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Development of A Mechanism for Selecting An Innovation Management Strategy in The Digitalization Process

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Abstract: Currently, the level of digitalization of enterprises and organizations in our country varies greatly depending on their scale, industry characteristics, form of ownership, etc. It should be noted that one of the main reasons for the insufficiently rapid implementation of digital transformation processes or their unsuccessful implementation is the lack of management experience in digitalization conditions, as well as the incomplete development of mechanisms for implementing such management. This article examines the directions for developing a mechanism for selecting an innovative management strategy in the digitalization process. It also proposes schemes for applying a trend strategy at industrial enterprises of the Republic of Karakalpakstan and managing industrial enterprises with a strategy of progressive changes and assessing its effectiveness

Keywords: digitization, industry, industrial enterprises, innovative management, strategy, management mechanism, robust management, strategy management, digital transformation, causation

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1. Introduction

The lack of fully developed mechanisms for implementing digital management has led to the development of an important scientific task, namely the development of methodological foundations for the strategic management of enterprises and organizations in the context of digital transformation. As an initial step in solving this problem, it is necessary to analyze the current state of scientific research and practical activities in this area.

Now, based on the above-mentioned considerations, in the industrial complex of the Republic of Karakalpakstan Turning to the issue of developing a mechanism for selecting an innovative management strategy for an industrial enterprise as one of the ways to increase the effectiveness of the organizational and economic mechanism for effective management of innovative activities in the process of digitization, it is necessary to take into account factors that are of great importance in the industrial potential of the region, which are formed according to factors such as the level of socio-economic development of the region, geographical location, cultural and historical values, human resources, natural and climatic conditions. Based on this, we propose to use the following procedure for selecting an innovative management strategy for enterprises operating in the industrial complex of the Republic of Karakalpakstan.

First of all, as we noted above, in order to utilize the existing potential and opportunities of the industry of the Republic of Karakalpakstan, we believe that it is necessary to pay attention to the opportunities of the regional industry in three directions,

in line with the ideas put forward by the government of the republic, including the President of the country, Sh. Mirziyoyev. In this regard, it will be necessary to strive to apply a package of incentives for newly established industrial enterprises, thereby generating additional funds for industrial enterprises, and providing state assistance in creating the necessary infrastructural conditions for the implementation of industrial projects.

In addition, it will be necessary for government bodies to take appropriate measures regarding the allocation of land plots, which is considered one of the biggest problems for industrial enterprises, including newly established ones, like all other economic entities. That is, it is necessary to simplify the actions in the process of allocating land plots, which are currently surrounded by excessive bureaucratic hassles, and to try to facilitate the already complex process of organizing an enterprise. Although the land plots on the territory of the Republic of Karakalpakstan are large and sufficient, a certain order must be observed in this regard. At the same time, when allocating land to such industrial enterprises, it will be necessary to impose certain conditions on entrepreneurs and investors, for example, to make a certain amount of investment, and to implement other similar measures that contribute to the socio-economic development of the region. It is also necessary for the responsible state bodies to develop regulatory and legal frameworks for the allocation of such lands and to introduce a procedure for their application.

Nowadays, digitalization is one of the most important directions in the socio-economic life of modern society, its implementation is associated with the introduction of innovative digital technologies in all areas of business, government agencies and society as a whole. According to S.D. Bodrunov, digitalization is now one of the main trends of economic growth, which is "...associated with the transition of humanity to the next technological and economic stage"[1].

The importance of implementing digitalization processes has been particularly evident in the recent coronavirus pandemic. If we were to describe this process in an analogy, then as one Forbes editor put it, "...in 2020, we were all forced into a digital life, effectively locking us into that life." [2]

Digitalization, like all aspects of social life, has had an impact on the management processes of industrial enterprises. In addition, the management system of industrial enterprises must operate through the implementation of an innovative management strategy in harmony with such directions as the green economy, innovative development, and the knowledge economy, which are currently among the main priorities. Therefore, the development of an innovative management strategy in the context of digitalization, and the selection of the best option for it under existing conditions, has become an important task for the management of industrial enterprises. This is especially acute for the Republic of Karakalpakstan, which is one of the largest regions of the Republic of Uzbekistan, but lags somewhat behind the central regions of our country in terms of industrial development.

