovation activity growth is assisted by enterprises' participation in the Program of developing of machine building in the RK for 2010–2014, the Program of developing of innovations and assisting of technological modernization in the RK for 2010–2014, the Program "Productivity–2020" which are oriented to their equipping with high-technology and up-to-date equipment, organizing of new enterprises for producing of competitive products, development and cooperation of relations.

Within the frames of these programs there is stipulated a system of measures of the state support for prior sectors of economy using 60 instruments. There were developed the programs of business support, 22 branch programs, including 13 branch and 9 functional programs in which there are concretized the branch and sectoral measures of Kazakhstan economy development. At the regional level there are acting 16 Programs of developing of territories in the interconnection with the branch programs. There is implemented the program of conferring of innovation grants, there are organized branch design bureaus, opened 9 offices of knowledge commercialization, developed a Park of innovation technologies, whose second stage is planned for putting into action in 2013 (Aubakirova, 2012).

In 2012, in the Program "Productivity −2020" there participated 27 innovation-investment projects from 13 regions and 8 industrial branches; all they were rendered the state support for the amount of 40 bill. tenge in the form of compensation of development costs or expertise of the complex plan of enterprises' modernization. All the projects stipulate the growth of productivity from 1,5 to 3 times, reducing energy consumption by 30 – 40 %, increasing the capacities loading up to 80 %. In 2013 there was planned a realization of 30 investment projects with funding in the amount of 187,5 thousand tenge for compensation of development costs and expertise of the investment projects complex plans and 15 bln. tenge for the long-term lease funding. One of the main advantages of the Program "Productivity–2020" is that it can be participated by industrial enterprises, whose production-technical base is characterized by a high level of wear. For this they need a middle-term plan of the *enterprise's modernization* which is developed by the consulting companies accredited within the frames of the program. State support instruments can be used only after the expertise is being carried out by JSC "Kazakhstan Institute of Industry development" and confirming that there will be achieved the growth of labor productivity no less than by 1.5 times as a result of implementation of new technologies, modernization, attraction instruments within the frames of the program.

At present by the Program "Productivity–2020" there are realized 43 projects of 8 industrial branches. The most active ones are machine building (12 projects) and building

materials industry (11 projects). In the general costs of the projects the largest specific weight belongs to two instruments of support of the production technological modernization wherewith there can be increased labor productivity: the long-term lease funding (59,17 %) and payment for the development or expertise of the investment project's complex plan (40,56 %). For the purposes of compensation up to 50 percent of the costs connected with the development of the middle-term plan of the enterprise's development that is most often used by enterprises, there was claimed funding from the state budget for the amount of about 45,1 mln. tenge. The demand for the long-term lease funding of all the projects made 65,8 bln. tenge, and for innovation grants – 4,2 bln. tenge.

In 2012 there were developed and adopted complex plans of modernization of 6 largest enterprises of metallurgical, machine building and chemical industries. Realization of these plans will permit to organize over 4 thousand work places, to begin producing of more than 20 new kinds of products with high value-added cost, to reduce energy consumption, to increase labor productivity by over 20 %.

Taking into account the applications claimed for innovation projects in branches, in 2010 there were organized the branch design bureaus of transport machine building, mining-and-smelting complex, oil-and-gas equipment (Innovations in Kazakhstan, 2012). They developed 110 sets of design documentation, 76 starting enterprises of the technological sector were rendered a support by the program of technological business-incubation. In 2011 there was organized a design bureau of agricultural machine building, in 2013 it was planned to open a design bureau of instrument making, there were signed contacts of cooperation with 9 machine building enterprises manufacturing the products for agro-industrial complex and instrument making (Forecast of the Republic of Kazakhstan social-economic development for 2013–2017, 2012).

One of the main problems that stop the process of implementation of new technologies and products for industrial enterprises is, as before, absence of needed resources, therefore participation in the state programs is considered to be one of the real chances to strengthen financial stability and growth of the innovation activity.

