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CONCEPTUAL BASES OF ORGANIZING MODERNIZATION PROCESS OF INDUSTRIAL ENTERPRISES

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In this article the authors attempt to highlight the main conceptual principles of organizing the modernization process of industrial enterprises, to identify the components of this process, to reveal the content of these components and their materialization in specific projects, to define the possible ways to implement these projects in order to achieve efficient results in high-competitive economic conditions.

Key words: modernization, economics, competitiveness, efficiency, principles, activities, processes, projects.

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КОНЦЕПТУАЛЬНІ ЗАСАДИ ОРГАНІЗУВАННЯ ПРОЦЕСІВ МОДЕРНІЗАЦІЇ ПРОМИСЛОВИХ ПІДПРИЄМСТВ

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Зроблено спробу висвітлити основні концептуальні засади організування процесу модернізації промислових підприємств, визначити складові цього процесу, розкрити змістове наповнення цих складових та їх матеріалізацію в конкретних проектах, окреслити можливі шляхи реалізації цих проектів з метою досягнення ефективних результатів господарювання у жорстких умовах конкуренції.

Ключові слова: модернізація, економіка, конкурентоспроможність, ефективність, принципи, заходи, процеси, проекти.

Problem statement

Accelerate the process of modernization of industrial enterprises covering a wide range of the problems that need proper conceptual solution in order to create an appropriate methodological base for solving a number of theoretical and practical problems that have a negative effect on the modernization process organizing and the efficiency of their operation.

Analysis of recent research and publications

The problems of modernization of the national economy and the individual companies are in the focus of the national and foreign economists, heads of the government agencies and enterprises. Recently, a lot of researches highlighted the problems of the resources support of the national economy at the macro

level [1], management capabilities and enterprise development based on modernization [3], modernization as a necessary condition for the economic reconstruction of the national socio-economic system [6], the problems of innovation and technological modernization [2], an allocation of the factors of the modernization of the resource potential of the industrial enterprise are focused [11, 12, 13] the functional principles of modernization resources, particularly for the marketing and management of functional subsystems are considered.

V. Balitska [1], investigating the supply of the resources for the national economy, notified that the formation of financial capital is the main factor in the macroeconomic stability of the country. That is why the financial position of a business entities is a determining factor in their modernization. Instead, A. Sirko and NM Naydych in their work [13] point out that in fact, the statement about the lack of financial resources is superficial, because in today's business world available effective mechanisms for raising funds in promising business projects. Therefore, the main factor hampering modernization processes determine the lack of financial resources to carry out these processes is incorrect. However, an important barrier to modernization, the authors cite the lack of serious economic competition, the competitive environment due to the distortion behavior of big business and government, as well as increased ownership of top management as a result of deregulation and privatization.

On the other side, A. Sirko and N. Naydych emphasized the point in their work [13] that the statement about the lack of financial resources is superficial, because in today's business world are available an effective mechanisms for raising funds in the promising business projects. Therefore, it is incorrect to determinate the lack of financial as the main factor of the modernization processes hampering. However, the authors identified that the lack of serious economic competition is an important barrier of the modernization. The competitive environment is distorted by the behavior of the big business and government, as well as increased ownership of the top management as a result of the deregulation and privatization.

So the following areas require further research: absence of a unified approach to the implementation strategy of the technical and economic modernization, lack of elaborating the particular areas of this modernization, resources of the project supplying, the uncertainty of the timing of the stages of the modernization and the low speed of modernization implementation in domestic enterprises.

Objectives

The main objectives of this article are: to formulate and justify the main provisions of the organization of the modernization process of the industrial enterprises as an important precondition of the real projects of its implementation.

Materials

Modernization of enterprises is a factor of the economic growth and it is one of the most urgent problems of the economy market transformation in the globalization challenges. It is necessary to create a general concept of the modernization – a complex of the systemic activities on different levels of the management hierarchy that concern organizational, technical and economic components in order to make the modernization an important foundation for accelerating innovation in the industry as a whole and individual businesses particular. Basic principles of the concept is schematically shown in fig. 1.

Modernization of national enterprises - is a state of sustainable and effective development, based on the implementation in the production process the scientific and technological progress aimed at renewal of the material and technical base of the enterprises in order to produce innovative products competitive in the foreign and national markets. In connection with that fact the government policies should be aimed at changing the structure of the economy through the development of high priority industries as the basis for transforming it into an innovative way of development. It is impossible to provide a wide range of modernization in all sectors of the national economy at the same time, because of several organizational and economic reasons, especially the fact that the implementations of modernization projects require investments. There is a need to attract significant amounts of investment resources for many enterprises, which for various reasons is problematic for them regardless of existing relevant source of their receipt.

