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## ANALYSIS OF PROBLEMS OF INDUSTRIAL ENTERPRISES IN THE CONDITIONS OF TRANSITION TO THE KNOWLEDGE MANAGEMENT

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Russia's entry into the WTO showed a number of problems of the domestic enterprises of an industrial complex that designated need of their detailed studying and definition of the ways for their decision. The great attention is demanded thus by process of strategic planning focused on knowledge management and formation of the self-training organization.

**Purpose.** To analyze development of the industrial enterprises of the Russian Federation, to reveal their general tendencies and development problems. To define and prove the directions of improvement for a control system of the domestic industrial enterprises based on management of knowledge.

**Methodology.** Methods of the system, structural and comparative analysis, deduction and induction are used. Data of bodies of statistics formed information base of research.

**Results.** The analysis of existing position of the industry as whole and main types of productions of light industry is made; problems of the enterprises are revealed; ways and sources of their decision are offered; expected results are defined. As a result, need of development of management of knowledge for the solution of tasks of the modern industry is designated.

**Practical implications.** Materials of research can be useful to heads and managers of different levels of management of the industrial enterprises.

**Keywords:** industrial enterprise, competitive advantages, development strategy, management of knowledge, organizational knowledge, self-training organization.

## **АНАЛИЗ ПРОБЛЕМ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ В УСЛОВИЯХ ПЕРЕХОДА К МЕНЕДЖМЕНТУ ЗНАНИЙ**

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Вхождение России в ВТО проявило ряд проблем отечественных предприятий промышленного комплекса, что обозначило необходимость детального их изучения и определения путей их решения. Большого внимания при этом требует процесс стратегического планирования ориентированный на менеджмент знаний и формирование самообучающейся организации.

**Цель.** Проанализировать развитие предприятий промышленности РФ, выявить их общие тенденции и проблемы развития. Определить и обосновать направления совершенствования системы управления отечественных промышленных предприятий, основанной на менеджменте знаний.

**Метод или методология проведения работы.** Использованы методы системного, структурного и сравнительного анализа, дедукции и индукции. Информационной базой исследования послужили данные органов статистики.

**Результаты.** Выполнен анализ существующего положения промышленности в целом и основных видов производств легкой промышленности; выявлены проблемы предприятий; предложены пути и источники их решения; определены ожидаемые результаты. В итоге, обозначена необходимость развития менеджмента знаний для решения задач современной промышленности.

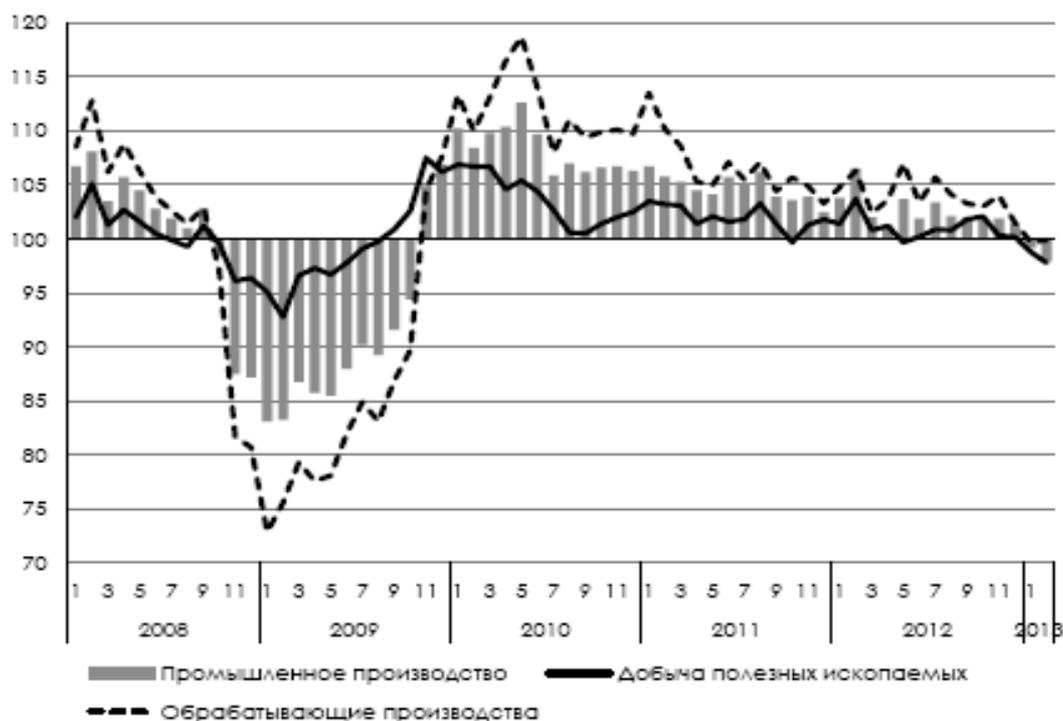
**Область применения результатов.** Материалы исследования могут быть полезны руководителям и менеджерам разных уровней управления промышленных предприятий.

