Definition of factors limiting the growth of industrial production

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Abstract. Issues related to the formation of new types of industrial production have been relevant in recent years, since it is industry that creates new technologies, products, provides human life and the existence of the state, in this regard, the authors of the study present this work. The transition of the industrial structure from one stage to another allows us to offer new scientific and practical solutions that ensure the development of industrial potential. The work revealed that industrial production in Russia is in stagnation and there are no changes in this area of activity. Based on the obtained data, a factor model was proposed, which made it possible to identify factors limiting the development of industrial production.

1. Introduction

The development of industry was dictated by the need for mass production of consumer goods, which ensured the stability of the state and the satisfaction of the inhabitants of this country [1]. In the countries of the world, the emergence of industry was based on the transition from manual labor to machine production, while reducing costs caused by staff maintenance, payment of utilities and the scale of the territory in which the production was located [2-3]. In foreign countries, there was a rapid transition from one technological structure to another, in Russia the development proceeded at a slower pace, and its development was caused by the electrification of Russia [4].

However, not all industrial enterprises today have steady growth, some sectors experience significant problems that are associated with a lack of resources, lack of new technologies, reduced competitiveness of enterprises and goods, and others [5-7]. All these factors are caused by various economic and global problems, ultimately negatively affecting the entire industrial complex. We believe that in order to ensure the stable functioning of the industrial complex, it is necessary to conduct a study aimed at studying the industrial complex of Russia, as well as form factors that limit and prevent the industrial complex from developing and ensuring the competitiveness of goods and services [8-9].
2. Materials and methods
The purpose of the work is to form factors limiting the growth of industrial production. The research objectives are as follows:

- Investigate the performance of the industrial complex;
- Suggest factors limiting the growth of the industrial complex.

The study was built on the use of scientific methods and information sources, which allowed the authors to formulate recommendations and suggestions in the field of industrial complex development.

3. Results
At present, in the Russian Federation there are almost all types of industrial production, the development of which is due to the presence of internal technical, technological, material and labor potential. In the modern period, the industrial production of Russia is privately owned. In the mining sector, the share of private property is 69.4%, in the manufacturing sector – 59.2%, the type of economic activity is the provision of electricity, gas and steam – 41.7%, water supply and waste – 63.1% (figure 1) [10].

![Figure 1. Forms of ownership of industrial enterprises, as a percentage.](image)

In this regard, industrial enterprises independently determine their own strategies and develop mechanisms for their implementation, in connection with which, it seems relevant to consider the volume of production (figure 2) [10].

It can be seen from the presented figure that the volumes of shipped products are increasing every year for various types of industrial production, however, it should be borne in mind that the growth of indicators is not always associated with an increase in output, but with inflation, diversification of production, due to the imposition of sanctions, an increase in the price of goods and services due to rising production costs, etc.

It is further advisable to assess the situation at industrial enterprises by categories - favorable, satisfactory and unsatisfactory (figure 3) [10].
Figure 2. The total volume of products shipped, billion rubles.

Figure 3. Assessment of the situation at industrial enterprises, as a percentage.

The figure shows that in 2018, more than a third of the leaders of industrial enterprises considered that their enterprises were in satisfactory condition. At the same time, it is worth noting that over the two years under review, the number of managers who consider the favorable condition of their organizations is insignificant, but overall, has increased, a similar situation is observed among managers who consider their companies unsatisfactory [11-14]. At the same time, it is worth noting that the number of organizations that consider their activities favorable, that is, confident in the projected volumes of output, stocks and demand for manufactured products does not exceed 10% for each type of activity [15]. Such a situation indicates a low level of stability of organizations and the possibility of transforming the strategy under the emerging new challenges of the national and world economic situation [16-18]. Of course, in order to overcome these factors, companies are developing measures to reduce and reduce them, however, as can be seen from surveys of company managers, the situation changes extremely rarely and not all measures taken positively affect the production process and, in general, the stability of companies [19].
4. Discussion

The analysis showed that, in general, the volumes of shipped products for various types of activities are increasing, and surveys of managers indicate a satisfactory condition of their production. The growing effect of global financial and economic crises, the sanctions imposed against Russia and trends in the field of innovative and digital development require new actions from companies related to the development of their own production [20-23]. The development of production should be associated with the transition from old technologies to a qualitatively new production, reducing production costs, increasing labor efficiency and the use of automated and digital technologies in the production process [24]. At the same time, in addition to such global trends, there are internal national and corporate problems that began to arise with the transition of the Russian economy to market relations, an increase in the use of technological equipment, the unreservedness of certain state tasks and the lack of proper training for existing and future industrial production. In our opinion, in order to present problems that limit and inhibit production growth, it is necessary to form a factor model (Figure 4).

![Figure 4. Factors limiting production growth in industrial enterprises.](image)

In the presented model, factors limiting production growth are presented in the form of four groups that affect both individual industrial enterprises and the national economy. According to the authors of the study, in order to reduce the negative impact of these factors, it is necessary not only at the corporate level to implement appropriate development programs and strategies, but at the federal level. Activities at the national level should ensure the creation of a favorable investment climate, increase the level of training, suggestions for the development of public-private partnership mechanisms, improve legislation for existing requirements and trends, provide assistance in finding and developing innovative and digital technologies, etc [25].

Thus, management of the factors presented at the corporate and state level will ensure smoothing of constraints and constraining the sustainable development of production at industrial enterprises.
5. Conclusion
Issues related to the development of new activities, especially industrial production, have been relevant in recent years, since it is industry that creates the main added value in the economy, in this regard, the authors of the study present this work. The development of industry has undergone constant changes associated with the sharp development and stagnation of scientific and research activities. The work presented information reflecting the current situation of the industrial complex, according to the results of which, a factor model was formed that constrains the development of the industrial complex.

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