Thus, in prospect there is possible the posing of the following problems of innovation development of productions processing in Kazakhstan:

- to preserve the traditional machine building productions, objectively resource intensive, and their orientation to the provision of the reproductive process in the real sector of economy;
- to provide a place in the top part of the technological pyramid with the help of innovation-active and highly efficient enclaves in economy to the advanced home technologies and convert them into industrial clusters;
- to form new innovation machine building, a continuous chain "innovation production of machine building – innovation production at the equipment consumer's".

The solution of these interacted problems can be performed by the way of combining of two strategies: activation due to the capital-forming investments of the inertia variant of development which still preserved the economy and strengthened so called basic technologies, and simultaneously – the strategies of innovation burst out aimed to develop a competitive cluster working for a lot of markets apart from the markets of raw material.

## Prospects of innovative development in Kazakhstan

In the nearest years there will be put into action *new instruments* stimulating the innovation development, such as grants for carrying out industrial studies with attraction of home scientific-research institutes; grants for high-technology enterprises; there is planned implementation of standards of high innovation technology of management in the branch structures including research institutions. In the budget program of the state bodies, national holdings and enterprises there will be stipulated financial support of research institutes working for the technology of the future; there is stipulated the conferring of grants at the sowing stage. By the program of the forced industrial-innovation development of Kazakhstan there is planned a realization of large investment projects in the sphere of high processing of raw materials and infrastructure.

There is activated the work to develop technologies commercialization that is assisted by increase of the number of commercialization offices in the country regions. In 2012–2014 with the purpose of developing of free economic zones there is planned the further development of the external and domestic infrastructure for realization of investment projects; there will continue working 5 industrial zones and begin functioning 11 more in 8 regions.

Great expectations to attract large investments, new technologies and innovations into the country are connected with the international exhibition"EXPO–2017" which will be held in Kazakhstan's capital Astana (Official site of the Republic of Kazakhstan President, 2012). In 2013–2017 Kazakhstan's economy will be developing in the conditions of growth of accumulated system risks and possible repeating recession tendencies in the world economy. In the middle-term period the policy to develop innovations is aimed to building of the national innovation system providing the economy's competitiveness increase due to implementation of the system of management the innovation-technological development, the innovation development of branches and regions, formation of conditions developing high-technology small and middle business and increase of scientific and engineering potential, as well as development of innovation clusters infrastructure (National Informa).

## Conclusions

Thanks to cooperation with the Korean Institute of Scientific-Technological Assessment and Planning, in Kazakhstan there has been put in action the program of technological predicting. Based on the analysis of global and domestic trends of science and technology development, and the results of positioning of the level of Kazakhstan's competitiveness as compared to other countries, there have been developed the aims and tasks of

the country's scientific-technological development up to 2020. Within the limits of the program there have been defined 18 priorities on the key sector of economy: oil-and-gas, mining-and-smelting, chemical and agro-industrial sectors, where the target technological programs will be realized in 10 trends and 63 critical technologies. According to the technological forecast, it is expected that till 2015 Kazakhstan will rise in the aggregated factor of innovation level and innovations use in business up to the 65$^{th}$place, and till 2020 it will take the 50$^{th}$ place (Conception of the Republic of Kazakhstan innovation development to 2030, 2012).

The key result of realization of the Conception of Kazakhstan innovation development must become a reaching of the number of 30 % by innovative enterprises in 2030, i.e. the current level of the countries of the Organization of Economic Cooperation and Development, and entering the number of 50 most competitive countries of the world.

Thus, the role of the state regulation in activation of enterprises forming a company town innovation activity of the real sector of Kazakhstan's economy is expressed in the following:

- first of all, there was rendered a support to home manufacturers that were dealing with manufacturing of high-technology and science intensive products with a high extent of processing, renovation of the production base due to use of resource- and energy-saving technologies, development of electronics and its introducing into production and non-production processes, as well as performing quality and demanded by economy scientific-research and experimental-design works. To achieve these aims there were toughened criteria of the projects selection: there were preferred the projects with final productions aimed for innovation and energy-efficiency, with a high level of technological processing;

