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MODERNIZATION OF INDUSTRIAL ENTERPRISES AS THE IMPORTANT PREREQUISITE OF THEIR TRANSITION TO THE INNOVATIVE DEVELOPMENT

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It is shown that modernization of the economy of Ukraine, its sectors and enterprises presents quite a number of problem issues. Their solution requires improvement of organizing the process of managing productive, innovative and HR activities at all levels of the hierarchy: national economy, industry, region, enterprise. These activities must have a clear purpose and have to be accompanied by realization of system measures of organizational, technical and economic character. The implementation of these measures will allow to increase the output of innovative products, the efficiency of enterprises and their competitiveness on internal and external markets.

Key words: modernization, national economy, technical and technological base, industrial enterprises, innovations.

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МОДЕРНІЗАЦІЯ ПРОМИСЛОВИХ ПІДПРИЄМСТВ ЯК ВАЖЛИВА ПЕРЕДУМОВА ЇХ ПЕРЕХОДУ НА ІННОВАЦІЙНИЙ ШЛЯХ РОЗВИТКУ

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Показано, що модернізація економіки України, її секторів і підприємств охоплює широке коло проблемних питань, вирішення яких зумовлене удосконаленням організування процесу управління виробничою, інноваційною та кадровою діяльністю на всіх рівнях ієрархії: національне господарство, галузь, регіон, підприємство, яке повинно мати чітке цільове призначення і супроводжуватись реалізацією системних заходів організаційно-технічного і економічного характеру, реалізація яких дасть змогу збільшити обсяги випуску продукції із інноваційним наповненням, підвищити ефективність суб'єктів господарювання та їх конкурентоспроможність на внутрішньому і зовнішньому ринках.

Ключові слова: модернізація, національна економіка, технічна та технологічна база, промислові підприємства, інновації.

Statement of the problem

The modernization of the domestic industry involves the creation of enterprises the technical and technological base as the basis for production capacity organizing to deliver competitive products to its domestic and foreign markets. There is a need to attract significant financial and investment resources which are not enough for systematic activities implementation that have organizational, technical and

economic nature as the basis for the acceleration and expansion of innovative business entities. The lack of necessary to accelerate the modernization of enterprise resources is a major factor that hinders their transition to innovative development.

Analysis of recent research and publications

The problems of the modernization of industry, its sectors and the main industrial units occupy a prominent place in the researches of the foreign and Ukrainian scientists. Thus, the modernization of the industry devoted to the researches of D. Wolfensohn, C. Johnson, P. Pads, J. Korn, S. Lall, J. Stiglitz and F. Khan and others. These problems concern also the works of Ukrainian scientists such as: A. Amosha, J. Bazyliuk, A. Vlasnyuk, V. Hayyets, V. Seminozhenko, L. Fedulova, which highlight the tactical and strategic issues of innovative development of Ukraine [1, 2, 3] the process of technological modernization of industry in Ukraine [4, 5, 6] competitiveness and efficiency of the modernized enterprises.

The formulation of objectives

The objectives of this article are: to describe the complex of the organizational, technical and economic actions, to characterize their meaning and to explain the need for the use it as an important prerequisite for modernization of the industrial enterprises. These actions will promote the innovations in the domestic enterprises and improve the competitiveness on the domestic and foreign markets.

Presentation of main materials

Lot of attention in the different levels of the government of Ukraine and in the modern domestic economic literature is paid to the modernization of the national economy.

We agree with the opinion of many leaders and scientists that the modernization of Ukraine's economy covers a wide range of problem on the tactical and strategic direction that are closely related and have the common purposes. The main task is to achieve an acceleration of innovation development in all spheres of public life of the country as the basis for the growth of competitiveness of the national economy. However, we note that the innovations implementation in the domestic economy in conditions of its transformations is characterized by a small share of innovation active enterprises, which is 10,7 % of the total number of the enterprises. There is also a very low level of knowledge intensity of GDP. This level has been 0,95–1 % in 2010–2011. It indicates that the use of the investment resources from a variety of sources is inefficient in order to solve the fundamental issues of the economic development and competitiveness.

The modernization of the national economy and its sectors in technical and economic aspects, and therefore their basic units – enterprises should aim to achieve each of it sustainable and effective development through the introduction of the scientific and technological progress and modern advanced technologies. These technologies will contribute to the renewal of the material and technical basis and will be the main basis for the manufacture of products with innovative content on external competitiveness and domestic markets. The rapid development of high-tech industries as the basis of its transition to an innovative way of development is the main goal of modernization.

