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PRIORITY GUIDELINES OF INNOVATIVE NATIONAL ECONOMICS' MODERNIZATION

The theoretical basis of innovative modernization of the industry as a background for sustainable development of the national economy of Kazakhstan is reviewed. The changes, that are in process in the whole system of production relations in Kazakhstan, are related to new stage of economics reform – to ensure sustainable economic growth based on industrial and innovational development of the industry.

Keywords: innovative type of development, modernization of industry, innovation policy, innovational and technological upgrading.

Problem statement. The changes, that are in process in the whole system of production relations in Kazakhstan, are related to new stage of economics reform – to ensure sustainable economic growth based on industrial and innovational development of the industry. The transition to an innovative economy stands as one of the key drivers of sustainable economic growth of the country and has a complex effect on the development of all spheres of society. For successful implementation of the designed changes related to the construction of a new economic model the objective tendencies in the world and within the country must be taken into account [1].

Analysis of recent research and publications. Theoretical and practical aspects of the formation and development of innovative elements in Kazakhstan industrial upgrading, in terms of the need to strengthen the industrial and innovative development, were discussed in the publications of foreign and Russian scientists L. Yongxiang [2] L. Abalkin [3], S.Yasin [4], Kazakh scientists U.Baymuratov [5], A.Esentugelov [6], M.Kenzheguzin [7], etc., but the issues of innovative modernization of industry is not considered with account for current state of the national economy.

Selection of the unsolved aspects of the problem. Global trends, that take place in Kazakhstan, are associated with the transition of the international community to innovative development. Innovative development, based primarily on steadfastly increasing strength, features and power of science and technology, becomes the dominant line in the development of modern civilization. Stable search process, preparation and implementation of innovations allowing improving the efficiency of social production functioning, the level of society and its members' wants satisfaction, insurance of the improvement of society vital functions is at the heart of an innovative type of development.

The research goal of priorities for the modernization of industry innovation is the development of adequate priorities of industrial and innovative development of Kazakhstan mechanisms for increasing the scientific and innovative potential of the "real sector" of the national economy.

The main results of the study. Under the influence of innovative development the economy of industrialized countries takes a qualitatively different state, the material basis of which is in the information, that transforms not only production, but also all other aspects of life, precipitously expanding the boundaries of both the national and the global level. The science and technological progress has become the system-forming factors of "information society" [8].

The development of computer science, biotechnology, new composite materials destinated the process of production diversification and the flexibility improvement of all aspects of social life. There are real opportunities to not just meet a variety of needs, but also to clear their individualization. The latter fact has served as an intense pulse of economic restructuring: as a result of knowledge intensive industries, high technologies are developing rapidly, and the development of services has become a priority.

The environmental component is an essential element of economic growth in the majority of developed countries and involves solving interconnected problems: resource-saving and use of non-waste technology, on the one hand, and on the other – a harmonious blend of natural processes to production. Increasing amounts of capital volume the society directs to the reconstruction of destroyed as a result of biogeocenose, thereby increasing the biosocial costs.

One of the most important features of a new type of economic growth is to reduce the proportion of material production in the social product, which means the reduction in the proportion of direct labor, reducing the number of involved ones on the background of higher-than-anticipated growth in labor capacity. As a result, society is creating new opportunities for non-material forms of wealth: information, communication, research, culture, education, recreation and other types of social services, which, in the long run, greatly intensifies social progress. Thus, emerging technological mode requires a new paradigm of social development in tune with the concept of sustainable development – the service for a man, the harmonization of his/her interests with the interests of society and the world civilization.

Shaping a new model of Kazakhstan's economy, it is necessary to take into account the variety of forms of modern economy and at the same time, national and individual characteristics of a particular system. The influence of this factor is very high, as evidenced by the fact that in countries with a similar level of development dissimilar models are being formed inevitably. Differences of American, German, Japanese, and other models of development are determined by the influence of non-economic factors, which are formed historically and with national characteristics of these countries [9].

Among others, the structure of these factors can be isolated by geographical and other natural features of the country. The essence of any economic model is largely shaped by factors such as location, resources, mineral wealth, the spatial quantity and density of population, etc. Factors that determine the features, such as the Japanese model, are the limited natural resources and a lack of living space, predetermined the high adaptability of the economy of this country. As well as the features of Kazakhstan's economy is largely predetermined by its vast territory and abundant resources. Therefrom, the special structure of the investment, the importance of regional factors, etc. come.

Generally, it is possible to ensure equitable economic growth, to smooth cyclical fluctuations if targeted policies are held. However, such policy should not ignore the cyclic form of reproductive performance, and come out of it, as of the given. This means that the investment strategy must respond to the STP, i.e. provide by the due date the implementation of new generation technology and facilitate the rapid phasing out of the old and must make the transition to innovative development.

