

Article

Economic Efficiency in the Industrial Sector in the Context of Diversification and Digital Transformation

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Abstract: The article examines and analyzes the theoretical and conceptual foundations of the innovative development of the enterprise as well as strategic, economic benefits of the enterprise in terms of diversification and transformation, the effectiveness of innovative development of an industrial enterprise, the digital transformation of Uzbekistan on the example of the construction industry.

Keywords: economic efficiency, diversification, digital transformation, efficiency, innovative development

Introduction

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In the context of diversification¹ and transformation² of production, the formation and optimization of the enterprise's potential are considered as urgent problems. Diversification is always associated with the expansion of products or services provided, in turn, this leads to the fact that the business becomes less dependent on the life cycle of an individual product, and ultimately this increases the efficiency of its activities and ensures more sustainable growth. As the conducted research has shown, the purpose of diversification, as a rule, is to increase the competitiveness of an enterprise, strengthen its position in the market and increase profitability. The use of diversification provides enterprises with certain strategic benefits:

- firstly, diversification is the most appropriate way to invest capital and reduce the degree of risk;
- secondly, by offering a range of goods and services, the company can increase its competitiveness;
- thirdly, when diversifying, there is a diversity effect that supersedes the effect of mass production of homogeneous products and this is due to the fact that the production of many types of products within one large enterprise is more profitable than the production of the same types of products at small specialized enterprises, since multi-purpose joint production facilities of the enterprise provides significant savings;
- Fourth, the company's staff accumulates significant technical and managerial experience;

¹ changing the type of activity, expanding the range of products, which partially neutralize the adverse effects of fluctuations in business conditions, reduce the risk of losses and thereby ensure higher and stable incomes.

² "pronounced changes in shape, character, or appearance" or "change (something) completely, usually for the better"

- Fifth, the company has the opportunity to gain technological benefits through joint R&D³ and exchange of experience in various strategic business units;

- Sixth, there are opportunities for greater differentiation of the products produced.

Today, the digital economy can be viewed from two sides – in the classical and expanded understanding⁴. In the classical sense, the digital economy is an area of goods and services based on digital technologies (for example, distance learning or online medicine, etc.). In an expanded sense, the digital economy is any economic production using digital technologies. The characteristic features of the digital economy are the following⁵: information products and services become the main type of products; An information network structure is being created, which implies the need for completely new approaches to management; investment is directed primarily into intangible assets (software, R&D, etc.). Integration of physical and digital objects, which makes it possible to quickly adapt to the digital environment and introduce global technological information technology trends based on existing innovative potential, in order to ensure sustainable economic development and competitive advantages.

In the context of globalization, digital transformation is important for an enterprise, and this is a strategic decision that can bring benefits such as increased operational efficiency, higher revenues and lower costs. This is not just a trend.

Organizations can gain a competitive advantage through rapid adaptation, which will prepare them for success in an increasingly digital world. Thus, a number of authors⁶ present the innovation potential as a three-pronged structure combining the areas outlined above: readiness for change, the possibility of their implementation and the availability of the necessary resources for this.

Summarizing the existing research, we can identify several of the most common areas: 1. Innovation potential is considered as a set of characteristics and the degree of readiness or the possibility of creating innovations (product, technology, etc.) and achieving innovative goals. 2. Innovation potential is a set (set, complex) of resources in conditions of rational organization of production and interaction of economic entities necessary to achieve innovative goals. 3. The innovation potential is the ability of a system to transform into a new state in order to achieve the innovative goals of an enterprise.⁷

