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Valerii Ilchuk, Iryna Sadchykova

**INNOVATIVE DEVELOPMENT OF THE PRODUCTION ENTERPRISES  
BY INCREASING COMPETITIVENESS OF THE NATIONAL ECONOMY**

Валерій Ільчук, Ірина Садчикова

**ІННОВАЦІЙНИЙ РОЗВИТОК ВИРОБНИЧИХ ПІДПРИЄМСТВ  
У ПІДВИЩЕННІ КОНКУРЕНТОСПРОМОЖНОСТІ  
НАЦІОНАЛЬНОЇ ЕКОНОМІКИ**

Валерий Ильчук, Ирина Садчикова

**ИННОВАЦИОННОЕ РАЗВИТИЕ ПРОИЗВОДСТВЕННЫХ ПРЕДПРИЯТИЙ  
В УВЕЛИЧЕНИИ КОНКУРЕНТОСПОСОБНОСТИ  
НАЦИОНАЛЬНОЙ ЭКОНОМИКИ**

*State and dynamics of the innovative activity in Ukraine was investigated. Endogenous and exogenous factors influencing on the innovative activity commitment of the industrial enterprises were determined. Main factors that stipulated technological lag of national economy from the economy of the developed countries of the world were analyzed. Possibilities that are submitted by the market economy for activation of innovative processes in the actual sector of economy were considered. The role of innovative potential of the enterprises in accelerating of innovative update of their main funds was shown. Factors of the market influence on activating of the innovative processes at the enterprise were revealed that are stipulated directly by the demands of competitive area concerning competitiveness increase on the domestic market and by the factors of macro environment concerning increase of the status of Ukraine as a highly technological state in the world economic sphere. It was shown, that to solve the problem of technological lag of the domestic production from the developed in technological area countries, it is necessary to implement offensive innovative strategy using both existing scientific-technological potential, and additional resources involving outstanding before scientific schools by strong financial support from the state.*

**Key words:** innovative process; innovative development; innovative strategy; competitiveness; real sector of economy; factors of the market influence; technological update of the main funds.

Fig.: 6. Bibl.: 5.

*Досліджено стан та динаміка інноваційної діяльності в Україні. Визначено ендогенні та екзогенні фактори, які впливають на активність інноваційної діяльності виробничих підприємств. Проаналізовано основні фактори, які зумовили технологічне відставання національної економіки від економік розвинених країн світу. Розглянуто можливості, які надає ринкова економіка, для активізації інноваційних процесів у реальному секторі економіки. Показано роль інноваційного потенціалу підприємств у прискоренні інноваційного оновлення його основних засобів.*

*Розкрито фактори ринкового впливу на активізацію інноваційних процесів на підприємстві, які обумовлені безпосередньо вимогами конкурентного середовища щодо підвищення конкурентоспроможності на вітчизняному ринку та факторами макросередовища щодо підвищення статусу України як високотехнологічної держави у світовому економічному просторі. Показано, що для вирішення проблеми технологічного відставання вітчизняного виробництва від розвинених у технологічному відношенні країн необхідна реалізація наступальної інноваційної стратегії з використанням як наявного науково-технологічного потенціалу, так і додаткових ресурсів із залученням відомих колись наукових шкіл за потужної фінансової підтримки з боку держави.*

**Ключові слова:** інноваційний процес; інноваційний розвиток; інноваційна стратегія; конкурентоспроможність; реальний сектор економіки; фактори ринкового впливу; технологічне оновлення основних засобів.

Рис.: 6. Бібл.: 5.

*Исследовано состояние и динамика инновационной деятельности в Украине. Определены эндогенные и экзогенные факторы, влияющие на активность инновационной деятельности производственных предприятий. Проанализированы основные факторы, которые обусловили технологическое отставание национальной экономики от экономик развитых стран мира. Рассмотрены возможности, которые предоставляет рыночная экономика, для активизации инновационных процессов в реальном секторе экономики. Показана роль инновационного потенциала предприятий в ускорении инновационного обновления его основных средств. Раскрыты факторы рыночного влияния на активизацию инновационных процессов на предприятии, которые обусловлены непосредственно требованиями конкурентной среды по повышению конкурентоспособности на отечественном рынке и факторами макросреды по повышению статуса Украины как высокотехнологического государства в мировом экономическом пространстве. Показано, что для решения проблемы технологического отставания отечественного производства от развитых в технологическом отношении стран необходима реализация наступательной инновационной стратегии с использованием как имеющегося научно-технологического потенциала, так и дополнительных ресурсов с привлечением известных когда-то научных школ при мощной финансовой поддержке со стороны государства.*

**Ключевые слова:** инновационный процесс; инновационное развитие, инновационная стратегия; конкурентоспособность; реальный сектор экономики; факторы рыночного воздействия; технологическое обновление основных средств.

Рис.: 6. Библ.: 5.