Today's reality is that the process of development and improvement of techniques and technologies cannot carry

out the analysis of human and social development, besides associated with the development level of the solution of social problems and the regulation of social relations, where the equipment is just one of the elements. In this context, innovation policy should include a comprehensive system of measures to stimulate, develop, maintain, manage, plan and control the processes of innovation in the fields of science, technology and production, related to adequate accompanying measures in the key areas of public life, providing design of all necessary conditions for the implementation of current and future goals of innovation policy, mainly, the creation of social and economic, organizational and economic factors for the progressive development of the efficient labor and power of society.

As the object of innovation policy the resource potential, which is a collection of stocks of social production, should be considered. There are stocks of natural, physical, financial and information resources, as well as population. The core of raw materials potential is in the productive forces of society and its size and structure determine the real capacity of the economy and society in the long run. Under the influence of innovation policy the composition, structure, quality and quantity of the resource potential of purposeful change are being modified persistently and the possibility of attaining the goals of society and the levels of satisfaction of the total amount of social and economic needs are modified too [10].

The number of ideas used to create innovations, search of engineering solutions directly dependent on the state of the intellectual potential of the country. Unfortunately, comparisons of Kazakhstan and the developed countries in terms of potential indicators are the evidence of the under run of Kazakhstan. The current state of the intellectual potential of our country is the result of a significant reduction in funding of science during the reform years and this, of course, is an objective reason, causes the lag in the area of competitiveness.

The transition to an innovative economy requires a constant growth of the scientific and technical potential, the most important factors of which should be:

− sufficient supply of properly qualified scientific personnel in the country;

− a steady increase in the level of financial support for research activities;

− availability of sufficient scientific and technical institutions and organizations engaged in the research and development processes;

− effective system of science management;

− steady improvement of the information support system of scientific work.

Considering the qualitative aspect of growth, it should be borne in mind that Kazakhstan is at a different stage of economic development than the leading Western countries, where the high consumer standards have been reached. While the developed countries spend the essential part of additional resources on the technological improvement of production and quality of living, for a long time in many sectors of the economy Kazakhstan will be forced to spend most of the extra features on the quantitative growth of production. Thus, it is extremely complicated to solve the reduction gap in the quality characteristics of economic development.

On this basis, a new economic model, focused on sustainable development, has to be both a model of innovation and efficiency. Therefore, mobilization of structural, technological and social sources of efficiency should not only be a prerequisite, but the content of growth, that is one of the key reference points [11].

Considering the multiplicity and imbalances of economic development of Kazakhstan it is important to strengthen the positive changes and those germs of a new quality of growth that will be involved in large-scale transformation taking place in the global economy.

In the transition to an innovative economy the prerequisites and the various positive factors that would ensure the transition to an innovative economy in a fairly short period of time should be taken into consideration. In this case, the complexity of the problem lies in the fact that for sustainable technological progress underlying the innovation economy, it is required to determine not only the main areas that need the support from the state, but also the level of technology, which they have to achieve. In all sectors of our economy, there are elements of several technological ways, and they are in a unique and close interaction.

Depending on the priority development of any technological system the state will be focused, we expect a fundamentally different technological options and economic future. In order to make the right choice, you need serious analytical work, including competent feasibility of decisions. Selecting a leading priority in the technological structure of the complexity of this problem is of fundamental importance.

The new production is to be competitive, environmentally friendly, with no loss of efficiency and productivity, necessarily based on the resource, energy and labor saving technologies and high-efficiency equipment, market-oriented, quick to change and update, etc.

The development of economically important industries, such as engineering, energy, building industry, light industry, in a competitive market is not possible without the continuous product updates and modernization. According to the theory of innovation, the creation of qualitatively new products out of old, non-competitive components is impossible. In this regard, the primary objective of economic policy is to modernize the productive apparatus.

The basis of the innovation economy, providing sustainable economic growth, is updated on the basis of modern science and technology, eco-friendly manufacturing, and, first and foremost, engineering. The problem of mechanical engineering, specializing in the manufacture of both the process equipment, and equipment, contributing to a more advanced processing of raw fuel, energy and raw materials sectors, while meeting the world standards at this stage has a strategic importance for the country.

The most important requirement for the formation of the main directions of technological upgrading of enterprises is the preference of labor-saving equipment and technology of high power and labor performance. In this regard, it is necessary to start with the reorientation of design ideas to create cost-effective, reliable types of machinery and equipment that are compliant with the specific indicators of the consumption of metal, fuel and energy to the best foreign models. In the allocation of technical resources and capital for these purposes these regions, industries and production must take precedence over the others.

For modern technologies used in the industry, the imperfection, multi-waste, low complexity of raw materials, resulting in significant contamination of the environment is characterized. Thus, an innovative contribution to the economy development is insignificant.

