

## Development of the Introduction of Innovations in the Field of Housing Construction in the Formation of a Housing Fund

***Kholmurodov Rachmatilla***

*Tashkent University of architecture and construction, researcher*

**Abstract:** In this scientific article, the factors that prevent the introduction of innovations in the field of housing construction in the formation of housing stock are the problems that arise in the introduction of innovations in the field and industries, the lack of knowledge of new products in housing construction and the possibility of obtaining complete information about them, the level of technical knowledge and professional qualifications.

**Keywords:** housing fund, housing construction, entrepreneurial activity, population standard of living, innovation process, innovation environment, housing utilities, services, multi-family homes, housing demand, housing stock management, management methods, management mechanism, management companies.

**Introduction.** In the formation of a housing fund, it is important to develop entrepreneurial activity in the construction of modern housing. It is known that the construction industry is one of the most cadimic areas of human existence, which has not lost its relevance even to this day. After all, today the construction industry is one of the rapidly developing industries all over the world, the development of which, along with the development of many other sectors of the economy, is also the basis for the emergence and development of new industries in the industry.

In the decree of the president of the Republic of Uzbekistan dated November 27, 2020 "strategy for modernization, accelerated and innovative development of the construction network of the Republic of Uzbekistan for 2021-2025" PF-6119, among the systemic problems that negatively affect the development of the construction network are the placement of production and infrastructure facilities, entrepreneurship, it has been shown that it negatively affects the development of performance and investment activity, and the low level of introduction of modern information and Communication Technologies does not allow participants in investment processes and subjects of urban planning activities to ensure maximum transparency and speed of the provision of public services. Ultimately, these listed problems are cited as hindering the rapid innovation development of the construction network.

The decree of the president of the Republic of Uzbekistan dated November 27, 2020 PF-6119 "strategy for modernization, accelerated and innovative development of the construction network of the Republic of Uzbekistan for 2021-2025" was adopted. Paragraph 32 of the "road map "on the implementation of the strategy of modernization, accelerated and innovative development of the construction network of the Republic of Uzbekistan for 2021-2025, approved by Annex 2 of this decree, sets out the task of introducing construction clusters based on the study of international experience.

263	ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 5 in May-2023 <a href="https://globalresearchnetwork.us/index.php/ajebm">https://globalresearchnetwork.us/index.php/ajebm</a>
	Copyright (c) 2023 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit <a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>

The relevance of the content and essence of this decree is based on the complexity and variety of products created in the field. That is, during the activities of the construction enterprise, it will be based on cooperative relations with organizations and enterprises of other directions.

Because, in relation to the industry in construction, not a single construction Assembly organization has the opportunity to carry out all construction processes on its own and create finished products, for which special organizations of different directions will be involved[1].

The emergence of construction clusters in the economy serves to reduce the cost of construction products, ensuring the competitiveness of the industry. Because, in the field of construction in the traditional form, the structure of cluster mechanisms will consist mainly of the following joints:

- supply of raw materials (sand, gravel quarries, etc.); - logistics supply (supply of special transport equipment and supply of construction raw materials);
- production of building materials (cement, concrete, brick, metal profile and bshq.). The current continuity of these joints makes it possible to reduce the cost of a square meter of buildings to be built, on the contrary, in a separate case, not a single of these joints will be able to achieve such an effect.

It should be noted that in the last half century, many examples can be given of the competitiveness of developed countries, achieved on the basis of the effective functioning of clusters in different areas. In this regard, the study of the experience of the countries of the European Union, which have achieved high efficiency in the organization and development of clusters in the construction industry, provides the opportunity to identify directions aimed at solving the tasks set out in the decree.

**Analysis of thematic literature.** The role of innovations being introduced in the field is of great importance to the development of the construction industry, such as many industries and industries. In turn, the creation and implementation of innovations in the construction industry, like in other areas, into mass use, consists of specific complications. Especially as structural problems of the construction industry, most enterprises have problems with a lack of qualified specialists, low level of attractiveness of the industry for young people due to inadequate working conditions, insufficient opportunities for introducing innovations and the possibility of informal labor.