**JEL Classification:** O31; P42

**Target setting.** Within the years of its independence, Ukraine continuously lost its innovative potential that has led to technological lag of the domestic economy from the developed countries of the world and decreasing its competitiveness in the world economic area.

Nowadays competitiveness of the domestic enterprises, level of their technological development is quite low, that is stipulated by their low innovative activity.

In the ranking of the innovations use, Ukraine is on the 86<sup>th</sup> position, and by the innovative potential – on the 39th. Knowledge base of industry is not higher than 0.3 %, that is 20 less from indexes of the developed countries. Investments amounts that are invested in the domestic science are not higher 1 % of GDP, that does not allow it to implement its function of the efficient scientific providing of the innovative development of the economy [3].

Innovative sphere in Ukraine is in crisis state, there are no tendencies of any positive changes. Starting from the years of independence in Ukraine, number of enterprises was shortened nearly twice, number of submitted patent applications was considerably shortened (about 30 %), and the number of inventions, that are being implemented, was shortened ten times, number of employees that make scientific – research and research-development works (SRRD) at the industrial enterprises was shortened many times.

Offsetting of innovative processes, decrease of intensiveness of innovations implementing lead to obsolescence of fixed production assets, that decreases their competitive possibilities both on the internal and external markets.

Adopting of the number of legislative acts concerning activating innovative processes in the national economy, output from the crisis of its scientific-technological sphere haven't stopped the processes of technological degradation of the domestic producers, that threatens both its economic safety and Ukraine's sovereignty. Declared in 2001 economy transition of Ukraine to the innovative model of the development hasn't found until the present moment its practical implementation [5].

**Analysis of the recent researches and publications.** Many outstanding domestic and foreign scientists devoted their works to investigating the problems of activating innovative development of the domestic markets, among them: O. Amosha, I. Alekseyev, V. Kozyk, E.Krykavskiy, V. Geietz, U. Goncharov, A. Gryniov, M. Denysenko, S. Illiashenko, O. Kusmin, E.Lapin, O. Melnyk, I. Pavlenko, M. Rymar, V. Tkachenko, R. Fatchutdinov, V.Khobta, A. Chukhno, A. Yudanov, K.Yankovsky and others.

**Defining of not investigated parts before of the general problem.** While acknowledging high academic achievements of the above mentioned scholars, their significant contribution in the theories and practice development of the innovative processes, it should be noted, that the problems of the innovative activity activating, competitiveness increasing of the domestic enterprises both on the internal, and the external market need further research. Thus, research directed to activating the innovative processes in the sector of economy become actual nowadays, they are directed for creating appropriate conditions and incentives of innovative development of the enterprises with the aim of increasing competitiveness of the national economy.

**Target of the article.** The target of the article is search of the efficient ways of activating innovative processes of the production enterprises development as a condition of increasing their competitiveness both on the internal, and external markets.

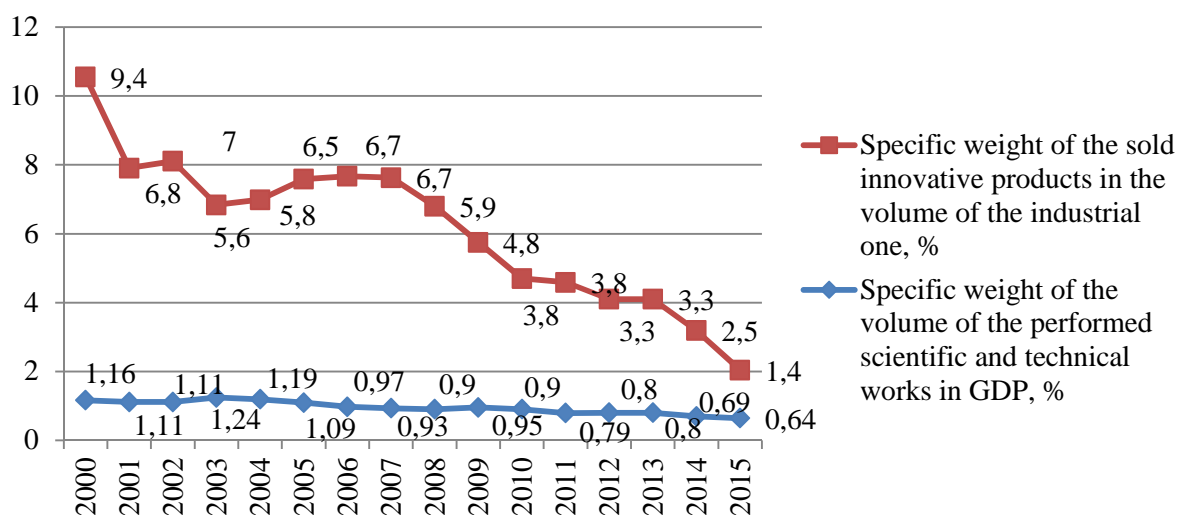
**Statement of the main material.** Low innovative activity of the enterprises of the real sector of the economy led to their considerable technological lag from the enterprises of the developed countries of the world, decreasing of their competitiveness, and, correspondingly, export possibilities. Thus, innovative development of the enterprises is the main and perspective way of the economic growth of the enterprises, increasing their competitiveness both on the domestic, and foreign markets.