All the shortcomings of the existing system of innovation management lead to extension of terms for creation, appreciation of the development process; reduce competitiveness and as a consequence, lead to a progressive underrun of technology and production in comparison with rivals.

The experience of industrialized countries shows that economic modernization requires deliberate regulatory function of the state in the field of R & D, its responsibility for the overall strategy of technological development, with the support of high technology and basic research.

Designed for active use of innovation in the economy of Kazakhstan, in our opinion, these solutions are necessary: the creation of high-capacity internal markets for innovative products, priority government support of domestic producers in domestic and international markets, increase the share of innovative component in the development of domestic production, the formation of high-quality innovative infrastructure, and ensure organizational and economic conditions to support innovation at all stages of the life cycle of innovative products.

All these transformations, as world experience shows, have already proven technical solutions and implementation. So, mainly for domestic enterprises is to adapt to the peculiarities of foreign decisions of Kazakhstan's economy.

The reforms in Kazakhstan should be radical in nature, affect the basis of the economic and political structure of our society. Without this it is impossible to integrate into a unified whole, taking into account the regional and international issues. New reproductive mechanisms need to smoothly combine elements of market-based competition and entrepreneurial activity, with adequate state participation in the economy in order to balance the interests of different stakeholders in achieving the efficiency and competitiveness of the economy.

In the process of innovation there is a central role of industries. Scientific organizations can produce knowledge and even stimulate demand for them by offering new technology, which allows the introduction of the competitive position of businesses, but it is the latter carry out the implementation of innovation, promoting them to customers, and the formation of backward linkages.

Considering the low investment activity in the past, the scale of investment in fixed asset formation at this moment (except for the extractive industries) does not correspond to the real needs of the renovation and modernization of the production apparatus, which negatively affects the efficiency of the national economy. The problem of investment maneuver in favor of the industries that produce goods and services with a high added value that can ensure the competitiveness of the economy, is being solved slowly.

In the manufacturing industry, particularly in high-tech industries, working balances for increasing output are determined by the quality of the equipment and used technology. Significant depreciation of fixed capital in the manufacturing sector is the cause of most low-load of equipment, as well as factors limiting the growth of production [12].

The findings of this study and the prospects for future developments in the designed area. In general, the results of the implementation of innovative policies, the adequate principles of sustainable development should be:

– a high level of social orientation of scientific and technical progress on the basis of broad dissemination of new technological systems that meet the highest regulatory requirements;

– a new level of social standards of living as a result of productivity and the efficiency growth of production, improvement of environment of urban and rural populations;

– a new standard of cost-effective use of resources, the growth of labor productivity, capital productivity, reduced material consumption, energy consumption, capital intensity of production, the achievement of its high competitiveness, and, as a consequence, a radical transformation of the structure of the economy and foreign trade as a result of unloading of the commodity sector of the economy and increase the contribution of manufacturing industries;

– overcoming the technological underrun of industry;

– implementation of a developed system of social guarantees, based on a new, higher level of economic development.

Thus, Kazakhstan's economic future depends on the ability of business, government and science to adapt to the rapidly changing internal and external conditions of development. Formation of adaptive capacity, i.e. the economy's ability to upgrade, structural changes, rapid growth, the orientation of public policy to a sharp increase in the status of science and education, the promotion of companies engaged with knowledge-intensive production, promoting the export of high-tech products will create a framework of transition to an innovative economy to the sustainable development of Kazakhstan.

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ПРІОРИТЕТНІ НАПРЯМИ ІННОВАЦІЙНОЇ МОДЕРНІЗАЦІЇ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ

Розглянуто теоретичні основи інноваційної модернізації промисловості як основа сталого розвитку національної економіки Казахстану. Ці зміни в даний час у всій системі виробничих відносин Казахстану пов'язані з новим етапом реформування економіки – забезпечення сталого економічного зростання на основі індустріально-інноваційного розвитку промисловості.
Ключові слова: інноваційний тип розвитку, модернізація промисловості, інноваційна політика, інноваційно-технологічна модернізація.

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ПРИОРИТЕТНЫЕ НАПРАВЛЕНИЯ ИННОВАЦИОННОЙ МОДЕРНИЗАЦИИ НАЦИОНАЛЬНОЙ ЭКОНОМИКИ

Рассмотрены теоретические основы инновационной модернизации промышленности как основа устойчивого развития национальной экономики Казахстана. Происходящие перемены в настоящее время во всей системе производственных отношений Казахстана связаны с новым этапом реформирования экономики – обеспечение устойчивого экономического роста на основе индустриально-инновационного развития промышленности.
Ключевые слова: инновационный тип развития, модернизация промышленности, инновационная политика, инновационно-технологическая модернизация.