**Ключевые слова:** промышленное предприятие, конкурентные преимущества, стратегия развития, менеджмент знаний, организационные знания, самообучающаяся организация.

At present the development strategy of the domestic industrial enterprises is targeted to maintaining the market positions, retention of the earlier achieved performance level and further development of activities on the innovative and competitive basis. Complicated modern conditions of the external environment functioning, namely, uncertainty, variability and dynamism do not allow industrial enterprises to achieve sustainable positive dynamics in these areas.

Let's consider the basic problems of the industrial enterprises of Russia. According to the data provided by Rosstat, materials of JSC Roslegprom and market research survey undertaken by the Center of the Market Research of the Institute of Statistical Studies and Economics of Knowledge (ISIEZ/ISSEK) NIU/NRU VshE/HSE (National Research University - Higher School of Economics), conducted in large and medium-sized Russian enterprises in 2012 in the industry the manufacturing and demand situations deteriorated. The volume of industrial production in 2012 continued to increase, however the growth was smaller than in the previous year by 2.6 % compared to 4.7% (in 2010 the growth was 8.2%) (Fig. 1) [2]. The growth rates, as in the previous year, almost every quarter were falling [3].

Russian industry research also showed that the share of enterprises that internal funds of which reduced (17%), is higher than the share of those experiencing growth (13%). In terms of profit the prevalence of negative assessments was noted (22 and 17% respectively). The key negative factor is the debt crisis in the euro zone, which has a negative impact on the trade capacity of the export-oriented companies. Also the fiscal problems (high level of taxation – 45%, funding gap – 39%) and lack of demand for the manufactured products (42%) remain to be production limiting factors. Low labor productivity and uncompetitiveness of Russian products within the world market (aggravating with the accession of Russia into the WTO) have negative impact on the business climate [1, 3].



**Fig. 1.** Rates of industrial production by type of economic activity in 2009–2013, % to the corresponding period of the previous year [2]

Analyzing more profoundly the performance results of industrial enterprises in our country we come to conclusion that situation varies from one industry to another. Among those industries the most competitive in the world market are the science-based ones, such as: aviation, aerospace, instrument engineering, shipbuilding, certain sub-branches of the defense industry (VPK) and Fuel & Energy Complex (TEK). The majority of the domestic engineering products are uncompetitive, as evidenced by the low share of finished machinery and equipment in domestic export trade (7-9%). In its turn Ministry of Economic Development forecasts for 2013 production volumes increase by 3.5 % due to share of automotive, engineering and woodworking industries.