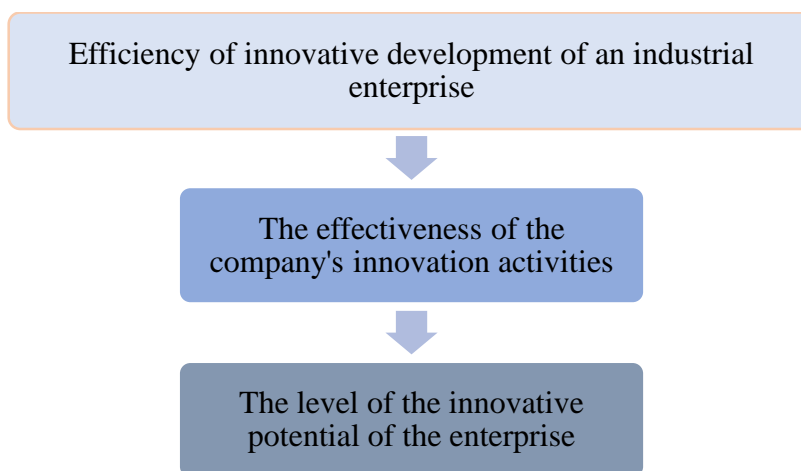


Fig. 1. Efficiency of innovative development of an industrial enterprise

³ research and development work

⁴ Golovenchik G. Theoretical approaches to the definition of the concept of "digital economy" // Science and Innovation. Republican Unitary Enterprise "Publishing House "Belarusian Science", 2019. Vol. 2, No. 192.

⁵ Arenkov I.A., Krylova Yu.V., Tsenzharik M.K. Client-oriented approach to business process management in the digital economy // Scientific and Technical Bulletin of St. Petersburg State Polytechnic University. Economic sciences. 2017. Vol. 10, № 6

⁶ Guryeva L.K. Conceptual foundations of the innovative strategy of regional development // Science and innovative technologies for regional development : collection of articles of the All-Russian scientific and practical conference (June 2003). Penza, 2003. pp. 21-23. Kokurin D.I. Innovative activity. M. : Exam, 2001.

⁷ "Assessment of innovative potential in industrial enterprises", N.V. Shubina. Bulletin of the UrFU. Economics and Management series. № 5/2013

The development of digital transformation on the example of the construction industry in Uzbekistan. Uzbekistan's digital transformation began about 10 years ago. The construction industry is one of the key sectors of the country's economy.

By the end of 2022, the share of construction in Uzbekistan's GDP amounted to 6.7% (in 2021 – 6.6%). The steady growth of the industry's indicators is evidenced by the growth in the volume of all types of construction work. For example, in the first half of 2023, compared with the same period in 2022, volume growth amounted to 11.4%. The largest cities, Tashkent and Ferghana, show the highest growth. More than 12 thousand enterprises producing 180 types of building materials work for the needs of the construction industry. As follows from the press service of O'zanoatqurilish materials, in January-June 2023, the volume of industrial production amounted to 5,554.6 billion soums, or the growth rate was 106.2%.⁸

According to the analysis, more than 1/5 of the cost of gross added value which was created in the country's industries in 2010-2023, more precisely, 21.2 percent on average, was contributed by the construction industry. In particular, the share of added value created in the construction industry, and also created in the total volume of industries, has a dynamic development trend in the period under study. By 2023 it increased by 1.4 percentage points compared to 2010, from 22.4 percent to 23.8 percent (see Figure 2).