- the state support covers all the projects of the Map of Industrialization, they were rendered assistance by the programs "Roadmap of business – 2020" and "Productivity – 2020", given preferences within the frames of the Law of investments, visa support, compensation of export expenses, assigning a land plot, speed up of licensing procedures, given grants for purchasing of innovation technologies;

- there were rendered point measures of the state support to the enterprises that implemented the projects presenting technologies transfer. This is connected with the active technologies transfer and implementing of advanced technologies into production assisted the growth of the home competence in various fields of knowledge due to realizing of joint innovation projects and scientific research. On this basis in the nearest years the accent will be made on development of own scientific competences helping to improve technological competitiveness in the long-term prospects;

- in connection with the growing consumer market of technologically complex production the state stimulates the development of high-technology production as outsourcing, i.e. in productions using the home human potential and foreign technological platforms. Later on at these markets there will be opened scientific centers developing a high-technology product. There have been already organized the Kazakhstan-French center of technologies transfer oriented towards development of high-technology products in metallurgy; the Kazakhstan-Korean center of technological cooperation; the Kazakhstan-German center of energy efficiency that will deal with energy audit, implementation of the system of energy management, consulting services, investments attraction. It is planned to open the Kazakhstan-Finnish center of technologies transfer;

- since 2012 the National Agency on technological development developed new instruments for support of start-ups in the field of innovations implementation. To open Kazakhstan innovators' access to the advanced west technologies and their transfer to the country speeding up, it was stipulated to form venture investment institutes with Kazakhstan and foreign (Russia, USA, Israel, Germany, Malaysia) capital investment assets into the technological innovation business;

- the state activates the work for developing of technologies commercialization: the number of commercialization offices increased, there are being developed free economic zones: alongside with already functioning 5 industrial zones there will be opened 11 more; only in 2012 by the program of technological business-incubation there were selected 20 projects, organized 15 commercialization offices at scientific-research institutes and universities, 2 regional centers of technologies commercialization, there were rendered educational and consulting services which makes dissemination of the knowledge on new technologies more accessible for innovation-active enterprises. By 2015 it is planned to increase the costs in the sphere of scientific research up to 118 bln. tenge which is almost three times as much as similar costs in 2012;

- there is improved the work to confer innovation grants (there are attracted international experts for evaluation of projects, used mechanisms of co-financing and compensation expenses, conferred innovation grants through a single operator, etc.);

- in the nearest years the main accent will be made on developing of new instruments of the state-private partnership in the sphere of developing innovations, target technological programs for co-financing prospective studies. By 2015 the main prior trends of the state policy of the forced industrialization of the country will become realization of innovation-investment projects in traditional expert-oriented sectors of economy by the way of realizing of a system approach based on regeneration, dissemination and use of the knowledge, integration of innovations into production and managerial processes.

Within the frames of the article there have been covered only a few aspects of management of the innovation activity. There are needed the further scientific studies and developments based on the real assessment of the country innovation development, as well as the predicting of innovation-oriented development of industrially developed countries in the conditions of the world integration processes deployment.

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**Inovacinės veiklos valdymo savybės Kazachstano Respublikoje**

