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MODERNIZATION OF THE INDUSTRIAL ENTERPRISES AS CONDITION OF THEIR COMPETITIVENESS' INCREASE

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Коваленко О.М., Станіславик О.В. Модернізація промислових підприємств як умова підвищення їх конкурентоспроможності.

Розглянуті напрями і чинники модернізації промислових підприємств. Визначені найбільш значимі зовнішні і внутрішні чинники модернізації підприємств промисловості Одеського регіону. Сформульовано роль модернізації в підвищенні конкурентоспроможності промислових підприємств

Ключові слова: модернізація, напрями модернізації, промислове підприємство, фактори модернізації, конкурентоспроможність підприємства

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Рассмотрены направления и факторы модернизации промышленных предприятий. Определены наиболее значимые внешние и внутренние факторы модернизации предприятий промышленности Одесского региона. Сформулирована роль модернизации в повышении конкурентоспособности промышленных предприятий

Ключевые слова: модернизация, направления модернизации, промышленное предприятие, факторы модернизации, конкурентоспособность предприятия

Kovalenko O.M., Stanislavik E.V. Modernization of the industrial enterprises as condition of increase of their competitiveness.

Directions and factors of modernization of the industrial enterprises are considered. The most meaningful external and internal factors of modernization of the enterprises of industry of the Odessa region are determined. The role of modernization in the increase of competitiveness of the industrial enterprises is formulated

Keywords: modernization, directions of modernization, industrial enterprise, factors of modernization, competitiveness of enterprise

Current conditions of economic management enterprises increased the competition both in the domestic and international market. The consequences of the financial and economic crisis, inconsistent government policies regarding the protection of domestic producers, a high level of moral and physical depreciation of productive assets and other factors combined led to the relevance of the enterprises competitiveness ensuring problem.

Particularly actual is the problem of competitiveness gaining by the industrial enterprises. A large number of industrial enterprises were not ready to an adequately active market behavior because of low-quality management, imperfection of business-processes, quality specifications to products of this economical branch and other reasons.

Today the industry is considered as a huge complex where competitiveness of goods and services depends on its activity both in the domestic and international market. According to State Statistic Service of Ukraine data [1], this complex includes 48103 active industrial enterprises. Overall cost of fixed assets of the industry is 1101199 million hryvna, and its employees' number is more than 3 million people. The third and fourth technological sets-up are dominating in industry. Its share at industrial production makes 95%. The base of these structures is metallurgical, chemical, light industry, fuel and power complex, most engineering branches. The share of the fifth and the sixth technological sets-up doesn't exceed 5%. The base of these structures is electronic industry, computing, fiber-optic technology, software, telecommunications, robotics, information services, biotechnology.

Industrial enterprises are highly affected by the financial and economic crisis. There was decrease in the export of industrial products, shortening the volume of production and increasing the quantity of finished products in stores, decreasing of finance results, deterioration of financial position. And though a large number of industrial enterprises get huge profits nonetheless the operational profitability during the last 5 years did never exceed 5%. More than 40% industrial enterprises in 2012 became unprofitable.

The GDP industrial exports share is about 40%, but the export structure is not satisfactory because of raw materials predominance, exceeding 60%. The total volume of high technology and science-intensive industries product amounts only to 15%.

It should be noted that there is a negative tendency of decreasing the production volume. In 2012, as compared to the previous year the light industry output of products decreased on 5,3%, in manufacturing industry – on 3,7%, in woodwork and timber industry and its manufacturing - on 1,8%, in metallurgical production and new metal products manufacturing field– on 5,2%, in engineering – on 6%, in the industry of other non-metallic mineral product manufacturing – on 5,8%. For the remaining sectors, though there was a non-significant increase in production volumes [1], the total decrease in industrial production in 2012 as compared to the previous year was 1, 8%.

All of these aspects of the national economy industrial sector development suggest that industrial enterprises need in the implementation of specific adaptive changes in respect of the manufacturing structure, assortment policy, technology and so on. One of the ways to provide such changes is modernization.

Analysis of recent studies and publications

The significant contribution to the research of modernization processes and its essence definition is made by T.S.Hachaturov and some other scientists, who studied the questions of defining and maintaining the efficiency of capital investment, forming, reorganization and modernization of manufacturing systems [2, 3, 4].

Until 1990ths the comprehension of the term “modernization” generally was limited by changes in equipment in order to adapt it to modern technique and economic conditions of manufacture, i.e. modernization of production process. P.E. Belenkiy, Yu.P. Gittik and T.V. Ladina regard the modernization as improvement of existing equipment designs to increase its technical level, according to the latest scientific and technological achievements [5]. According to B. A. Raysberga, L.Sh. Lozovskogo and E.B. Starodubtsevov [6] modernization is a process of improvement, refining, reestablishment of object, bringing it to the new requirements and standards, specifications, indicators of quality. Thus they regarded machines, equipment and technological processes as the objects of modernization. M.I. Moldovanov defines modernization as changes, improvement of production that meets modern requirements [7].

The aim of this *research* is to estimate the role of modernization in increasing the competitiveness of industrial enterprises.