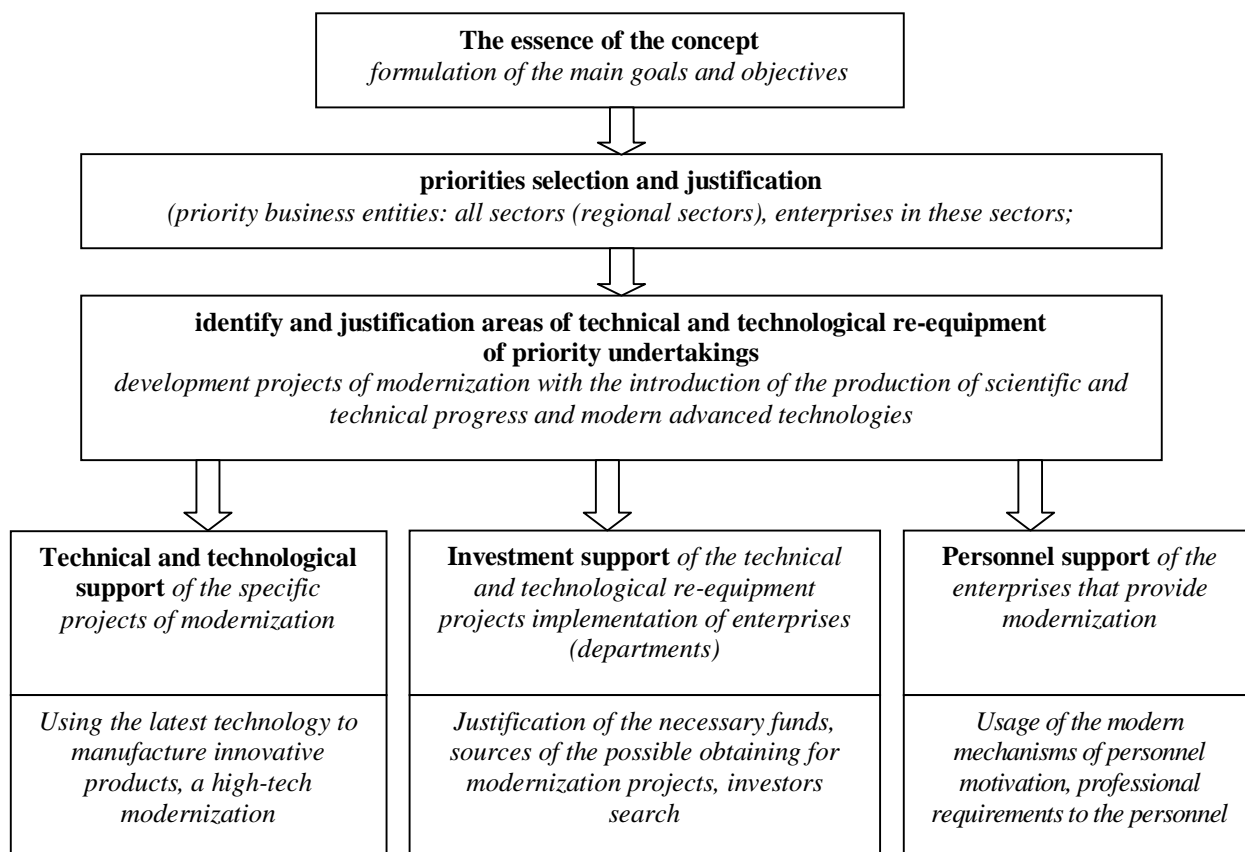


Fig. 1. Conceptual principles of the modernization process organizing of industrial enterprises
Source: [authors own development]

Limitations of the resources, especially investment that can be attracted to the modernization of industrial enterprises necessitates the prioritizing of its implementation. It should be noted that the priority is not just a formality but an important organizational basis which determines the priority of modernization in a view of the importance and significance of their teams in order to solve the socio-economic objectives, such as proper ensuring the internal Ukrainian market by its own products which is not inferior of its quality to foreign analogues.

Investment security. To attract investors to invest in the modernization of the national enterprises need to convince them of the benefits of investing, that every company must show their own capabilities and potential for further development.

Could be useful the experience of international practice of the financial support of innovation of the informal venture capital market, where the individual investors directly invest their financial resources in particular projects. These individual investors called informal investors or business angels [14]. The inhabitants of our country could be business angels also. Earlier the population of Ukraine had given preference to saving money in the banks, but now in the present condition a confidence in the banks is decreasing. This could help attract people to invest the funds into innovative enterprises, including its modernization. But for this strategy realization a positive image of the enterprises has to grow and enterprises have to demonstrate its stable financial condition and highly competitive position in the marketplace. Be able to increase popular participation in the financing of enterprises and public policy to increase incomes. Government policy to increasing the incomes could improve public participation in the financing of the enterprises development.