Santrauka

Kazachstano respublikos ekonomika vis dar išsaugojo orientaciją į ţaliavas ir priklausomybę nuo pasaulio ţaliavų rinkų konjunktūros. Ţaliavų atsisakymo plėtros modelis reikalauja modernizacijos ir tuo pat metu perėjimo prie inovacinės ekonomikos, nes Kazachstanas koreliuoja ilgalaikį tvarų augimą, pirmenybę teikdamas naujovėms, taip pat plėtodamas ir gerindamas ekonomiką, paremtą naujausiomis ţiniomis ir konkurencinėmis naujovėmis. Institucinių pokyčių tikslas yra sukurti naujoviškai aktyvius rinkos subjektus. Šio straipsnio tikslas – parodyti valstybinio reguliavimo vaidmenį siekiant diegti inovacinius projektus versle. Norint pasiekti šį tikslą reikėjo išanalizuoti kelias problemas: parodyti pramonės įmonių dalyvavimo įvairiose inovacijų plėtros programose rezultatus; įvertinti valstybės reguliavimo veiklą įmonėse perėjimo nuo technologijų perdavimo iki aukštos technologijos inovacinių projektų diegimo, taip pat išsiaiškinti, kokios naujos priemonės, skatinančios įmonių inovacijų plėtrą ateityje bus diegiamos. Tyrimo objektai yra Kazachstano pramonės įmonės. Tyrimo dalykas yra ekonominių ir valdymo ryšių sistema, susijusi įmonių inovacinės veiklos valdymu. Šiame darbe remiamasi pagrindiniais teiginiais, išdėstytais mokslininkų ekonomistų darbuose apie įmonės inovacinės veiklos valdymo problemas. Mokslinis metodinis aparatas apima retrospektyvą, prieţasties-pasekmės ryšius, dabartinę analizę ir sintezę, palyginimą, apibendrinimą, sisteminį metodą, naudojamą valdant įmonės inovacinę veiklą. Tyrimo pagrindą sudaro metodai, koncepcijos ir idėjos, tradiciškai naudojamos tiriant įmonių ekonomiką.

Šiam tyrimui autorė naudojo išplėstą „inovacinės veiklos" aiškinimą, kuris atitinka priimtą *Ekonominio bendradarbiavimo organizacijos* ir plėtros metodiką, apimančią diegimą naujų, pasaulio rinkoje gerokai patobulintų gaminių bei paslaugų, gamybos technologijų bei verslo procesų (inovacija siauraja prasme), ir skolinimąsi bei pritaikymą jau esamų naujų produktų, technologijų ir procesų (t.y. modernizacija).

Autorės daugelio metų tyrimai parodė, kad prie rinkos ekonomikos sąlygų gali prisitaikyti tik tos Kazachstano pramonės įmonės, kurios turi akivaizdţius konkurencinius pranašumus, daţniausiai išteklių srityje. Pastaraisiais metais valstybė galėjo skatinti jų plėtrą tam panaudodama inovacinės veiklos reguliavimą. Valstybės inovacinės politikos pastangos yra pirmiausia nukreiptos į inovacinių klasterių ir aplinkos plėtrą, antra, į inovacinės infrastruktūros efektyvumo didinimą, trečia, į naują mokslinės-technologinės komercinės sistemos plėtrą.

Tyrimais nustatyta, kad valstybės vaidmuo plečiant inovacinę sferą yra nukreiptas į rėmimą gamintojų, kurie gamina aukšta technologija ir mokslu pagrįstus produktus ar paslaugas ir kuriems reikalingas plataus masto apdorojimas, gamybos bazės renovacija dėl naudojamų resursų bei energiją taupančių technologijų. Svarbus aspektas taip pat yra elektronikos plėtra ir jos diegimas į negamybinius procesus, kokybės siekimas, mokslininiai tyrimai ir eksperimentiniai projektavimo darbai, kurių reikia plėtojant ir gerinant ekonomiką. Valstybė pritarė pramonės įmonių projektams, kuriuose buvo numatytas diegimas naujų technologijų, nes jos tenkino tarptautinio darbo pasidalijimo reikalavimus, skirtus ilgam laikotarpiui, taupant atsargas ir tobulinant infrastruktūrą. Buvo imtasi tikslinių valstybės paramos priemonių įmonėms, kurios diegė technologijų perdavimo projektus. Buvo nustatyta, kad valstybės parama apima visus *Industrializacijos ţemėlapio* projektus. Jiems buvo suteikta pagalba ir programų „Verslo planas – 2020" ir „Produktyvumas – 2020" pirmenybė remiantis *Investicijų įstatymu*, kuriame buvo numatyta parama dėl vizų, eksporto išlaidų kompensavimo, ţemės skyrimo, licencijavimo procedūrų pagreitinimo, suteikiamos dotacijos inovacinių technologijų paslaugoms pirkti.