Obviously, from the standpoint of innovative development, it is not enough to simply invent something that is suitable for digitizing the innovation management strategy in industrial enterprises - in this regard, it is necessary that this management strategy demonstrate its effectiveness as a result of its implementation, paving the way for strengthening the competitive position of the industrial enterprise in the market. Based on this, it is important to develop a mechanism for correctly selecting the most optimal option for the innovation management strategy in accordance with the existing capabilities and emerging conditions in industrial enterprises. This, in turn, will help prevent the emergence of gaps between innovative and digital development. Including, The Decree of the President of the Republic of Uzbekistan No. PF No. 6079 dated October 5, 2020 "On approval of the "Digital Uzbekistan-2030" strategy and measures for its effective implementation" in paragraph "2.3. Priority areas of development of the digital economy" sets out tasks such as "harmonizing programs for the introduction of modern information technologies at industrial enterprises with programs for the technological re-equipment of these enterprises"[3].

It should be noted that digital processes of industrial management allow to effectively ensure the growth of added value, reduce production costs in the process of increasing labor productivity, ensure high efficiency of industrial products and their competitiveness in world markets. Digital technologies also create the basis for reducing the direct participation of humans in the production process, replacing manual labor with innovative technologies and knowledge. Many researchers and scientists have expressed their views on this issue, and we consider it necessary to focus on some of them.

For example, M.Ya. Veselovsky and N.S. Khoroshavina argue that industry will emerge as a sector that determines the main direction in the economy. Accordingly, they believe that in order to systematically and objectively increase the level of economic security of the country, it is necessary to ensure the economic security of the entire industrial sector and each industrial enterprise in this system, and to develop a strategy for digital management of industry [4].

According to MSOborin, the use of an innovative management strategy in the context of digitalization provides the following advantages [5]:

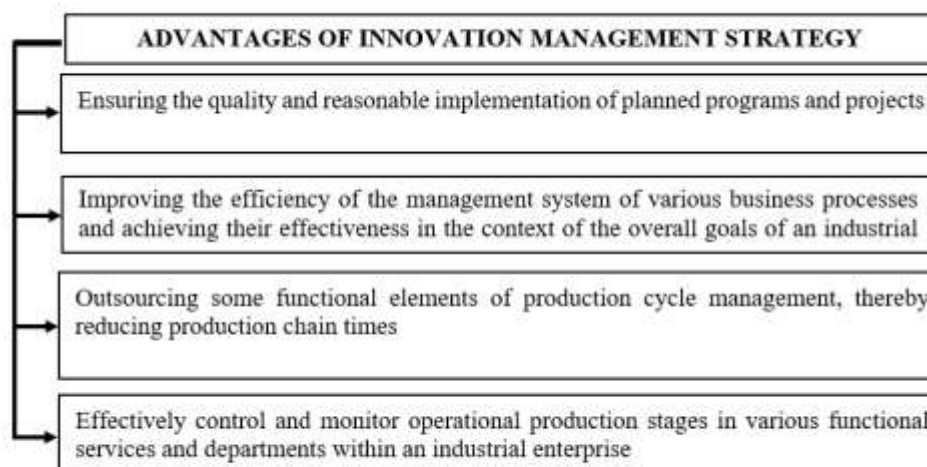


Figure 1. Advantages of applying an innovative management strategy based on digitalization in industrial enterprises[6].

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In general, A.V. Vershinina and E.R. Orlova *The digitalization of management processes in modern enterprises implies the transition to information technology of a holistic model of business processes, management functions, including interactions between production elements*[7].

Today, in the context of the widespread trend of the digital economy, it is becoming clear that the main task of using digital technologies in industrial production is not only to increase the volume of product production, improve product quality while achieving high cost-effectiveness, but also to increase the speed of making necessary management decisions in production activities, and ensure seamless cooperation of the stages of the technological chain in an industrial enterprise.

When developing an innovative management strategy in the process of digitalization of economic activity, we believe that it is also necessary to pay attention to the views of A.G.Boev and A.G.Puzakov, since in this they indicated the main types of strategies of industrial enterprises in the conditions of the development of digitalization processes (Table 1).

