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Development of Private Entrepreneurship in The Digital Economy

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Abstract: The article highlights the fact that the development of industrial sectors in the digital economy is one of the current topical issues, and that the digital economy has broad potential for the development of sectors based on new technologies. It is shown that the relationship between important factors for increasing the economic efficiency of industrial sectors is significant. Formulas for calculating production efficiency and labor productivity indicators are presented to increase the efficiency of industrial enterprises.

Keywords: Digital economy, digital technologies, potential, economic efficiency, IoT technologies, artificial intelligence, cybersecurity, production efficiency, labor productivity, strategic planning, industrial strategy, clustering theory, integrated approach.

Introduction: In the digital economy, digital technologies are creating great opportunities to improve the efficiency of industrial sectors, ensure their competitiveness, and support sustainable economic growth. One of the main trends today is the development of industrial sectors.

In the digital economy, the digitization of industrial sectors allows for the automation and increase of production processes. With the application of digital technologies at all stages of production, the use of artificial intelligence and automation tools accelerates production processes and reduces errors due to the human factor. With the help of IoT technologies (IoT (Internet of Things) - expanding the possibilities of data collection, analysis and automation through the digitization of processes within the enterprise), industrial objects and systems are interconnected, data is collected and real-time monitoring is carried out, which allows for more effective management of the production process. This technology reduces the time

and costs of manufacturing complex and customized products. Increasing the economic efficiency of industrial sectors in the digital economy is associated with the following factors:

- Data-driven decision-making - Through Big Data technologies, industrial enterprises will be able to collect production and market data and make quick and accurate decisions based on their analysis.
- Cost optimization - Digital technologies help reduce production costs by ensuring efficient use of resources.
- Supply Chain Optimization - Digital platforms enable efficient management of global and local supply chains, increasing the ability to deliver products faster and more cost-effectively.

LITERATURE REVIEW

Also noteworthy are the works of scientists Salaheddine Soummane, Amro M. Elshurafa, Hatem Alatawi, Frank A. Felder, who conducted scientific research on industrial production and its assessment, and proposed using the national optimization model of Saudi Arabia to assess the consequences of the industrial sector. They determine the cost consequences of shifting fuel consumption, emissions and industrial loads from one season to another without changing industrial electricity tariffs and production levels. O.V. Bakanach and K.V. Gauss consider the issues of increasing industrial potential through the competitiveness of enterprises and the set of all related processes. A.V. Bystrov, A.R. Yesina, V.D. Svirchevsky consider that failures in industrial dynamics are not due to the influence of exogenous factors and random failures, but to problems in the country's industrial development management system. That is, the sectoral structure of the industry is the main factor determining the level of its economic and social development, and the changes observed in the industry.

RESEARCH METHODOLOGY

The digital economy enables the development of industries based on new technologies. This relevance lies in the fact that the concept of Industry 4.0 involves the digitalization of production by introducing digital technologies (IoT, Big Data, cloud computing) into industrial processes. This creates opportunities for high-precision and fast production. By creating digital models of industrial processes, enterprises will be able to simulate real processes and predict and optimize problems in them. Systems based on artificial intelligence will help optimize production processes, improve product quality and increase labor efficiency. In the digital economy, the importance of cybersecurity is increasing, as industrial sectors depend on digital data and systems. The risk of cyberattacks may be high during the activities of industrial enterprises. With the use of digital technologies, databases, systems and operational processes of industrial enterprises must be provided with cybersecurity. Ensuring the uninterrupted operation of systems and protecting digital infrastructure is one of the pressing problems for industrial enterprises. The digital economy is also of great importance in ensuring environmental sustainability in industrial sectors.

Using green technologies and digital approaches:

Waste reduction - Digital technologies allow you to reduce waste by optimizing the production process.

Improving energy efficiency - Effective management of energy resources is achieved through digital control systems, which helps reduce energy consumption.

Achieving sustainable development goals - Digital industrial solutions help businesses comply with environmental sustainability.