In this case, a large number of scientific-research studies on the study of the innovation development of the construction industry, the identification of its problems and the formation of necessary measures based on this are carried out by scientists from abroad and the Republic, among them, L.A.Trofimova, V.V.Trofimov, A.P.Rodionov, B.B.Khrustalev, A.N.Conkin, N.P.Kuzmich, B.S.Kalmuratov, Sh.A.Fattakhov, D.R.Khairova et al.

The analysis of the research of the above-mentioned scientists, dedicated to the innovation development of the construction industry in the provision of housing for the population, provides the opportunity to clarify and systematize the problems in the field. For Example, L.A.Trofimova and V.V.According to Trofimov's research, the low level of innovation activity of construction organizations is based on the inactive participation of globalization in processes in relation to industries. One of the reasons for this is recognized that the construction process is based on a long period and the presence of many small and medium-sized enterprises involved in construction, that is, Representatives of this enterprise do not have the opportunity to direct investments in the implementation of scientific research and do not have the necessary skills to evaluate and introduce high-tech innovations.[2]

A.P.Rodionov, in his study, studied the problems of the formation of innovative processes in the construction industry, justifies the need to support these processes by the state government in the regions. [3]

264	<p>ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 5 in May-2023 <a href="https://globalresearchnetwork.us/index.php/ajebm">https://globalresearchnetwork.us/index.php/ajebm</a></p>
	<p>Copyright (c) 2023 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit <a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a></p>

B.S.Kalmuratov, like the rest of the world, recognizes that the level of innovation of the construction industry in Uzbekistan is low based on several factors, including: -73.2% of total construction enterprises are micro-enterprises, and the number of workers in them, on average, consists of 10 people, at these enterprises there is no possibility of making deductions for innovations from working capital; - the; -the absence of state-owned R & D centers that carry out construction technology research. [4]

Sh.A.Fattakhov, D.R.In their research, khairova reasoned that innovative processes in the construction sector in our country are not systematized and do not fully meet modern requirements. One of the main reasons for this is that despite the fact that there are many small enterprises and private entrepreneurs in the construction sector in the country, their innovation activity is low, and their material and technical bases have not developed. As a practical solution to this issue, a proposal was put forward by the authors to create an "association of construction organizations". That is, based on the mechanism of clusters on the mechanism of activity, which is located in these structured areas, among its main tasks were proposed to ensure the effectiveness of updating construction techniques, activate the participation of small businesses and private entrepreneurship in the innovation processes in the construction sector, and provide personnel to the capital construction sector in the Republic and [5]

A similar idea is A.N.Conkin, S.M.Vasin and o.V.It has also been advanced in vertyanova studies. In particular, in order to increase the innovation activity of the construction industry and, especially, to actively engage in these processes in all regions of the country, scientists have put forward the idea of establishing territorial construction clusters in their scientific research and attaching construction companies, research institutions, higher education institutions in the territory to them.[6]

B.B.Khrustalev, A.N.According to Konkin[7], the construction sector is far behind in terms of innovation in relation to other sectors and sectors of the economy, and in the field, the innovations being introduced can change the efficiency and productivity of construction in three areas, these are: digital technologies, modern materials and automation of construction processes. Scientists put forward several factors that affect the introduction of innovations in the construction industry.

One of the main problems in analyzing the role of the construction sector in the world economy remains the lack of empirical data. By most international organizations that provide open statistics (for example, the United Nations, the World Bank, the International Monetary Fund), the size of the construction sector is calculated only in the form of value added, usually taking into account expenses, surcharges and income for wages. However, when studying the role of the construction industry, it is necessary to take into account the total costs spent on construction [8].

According to the analysis of world practice, the need for state regulation of housing construction is based on the following factors:

- lack of funds of the majority of the population for the purchase of housing;
- delimitation of the state budget to be directed towards housing construction;
- lack of financial and credit mechanisms for residents who intend to purchase housing;
- low confidence in the population compared to the participants of the housing market;
- lack of effective mechanisms for the population listed in the desire to improve housing conditions;
- the fact that the main tamoiyils for the purchase of housing for all segments of the population were not introduced into practice, etc.

