

## **ECONOMICS AND MANAGEMENT OF MANUFACTURING PRODUCTION ENTERPRISES**

**Abstract.** *Today, in the era of post-industrial development of the world economy, the sphere of material production undergoes significant changes in scale related to the complete replacement of production methods and technologies; there is a change in fundamental concepts that justify the methods of organizing production and managing industrial enterprises. The cumbersome and wasteful industrial production of mass consumption goods is rapidly being supplanted by a new concept of in-line production of products to order, called "lean production." It allows you to unite the efforts of all employees of the enterprise, from top managers to operators of automatic lines and suppliers of components, to combine them into a single integrated whole - a flexible production system that can respond to market demand in a timely and adequate manner, as well as repeatedly increase labor productivity and output volumes of goods in existing production areas, improve their quality, reduce energy intensity and manufacturing cost.*

**Keywords:** *production enterprises, technology, global market, industrial world, machine-building, production system.*

Each stage of the development of society corresponds to a certain way of organizing material production and managing the economy, the effectiveness of which is determined by the level of development of technology, production technologies, and socio-economic relations, which allow you to most rationally combine in time and space the resources available to society (people, means and labor items) for the production of necessary goods and services. To date, enough knowledge has been accumulated in this area of substantive activity, which is reflected in the numerous works of several generations of scientists and constitutes the fundamental provisions of the classical theory and practice of organizing production.

Nevertheless, the historical experience of the development of industry objectively shows that in the conditions of changing public formations, continuous improvement of goods and their manufacturing technologies, the interests of practice require comprehensive analysis and revision of established scientific views, and experience in order to find more effective models for organizing production and managing enterprises. Technological innovations and the subsequent leaps in economic development arise in the presence of contradictions in society that cannot be resolved by familiar, well-mastered means. This is also true for high-tech engineering production - an important strategic component of the innovative economy of the future [1].

Today, in the realities of the twenty-first century, it becomes clear that the traditional system of industrial production is unable to ensure the sustainable and harmonious development of the national and world economies. Mass/large-scale machine-building production, designed for stable production of a narrow range of products, outlives itself in conditions of growing competition in the domestic and global markets.

The preservation of knowledge-intensive engineering requires the implementation of an innovative strategy for the development of adaptive/reconfigurable production systems, with a high level of adaptability (flexibility of structure and layout) of machine systems to changing market demand, allowing the production of a wide range of complex technical products with a constantly updated model range. The use of new generation machine systems with an automatically reconfigurable structure makes it possible to widely use the parallel organization of work at various stages and stages of production, which significantly

increases the efficiency of the machine-building enterprise, but at the same time requires accurate coordination of the interaction of various elements of the production system [2].

There was an objective need to review approaches to the organization and management of industries and enterprises of the engineering complex since contradictions are formed between the changing content of economic activities and the lagging pace of improvement in the methods and tools of management of enterprises, associations, and associations.

The approaches to the organization of production and management of economic entities in industry developed during the period of the policy economy have almost completely lost their effectiveness in the market, and new ones are still being formed. The task of creating a fundamentally new theoretical and methodological basis of production management, improving existing and developing innovative mechanisms, methods and technologies of design and effective/optimal regulation of technological processes that allow improving the quality of organization and efficiency of industrial enterprises, ultimately determining the results of economic reforms, becomes especially urgent. The relevance of this problem is confirmed by the rapid development abroad of Continuous Acquisition & Life cycle Support/CALS - technologies, which involve the continuous improvement of products and technologies for their manufacture, as well as the introduction of new organizational management methods and information support technologies for design and operational management solutions.

These technologies are mainly focused on flexible high-tech production with extensive use of automatic machine systems and complex technological processes. In this regard, since the 1990s, the work on the creation of integrated adaptive production systems and intelligent next-generation control technologies (Reconfigurable/Intelligent Manufacturing Systems RMS/IMS) has dominated the scientific development of the problems of organizing production and managing industrial enterprises [3].

This area of research received a wide global resonance in the 1990s in response to the real needs of industry and is now being carried out by large international consortia at the initiative of the governments of leading industrialized countries: the EU, USA, Canada, Japan, Korea, Australia, Switzerland, in order to ensure the survival and increase the competitiveness of industrial enterprises in world markets and, as a result, the sustainable development of the national economy. On this issue, major international forums and conferences are regularly held on the issues of increasing technological flexibility and intellectualization of the existing in-line robotic production and the creation in the future, at the junction of industrial and information technologies, of a new generation of reconfigurable production systems with parallel technological processes.

