

ISSN 2181-8622

Manufacturing technology problems



Scientific and Technical Journal Namangan Institute of Engineering and Technology

INDEX  COPERNICUS
INTERNATIONAL

**Volume 9
Issue 1
2024**



REGULATIONS OF THE REGIONAL DEVELOPMENT OF SMALL BUSINESS

RASHIDOV RAHMATULLO

Associate professor of Namangan Institute of Engineering and Technology, Namangan, Uzbekistan

Tel: (0893) 498-9684, E-mail: r.rashidov84@mail.ru

ORCID: 0000-0002-8160-7001

MIRJALOLOVA MUAZZAM

Student of Namangan Institute of Engineering and Technology, Namangan, Uzbekistan

Tel: (0890) 218-2802, E-mail: muazzam@mail.ru

Abstract: In the article, spatial mechanisms of small business development, factors, opinions of foreign scientists, existing problems are listed based on statistical analysis, and as effective solutions to these problems, recommendations on the development and implementation of issues of regional location of business entities are presented. The research methods were statistical, comparative analysis, induction and deduction methods. The changes that have occurred in the economy in recent years require the development of a new, more complex stage of economic transformation, in which the center of gravity shifts to solving the problem caused by the technical-economic paradigm and systemic long-term changes. Term challenges that reflect global trends and domestic development barriers. In such conditions, small business plays an important role, which affects the socio-economic level of the country's economy in many ways. The article contains proposals and recommendations on the features of regional development of small business. When analyzing the processes of formation of territorial models of innovative development of small business, it is reasonable to conclude that their most important parameters form a multi-level system, are complexly interrelated and subordinate to each other. It is of particular importance to develop an approach that allows for a systematic interpretation of the processes of formation of unique regional trajectories of innovative development of business entities that ensure the successful creation and implementation of competitive advantages, and the use of typology as its basis.

Keywords: innovation, entrepreneurship, spatial development, spatial balance, evolutionary development.

I. Introduction. There is a need to develop a conceptual approach to form realistic ideas about the spatial development of small business, which allows for a satisfactory description of the production of knowledge, innovation and their reproduction within endogenous models. When micro-entities are directly aggregated into ideal market-type macrosystems, it allows to overcome the limitations of traditional analysis based on a simplified understanding of economic reality. The limitations of traditional analysis do not allow to properly take into account the spatial diversity of economic development, the specificity of interregional relations, as well as significant differences in socio-economic conditions for economic development. Taking into account the spatial dimension is of particular importance for our country due to the differences in the conditions for running a small business in the regions.

The study of the laws of evolution of the spatial mechanisms of small business development and the factors affecting them is important from the point of view of the development of economics. The increase in the density of filling the territories with farms and the involvement of new lands in the farm rotation led to an increase in the land deficit. This process is historical in nature, it has been greatly accelerated due to the quadrupling of the world's population and the increase in the rate of economic development. The reduction of free spatial resources and the expectation that this process

will become more intense gives them special importance, leads to increased competition and puts the tasks of optimizing their use on the agenda.

The alternative concepts developed so far have certain advantages because they aim to identify the main patterns of spatial development and, accordingly, the relevant factors. However, they do not properly take into account all the diversity of the most important factors and relationships, they do not allow to have a satisfactory picture of the economic activity and development patterns of small business. Today, a number of theoretical models based on many assumptions and simplifications are actively used. It should be noted that in the existing works [1] the set of spatial development factors is given quite widely, there are works on the assessment of the influence of individual factors on regional differences in the level and dynamics of development; on the other hand, there are no generally accepted ideas about which of these factors are primary and which are secondary, how much each of these factors should be taken into account in the implementation of regional policy, and without understanding the causes of problematic situations, developing adequate tools to support small businesses not possible.

Authors of econometric models try to take into account many factors when assessing their contribution to spatial development, but for many regions it remains difficult to explain a significant part of GNP growth; a holistic view of spatial development does not emerge because different sets of critical factors are often important for different regions. Currently, there is no coherent legal and conceptual framework for spatial development of small business. Society and government do not appreciate the negative consequences of the imbalance in small business development. At the same time, existing alternative theories describing spatial development processes based on center-periphery interdependence and cumulative growth complement each other to a certain extent and create a basis for a deeper study of these processes.