## ТЕОРЕТИЧНІ ПРОБЛЕМИ РОЗВИТКУ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ

Innovative activity provides for high indexes of economic development, allows to solve economic, ecological and social problems of the enterprises functioning.

Implementing of the innovative processes is one of the main factors of increasing products competitiveness, provides efficiency of the production resources use, increases the level of the enterprises adapting to the conditions of the environment, spreads their possibilities concerning entering new sale markets, creates conditions of long term stability [2].

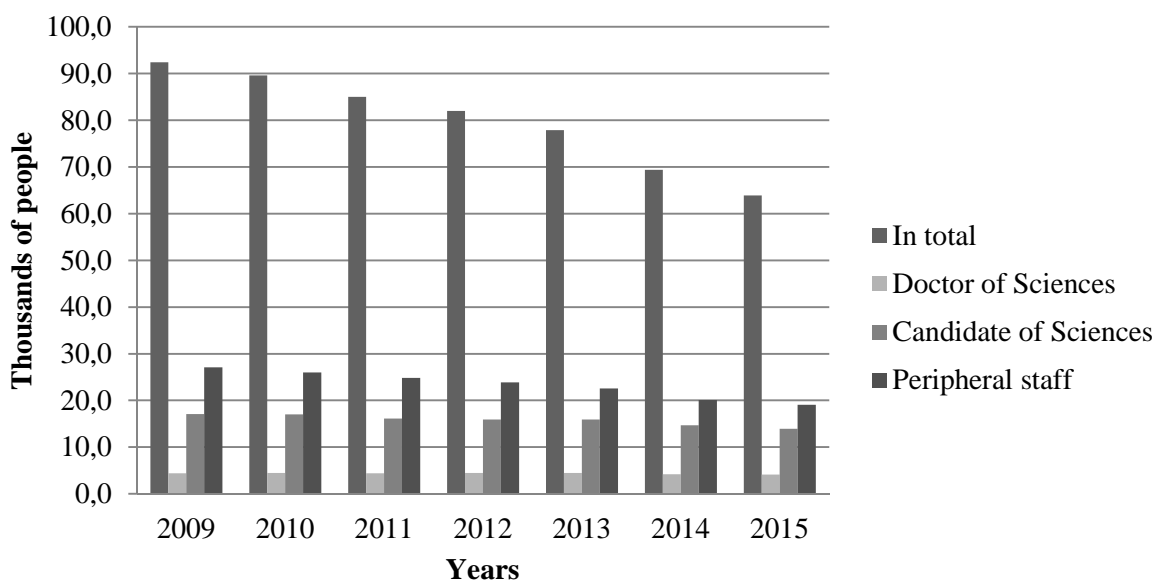
Increasing competitiveness of the domestic enterprises, and, correspondingly, economic growth depend on their innovative activity, on the volume of performed SRRD. Analysis of the results of the scientific-technical and innovative activity of the production enterprises activity of Ukraine (Scheme 1) shows negative tendency, in particular – decreasing of the specific weight of the performed scientific and scientific-technical works in GDP of the country, as well decreasing of the specific weight of the sold innovative products in volume of the produced one, that certifies about offsetting of the innovative processes in the real sector of the national economy.



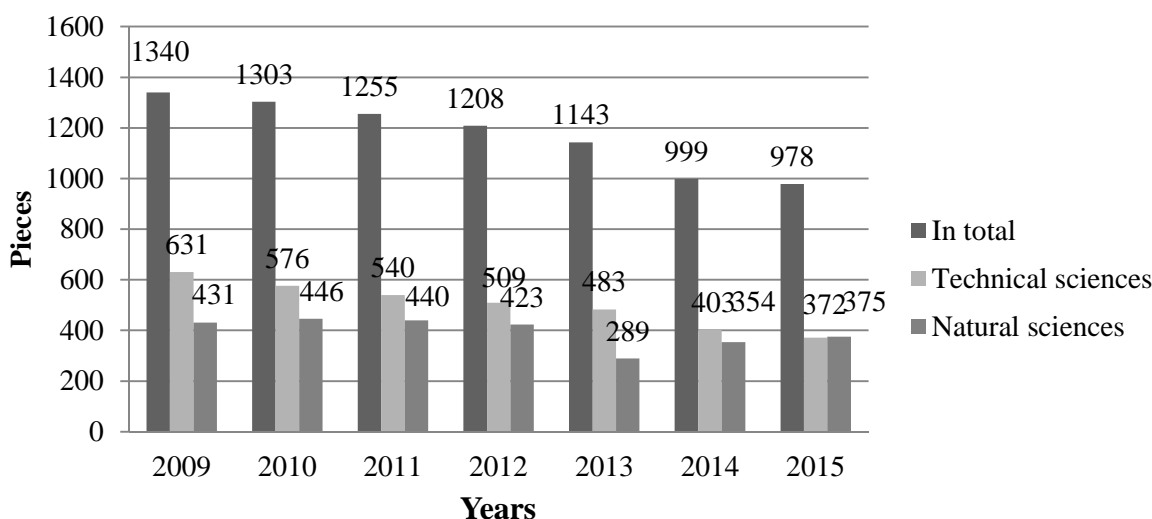
*Scheme 1. Results of the scientific-technical and innovative activity of the productions enterprises of Ukraine, %*