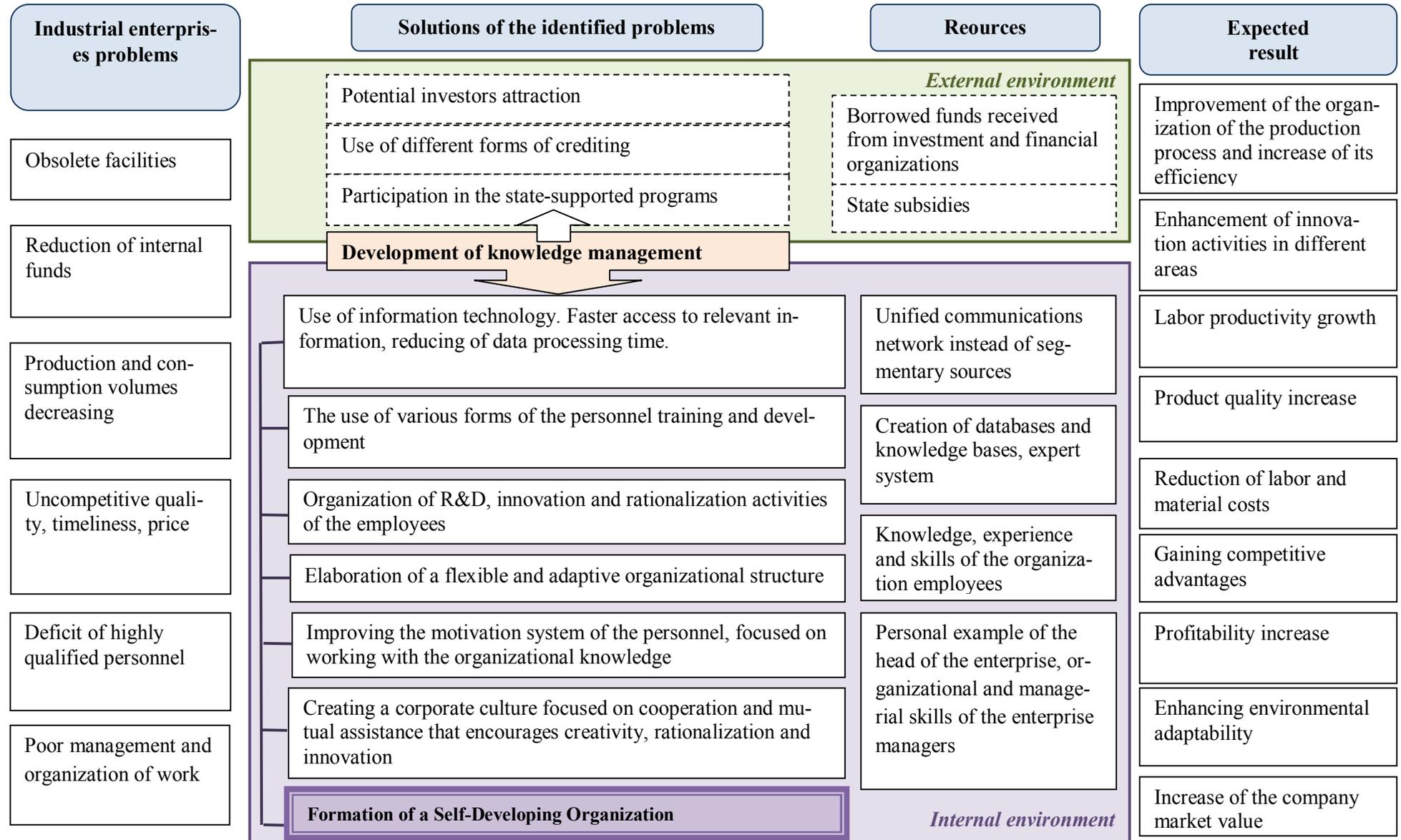
It should be noted that an important multi-sector of the Russian economy that maintains independent and sovereign industrial power status of the country as well strengthening of its defense capability, economic, social and intellectual security is

the light industry [7]. It involves about 29 thousand enterprises and organizations, 70% of the production is accounted for by the 300 largest enterprises.

Evaluating the results of the light industry enterprises performance the main problems of this economic sector can be pointed out. The causes for the decline of production of natural fiber fabrics are the shortage of raw materials and poor quality thereof along with increase of prices for the high-quality raw materials on the world market. Output of garments is also declining due to increasing of the import share in sales. Raw materials price increase along costs for energy resources escalation lead to profitability decrease in the textile and clothing industry. As a result, the share of loss-making enterprises is increasing. Also light industry enterprises continue to suffer a shortage of funding. For many manufacturers the proposed credit interest rate is quite high, therefore they refuse to get a loan.