Basic material research

Modernization means the renovation and change according to new, modern requirements. This category identifies the change of current situation and existing opportunities by adding any changes to specific object [8]. Obviously that if this term applies to the enterprise, it will define the renovation of all ways of its activity.

In our opinion modernization of enterprise is the process of renovating all aspects of enterprises activity from one form of economic management into

other thus providing its development and increasing the competitiveness. Its key principles are comprehensiveness and systematization.

It can be noted the following directions of modernization the industrial enterprise:

- modernizing the production relations;
- modernizing the production base;
- modernizing the product release;
- modernizing the structure of manufacture;
- modernizing the commercial activities;
- modernizing the innovation activities.

Let’s consider each of those directions.

In our opinion the modernization of personnel selection system, its labor motivation, organizational and functional structure of management should be attributed to modernization the production relations. This involves the renovation of command chain, relationships between departments, using the new data technologies and means of communications, modern methods of making the decisions and others.

Modernization of the production base is caused by the need for the changes in technologies, equipment, outfit according to modern requirements of enterprise work. It can consist in the latest machines, technique introduction o that provides the automation of production processes, equipment with electronic control systems, new technological processes and improvement of existing, computer technologies and so on.

Modernization of the product release involves planning the product lines, creation the new product types, manufacturing the new high quality products. For Ukraine, the quality issue is very relevant in connection with its accession to the WTO, since in order to be competitive in the international market, you need to produce high quality products that meet international standards.

The most important prerequisite here is the replacement of outdated quality standards. For example there has been developed a number of new standards that consist requirements for quality of food. So the requirements to management security system of food products, including all organizations, components of the food chain from farm economy to food suppliers, including packing are defined by new standard ISO 22000:2005 [9]. Obviously the standard agreeing and working out it will contribute implementation of export operations and enhance their international competitiveness for enterprises of food-processing industry. In the mechanism of modernization extremely important place takes the legal base of competitiveness management, which includes government, industry standards, specifications and standards of enterprises.

Important is the role of standards in certification of industrial products systems, which substantially affect the enterprises competitiveness in both domestic and international markets. It should be noted that the national system of standardization has many unsolved problems that hinder the development of production, export, lead to the loss of positions in the markets of Europe and the CIS. Most of the national

standards do not meet international and European standards, and the results of Ukrainian certification and accreditation procedures are not recognized at the European countries. Considering the law rates of harmonization the standards and the fact that neighbouring and foreign countries are actively implementing European and international standards, there is no doubt that Ukraine is facing the threat of the loss of potential markets.

Analysis of using the enterprise standards in Ukraine shows that the majority of them have the organizational and methodological nature mainly concerning the processes of organization and management. However, the overseas enterprise standards are used as a normative document for product.

In our opinion, the problem of company management competitiveness requires an appropriate mechanism to harmonize the achievements of scientific and technical progress and the consumers requirements in the current conditions of the competitive environment in Ukraine. Because the standards of enterprises ensure the necessary level of product characteristics, which suits the consumers, they can be regarded as an instrument of such agreement.

The base of modernizing the manufacture structure consists of the processes of its restructuring, the assessment of each business unit contribution to ensure the competitiveness of enterprises and the inefficient elements elimination from the production structure.

Modernization of the commercial activities means modernizing departments and services involved into marketing activity, product distribution network, storage system and financial policy of the enterprise.

Efficient commercial activity of enterprise is impossible without rationally structuring the appropriate management structures - the departments, bureaus, sectors, etc. Therefore, their activities modernization should be based on the following principles and conditions:

- determination, i.e. ensuring the compliance with the mission, objectives, strategies and policies of the enterprise, focus particularly on a decision of commercial problems, searching and meeting the needs of consumers);
- clarity of construction, i.e. providing the reasonable specialization, lack of duplication of responsibilities, ensuring the unity of leadership in commercial activities, performers under control;
- the exact definition of the activities directions, i.e. providing the guidance on a particular concept, the distribution of tasks and responsibilities of each department and the performers, the vertical and horizontal connections;
- flexibility, i.e. providing a timely response to changes in the business environment;
- coordination of actions, i.e. providing the complex commercial actions to achieve synergies;

- sufficient financial support, both from the commercial actions and motivation of employees related services;
- efficiency, i.e. providing the absorbing of costs on commercial activities by income of associated activities;
- availability of highly qualified personnel and standing specialized training;
- constant active policy in search of markets, customers, unmet needs and creative approaches in solving the commercial tasks.

In our view the essence of innovation activities modernization refers to implementing the changes in the approaches to innovative design, development of measures for improving the competitiveness, the introduction of new developments in its supporting sphere, improvement the concept of industrial output.

In our view, a particular importance of industrial enterprises in the basic industries relays to the modernization of production systems today.

The production system of industrial enterprise is a way of organizing production in the workshops, including the acquisition of raw materials, employees operations, placement and maintenance of equipment, quality management, development of new products, etc.

Manufacturing enterprise system covers all stages of its production and marketing activities, from receipt of raw materials to shipment of finished products to customers. The products quality, the value of the production cost and, ultimately, the competitiveness of enterprises determines from the efficiency of the production system.