About decreasing of innovative potential of the scientific-technological sphere of Ukraine and innovative activity certifies decreasing within the recent years number of specialists that performed scientific and scientific-technical works (Scheme 2), as well number of scientific organizations by the sciences branches (Scheme 3).

Negative dynamics that can be tracked within the recent years concerning the number of the innovative activity subjects is a result of the innovative climate worsening in Ukraine, lack of the investments in the innovative sphere of the economy, increasing the risks of the innovative activity.

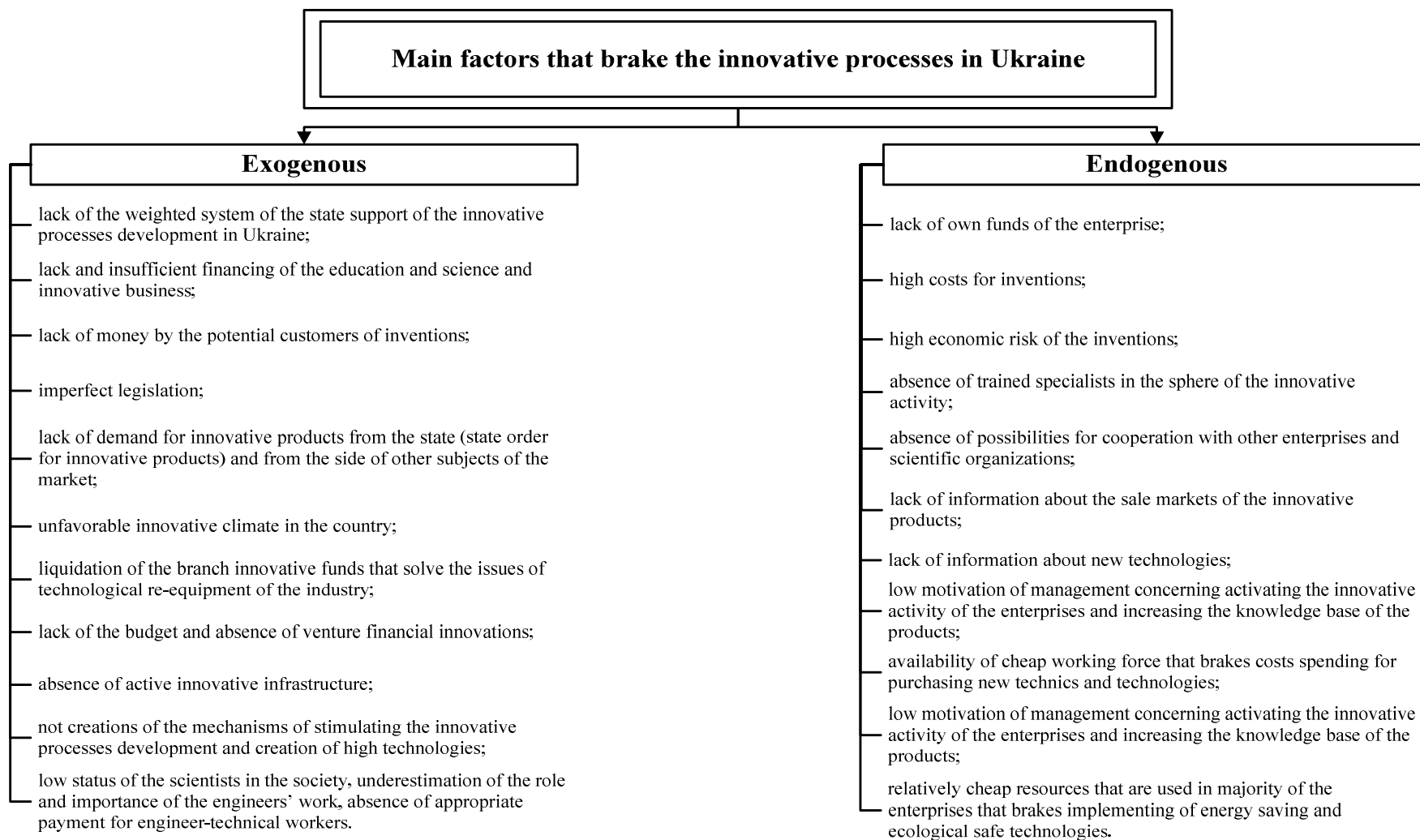


Scheme 2. Number of the specialists that performed scientific and scientific-technical works, thous