The strategy map development will promote financial resources that are necessary for innovation development and implementation of the specific projects of modernization of national enterprises. Due to the classic version all the necessary information in the strategic map is divided into four parts: “finance”, “clients”, “business processes” and “training and development” (fig. 2). The strategy of financing the acquisition of new technologies, aiming at the development of production facilities should provide growth inflows from outside through a balanced portfolio and rational pricing.

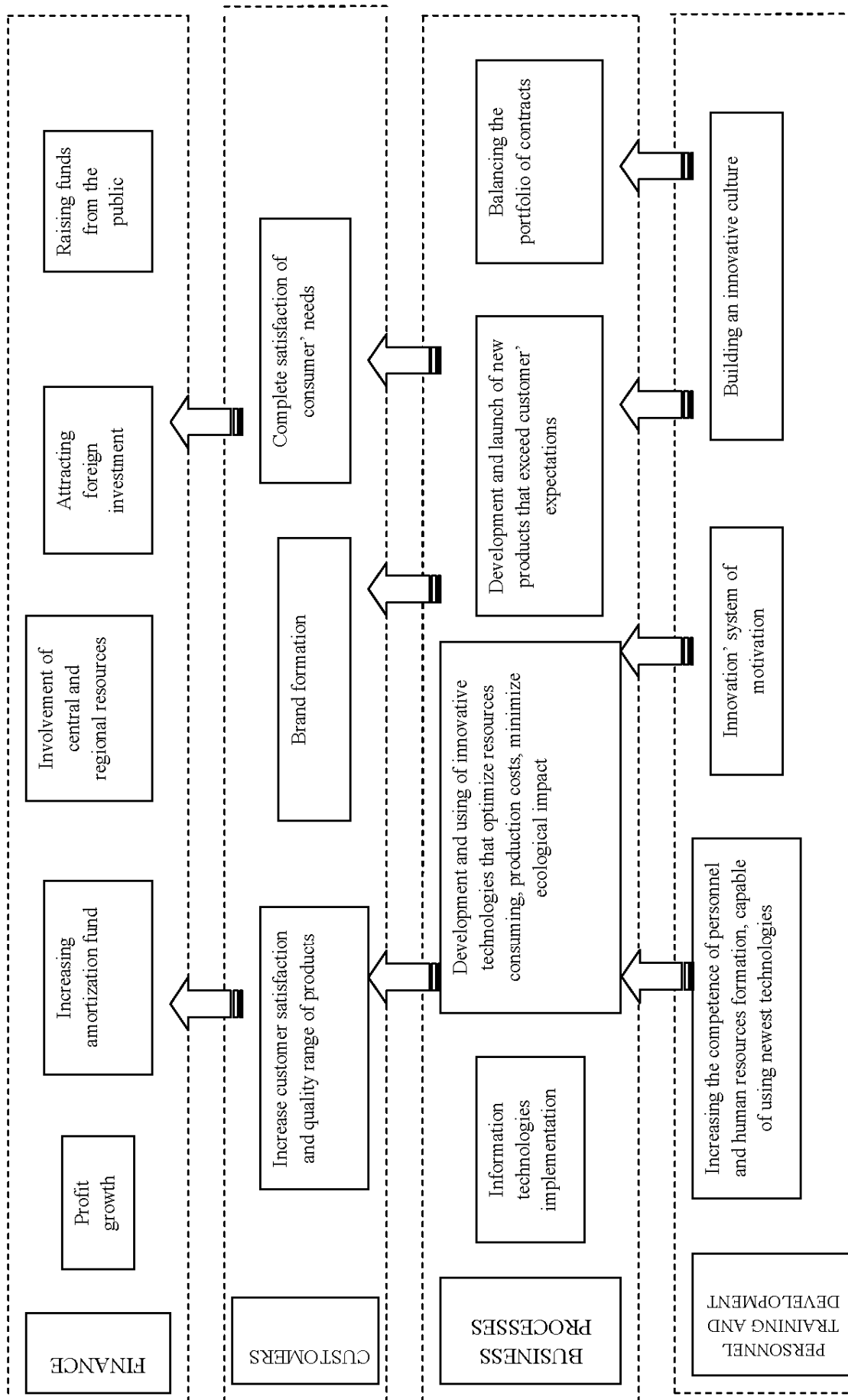


Fig. 2. Strategy map of financing the projects of modernization of national enterprises

Four of these blocks are linked together by strategic causal chain – the qualified employees, using the developed infrastructure (information systems, equipment, technology), provide quality of business processes meet the requires of the system. Well-established business processes (low percentage of defects, fast processing and customer' order fulfillment) satisfy and ensure customer' loyalty, achieve strong competitive advantage and success on the market. Marketing success of the company, in turn, is the basis of its financial success. In our case, the interaction between blocks is considered in the following order. The funds invested in training and development will form a culture of innovation, improve the competence of personnel who will be able to develop and implement technical, technological, marketing, management innovation.