The importance to find the solution of the problem of the successful development of the Ukrainian industry by its modernization is due to the fact that the main part of domestic enterprises cannot adequately respond to the internal and external challenges and have a low competitiveness. This situation can be explained by the fact that companies that are using outdated technologies are energy intensive, have not enough developed the product and market diversification of production. These factors finally lead to their low adaptability to adverse effects of environmental factors, leading to a slowdown in output quality and inefficient management in this tough competition.

It is necessary to develop and set specific deadlines for the targeted programs implementation of the modernization at all levels of economic activity: industry, region, company in order to neutralize the impact of negative factors hampering innovation development of Ukraine's economy, its sectors and companies in the short period. These programs will be the important organizational basis of their resourcing and timely implementation in order to achieve their goals and solve economic and social problems. The modernization programs creation should take place on the basis of identified priorities for its conduct.

It is appropriate to note that the priority in this context is not some formality, but an important organizational factor that determines the priority of the enterprises modernization. There are a very important activities of the personal in order to solve socio- economic problems, such as ensuring proper internal Ukrainian market the own products which are not inferior in quality to foreign analogues. Also in priorities in modernization may be those sectors of the economy and its companies that are able to upgrade at the optimum time and ramp up its production capacity and ensure the production of high quality products that meet international standards and are competitive in both domestic and foreign markets. Therefore, the definition of these sectors (industries) and enterprises should be considered as one of the most important factors of the modernization processes managing. Its status needs to be confirmed by the respective government's regulatory documents. This means that these industries and their companies are focused on sustainable innovation development and effective operation and are supported by the government. However, a set of institutional arrangements will increase their investment appeal to the domestic and foreign investors, which is especially important in a shortage of investment resources.

The government's preferences are the important factor that will help accelerate the modernization priority enterprises. These preferences include: lowering tax rates for the period of development and organizing the new products, the provision of soft loans for the purchase of new technologies, which are aimed of the production capacities development. These enterprises have to be focused on competitive innovative products manufacturing and favorable conditions creation at the customs border if they have the appropriate contractual arrangements with foreign firms to supply equipment for the modernization of production and components for the new products manufacturing.

Accelerate modernization defined as a priority, hence the need to improve their depreciation policy, which should be aimed at the use of the depreciation funds for modernization, which will help accelerate the process of reproduction of their material and technical base. In this context, the benefits must be granted the use of accelerated depreciation forms with clearly defined the objects of the depreciation for each plant.

The domestic investors, who are represented by the companies, banks, domestic machines building enterprises should have the main role in the system measures to ensure investment support of the modernization process. The domestic machines building enterprises are intended to solve a dual task: its technical and technological base updating as the basis of the new technologies for organizing manufacture innovative products competitive on the domestic and foreign markets and are intended for re-equipment of other sectors, including light industry, food processing, wood and paper industry, agriculture and national infrastructure.

The Ukrainian machines building enterprises have been and are staying the main sector of the national economy. Industry has a significant industrial, scientific and human resources. Over 2,800 industries and 230 organizations operate in its structure. The main types of the existing organizations activities are to create, design and implement researches and works development. More than 1 million people work in this area. This number suggests that Ukraine has a strong potential to further accelerate the development of its own machine building as an important background and financial framework for the high-tech modernization of the national economy. However, it should be noted that the solution to this important task necessitates technical and technological re-equipment the machine building industry.

First of all, a huge work has to be done for the modernization material and technical base of machines building enterprises acceleration, because the fixed assets of these enterprises are worn on more than 70 %. Practically it is impossible for all of them to organize the manufacturing of the new high-quality products with optimal level of the costs. In some branches of the industry, enterprises of agricultural machine building industry, for example, depreciation of fixed assets is around 80 % and technical equipment is more than 90 %. This information shows that it is very necessary to modernize the technical and technological base that is the main issue for the technical hardware for agricultural needs manufacturing. After the catastrophic state of agricultural machinery yield losses are estimated within 8–12 billion. In the context of these data it can be concluded that upgrading domestic enterprises of the agricultural machines must be accompanied by support from the government, that the adoption of

appropriate regulations that are set for them certain privileges, including exemption of VAT and import duties on the import of new technologies and equipment.