In the digital economy, global markets are constantly changing, which forces industrial enterprises to be flexible and competitive. Real-time monitoring of market needs and requirements and rapid response are driving the development of digital technologies. Digital platforms and technologies enhance mutual integration in international markets, making industrial products globally competitive. The relevance of developing industrial sectors in the digital economy is not only related to increasing production efficiency and ensuring economic development, but also to solving pressing problems such as environmental sustainability, technological innovation and cybersecurity. The digitalization of industrial sectors creates new opportunities for enterprises, adapts them to new requirements of the global market and increases competitiveness.

It is necessary to develop cooperation between the state and the private sector in the introduction of innovative technologies. The state should provide financial assistance to innovative projects and develop competitive industrial sectors by supporting startup projects. To solve market problems, it is necessary to strengthen market research and marketing strategies. The following measures can be effective in this regard. It is necessary to develop strategies for entering new markets for industrial products and strengthen marketing. The international competitiveness of industrial products can be increased by expanding export markets. It is necessary to regularly study market requirements and optimize the production process of products that meet consumer needs. It is necessary to take into account environmental problems in the

development of industrial sectors. The following measures can be taken to solve this. It is necessary to use environmentally friendly technologies in industrial enterprises and bring production processes into line with environmental safety standards. It is important to introduce energy-saving technologies in industrial enterprises to reduce energy consumption and increase energy efficiency. The state should expand support programs for the development of industrial sectors. It is necessary to stimulate economic growth by implementing the state's industrial development strategies and optimizing them at the regional level.

Economic models, analyses and formulae used in the scientific and methodological foundations of developing methods for the development of industrial sectors are used to increase the efficiency of industrial enterprises, introduce innovations and ensure economic stability. Below are some formulas widely used in the development of methods for the development of industrial sectors and their scientific and methodological foundations.

To improve the efficiency of industrial enterprises, production efficiency and resource utilization indicators are calculated. These formulas are used to assess the production volume of enterprises, the efficiency of resource utilization, and the costs of product production.

Production efficiency (P): P=Y/I

where: P - production efficiency; Y - volume of products produced; I - total resources used in production (labor, materials, time, etc.).

Labor productivity (L): L=Y/T

where: L - labor productivity; Y - volume of output; T - time spent on labor or the total number of workers.

The scientific and methodological foundations for the development of industrial sectors are a set of concepts based on extensive scientific research, analysis and experience, which help ensure the sustainable development of industrial sectors. These foundations are based on scientific theories, methods of introducing innovative technologies, economic models and strategic approaches. The scientific and methodological foundations of the development of industrial sectors are presented below:

1. Scientific theories and conceptual approaches;
2. Economic and statistical analyses;
3. Innovative and technological approaches;
4. Industrial strategy and public policy;
5. Strategic planning and management methods.

Several economic and industrial theories are considered as the basis for the development of industrial sectors. These theories are used to ensure the sustainable and competitive development of industrial sectors:

- Industrial Economics Theory: The theoretical foundations of industrial economics are aimed at increasing economic efficiency, ensuring the proper use of resources, and ensuring the competitiveness of industrial sectors. This theory helps to determine methods for optimizing production costs and allocating resources.
- Innovation-based development theory: The theory of innovation-based economy and industrial development is based on the widespread introduction of innovations in industrial sectors and the development of innovative technologies. In this theory, innovations are considered an important factor in increasing production efficiency and ensuring the competitiveness of products.
- Cluster Theory: Porter's cluster theory provides for increased competitiveness through synergy between closely related enterprises and organizations in the regional development of industrial sectors. Clustering helps to specialize industries and strengthen regional economies.

CONCLUSION

The scientific and methodological justification for the development of industrial sectors in the digital economy is based on economic diversification, increasing competitiveness, technological innovation, social protection, environmental sustainability and international cooperation. If these methodologies are implemented with an integrated approach, long-term stability and sustainable development of the national economy will be ensured. The number of manufacturing enterprises that ensure social stability will increase and the well-being of the population will increase. Innovative and technological progress is one of the main factors of economic stability, which increases the competitiveness of the industry. International trade and investment make a significant contribution to economic stability. Sustainable development of the industry is facilitated by attracting private investment.

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