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ESTIMATE OF WELFARE LOSS FROMMARKET POWER IN UKRAINIAN ECONOMY

The article investigates and improves the methodology of estimate of welfare loss from market power. Basing on the improved methodology the author estimates such a loss in Ukrainian economy of 2008-2011.
Keywords: welfare loss; market power.

Introduction. Realizing of adverse effect of monopoly or close to monopoly structure of markets to the economy is seen by the works of Aristotle, being a hard fact of current economics. It shifts the attention of recent researchers to the problem of such an adverse effect estimate. For that purpose A. Marshall suggested to use a value of a loss of consumer surplus (later known as a deadweight loss) originated by monopolistic restricting output and price rising [1, p.540]. But the first quantitative estimates of the deadweight loss from monopoly or other degree of market power appeared only a half of the century later. Their results were rather contradictory [2, p.77-87].

The above said explains both the current scientific interest in quantitative assessment of welfare loss from market power and the variety of approaches to its estimate. Using logic of A. Lerner A. Harberger [2, p.77-87], D. Schwartzman [3, p.627-630], D. Worcester [4, p.234-245] estimated the welfare loss with the market power holders' profit margin, K. Cowling and D. Mueller [5, p.727-748] – with the value of profit, A. Dixit i N. Stern [6, p.123-143], A. Daskin [7, p.171-185] – with structural parameters of the market etc. It is only the one face of the problem of variety of approaches to an estimate of welfare loss from market power. Another one exists on the deeper theoretic level where a crucial criterion of existing diversity is not an information base or some kind of indicator, but the essence of welfare loss is. One group of researches, dealing in the tradition of A. Marshall [8, p.191-212], A. Lerner [1, p.536-566], A. Harberger [2, p.77-87], considered that the Harberger triangle was a satisfactory measure of welfare loss. Another group, consisting of G. Tullock [9, p.435-448], R. Posner [10], H. Leibenstein [11, p.447-506], Y. Lee та D. Brown [12], argued about expanding of this category and the value of its estimate as well.

The aim of this article is to optimize the existing theoretic approaches to an estimate of welfare loss from market power into the new approach and to estimate the actual value of welfare loss in Ukrainian economy of 2008-2011, basing on that approach.

Review of welfare loss estimates evolution. Let's begin doing this with a review of welfare loss estimates evolution. The pioneer of such an estimate was A. Harberger. He started his research with geometric formula of triangle of the loss of consumer surplus, argued by A. Marshall.

$$WL = \frac{1}{2}|\Delta P \Delta Q| \qquad (1)$$

where ΔP – the monopolistic price increase; ΔQ – the monopolistic output decrease.

The impossibility and impropriety of such increases measuring by 73 sectors of American manufacturing, investigated by A. Harberger in his world famous work 'Monopoly and Resource Allocation' [2], was clear. So the researcher made some economic and mathematical transformations of the formula (1). Using the Lerner Index and price elasticity of demand he determined the formula (2 a) that became a basic one for his research.

$$WL = \frac{1}{2}PQ\varepsilon m^2 \qquad (2\ a)$$

where PQ – the revenue of a firm; ε – the price elasticity of demand; m – the profit margin, calculated in the way, explained below.

A. Harberger calculated the deviation of industrial profit rates from the mean one for the whole manufacturing. Then these deviations were transferred into dollars of monopoly rent and expressed as a share of sales to get the monopoly profit margins. Price elasticity of demand was deemed as unit one that transformed (2 a) into (2 b).

$$WL = \frac{1}{2}PQm^2 \qquad (2\ b)$$

The sum of per industry welfare losses gave a total value of welfare loss equal to 0.1 % of US GDP [13, p.445].

Notwithstanding a novelty and relevance of Harberger approach to the estimate of welfare loss from market power it was highly criticized. The first reason for the critique was the way of rent calculation using the deviation of industrial profit rates from the mean one for the whole manufacturing. G. Stigler pointed that the level of profit rate in manufacturing was higher than in other sectors of the economy usually. Hence use of Harberger approach led to consistent underestimation of market power impact on the welfare [13, p.445-446]. Comments of K. Cowling and D. Mueller were even more critical. They argued not only against the problem of restriction of the sample, but against the incorrect methodology of analysis. Researchers wrote that there was a classic method of monopoly rent calculation. The rent was calculated by subtracting the normal profit from the value of accounting profit of a firm, while the normal profit was a long-run return in the competitive market, corrected for risk. The mean profit rate, used by A Harberger, was higher than the rate of normal profit, because of including some positive value of economic rent. K. Cowling and D. Mueller called it 'incorporated element of monopoly' [5, p.728].

Another point of Harberger approach critique was a fixing of price elasticity of demand on the unit level in all investigated industries. Such a restriction was irrelevantif no vestigated industries. Such a restriction was irrelevantif no