Innovations implementation will facilitate the equipment upgrades, resources using. It will reduce costs and improve productivity. Technical and technological innovation will make it possible to produce new products that will meet customer' expectations and will improve the satisfaction of their needs, which has a positive impact on improving the competitiveness of enterprises, the formation of its brand. Complex satisfaction of the customer' needs facilitate the increasing of profit, enlargement of amortization fund. Part of the modernization funds should be targeted for modernization that would boost reproducible processes of material-technical base. In this context, the benefits must be granted the use of accelerated modernization with clearly defined objects of modernization a by a particular company.

The brand formation will increase the investment attractiveness of enterprises. It will attract the household deposits, central and regional resources, and foreign investments. To measure the prospect "finance" along with traditional sources of financing innovation as the company profits increasing, amortization fund enlargement is proposed also to involve regional and centralized resources as a powerful source in Ukraine today; (according to expert information, they constitute 60–70 billion dollars). The prospect "clients" includes information on improving customer satisfaction and quality range of the products, complex customer satisfaction, creating a positive company image. Perspective "business processes" measures the efficiency of operations in the enterprise business processes and is characterized by the following issues: the introduction of information technologies, the development and release of new products through the application of innovative technologies, retaining existing customers and attracting new customers conformity to product requirements and ability to exceed their expectations, balancing portfolio orders of the resources consuming, optimization and reduction of production costs, minimizing environmental impact. The prospect "training and development" allows you to access the increasing of the personnel' competence, fostering innovations, creating the culture of innovation and human potential of the company.

Personnel support of the enterprises that provide modernization. The implementation of the modernization process of industrial enterprises necessitates providing them with high qualification specialists, among them a prominent place is allotted to the managers, first of all, engineers and technical workers, highly qualified specialists.

In many cases, modernization of enterprises can significantly affect the formation of the structure of it personnel. In such cases, preference should be given to the employees who are able to solve complex problems systematically raising the technical and organizational level of production based on new technologies, make organizing the production of high quality products, competitive on the domestic and foreign markets

For the development and implementation of modernization projects it is necessary along with qualified workers to involve, young graduated professionals, who have sufficient knowledge to solve specific design problems related to improving the technical and technological level of the enterprises and its divisions.

Along with the improvement of personnel support that provide modernization process it is extremely important to use modern, sophisticated mechanisms of material and moral motivation incentives given the professional level of employees and their contribution to the achievement of concrete results in the implementation of modernization projects in the enterprises.

The industrial experience of the USA, Germany, Japan, France, Canada, suggests that an important factor in accelerating the modernization is strong development of the national innovation infrastructure.

Modern innovation infrastructure is a pull of organizations that provide the following activities: the development and introduction of new technologies in production and non-production areas, organize the production of innovative content, creating a favorable business environment to attract investment, create new working places with high-end equipment. However, such structures should have the appropriate organizational and production orientation, that means to be focused on accelerating innovation processes in enterprises that are in the sphere of influence on innovation infrastructure organizations take a leading role in solving economic and social problems, produce or can produce goods and provide high quality services.

Conclusions

To accelerate the modernization of industrial enterprises in conceptual development is important to focus on the implementation of activities aimed at concentration of investment resources and its rational use in the implementation of the relevant programs and projects. It necessitates the use of an appropriate mechanism. The basis of this mechanism is program budgeting method. Application of this method in the management of programs and projects of modernization will be an important tool for the success of its implementation, primarily through the formation of sustainable resources and its effective use, implementation of the clearly defined terms of the measures envisaged programs and projects relevant departments and functional services; establishing individual responsibility for the specific artists perform certain sections (stages) of a program or project.

However, the use of program budgeting method will help coordinate in space and time performance of the functions of the relevant services related businesses directly and indirectly with the modernization of the enterprise, will help reach its goal through the use of modern management mechanism.

Prospects for further research

To accelerate the modernization, increasing efficiency and effectiveness of the project implementation it is necessary to conduct appropriate research. The result must be formulated principles and developed methods for modernization projects evaluating, selection of options, effectiveness.

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