Table 1. Main types of strategies of industrial enterprises in the context of digitalization[8]

No.	Strategy type name	Strategy type content	The main idea of the strategy
1	Progressive change strategy	A system of innovative projects, solutions and action plans aimed at gradual	Dynamic development of an industrial enterprise

		transformation, balanced active development and ensuring the market leadership of the industrial complex	through the accelerated introduction of innovative mechanisms, advanced technologies, and effective experimental ideas
2	Trend following strategy	A program of sequential reorganizations and changes aimed at maintaining the competitiveness of the industrial complex at the level of average market values. This strategy involves the introduction of business management tools at industrial enterprises that have been successfully approved by other market participants and have demonstrated their positive characteristics.	Enterprise development through systematic non-radical transformation and continuous adaptation of the enterprise to the market
3	Conflict resolution strategy	An anti-crisis program of restructuring, which provides for a systematic solution to the problems of the industrial complex that create difficulties for the operation of an industrial enterprise and reduce the efficiency of its activities	Accelerate the pace of reorganization and development of an industrial enterprise by resolving accumulated contradictions and disparities, smoothing out "bottlenecks", and synchronizing the work of structural divisions

The list of alternative strategies proposed by the above authors reflects the main directions of development and transformation of industrial enterprises. However, depending on the specific tasks and conditions within the framework of which the management of enterprises of the industrial complex accepts the choice of the type of strategy, it can be additionally supplemented and necessary adjustments made. Also, the presented alternative strategies differ in their basic priorities, but, nevertheless, they do not exclude each other and can be successfully combined in the process of tactical or operational management.

Based on the above, it can be concluded that the development strategy of an industrial enterprise, taking into account digitalization processes, is usually implemented in the form of an innovation strategy, which represents a set of organizational, innovation and management decisions aimed at achieving the current goals of the enterprise and solving the tasks in this regard. A rationally developed and implemented innovation strategy should not only contribute to the development of innovative activities in an industrial enterprise, but also contribute to the organization of a new management system, taking into account the use of digital technologies, and the modernization of production activities. This, in turn, should allow reaching a new level of development and improving competitiveness indicators in the long term.

2. Materials and Methods

As a result of rational economic reforms carried out to develop, renew and modernize our economy, today the development of the digital economy is being achieved. In particular, great importance is attached to the effective implementation of digital technologies in the activities of business entities, the sequence of actions that must be taken in them to implement the digital transformation process. The following methods were used to study the features of digitization of real sector enterprises, the role and importance of using digital technologies. 1. Digital technologies introduced in today's practice were studied and classified into groups based on the goals that enterprises want to achieve. 2. The achievements and possible losses that can be achieved through the introduction of digital technologies were analyzed. 3. In order to properly manage the digital transformation process in enterprises, digital transformation stages were developed. 4. Based on the analysis, digital transformation models were developed.

3. Results and Discussion

Another aspect of the innovative management strategy at industrial enterprises of the Republic of Karakalpakstan should be noted, which is associated with the region's unique advantages in accessing foreign markets. This advantage is the region's ability to directly access the neighboring republics of Kazakhstan and Turkmenistan, and through them to the markets of countries such as Russia and Iran. In the process of using these opportunities, it is necessary to designate customs checkpoints to accelerate the movement of goods exported, equip them with the necessary technical and technological equipment. In addition, it is also important to introduce the use of local raw material resources, which will help ensure the competitiveness of industrial products exported.

Assessing the effectiveness of the results of implementing the innovative management strategy of industrial enterprises of the Republic of Karakalpakstan helps to determine the extent to which the chosen strategy is justified. To do this, during the assessment of the chosen strategy, a number of important indicators of the development of the industrial system are taken into account, including it is necessary to determine the growth indicators of the relative share of innovative products in the total volume of manufactured and sold products, the volume of innovative products produced at an industrial enterprise, investment in the development of innovative products, and the share of employees engaged in research and development. As we know, the determination of these indicators is carried out by analyzing the financial and economic activities of industrial enterprises managed using the selected strategy.(Figure 2).