The fact that the state does not participate or have a low level of participation in the promotion of supply and demand in the housing market can cause a violation of the overall balance in the market and an

265	ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 5 in May-2023 <a href="https://globalresearchnetwork.us/index.php/ajebm">https://globalresearchnetwork.us/index.php/ajebm</a>
	Copyright (c) 2023 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit <a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>

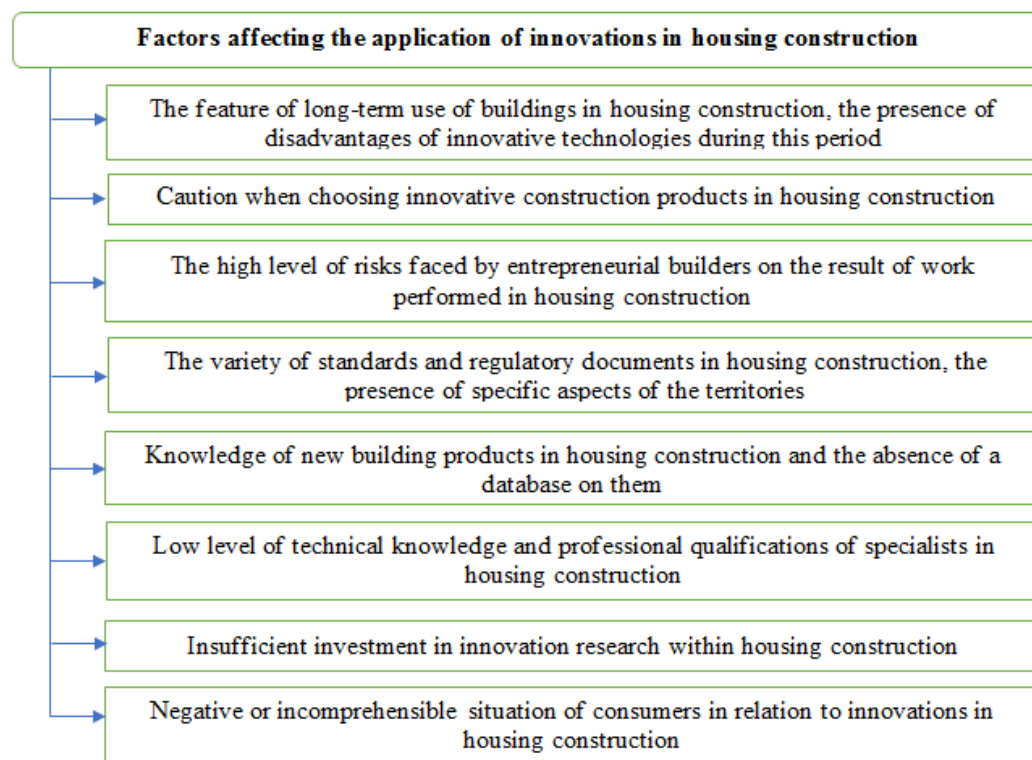
exacerbation of symptoms of social inequality. Because, the purchase of housing in expensive narhs by segments of the population with high income increases as a result of which the market saturation occurs, while the demand for economically optimal – economical houses decreases, and ultimately the negative impact on the construction of Housing and further increase in current narhs.

Its high level of activity in the regulation of housing construction by the state stimulates the development of individual segments of the housing market, as a result of which both the market and the market for housing purchases for all segments of the population, regardless of their income, increase their social opportunities.

Also, state incentives for middle-income residents to purchase housing provide stability of financial flows, have a positive impact on the construction volume of Housing, and increase the number of residents with the ability to purchase housing.

**Research methodology.** The article makes extensive use of comparative comparison, statistical data study and economic comparison and analysis, logical reasoning, scientific abstraction, analysis and synthesis, induction and deduction methods in the study of influencing factors in the application of innovations in modern housing construction in the formation of housing stock.

**Analysis and results.** Today, in the field of construction of the economy of our country, business representatives of various forms and sizes actively carry out their activities in the form of construction-assembly, construction-repair, production of construction products and services.