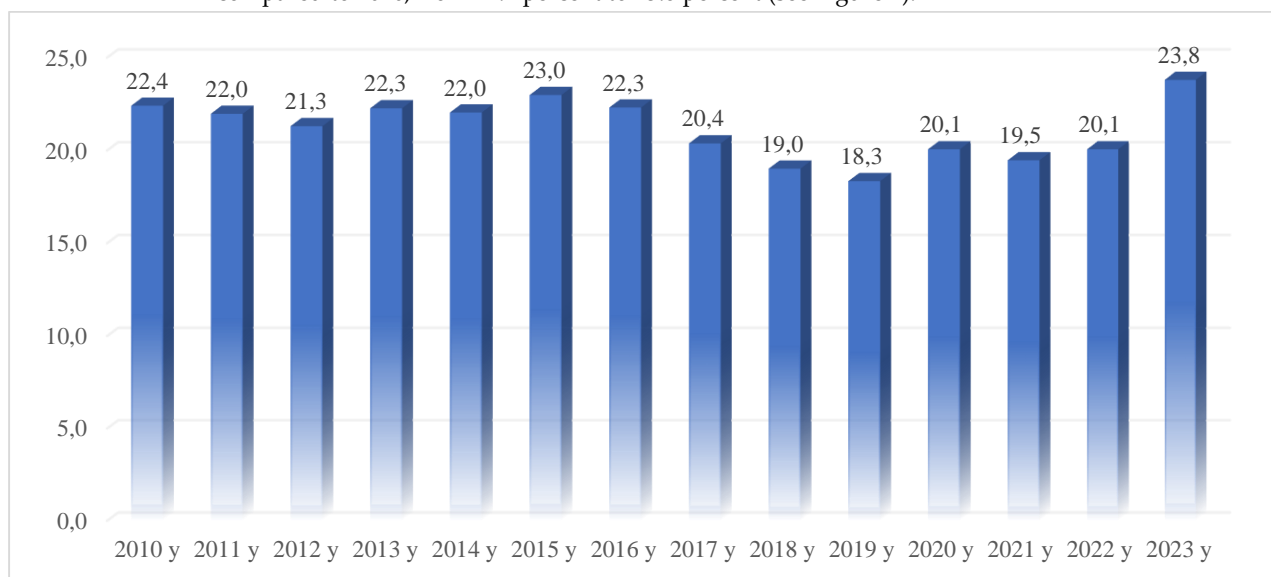


Fig.2. The share of the construction industry in the volume of added value created in the industries of Uzbekistan (as a percentage of the total volume)⁹

During the study period, the growth rate of the share of the construction sector in the volume of gross added value in the industrial sector averaged 100.7 percent, with a dynamic growth trend (see Figure 3). Statistical observation shows that in only five years out of a 13-year period, the growth rate of added value created in the construction sector exceeded 100 percent compared to the previous year, and in the remaining years tended to decrease relatively.

⁸ <https://globalcio.ru/discussion/36575/#3>

⁹ It was created on the basis of data from the Agency for Statistics under the President of the Republic of Uzbekistan

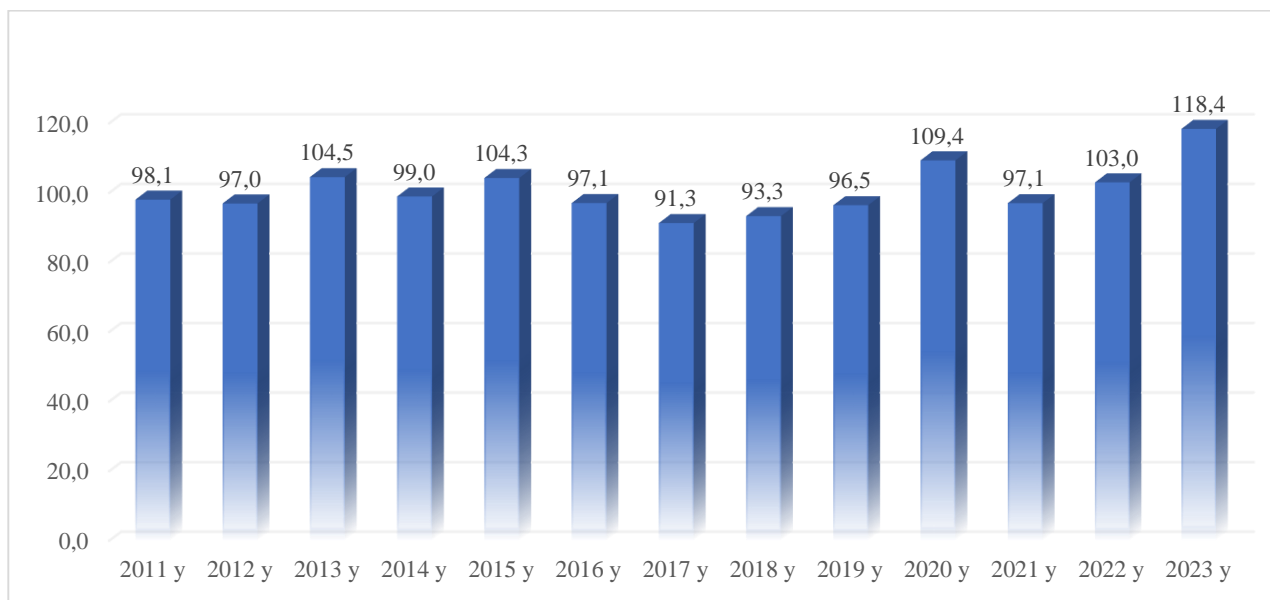


Fig.3. The growth rate of the share of the construction sector in the volume of gross added value in the industrial sector, as a percentage, compared to the previous year¹⁰