Priority development of the field of the agricultural machinery in Ukraine by large-scale modernization of enterprises caused by the fact that only by a radical upgrading of production processes in agriculture can not only achieve significant positive change in agricultural economics, but also significant changes in the lives of the farmers and all Ukrainian people.

However, raising the technical level of agricultural enterprises will significantly to increase export potential of domestic agriculture, consolidate its position as one of the leading players in the global food market. Thus, in dealing with such important tasks the crucial role has to be assigned to the field of agricultural machine building industry. It is necessary to radically upgrade the capacity of domestic enterprises based on the latest technologies and to provide agriculture and agrocomplex in general not just modern technology and sophisticated system of machines for use in crop production, livestock, growing vegetables and storage and the agricultural products transportation.

Our machine building industry has become a locomotive of modernization of economy of Ukraine. Its dynamic development through the introduction of new technologies not only will help to accelerate the modernization of all sectors of the economy, but will be an important factor in the stability of the Ukrainian economy, based on its transition to an innovative way to develop and improve its competitiveness.

Modernization of the industrial enterprises should not only contribute to the development of their assets to increase production output, but also significantly affect the improvement of safety, environmental protection and the development and creative growth of the staff.

It should be focused on the by the high skill level specialists, professional managers, engineers, technical personnel and skilled workers industry providing, which have to be able to learn new technologies and evaluate the effectiveness of their application.

Modernization businesses can have a significant effect on the formation of values and patterns of staff. In such cases, preference should be given to involvement of the categories of workers who are able to solve complex problems systematically increasing technical and organizational level of production on the basis of the latest technologies, adept use of internal reserves, make organizing the production of high quality products, competitive on the domestic and foreign markets

For the development and implementation of modernization must actively engage along with skilled workers, young professionals who have completed graduation, and have sufficient knowledge to solve specific design problems related to improving the technical and technological level of enterprises and their departments that are able to develop and introduce new technologies of production.

Managers of the modern industrial enterprises must have a good knowledge of management of the modernization processes. They have to undergo the proper training in special courses that should be organized at universities in all scientific centers of Ukraine. However, in the universities in Ukraine, especially technical universities in the curriculum should provide the teaching special subjects (courses) related to the economic issues and management of the modernization processes for professionals specialties “Management and Administration (economic activities)” and “Innovation management”.

Modernization has become an important basis for accelerating innovation in industry as a whole and individual businesses need to carry out systematic measures at different levels of the hierarchy of organizational management, technical and economic direction. Among them a prominent place must be given to the definition and justification of the priorities of modernization, investment and personnel to support them. The problem of the industrial enterprises modernization on the basis of innovation depends on the support for this process and on the professionals, who are trained on the latest technologies. The expenditures of this area should not be considered as social expenditures but as investments for developing and manufacturing on the innovation basis.

It is very important to use modern sophisticated mechanisms of the personnel motivation along with the staffing improvement in companies engaged in modernization. The material and moral incentives which are based on the professional level of employees and their contribution to the achievement of concrete results in the implementation of projects on modernization of enterprises, in particular must get personalized application development and motivation of employees.

The experience of the industrial enterprises of the United States, Germany, Japan, France, Canada, suggests that a strong development of the national innovation infrastructure has become an important factor in the modernization of industrial enterprises accelerating. Modern innovation infrastructure includes organizations whose main activity is the new technologies development and implementation in production and non-production areas, the innovation production organizing, a favorable business environment creating to attract investment, new work places with high-end equipment creating. However, such structures have to be with the appropriate organizational and production vector, that has to be focused on the innovation processes accelerating in the companies that are in the sphere of the organizations influence of innovation infrastructure occupy a leading position in solving economic and social problems, produce or can produce goods and provide high quality services.

Measures aimed at the concentration of investment resources and their rational use in the implementation of relevant programs and projects is essential to accelerate the modernization of industrial enterprises. It is necessary to use an appropriate mechanism to use them. The basis of this mechanism should be based on a program-based method. Application of this method in the management of the programs and projects of modernization will be an important tool for successful performance, primarily through the sustainable resources formation and its effective using. It is also the important tool for the relevant parts implementation of the services and programs and projects that are functionality provided in a timely establishment of personal responsibility for the performance of the specific artists separate sections (stages) of the program or project. This method will help align in space and time performance of the functions of the relevant services of the companies and design organizations associated directly or indirectly with the conduct of its modernization. This method also will help to achieve the goal set for it by the modern mechanism using for investment resources management.