**Figure 1. Factors affecting the application of innovations in housing construction**

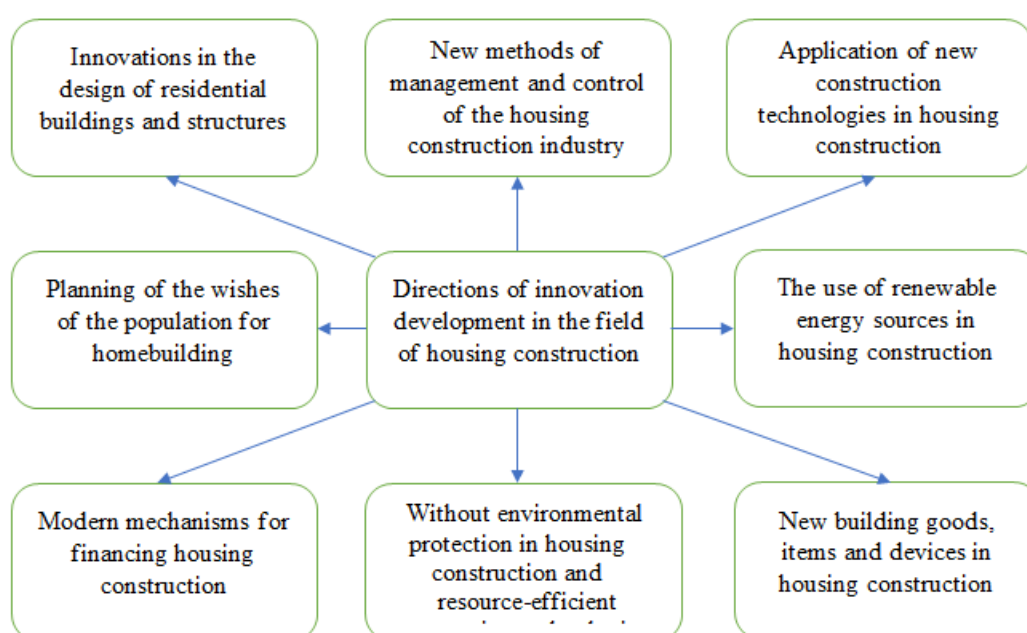
In Figure 1, it can be established that almost most of the factors that prevent the introduction of innovations in the field of housing construction are similar to the problems that arise in the introduction of innovations in other industries and industries, including the lack of opportunity to know new products and obtain complete information about them, the level of technical knowledge and professional qualifications

of Based on the analysis of the scientific literature within the framework of the organization and development of entrepreneurial activity in the construction industry, various restrictions and obstacles that may arise in entrepreneurial activity in the field can be divided into three main systems:

- universal restrictions-at the level of the country's economy;
- General Inter-industry restrictions-restrictions that affect the entire construction sector;
- special restrictions-restrictions on entrepreneurial activity operating in the construction industry.

The introduction of new technologies in the field of housing construction is usually carried out with a delay in many cases, especially innovations that have passed all the test stages and have been encouraged from high-standing organizations, there will also be cases of inapplication in practice.

In order to achieve the effectiveness of innovations in the field of housing construction, it is necessary to first determine the main directions of innovation development in the field (Figure 2).



**Figure 2. The main directions of innovation development in the field of housing construction**

After all, innovation developments in the field of construction should be based on scientific and technical innovations and have a stable level of profitability, being in demand in the market. In this aspect, it is advisable that in the construction business, innovative ideas should not only be relevant to technical and technological processes, but also cover organizational and managerial aspects. In this case, management innovation implies new methodologies and new organizational structures of Management in the field of construction, and management methods can be used in two ways, administrative and economic. Technological innovation will be based on process and product innovation, and process innovation will be based on new technology, networks and mechanisms. While product innovation refers to new items, devices, components and equipment, process innovation refers to new technologies and mechanisms. Because, the creation and introduction of new materials will become the basis for the development of innovative technologies in the field of construction.