To resume the issue related to the problems of the domestic industry as a whole it should be noted that the strongest points of Russian economy in terms of global competitiveness are the scientific and technical capacity as well as human resources, and the weakest ones are the role of the state in the economy, enterprise management system, credit and finance sphere [1,2,3]. Further prospects of domestic enterprises development in the conditions of strengthening globalization process, increasing global competition and Russia's accession to the WTO should be based on a new strategic approach to functioning. This approach should be oriented to the development and implementation of efficient techniques and technologies, and to increase the competitiveness of the industries. The ability to gain a competitive advantage and to maintain it largely depends on the enterprise's strategy, which should make provision of creation of value for the customer, his satisfaction that in the long term provides achievement of the same or even greater financial result. In order to survive in the new global economic environment it is necessary to reconsider radically the existing development strategies and to realize the benefits of scientific and technological progress and human resources. It is this very approach that is a key element of sustainable development in Russia.

In order to develop a long-term strategy of Russian industrial enterprises and to determine its chief aims, in our opinion, it is necessary to start with the problems common to most organizations, to understand clearly the ways and sources which can lead to the solution of such problems, to focus on the expected result (Fig. 2).



**Fig. 2.** Significance of knowledge management development to meet the challenges of modern industry

As shown in Fig. 2, the ways of solving the problems identified and the sources required for this task can refer to both external and internal environment of the organization. The problems associated with management of technical development of production and with reduction of internal funds are difficult to solve for the enterprises being on their own, without engaging borrowed funds and state-supported funds. However, as practice and analysts' forecasts show, the amount of government subsidies for today is insignificant and it will continue to decline steadily, and in order to get loans an enterprise needs to prove its prospective viability, financial sustainability and competitiveness (which is difficult for most organizations). At that, the key problem of enterprises is exactly uncompetitiveness of their products and services by contrast with the best companies from developed countries of the world, which in turn reflects poor management of organization and shortage of highly qualified personnel. Therefore, the number of enterprises that get outside financial assistance is limited. For this reason the necessity of enterprises to use their internal resources by improving the management system intended to ensure the efficient use of intellectual resources becomes obvious. According to the statement of P. Drucker most resources are not specific: capital, equipment, material values - can not be used to distinguish one business from another in its innermost essence, the most important resource distinguishing business and giving decisive competitive edge is the specific production and management knowledge used in it [4]. Therefore, at the contemporary stage, given the fact that formation of the new economy is taking place under conditions of the increasing role of information and knowledge as the determinants of economic growth of an enterprise, it becomes important to develop such direction of management as the management of organizational knowledge. The goal of knowledge management in the company is to make knowledge a key strategic resource, to ensure the growth of the company value by means of formation of a sustainable difficult-to-reproduce competitive advantage.

Knowledge management development is based on the use of information technology to speed up the information exchange process, to significantly increase the

volume of information and to ensure its availability, while also improving the forms of its presentation. Thus, it is important to create databases and knowledge bases, expert system which will serve not only as sources of information and knowledge but also as tools of sharing the latter. This ensures timely introduction of new knowledge into practice, promotes new ideas in the process of development and design of products, and increase product competitiveness. Also one of the main trends in knowledge management strategy is organizational learning which implies formation of the enterprise system aimed not only at retrieval, accumulation, and dissemination of the existing knowledge but also creation of new by means of inclusion of every single employee in the continuous process of personal and organizational self-renewal through active interaction with the environment. This eliminates shortage of highly skilled professionals, managers, operational and non-operational working personnel in all production stages, influences positively on the improvement of product quality and growth of labor productivity. The effectiveness of knowledge management also depends on the improvement of the enterprise organizational structure, which affects the interaction between the employees and determines the rules of their communication. This enhances the quality of organization management and ensures adaptability of the enterprise to the external environmental conditions. Acceleration of the processes of knowledge sharing becomes possible due to a well-formed system of the personnel motivation which should implicate stimulation of active participation in the work with knowledge and its dissemination, which ultimately results in increase of innovation activities, as well as in achieving the best quality of production. High level and transparency of corporate culture also focused on the conditions of knowledge management promote mutual support, cooperation, creativity and constructive relationship, i.e. creation of favorable environment for transformation and implementation of new knowledge. However, creation, increment of the organization knowledge and their management can be considered (a) powerful competitive advantage only in an organization aimed at continuous development of business. And the investments in creation and use of knowledge should be focused on long-term benefits and be di-