Dėl valstybės reguliavimo ir kontrolės stiprinimo bei pramonės įmonių inovacinės veiklos koordinavimo, buvo tobulinamos tikslinės technologinės programos, paruoštos ekspertų ataskaitos apie teisės aktų normatyvus ir duodamos rekomendacijos inovaciniam procesui toliau tobulinti. Didelis vaidmuo tenka paramos programoms, kuriose numatyta (įskaitant darbą) projektavimo biurų sektoriuose plėtra, verslo inkubatorius, numatantis komercinę sistemą ir naujas priemones, pradedančių įmonių paramai gauti. Buvo aktyvuota informacinė-analitinė parama, numatanti technologinį ateities prognozavimą ir tyrimus įstatymų tobulinimo srityje, dalyvavimą tobulinant normatyvinius dokumentus ir valstybines programas, įvertinant valstybinių organų aktyvumą sprendţiant klausimus, susijusius su pramonės įmonių inovacine veikla. Valstybė skatina aukštųjų technologijų gaminių plėtrą kaip uţsakomąsias paslaugas, t. y. gamyboje naudojant vietinį ţmogiškąjį potencialą ir uţsienio technologines platformas. Vėliau šiose rinkose bus atidaryti moksliniai centrai, tobulinantys aukštosios technologijos gaminius. Jau buvo suorganizuotas Kazachstano – Prancūzijos technologijų perdavimo centras, orientuotas į auštųjų technologijų gaminių plėtojimą metalurgijos pramonėje, Kazachstano – Korėjos technologinio bendradarbiavimo centras, Kazachstano – Vokietijos energijos efektyvumo centras, kuris uţsiėmė energijos auditu, energijos valdymo sistemos įdiegimu, konsultavimo paslaugomis, investicijų pritraukimu. Planuojama atidaryti Kazachstano – Suomijos technologijų perdavimo centrą. Technologinės plėtros *Nacionalinė agentūra* sukūrė naujų instrumentų pradedančių įmonių paramai inovacijų diegimo srityje gauti. Kad atvertų Kazachstano novatoriams priėjimą prie paţangių vakarietiškų technologijų ir pagreitintų jų perdavimą į šalį, buvo nutarta suformuoti rizikingų investicijų institucijas su Kazachstano ir uţsienio kapitalu, investuojant lėšas į technologinių inovacijų verslą. Reiktų išskirti tokias darbo, suteikiant inovacines dotacijas pramonės įmonėms, savybes, kaip tarptautinių ekspertų pritraukimas projektams vertinti, bendro finansavimo ir išlaidų kompensavimo mechanizmų naudojimas, dotacijų inovacijoms suteikimas per atskirą operatorių. Artimiausiais metais pagrindinis akcentas bus skiriamas valstybės ir privataus sektoriaus verslo partnerystei plėsti. Iki 2015 metų pagrindinėmis, svarbesnėmis šios priverstinės šalies industrializacijos valstybės politikos kryptimis taps inovacinių-investicinių projektų taikymas tradiciniuose ekonomikos sektoriuose. Bus taikomas sisteminis metodas, pagrįstas regeneracija, ţinių skleidimu ir panaudojimu, inovacijų integracija į gamybą ir valdymo procesus. Remiantis pasaulio ir šalies mokslo ir technologijų plėtros krypčių analize, atlikus Kazachstano konkurencingumo su kitomis šalimis vertinimą ir palyginus su tų šalių rezultatais, buvo sukurti šalies technologinės plėtros tikslai ir uţdaviniai iki 2020 metų. Programoje numatyta 18 svarbiausių prioritetų pagrindiniuose ekonomikos sektoriuose, kurie duos šaliai didţiausią socialinį-ekonominį efektą ir leis uţimti nišas pasaulio rinkose. Pagrindinis *Kazachstano inovacijų plėtros* koncepcijos tikslas yra iki 2030 metų pasiekti, kad inovacinių įmonių skaičius padidėtų 30 %, t. y. pasiekti dabartinį *Ekonominio bendradarbiavimo* ir *Plėtros organizacijos* šalių lygį.

Raktaţodţiai: *Kazachstanas, valstybinis reguliavimas, inovacija, inovacinė veikla, įmonė*.

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