It is worth noting that the steady growth in the volume of construction work in the country indicates the effective implementation of measures aimed at ensuring the diversification of products sold at enterprises in the construction industry.

Since 2020, the national information system "Transparent Construction" has been gradually introduced in the Republic of Uzbekistan, which allows to form and develop a single database, as well as to ensure interdepartmental exchange. The portal of electronic public procurement in the construction industry, the information system of construction control, the information system "Expertise of urban planning documentation", the electronic rating of construction contractors, the information system "State Urban Cadastre of the Republic of Uzbekistan" and the electronic platform for the construction of apartment buildings on a shared basis have already been developed and implemented. Also, by 2020, 626 international standards for the production of high-quality and safe building materials have been adopted.

Another major digital project of the Ministry of Construction of Uzbekistan — since 2022, the authorities have been developing the concept of a smart city and creating digital counterparts of the largest settlements of the republic. Nukus and Tashkent were the first to "digitize". Digital twin cities allow you to collect, model, visualize, analyze and predict information for more effective decision-making.

The key trend in digital technologies in the construction industry of Uzbekistan, as well as in the world, is BIM¹¹ technologies (Building Information Modeling). BIM makes it possible to plan, design, build and operate buildings and infrastructure more efficiently through 3D modeling and comprehensive analysis of the components of the construction object. Due to the active development of the industry, the need for digitalization of all processes within construction companies is also growing. Large developers are implementing platforms for project management and sales (CRM¹², ERP¹³).¹⁴

Since the start of large-scale reforms in 2017, Uzbekistan has made significant progress in changing its economy and digitalizing it, which has led to accelerated economic growth. The set of some measures contributed to improving the competitiveness of the national economy, it led to

¹⁰ It was created on the basis of data from the Agency for Statistics under the President of the Republic of Uzbekistan

¹¹ an object-oriented model of a construction object or a complex of construction objects, as a rule, is in three-dimensional form, with elements of which data on geometric, physical and functional characteristics of a construction object are associated.

¹² Customer Relationship Management is a customer relationship management system that collects and organizes personal data.

¹³ performs the role of warehouse and production management

¹⁴ <https://globalcio.ru/discussion/36575/#3>

price liberalization, increased transparency of the economy and reduced barriers to attracting foreign investment.

Information and communication technologies (ICT) and the Internet have played a key role in transforming economic systems and societies, contributing to increased labor productivity and economic efficiency. The innovations generated in the field of ICT have significant potential to create new growth points and implement significant social improvements in the country.

The steady growth rate of the digital component is reflected in the following:

- Active support and interest of the state in the implementation of digital transformation through reforms, programs and initiatives;
- Developed digital infrastructure with positive dynamics of indicators in the last few years;
- Steady demand for IT specialists, increasing the availability and demand for IT education;
- An increase in the number of people using digital technologies and the Internet, with a high level of Internet and mobile connectivity throughout the country;
- Expanding the scope of application of digital achievements of scientific and technological progress.

There are also factors hindering the mass digitalization of enterprises in Uzbekistan:

- The need for deep production optimization: automation of business processes requires companies to significantly rework and pre-optimize processes, as well as change the established corporate culture;
- Limited resources: The digital transition can be especially difficult for small and medium-sized enterprises due to their limited financial and human resources compared to large companies;
- The need for the participation of qualified specialists: the introduction of digital tools requires the participation of specialists with both knowledge in the subject area and skills in the field of information technology.
- The pace of technology development and the lagging regulatory framework: the development of digital technologies often outstrips the development and application of relevant regulatory laws, which makes it difficult to implement them into business processes

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