For the innovation development of the housing construction industry, the following should be carried out:

- lagging behind in the field in terms of the level of labor productivity compared to developed countries;



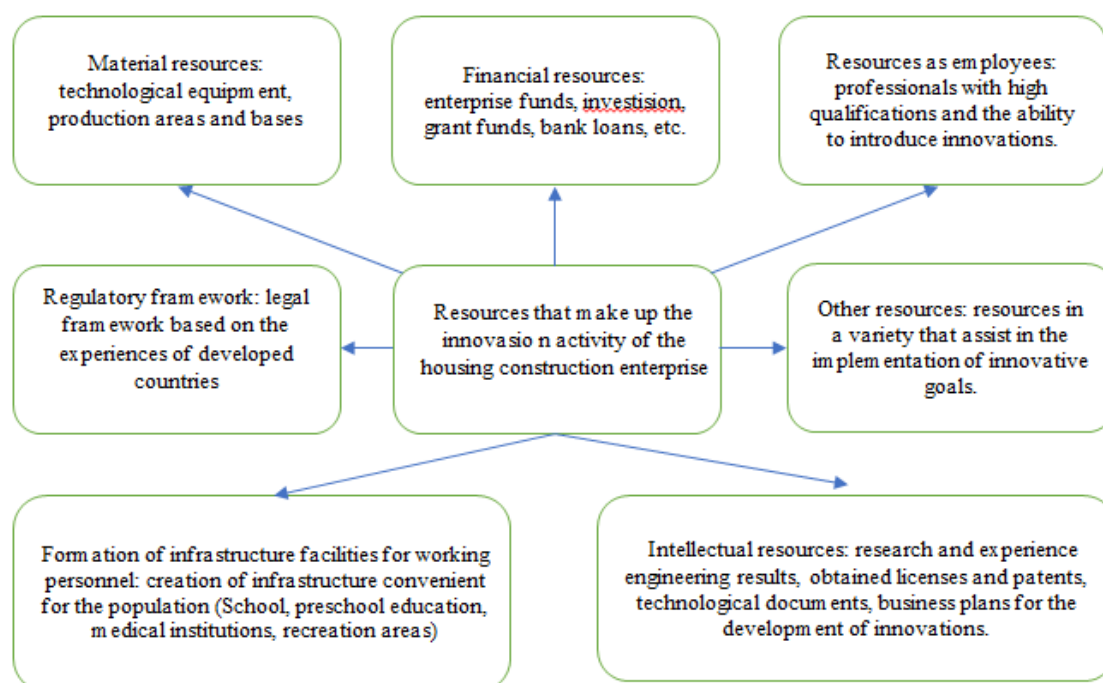
- lagging behind in the use of effective and resource-efficient materials and technologies;
- the need to increase environmental safety in various processes and stages of construction.

But, according to many analyzes, there will also be high cases of distrust by consumers to representatives of small businesses operating in the construction industry. To implement these goals, it is advisable to carry out the following measures:

- support of comprehensive scientific development and research;
- provide highly qualified professionals capable of making and implementing new management decisions in the field;
- increase the level of development of technical documents in the field of design and construction;
- introduction of international standards aimed at introducing innovation decisions and products;
- create and develop a competitive environment in the construction industry.

N.P.Kuzmich [9] analyzing the innovation potential of construction enterprises in his study, Holda distinguishes three main components-these, resource potential, internal potential and results. In particular, the resource potential is the development of the production technological resources and Construction Products industry on the basis of the construction complex of the territory; information resources – projects, programs, knowledge base; financial resources-financial opportunities, resources and reserves; human resources – capacity, knowledge, skills. The process of creating a new construction product in the internal potential, the introduction of new technologies, ensuring the connection of the construction market with science, the management of innovative processes covers the methods.

In this aspect, it is advisable to consider in detail the resources that make up the innovation activity of the construction enterprise, from which it is proposed to take into account material, financial, intellectual, personnel and other resources (Figure 3).



**Figure 3. Resources that make up the innovation activity of the housing construction enterprise**

268	ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 5 in May-2023 <a href="https://globalresearchnetwork.us/index.php/ajebm">https://globalresearchnetwork.us/index.php/ajebm</a>
	Copyright (c) 2023 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit <a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>

In Figure 3, each resource that constitutes the innovation activity of a housing construction enterprise is important, and the absence of one leads to an interruption of the innovation process.