Scheme 3. Number of scientific organizations by the sciences branches, pcs

Among the main reasons of the innovative stagnation of the domestic enterprises, the following ones should be noted: low motivation of the management concerning increasing the innovative production stipulated by monopole state of some enterprises on the domestic market, that doesn't favor to elaboration and implementing the measures relating increasing competitiveness of their products; lack of appropriate state support of the innovative processes at the enterprises of the real sector of economy and actual measures of stimulating technological re-equipping of the enterprises; low number of inventors and qualified staff, able to generate new ideas concerning elaboration and implementing the innovations; use by the owners of the enterprises profit not on the innovative activity, but on the other purposes that brakes technological re-equipment of the main production means; availability of cheap labor forces that restrains spending the costs for purchase of new equipment and technologies; relatively cheap resources that are used in considerable majority of the productions that brakes implementing resource and power saving, ecological-safe technological processes; low general innovative potential of the enterprise that are not able to satisfy demand for new technique and technologies; not favorable climate in the country and others (Scheme 4).



*Scheme 4. Main factors that brake the innovative processes in Ukraine*

Innovative stagnation should be overcome by interest of the enterprise itself to increase its technological level, by this this interest can be forced due to the influence of the outside environment, in other words – competitors, that can displace the products of any enterprise that has not got any competitive advantages and doesn't correspond to the demands of the market. As a considerable stimulus to put the enterprises on the way of innovative development is availability of the innovative potential, efficient use and increasing of which allow to provide in competitive environment sustainable development of the enterprises in long-term perspective.

To increase the innovative potential that plays the leading role in technological re-equipment of the main means of the production enterprises, it is necessary to implement the following measures [1]: to create at the enterprise appropriate conditions and actual motivation for people that are engaged in inventions and innovative activity; to provide efficient methodological, information-advisory and educational support of the innovative strategy of the enterprise development; to flavor to common scientific-research and research-development works with branch scientific-research institutes and universities; to increase quality of the innovative processes management at the enterprises; to stimulate innovative activity and mechanisms development of the innovative technologies commercialization.

Among the stimulus of the enterprises innovative development in line with strengthening competitiveness on the goods and services market, considerable role is played by rise in energy resources price. In such conditions of economic activity, to decrease the prime cost of the products and goods, the enterprise has to implement resource and energy saving technologies with the purpose to provide price competitiveness of its products.

Innovative model of the national economy development can be implemented on conditions of the developed innovative infrastructure, strong institutional providing, growing demand for innovations in all spheres of common production. But the main stimulus of the enterprise innovative development is a necessity to increase their competitiveness both on the domestics, and foreign markets, as well increasing the image of Ukraine as highly technological state in the world economic sphere.

Possibility of the enterprises to survive in tough competitive conditions is defined by their innovative activity. In other words, only innovative active enterprises have chance to operate successfully in the competitive environment and provide innovative development and stable economic growth.

To the innovative development of the enterprises and national economy in general the innovative state policy should be directed, that has to create all necessary conditions for withdrawal the economy of Ukraine out of the crisis state. Main aim of such policy should be definition and implementation of the innovative priorities of the economy development. There is left in Ukraine after the time of the Soviet Union definite scientific-technological potential that hasn't been fully destroyed within the years of Ukraine independence.

The main task for Ukraine nowadays is to stop the processes of the economy technological degradation, reanimation of strong before scientific schools, stimulation of the fundamental science development that is in crisis state, creation of appropriate conditions to support the development of the applied science, creations of favorable innovative climate to increase innovative activity of the enterprises of the real sector of economy.

Market conditions of economic activity open new possibilities for the enterprises that have sufficient number of the “freedom levels” to enter the innovative way of development.

At the present moment, the state has not got any tough intentions and leverages to limit the enterprise in resources, means of the goals achieving, put definite demands concerning production program and etc. The enterprise has free choice of its development strategy in any conditions of functioning under those “rules of game” that are defined by the state. Thus, the innovative development of the enterprises and the economy in general depend in first turn on

the innovative activity of each enterprise, level of its management, direction of the management staff to innovative upheavals.

Implementing of the innovative model of the production enterprises development should be based on their innovative potential, on innovative intentions of the management to achieve technological advantages in conditions of the competitive environment.

Innovative-active enterprises are characterized by offensive innovative strategy directed for strengthening the innovative potential able to provide production of highly competitive products.