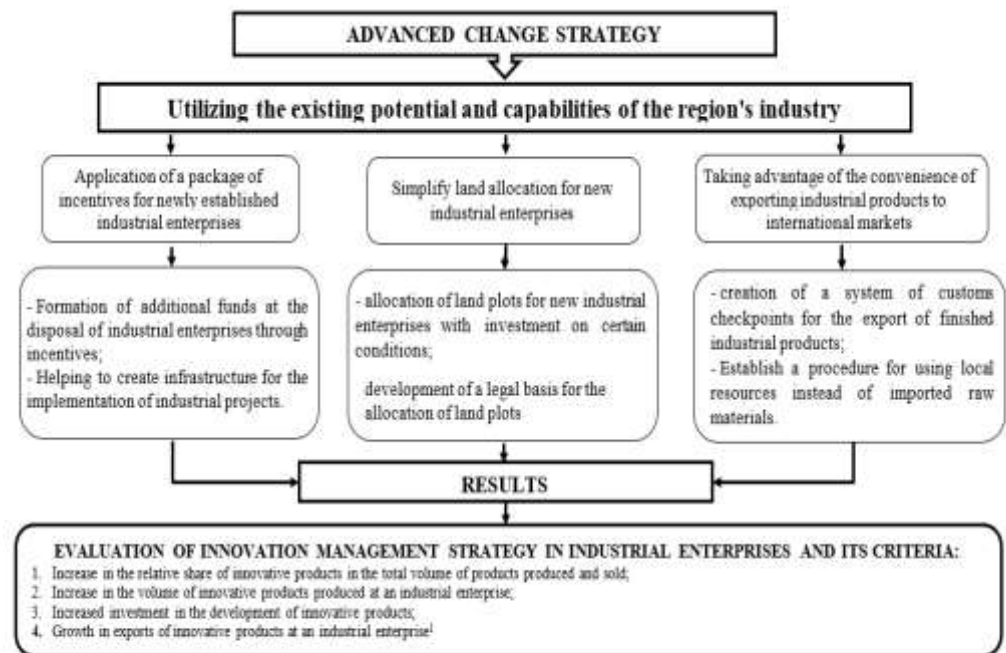


Figure 2. Scheme of management of industrial enterprises of the Republic of Karakalpakstan with a strategy of progressive changes and assessment of its effectiveness[9].

If we pay attention to the trend-following strategy, which is listed in second place among the main types of strategies of industrial enterprises in the context of digitalization in the processes of innovative development of the industrial complex of the Republic of Karakalpakstan (Table 1), then this strategy implies a thorough study of innovative developments of other advanced entities in the market when introducing them into the management processes of industrial enterprises of the region, the use of mechanisms for producing products, providing services or conducting business activities that have been approved by high-tech companies and have shown their new positive aspects in the market. This strategy provides for the simultaneous adaptation of an industrial enterprise to changes taking place in the market, and the processes of systematic innovative transformation. Accordingly, we believe that it is more effective to apply such a strategy to industrial enterprises that do not have significant socio-economic, strategic importance in the regional industry, do not have a large market share, and mainly have a secondary consumer value in the market. In particular, the implementation of the trend-following strategy in enterprises in sectors such as mechanical engineering, consumer goods production, and the building materials industry can show faster results in diversifying the market position of such industrial enterprises.

We propose to apply the trend management strategy in the regional industrial enterprises based on the following scheme (see Figure 3).

The introduction of a trend-following strategy within the framework of an innovative management strategy for enterprises operating in the industrial complex of the Republic of Karakalpakstan is inextricably linked to the issues of strategic management theory, which are addressed in a number of scientific works carried out in the field of modern management today. An analysis of most scientific works devoted to strategic management issues shows that in this case, strategic management is mainly aimed at developing traditional approaches and mechanisms by adapting them to the capabilities of the digital economy.

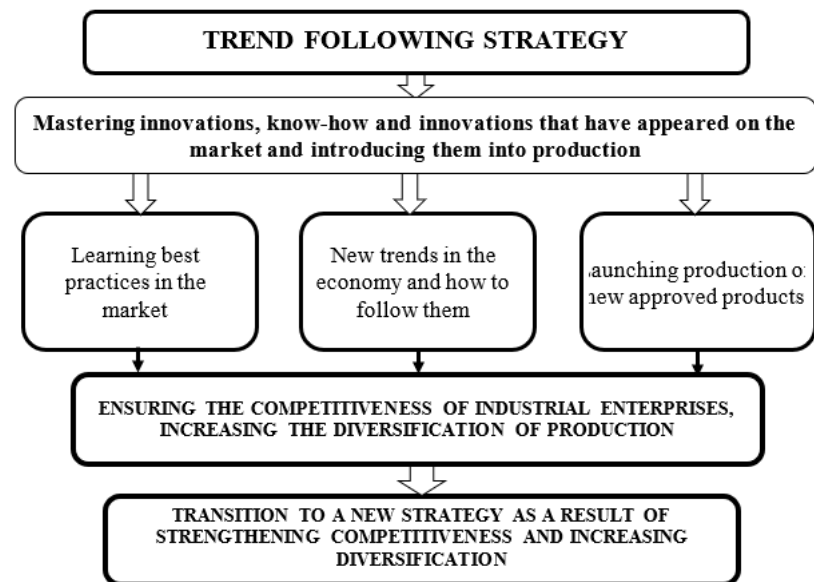


Figure 3. Scheme of applying the trend strategy in industrial enterprises of the Republic of Karakalpakstan[10].