**Conclusion.** Like all industries, the introduction of innovations in the field of housing construction is a requirement of today. It is necessary to define that in recent years, the comprehensive scientific and technical and innovative policies implemented by the government in the country are forming the basis of the innovative system in the country. In turn, the innovation system is based on a number of important factors, including the market orientation and application of scientific research and development in practice, the availability of enterprises engaged in innovation, their relative indicators, etc.

On the basis of research carried out within the framework of the innovation development of the housing construction market and the economic efficiency of small business and entrepreneurial activity in it, the following conclusions were formulated:

- we believe that the process of housing construction is based on a long period and that the small and medium-sized enterprises involved in it do not have the opportunity to direct investments in the implementation of research and do not have the necessary skills to evaluate, introduce high-tech innovations.
- provides an opportunity to eliminate the problem of low level of participation of research and higher education institutions in the introduction of innovations in enterprises and organizations in Uzbekistan in the field of housing construction. Because, as we know from world practice, the participants in the innovation processes will not consist only of enterprises and organizations, in these processes there is a specific important role of direct research organizations and institutions of Higher Education.
- as a result of the reforms carried out, an increase in the number of enterprises, organizations, small enterprises and microfirms that have produced innovative products, Works, Services has been achieved in recent years. In terms of total number, along with the increase in the number of enterprises producing innovative products, works, services, there was also an increasing trend in the number of construction enterprises in their structure, and their significant share fell on small enterprises and microfilters.

Based on the study of the problems analyzed above, we think that it is advisable to systematically implement the following measures for the development of innovation processes in the field of construction, including:

- formation of modern infrastructures for the development of innovation;
- activation of digitization processes in the construction industry, in particular the introduction of digital technologies and, as a result, the achievement of automation of construction processes;
- regulatory framework and technical control norms for the use of domestic building products and technologies in accordance with international standards;
- training of personnel in the field of research and education for the construction industry;
- establishing its relationship with science and the production process;
- development and implementation of modern requirements for the qualification of the implementation of modernization in the work activities of workers, technical personnel, management personnel, the use of modern techniques and technologies;
- development of state programs aimed at increasing and supporting the innovation activity of small business enterprises in the construction sector.

269	ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 5 in May-2023 <a href="https://globalresearchnetwork.us/index.php/ajebm">https://globalresearchnetwork.us/index.php/ajebm</a>
	Copyright (c) 2023 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit <a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>

In this case, the introduction of mechanisms to stimulate builder companies that introduce innovations.

In the field of housing construction, innovative technologies should be aimed at the integrated development of the construction industry, the reduction of current costs, the reduction of time spent on construction processes, the reduction of the risks that exist in the industry.