rected to achievement of the strategic objectives of a particular business, the company as a whole. Creating an effective knowledge management system at enterprises basing on the use of information technology, organizational learning, improving the organization structure, incentive system, organizational culture in the conditions of new economy can ensure formation and development of a self-developing organization, which at various levels is able to structure, formalize and create knowledge about the company and its environment.

The expected result of the principles of knowledge management observance is the achievement of the goals and solution of both strategic (increase adaptability, the market value of the organization, etc.) and operational management (growth of labor productivity, product profitability, profit, etc.) tasks. Thus, adherence to the approach based on knowledge management allows to organize labor process and sharing of valuable knowledge (from the viewpoint of organization) and to ensure its practical application, increases innovation activity, finally resulting in enhancement of the company competitiveness, profitability and market value.

Let's consider some examples of the effective use of the approach based on knowledge management by Russian enterprises. Today in every regional division of Gazprom, JSC there is an information system (provided by the IBS Company), providing the opportunity to automate the processing of information flows. Even back in 2003 management of Severstal, JSC proclaimed knowledge and professional experience of its staff the main value. The Corporate University developed and introduced the corporate standard "Knowledge Management", which identifies and describes the basic resources and instruments for knowledge management: unified language, knowledge base and information storage, means of communication and teamwork, corporate communities. The most important resource is the Knowledge Management System, which helps to create a unified culture of conducting business, improve the efficiency and competitiveness of the company. In 2008 LUKOIL, OJSC started the project "Corporate System of Knowledge Management", which aims to build a flexible system of fast and efficient exchange of information (experience) on

production issues, to provide opportunities at all levels and in all divisions have the necessary, sufficient and advanced knowledge for productive work. [6]. The Russian company “Firma Tekhresurs” (an enterprise actively operating in the electrotechnical market) divided the program of knowledge system implementation into several stages: 1) creation (update) of charts scopes of duties; 2) inventory of competencies; 3) identification of needs for training and development; 4) choice of education methods and forms; 5) scheduling and budgeting of training. Smaller companies begin to address the issues of ideas and experience of their employees accumulation as well. For instance, the Bystrov Company began the implementation of knowledge management with structuring information flows, revealing the most popular information resources, and optimizing the technology of data storage and use. The company web portal contains intracorporate reports and analyzes, as well as the information gathered from the external resources: articles about the market, about the company published in different newspapers and magazines. The company is an active user of MBD (Master of Business Dynamic) system. MBD enables to manage the dynamics of the business through the introduction of extremely simple but very well systematized tools - daily, weekly, quarterly, semi-annual and annual meetings of all managers [5].

It can be concluded that among the Russian companies only partial adherence to the principles of knowledge management is evident, still, as of yet, this is within the powers of economically strong enterprises only. The unified system of knowledge management has not yet been built. The reason for this is lack of methods and management techniques to introduce the concept of “knowledge management” into the practice of domestic industrial enterprises. Consequently, there is an urgent need for development of such methods and adaptation of the latest management models practiced around the world to Russian business environment.

Thus, the approach based on the knowledge management should be at the heart of the strategy for development of Russian industrial enterprises which intend to win the competition. Absence of models for organization knowledge management or use

of models with certain disadvantageous features hinder the development of domestic enterprises and slow down the process of efficiency improvement of the production and business activities at such enterprises. Knowledge management as a tool of modern management allows within a short time to achieve real economic effect due to the relatively simple implementation mechanisms, and knowledge management system in a company is a powerful tool for advanced development.

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