Within the framework of such scientific work, in accordance with traditional approaches, strategic goals are set based on an analysis of the existing conditions and available resources. Depending on which of these factors is decisive, strategic decisions are made through causation and effectuation (efficiency) is characterized by the concepts of - a comparative analysis of these concepts is given in the scientific work of SD Saraswati [11]. Accordingly, the trend-following strategy we have presented above. Figure 3 is related to the effect of causation, where causation -(Latin causa - cause) - this is a basic philosophical concept that expresses the relationship between cause and effect. Based on this, causation means acting towards a certain goal or goal; creating, bringing about or implementing something. If we look at an enterprise in the regional industrial complex, as a result of the effect of causation, for example, at the JV "Kungroat Soda Plant" LLC, it can be noted that the latest technical and technological achievements in the chemical industry have a great opportunity to be introduced into the production processes of products at the JV "Kungroat Soda Plant". Also, in the production of cement, which is one of the main products in the building materials industry, the opportunity to produce resource-efficient building materials by using local raw materials can be mentioned.

It should also be noted here that the trend-following strategy, as a result of causation, reveals its effectiveness through the principle of effectuation or efficiency. The reason is that Efficiency is a method of decision-making based on available capabilities and resources, which involves rapid adaptation to the environment. This means that enterprise management is a key factor in the field of industrial production. By mastering and introducing innovations, know-how and innovations (that have emerged in the field into production, an industrial enterprise can ensure its competitiveness by forming a trend-setting production practice without the need to invest significant effort and resources in innovation, thereby paving the way for an industrial enterprise to expand its capabilities in the future and transition to more effective management methods in production management.

At the same time, in the conditions of digitization zRobust management in the classical theory of management in strategic management studies to model various scenarios and obtain more accurate forecasts, along with the ideas of using reliable information technologies as the basis for strategic decisions. The thesis of using the so-called approach to management is increasingly being discussed. The abandonment of the exact model of the managed object, which is characteristic of robust management, coincides with the decline in predictability of the future - this was long ago mentioned by I. Ansoff as the basis of strategic planning and management[12].

Another issue in the context of strategic management mechanisms and approaches to digital transformation concerns their different aspects of application for different types of companies. In this regard, according to Yu.S. Vasileva, "...the main factor of success for adaptive companies is the speed of response to changes", the main task of managers is to "...identify and use the appropriate resources at the enterprise-organizational level", and therefore, for such companies, it is necessary to rely on a resource-based approach to strategic management. For companies that are industry leaders, "...the presence of unique, rare competitive advantages that guarantee competitiveness in the processes of development of the situation in any direction becomes of particular importance"[13]. For such companies, very high goals are set that do not correspond to the existing conditions and available resources. In times of crisis, breakthrough strategies become not just a matter of routine for industry leaders, but a matter of "life and death" for all companies[14].

The choice of strategic management mechanisms and approaches also depends on the strategic orientation of companies (entrepreneurship, market orientation, or personnel training). However, as TV Belyaev points out, recently mixed strategic orientations have become increasingly widespread[15]. Such a combination leads to the use of hybrid mechanisms and approaches to strategic management, the initial attempts of which are being made by domestic entrepreneurs and researchers in our country.

4. Conclusion

In conclusion, at the current stage of digitalization processes, when choosing the optimal options for the innovative management strategy of industrial enterprises of the Republic of Karakalpakstan, it is necessary to act based on the current socio-economic situation in the region, emerging opportunities and the potential of the regional industry. In addition, it is recommended to adhere to the principle of "not putting all your eggs in one basket", which is popular among economists. Accordingly, we consider it appropriate to put forward the following proposals for developing a mechanism for selecting an innovative management strategy in the process of digitalization:

1. Choosing an innovative management strategy in industrial enterprises of the region in the context of digitalization. It is necessary that the management strategy, as a result of its implementation, be able to demonstrate its effectiveness and pave the way for strengthening the competitive position of an industrial enterprise.
2. The innovative management strategy implemented at industrial enterprises in the region should not only ensure an increase in product volume and quality, but also help increase the speed of management decisions and ensure the continuity of technological chains in industrial enterprises.
3. When applying selected options for the innovative management strategy of industrial enterprises, it is recommended to pay attention to the socio-economic significance of the industrial enterprise, its production scale, and, based on this, use appropriate strategy options.

In management processes, since strategic decision-making is associated with the concepts of causation and efficiency in the current conditions of high cooperation, strong competition and resource scarcity, the correct choice of management strategy is of great importance in the management of industrial enterprises. Accordingly, it is proposed to pay serious attention to improving the skills of management personnel operating in the management system of industrial enterprises.

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