In conditions of crisis phenomenon and strengthening competitiveness among the production enterprises the efforts should be centered on productive and technologic innovations. Technological innovations allow to withstand price competition and competition by definite qualitative parameters, and the product – to fill new niches by the innovative competitive goods.

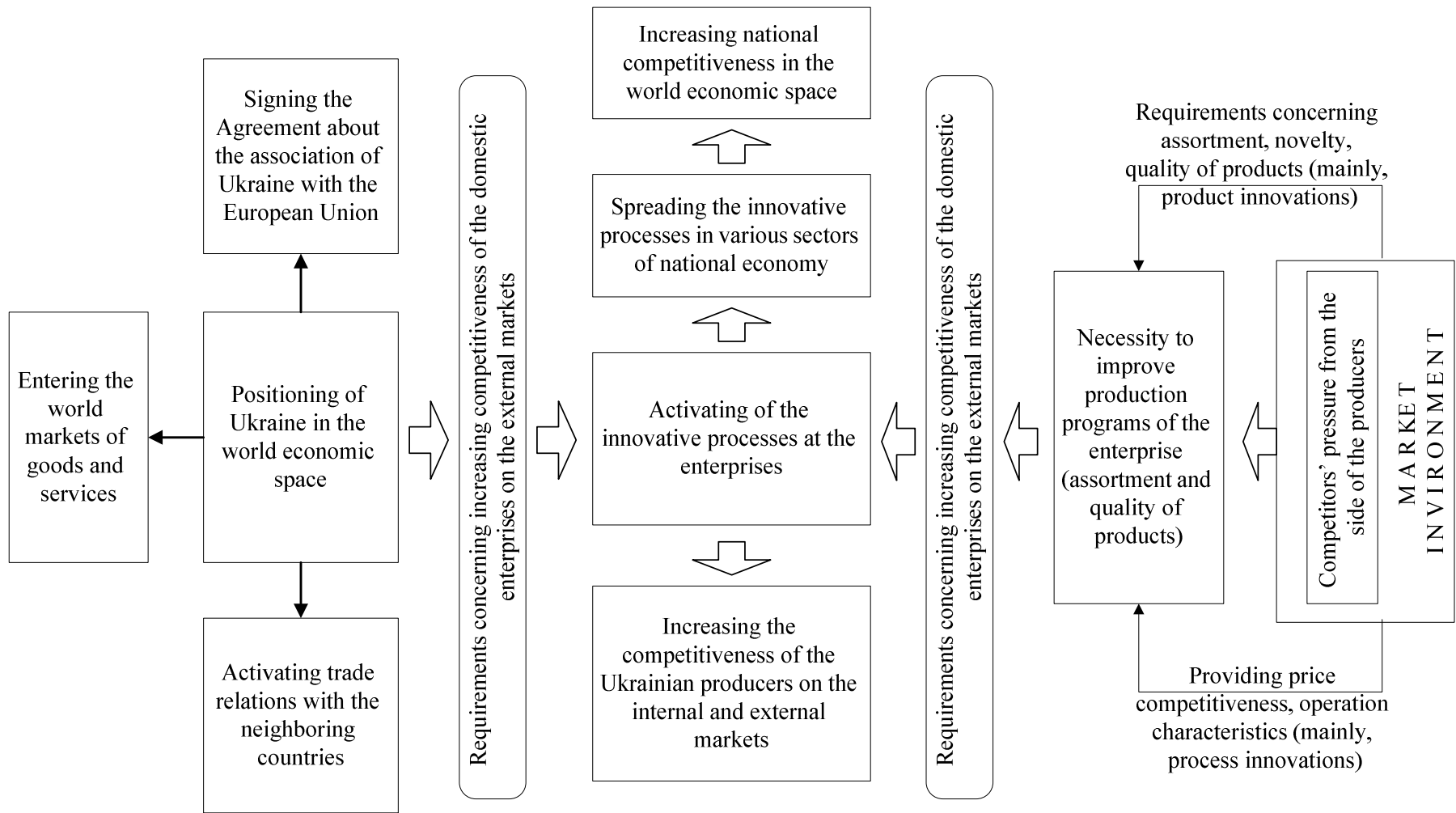
Market conditions of economic activity essentially changed stimulus of the enterprises innovative activity. Activating of the innovative processes is connected not only with the necessity to increase competitiveness of the existing products by means of improving equipment and technologies (process innovations), but as well with the demands of the market concerning creation of new products and services (product innovations).

After some time, direction of the innovative activity of the production enterprises is defined more often by the marker where the operation characteristics should correspond to the needs of the end users, and that stipulates the development of the product innovations themselves.

On the other hand, development of globalization and integration processes, signing the Agreement about association of Ukraine with the European Union, activating trade relations with the neighboring countries put before the domestic goods producers new demands concerning competitiveness of their products and services (Scheme 5).

Necessity to be competitive both on the domestic, and foreign markets puts the demands concerning increasing operation characteristics of the production enterprises goods, that, in its turn, make the producers to participate actively in the innovative activity.