### List of literature used

1. Asaul A.N. Construction cluster – a new regional production system // Economics of construction. 2004. No.6. pp.16-25.
2. Trofimova L.A., Trofimov V.V. Information modeling and engineering management organization schemes as a basis for innovative development of the construction industry / 2016. p.80. <https://cyberleninka.ru/article/n/informatsionnoe-modelirovanie-i-inzhiniringovye-shemy-organizatsii-upravleniya-kak-osnova-innovatsionnogo-razvitiya-stroitelnoy>
3. Rodionov A.P. Problems and prospects of development of small business in the construction industry in Russia at the present stage / Problems of theory and practice of entrepreneurship. p.121.
4. Kalmuratov B.S. The current state of innovative development of the construction industry of the Republic of Uzbekistan / International Scientific Journal Theoretical & Applied Science. 2020. P.459.
5. Fattakhov Sh.A., Khairova D.R. Ensuring the growth of efficiency of small business and private entrepreneurship in the conditions of innovative development of the construction industry of Uzbekistan / Bulletin of Science and Practice. No.8. 2020. p.188.
6. Konkin A.N., Vasin S.M., Vertyanova O.V. Theoretical foundations of the formation of mechanisms of innovative development of the regional construction complex / Social Sciences. No.24. 2011. pp.303- 304.
7. Khrustalev B.B., Konkin A.N. Factors influencing innovation-Investment activity in construction / International agricultural journal 4/2019. C.222
8. Crosthwaite D. 2000. The global construction market: a cross-sectional analysis. Construction Management and Economics, 18, pp. 619-627.
9. Kuzmich N.P. Research of innovative potential of small construction enterprises // Far Eastern Agrarian Bulletin. 2012. No. 4. (24). pp.33-37
10. Saidov Mashal (2021) Opportunities for the formation of the electricity market in Uzbekistan. 2nd Global Symposium on Humanity and Scientific Advancements Hosted from Jacksonville Florida, USA. December 30th 2021. P. 179-183. <https://conferencepublication.com/index.php/aoc/article/view/1806/1891>
11. Саидов Машғал Самадович (2021) Электр энергетика соҳасида тариф ва нарх шаклланишидаги муаммолар ва олиб борилаётган ислохотлар. “Iqtisodiyot va innovatsion texnologiyalar” ilmiy elektron jurnali. № 6, noyabr-dekabr, 2021 yil
12. file:///C:/Users/Acer/Downloads/%D0%93%D0%9E%D0%A2%D0%9E%D0%92%D0%9E+%E2%84%96+6+2021\_145%20(1).pdf
13. Saidov Mash'al Samadovich, Hasanov Abdumukhtar Azizalievich (2023) Institutional Characteristics of the Regulation of Natural Monopoly Fields. International Journal of Business Diplomacy and Econom. ISSN: 2833-7468 Volume 2| No 3| March-2023.



14. file:///C:/Users/Acer/Downloads/149-156+Institutional+Characteristics+of+the+Regulation+of+Natural+Monopoly+Fields%20(2).pdf
15. Саидов Машғал Самадович (2023) Электр энергетика тармоғини бошқаришдаги муаммолар ва уларни бартараф этиш йўллари. "Iqtisodiyot va innovatsion texnologiyalar" (Economics and Innovative Technologies) ilmiy elektron jurnali. 1/2023, yanvar-fevral (No 00063). <https://iqtisodiyot.tsue.uz/journal/index.php/iit/article/view/195/228>
16. Saidov Mashal Samadovich, Rakhimberdiev Khatamboy Dilshodzhon ugli (2023) Organization of Production and Management of New Enterprises. AMERICAN JOURNAL OF ECONOMICS AND BUSINESS MANAGEMENT ISSN: 2576-5973 Vol. 6, No.1,2023.
17. <https://globalresearchnetwork.us/index.php/ajebm/article/view/1908/1737>
18. Saidov Mashal Samadovich, Ruziev Erali Yarash ugl (2023) Features of the System of Digital Information and Communication Technologies in the Management of Companies. MANAGEMENT ISSN: 2576-5973 Vol. 6, No.1,2023.
19. <https://globalresearchnetwork.us/index.php/ajebm/article/view/1911/1740>
20. Saidov M.S., Shafaiziev Sh. The main aspects of the development of the production potential of the enterprise. "Экономика и социум" №1(104)-1 2023.
21. <https://cyberleninka.ru/article/n/the-main-aspects-of-the-development-of-the-production-potential-of-the-enterprise/viewer>
22. Saidov M.S., Koshbokov D.M. Features of international companies in world business. "Экономика и социум" №1(104)-1 2023.
23. file:///C:/Users/Acer/Downloads/features-of-international-companies-in-world-business.pdf
24. Saidov M.S., Abdumadjidova Sh. Main tools of lean manufacturing in the management system. "Экономика и социум" №1(104)-1 2023.
25. file:///C:/Users/Acer/Downloads/main-tools-of-lean-manufacturing-in-the-management-system.pdf
26. Saidov M.S., Barnaeva N. Features of diversification of products and products of competitive procedure. "Экономика и социум" №1(104)-1 2023.
27. file:///C:/Users/Acer/Downloads/features-of-diversification-of-products-and-products-of-competitive-procedure.pdf
28. Saidov M.S., Karshiev A.N. System of export activity management in Uzbekistan. "Экономика и социум" №1(104)-1 2023. file:///C:/Users/Acer/Downloads/system-of-export-activity-management-in-uzbekistan.pdf