In the traditional/classical sense, centralized production control is a continuous process of the development by the planning system (subject of management) of control actions, which are transmitted through information communication channels to process areas (control objects) to ensure their coordinated operation in a given mode in accordance with the production program (target function). To this end, when orders are received, the Enterprise Planning Service draws up work schedules for a specific period (day/week/month) for all stages of the production process (procurement, parts and assemblies, product assembly) using an automated planning system that sends instructions to each production site on what needs to be done in the upcoming planning period. Since the production process is usually not exactly in accordance with the plan, production progress is monitored by means of production site reports on actual execution of planned tasks, from which the plan is adjusted and instructions/shift tasks are retransmitted to production sites.

Industrial production, based on the continuous production of the same type of products with the help of high-performance equipment and mechanized flow lines, ensured a significant increase in labor productivity and output volumes compared to the artisanal

method, which made it possible to obtain a tremendous economic effect, reduce the cost of goods and make them available for mass consumption. However, the subsequent saturation of markets reduced the usefulness of standard products for buyers. As a result, demand periodically fluctuated, overproduction arose, leading to the stop of most industrial enterprises and the emergence of cyclical recessions in the world economy of the 1930-1960s [4].

In order to eliminate their consequences and intensify industrial production, the governments of industrialized countries supported private corporations in the form of subsidies and government orders, most of which were the production of food and military equipment for export. The concentration of weapons in certain geopolitical regions provoked military conflicts, which, as a result of the redistribution of spheres of influence, facilitated access to world reserves of cheap energy resources and raw materials, the inflow of which, as a payment for the export of goods, equipment and technologies, ensured a rapid growth in production, employment and, accordingly, relieved social tension within industrialized countries.

The development of the American and world economy, international trade relations, the division of labor and industrial cooperation between the developed countries of the New and Old World contributed to the improvement of the mass production system, including the automotive industry. The presence of global competitive (geopolitical) advantages in the USA, England and other European countries ensured the access of these states to the energy, raw materials and labor resources of developing countries with commodity economies, which gave a new impetus to the growth of the industrial economy and brought it to a new round of technological development in the 1970-1980s [4].

An analysis of the history of the development of the industrial world indicates the following facts and circumstances. Growth of national wealth and per capita income of developed countries, emergence and capitalization of transnational companies (as a rule, at the expense of the interests of other states) led to the emergence of the so-called tertiary sector of the world economy and middle-class people serving its interests - politicians, entrepreneurs, representatives of free professions (lawyers, financiers, scientists, journalists, etc.) - easily and quickly rich in commercialization of technological innovations and financial and intermediary operations carried out by the ruling elites of these countries on a global scale.

The first blow to his automotive empire was dealt by the American engineering company General Motors (GM), led by A. Sloan - a man with good education and more progressive ideas about corporate governance of huge enterprises, the emergence of which became possible and necessary as a result of the development of industrial technologies of industrial production - as well as what and how it was necessary to produce, in order to succeed in the then competitive automotive market. Given the changing economic realities that Ford persistently did not want to recognize, Sloan expanded the GM product line to five different models, from the cheapest (Chevrolet) to the most expensive (Cadillac); they had to meet the needs of most potential buyers of different ages with different levels of income and education. The next blow was dealt by European automakers, which began to use similar methods of mass production, creating competition for the American automotive industry. Since 1955, the market share of imports began to gradually grow, depriving American manufacturers of leading positions and thereby marking the birth of the era of mass production of rapidly updated machine models in conditions of fierce competition.

The main reason why the Big Three American companies (Ford Motor Co., General Motors Corp., and Chrysler Corp.) began to lose their leading position in the global automotive market in the 1960s, consisted in the fact that mass production technology was mastered in many countries of the world. G. Ford in the 1930s, driven by paternalist motives, openly demonstrated to foreign industrialists aspects of his mass production system at his factories in America (Highland Park) and Europe (Dagenham, England;

Cologne, Germany), including Andre Citroen, Louis Renault, Giovanni Agnelli (FIAT), Herbert Austin and William Morris (Maurice and MG, England), etc. [5].

The stagnation of industrial production in the developed countries of the West could continue indefinitely if in the East, in Japan, in completely different economic conditions, a national auto industry did not arise, in the bowels of which a new method of production was created, fundamentally different from the American mass-production system and many times superior by efficiency.

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## МОТИВАЦИЯ И СТИМУЛИРОВАНИЕ ПЕРСОНАЛА

**Аннотация.** *Мотивация и стимулирование персонала могут рассматриваться как процесс удовлетворения потребностей сотрудников и их, связанных с работой ожиданий. При этом цели персонала согласуются с целями и задачами организации. Одновременно с этим, мотивация и стимулирование понимаются и как комплекс мер, применяемых со стороны субъекта управления для повышения эффективности трудовой деятельности персонала.*

**Ключевые слова:** *мотивация, организация, персонал, рынок, корпоративная культура, потребности, поощрения.*

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## STAFF MOTIVATION AND STIMULATION

**Abstract.** *Personnel motivation and incentives can be considered as a process of meeting the needs of employees and their work-related expectations. Moreover, the goals of the staff are consistent with the goals and objectives of the organization. At the same*