Current technical-technological level of the domestic production enterprises demands implementing active offensive innovative strategy that should provide quick overcome of technological lag of the domestic production from the leading ones in technological relation countries [4]. By choosing the innovative strategy of the enterprises development, it is necessary to consider available innovative potential, peculiarities of the production apparatus and innovative processes, knowledge base of the production and specifics of operation.



*Scheme 5. Factors of activating the innovating activity of the production enterprises*

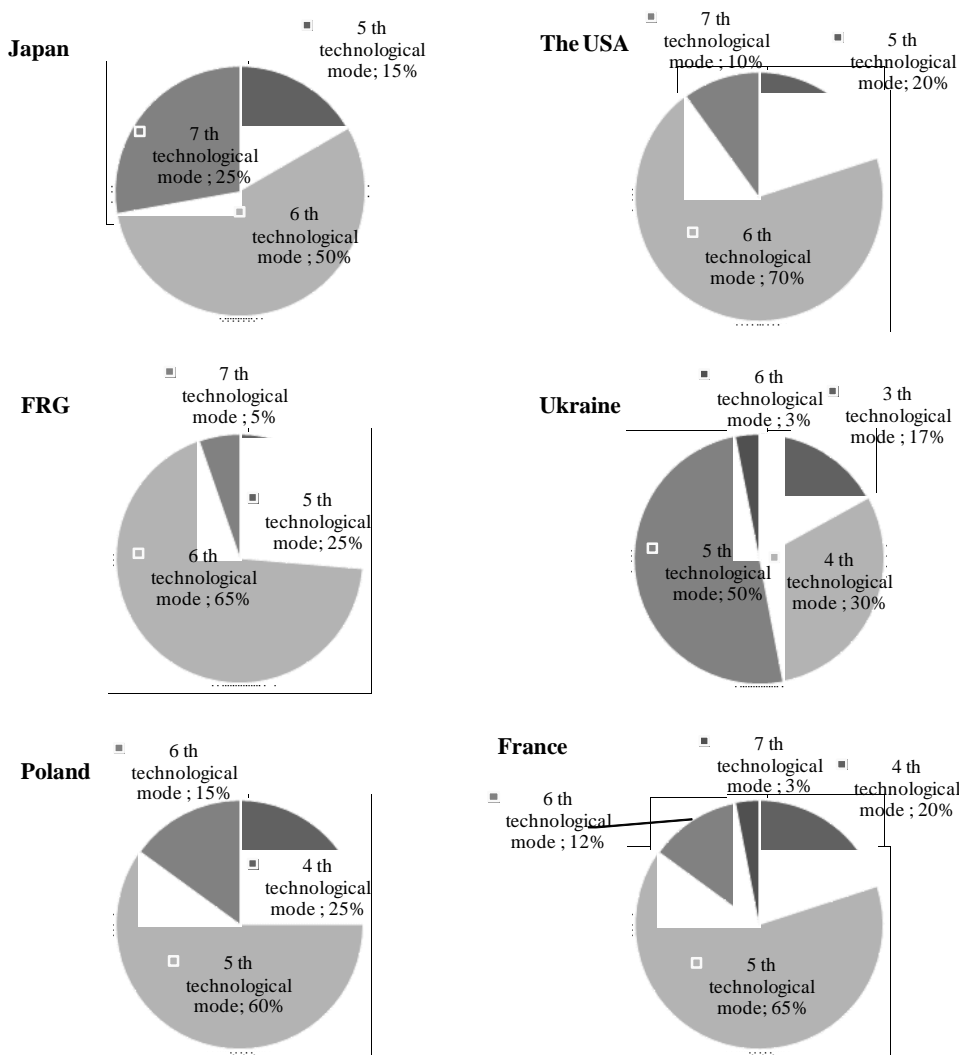


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We can speak about implementing various types of the strategies depending on the availability of own research base, development or development-technological bureaus, pilot production, etc. In case if the enterprise conducts own researches and elaborations, scientific-research and research-development works strategies implementing of the research leadership , leading knowledge basing, using of technological advantages are possible.

Innovative development of the economy is impossible without innovatively active enterprises, activity of which in sphere of creating new technics and technologies should be supported by the state. However, the main stimulus of the innovative improvements in the real sector of economy is a competitive influence of the market environment that puts before the enterprises tough demands concerning competitiveness of their goods and services.

Today, the domestic production enterprises can't stand the competitiveness both on the domestic , and foreign market. That can be explained, in first turn, by insufficient attention of the state to the technological development of the economy of Ukraine, in minimizing the scales of the fundamental and applied researches as a result of decreasing the volumes of state financing the science and education. This situation is alarming for Ukraine and can brake the technological development of the national economy, leaving it outside of the technical progress. Technological lag of Ukraine from the developed countries of the world is characterized by low dominating technological order of the national economy (Scheme 6).