In conclusion, it should be noted that the modernization of industrial enterprises is going to be the material and production basis for scientific and technological developments.

Conclusions

Modernization of industrial enterprises covers wide range of the organizational, technical and economic issues, requiring adequate resource support, consistent and systematic solution by the properly prepared projects implementation. In this context, an important place should belong to the selection and justification of the priority objects of modernization in relevant sectors to ensure the processes of modernization investment resources with defined sources of attraction and effective using, personnel professional training of the companies which are focused on the development of new technologies for the manufacture of competitive products in the domestic and foreign markets, the use of program- target method of managing the processes of modernization and flexible mechanisms to motivate participants to implement modernization projects.

Prospects for future research

Successful problem solving issues that are related to the modernization of the Ukrainian economy, its individual sectors and enterprises necessitates conducting extensive research aimed to study the formation of the conceptual foundations of organizational-economic mechanism of modernization and its impact on different levels of the hierarchy of control. The proper place of this mechanism should be devoted to the issue of personnel motivation and the development of projects which should be implemented by the modernization.

1. Амоша О.І. Інноваційний шлях розвитку України: проблеми та рішення / О.І. Амоша // Економіст. – 2005. – №6. – С. 28–33. Геєць В.М. Інноваційні перспективи України / В.М. Геєць, В.П. Семиноженко – Харків: Константа, 2006. – 272 с. 3. Федулова Л. Науково-технологічний та інноваційний процес в Україні: тенденції в кризових ситуаціях / Л. Федулова // Економіст. – 2011. – № 1. – С. 24–28. 4. Технологічна модернізація промисловості України / за ред. Л.І. Федулової. Інститут економіки та прогнозування. – К., 2008. – 472 с. 5. Луцьків О.М. Модернізація промислового потенціалу в контексті підвищення конкурентоспроможності економіки карпатського регіону / О.М. Луцьків // Економічні науки. – Серія «Регіональна економіка». Збірник

наукових праць. Луцький національний технічний університет. – Вип. 9(35). Частина 1. – Луцьк, 2012. – С. 285–293. 6. Ружанська Т.М. Зміст процесу модернізації української економіки / Т.М. Ружанська // Збірник наукових праць Національного університету Державної податкової служби України. – 2012. – № 2. – С. 215–224.

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PREREQUISITES FOR MODERNIZATION OF MATERIAL AND TECHNICAL RESOURCES IN AGRICULTURE

ã Viatkin P. S., 2014

In this article the preconditions for implementation of modernization processes in agriculture are determined. The process of modernization is regarded as a set of structured factors aimed at improving the efficiency of economic activities of agricultural enterprises. The main directions of improving material and technical base of agricultural enterprises are determined.

Key words: modernization, agricultural enterprise, logistical support, modernization process.

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ПЕРЕДУМОВИ МОДЕРНІЗАЦІЇ МАТЕРІАЛЬНО-ТЕХНІЧНОГО ЗАБЕЗПЕЧЕННЯ СІЛЬСЬКОГО ГОСПОДАРСТВА

ã Вяткін П. С., 2014

Визначено передумови реалізації модернізаційних процесів у сільському господарстві. Модернізаційний процес розглядається як сукупність структурованих чинників, спрямованих на підвищення ефективності господарської діяльності аграрного підприємства. Визначено основні напрями удосконалення матеріально-технічної бази сільгосп підприємств.

Ключові слова: модернізація, сільськогосподарське підприємство, матеріально-технічне забезпечення, модернізаційний процес.

Statement of the problem

Efficient agriculture is characterized by a set of benefits arising from the current trends of its development, impact and prospects of implementation. Advantages of agriculture area, unlike other areas of modern national economy lies in the fact that population growth provides a direct increase in total demand for food and consumer goods. The agrarian question has always been important for Ukraine, because agriculture is a manufacturer of food production, which is vital for the public, one of the main ways of life, determined society, the primary mean of transformation of transformation human labor into capital. The background of these paradigms singled out problems of modernization processes in agriculture as the basis of the forcing process of the agricultural sector of Ukraine.

Analysis of recent research and publications

The process of modernization changes in enterprises is researched by scientists for decades. The creation of the priority directions of development and modernization of fixed assets of enterprises are