The production system efficiency is determined by how efficiently the company uses the available labor, capital, raw staff and materials and other resources, according to the specifics of the production and the characteristics of its external environment.

The study of the Japanese experience in organizing the production allows to identify the main management techniques that are used in Japan for the effective production systems development. These techniques, many of which have already received the name in English, apply for modernization of production systems companies in the West. The appeal of these methods is determined not only by the capacities of increase productivity and improves quality, but also in the conditions of tough budget constraints. These methods use does not require significant capital expenditures even in the traditionally capital-intensive productions.

Today, the high possibilities of administrative innovations, using the Japanese experience are demonstrated not only by the Japanese but also the leading enterprises in Western countries. In recent years, there is a growing number of enterprises that are upgrading their production systems based on the Japanese experience.

The practice of such implementations covers the automotive industry and enterprises in other industries - aerospace, metallurgy, manufacturers of household appliances, etc. These include the largest automobile manufacturer (Daimler Chrysler, Ford, General

Motors), auto component manufacturers (Valeo, Autoliv), of the enterprise industry (Alcoa), chemical industry (DuPont). The main part of the enterprises that effected their production systems modernization, demonstrates the high profitability of investments, exceeding the average rate of return on investment in their industries.

Reports of consulting companies and the analytical studies' results suggest a conclusion that most companies which did modernization of their production systems, improved product quality, increased resource productivity, decreased the duration of the production cycle.

However, the production system modernization by itself does not imply that similar success is guaranteed. Analysis of the failed production systems modernization projects shows that the main reasons for this are insufficient accounting the features of the market environment in which the company operates and the characteristics of providers and financial institutions.

Summarizing the essence of all the above, it can be concluded that the goal of industrial enterprises modernization is to increase its competitiveness, which is necessary to realize the economic, administrative, production, innovation, and other objectives.

The main factors that are hindering the rate and quality of the implementation of these objectives by industrial enterprises today, in our opinion, are:

- insufficient development of competitive market environment;
- instability of the legal environment;
- lack of the stock market development;
- limited access to financial resources;
- weak government support;
- psychological unpreparedness leaders to modernize;
- the lack of practical experience;
- lack of own funds for modernization;
- a low level of development of consulting services market.

Despite all the difficulties, we can talk about a specific activation of the processes modernization in the industry, which success will depend on the programs that have being developed to the state support of modernization, the activization of regional governments to create incentives for its conduct, the formation of a specific legal environment.

The factors of the industry modernization include:

- marketing (sales market, product, competition, pricing, sales promotion, marketing division);
- management (capital management, organizational structure, decision-making mechanism, monitoring of progress, the interaction of departments and services, management of supply, marketing, inventory, operational management of production);
- organizational (production structure, organization the production process, serving households);

- financial and economic (management of working capital, costs, process of capital accumulation and investments);
- technical and technological (technical and technological level of production development, its ecological safety, investment in fixed assets, quality assurance);
- informational (flow of documents, computerized enterprise management, efficiency reaction on the received information);
- socio-psychological factors (motivation of innovation activities, activity of managers, recruitment sources and methods of selection, career development);
- innovation (innovation activities, its organization, research and projects, the level of employees scientific and technical education, scientific and technical services).

Thus, increasing the industrial enterprises competitiveness in its modernization relates to the need to solve many issues. In order to determine the most relevant ones for Odessa region, we carried out a survey of the some enterprises' managers of various branches of industry and representatives of the regional administration, where they were asked to answer series of questions about the factors that influence on the modernization processes, measures that improve their effectiveness, most often chosen strategic direction of the modernization and other issues.

As a result, the key factors of the external environment that restrain the modernization are: uncertainty as to the effective economic reforms and the economic situation stability, the lack of priority programs of modernization the enterprises, the low solvency demand, insufficiently stimulating of modernization programs and infrastructure projects.

According to experts the internal factors are: low level of strategic thinking, planning and management, lack of effective job of marketing services, limited access to investment resources. A difficult financial situation and obsolete equipment were also called.

The strategic areas were called the following activities:

- the restructuring of enterprises;
- debts restructuring;
- increase the realization of products;
- selection of goods with high demand;
- the choice of markets with unmet needs;
- elimination the inefficient elements of the enterprises;
- introduction of a quality management system;
- specialization of production.

It should be added that as to the activation of the modernization process in many industrial enterprises, as food, chemical and petrochemical industry and other branches, in recent years most respondents explained that by the presence of predictable, stable sales markets, hard competition and investment attractiveness.

Conclusions

Summarizing the above, we note that the modernization of industrial enterprises assuming the necessary changes' implementation in all areas of their activities, focusing on forming the new relations in the spheres of management and production through enterprise restructuring, reformation of the management system, the innovative ensure the competitive production of industrial products, the new

production relations formation, development activities in the marketing and attracting investment resources spheres.

Because of high importance of management factors in providing the effectiveness of the modernization processes, further work regards the detail study of their impact on industrial enterprises competitiveness.

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