Scheme 6. Structure of technological modes of Ukraine and other countries of the world

Overcoming of the technological lag is possible on conditions of transition the economy of Ukraine to the innovative way of the development and strengthening the regulating role of the state in sphere of the innovative activity. In first turn the state should care about the innovative development of the basic branches that have strategic value for economic safety and the country's defense.

Ukraine should position in the world economic space as a highly technological state with the developed scientific and innovative sphere, strong machine building complex, productive agriculture and other base branches that can provide competitiveness of the domestic producers both on the internal, and external markets.

Implementation of the innovative model of the national economy development and solving the strategic tasks concerning increasing the competitiveness of the Ukrainian goods producers both on the internal, and external markets should be based on the national innovative system of the country, in base of creation of which is laid the process of integration of the production, finances, science and education, that together with the innovative infrastructure and correspondent institutional support with participation of other members of the innovative process have to create appropriate conditions for outcome of Ukraine out of protracted economic crisis.

Strategic plans of the development of the economy of Ukraine should be oriented to new technological modes, with this purpose development of modern innovative structures should be activated (technoparks, technopolicies, technological incubators, venture companies, etc.), to develop the institutes of technologies transfer, to create conditions for the development of the innovative entrepreneurship.

Basic guidelines of the state policy concerning the innovative development of the enterprises of the real sector of economy should be: definition of the innovative priorities of the machine building complex development as a base of the domestic industry; stimulating economic development of the enterprises and their orienting to the innovative model of the development; improvement of the normative-legal base concerning activating the innovative processes in Ukraine; accelerating the network creation of the innovative structures (innovative centers, centers of technologies transfer, technological incubators, technoparks, technopolicies, ect.); creation the conditions for increasing the innovative potential of the enterprises; implementing on practice the results of scientific research and elaborations by scheme "science-production-market"; conversion of the defense enterprises, using their technological potential in frame of the technologies transfer in civil branches of the domestic economy; improvement of the financial-credit, tax and customs policy in sphere of the innovative activity of the production enterprises; development of the innovative infrastructure and strengthening the institutional providing of the innovative processes; preparing the scientists, constructors, highly qualified working staff; implementing the stimulus system for activating scientific researches and elaborations; increasing the status and national recognition of the scientists', inventors' , innovators' work; improvement the system of the rights protection of the intellectual property of the state, legal and physical entities.

**Conclusions and propositions.** The innovative development of the enterprises as a factor of strengthening the competitiveness of the national economy should become the object of special attention from the side of the state, that has to create appropriate conditions for activating the innovative processes in the real sector of economy, accelerating the technological re-equipment of the main means of production.

The state should strengthen institutional, organizational and financial support of the innovative activity of the economic subjects, flavor to creating the innovative structures. Implementing of the state innovative priorities should concern the innovative development the

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machine building branch as a base for technological re-equipment of all spheres of social production.

To reach the achievements of the domestic enterprises that at the present moment are competitive on the external market (energetic machine building, aircraft, ship building, etc.) should become the centers of technological developments, points of economic growth, scientific and economic experience should be used in other branches of the national economy.

However, the most efficient stimulus of the innovative development of the production enterprises is their own desire to be competitive both on the internal, and external markets. The enterprises should put all their efforts for increasing the innovative potential, for using all resources and possibilities of the enterprises concerning technological renewal of the material and technical base of production.

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**Ilchuk Valerii** – Doctor of Economics, Professor, Chief of Department of Finance, Banking and Insurance, Chernihiv National University of Technology (95 Shevchenka Str., 14027 Chernihiv, Ukraine).

**Ільчук Валерій Петрович** – доктор економічних наук, професор, завідувач кафедри фінансів, банківської справи та страхування, Чернігівський національний технологічний університет (вул. Шевченка, 95, м. Чернігів, 14027, Україна).

**Ильчук Валерий Петрович** – доктор экономических наук, профессор, заведующий кафедрой финансов, банковского дела и страхования, Черниговский национальный технологический университет (ул. Шевченко, 95, г. Чернигов, 14027, Украина).

**E-mail:** ivp5@ukr.net

**Sadchykova Iryna** – PhD in Economics, Associate Professor of Financial and Economic Security Department, Chernihiv National University of Technology (95 Shevchenka Str., 14027 Chernihiv, Ukraine).

**Садчикова Ірина Володимирівна** – кандидат економічних наук, доцент кафедри фінансово-економічної безпеки, Чернігівський національний технологічний університет (вул. Шевченка, 95, м. Чернігів, 14027, Україна).

**Садчикова Ирина Владимировна** – кандидат экономических наук, доцент кафедры финансово-экономической безопасности, Черниговский национальный технологический университет (ул. Шевченко, 95, г. Чернигов, 14027, Украина).

**E-mail:** aspirant\_chstu@ukr.net