II. Methodology & empirical analysis. The author's approaches are presented based on the study of scientific literature and articles of foreign scientists on the subject and the analysis of the experiences of foreign companies in this regard. Also, in order to increase the scientific and practical value of the article, statistical analysis methods (dynamic and comparative analysis methods) of the data of the State Statistics Committee of the Republic of Uzbekistan were used.

A methodical approach based on an improved research paradigm is proposed in accordance with the subjective nature of economic reality for the appropriate description of the processes that determine the characteristics of the formation of various territorial models of the innovative development of small business.

The proposed theoretical and methodological approach is the use of a multidimensional space-time coordinate system, which includes economic-value, organizational-institutional, technical-economic, cycle-time dimensions, which allows to take into account the main types of influence. It appears depending on the ability of local systems of small business to create certain forms of organization of innovative processes.

III. Results. Considering the processes of spatial development of the national economy and small business from the perspective of the concept of dynamic capabilities

and taking into account the rules of systematic analysis, the theory of complexity and evolution allows us to identify the following features and regularities, these processes:

- a systematic connection of regional objects with different change capabilities in the process of constant interactions occurring in the internal and external environment, they are not completely autonomous from each other, but interdependent;

- the country's economy acts as a complex polyregional system (organism), developing on the basis of vertical (center-regional) and horizontal (interregional), cooperative and competitive interactions and included in the system of world economic relations;

- when regional structures are integrated into the common economic and temporal space of the country, on the one hand, they differ from each other in terms of their goals, resources, powers and abilities, and on the other hand, they are oriented towards the fulfillment of a common task and are common. Combined with cultural and value orientations and common functions, a macro-systemic effect emerges due to simultaneous integration and complementarity;

- each territorial object works as an open, complex, dynamic system existing in a certain cultural, institutional, technological and territorial space, limited by its resources and maneuverability, having an internal structure and developing together with the external environment;

- accumulation of changes and acquisition of new characteristics of territorial subjects and national economy occurs on the basis of development and implementation of their dynamic abilities, their formation depends on the activity of entrepreneurial structures and the role of small business;

- common corridor of spatial development of entrepreneurial structures and small business defines knowledge base and basic technologies, cultural and value directions and institutions.

Changes in the conditions for small businesses associated with the transition to innovative competition impose new requirements on the formulation of innovation policy, the selection of priorities, models and tools for its implementation. Filling the regional space with elements of innovative activity is the most important factor for the successful development of the national economy and social sphere today, and the regions are expanding their opportunities to prevent and reduce the negative effects of changes in the business environment.

According to the data of the State Statistics Committee, the analysis of the distribution of small enterprises by regions of Uzbekistan allows us to conclude that the main part of small enterprises is concentrated in the city of Tashkent, and this trend continues. (Table 1).

Table 1. Distribution of small businesses and micro-enterprises by regions of the Republic of Uzbekistan in 2018-2021 (according to those registered) [10].

No	Indicators	2018 year		2019 year		2020 year		2021 year	
		Quantity , unit	%	Quantity , unit	%	Quantity , unit	%	Quantity , unit	%
1	According to the Republic of Uzbekistan	242379	100	276237	100	353921	100	436981	100
2	Republic of Karakalpakstan	11076	4.6	12364	4.5	15050	4.3	18923	4.3
3	Andijan region	21631	8.9	23978	8.7	28880	8.2	35795	8.2
4	Bukhara region	13495	5.6	15700	5.7	20982	5.9	26097	6.0
5	Jizzakh region	10069	4.1	11845	4.3	14769	4.2	18661	4.3
6	Kashkadarya region	14969	6.2	16752	6.1	20921	5.9	26088	6.0
7	Navoi region	7788	3.2	9143	3.3	15511	4.4	19058	4.4
8	Namangan region	16928	7.0	17944	6.5	22034	6.2	27314	6.3
9	Samarkand region	17261	7.1	20669	7.5	27322	7.7	35022	8.0
10	Surkhandarya region	10897	4.5	11670	4.2	15783	4.5	22670	5.2
11	Syrdarya region	8064	3.3	8947	3.2	11697	3.3	14256	3.3
12	Tashkent region	25128	10.4	29390	10.6	38006	10.7	45935	10.5
13	Fergana region	20502	8.4	23542	8.5	29599	8.4	37199	8.5
14	Khorezm region	11345	4.7	12576	4.6	16282	4.6	20177	4.6
15	Tashkent city	53226	22.0	61717	22.3	77085	21.8	89786	20.5

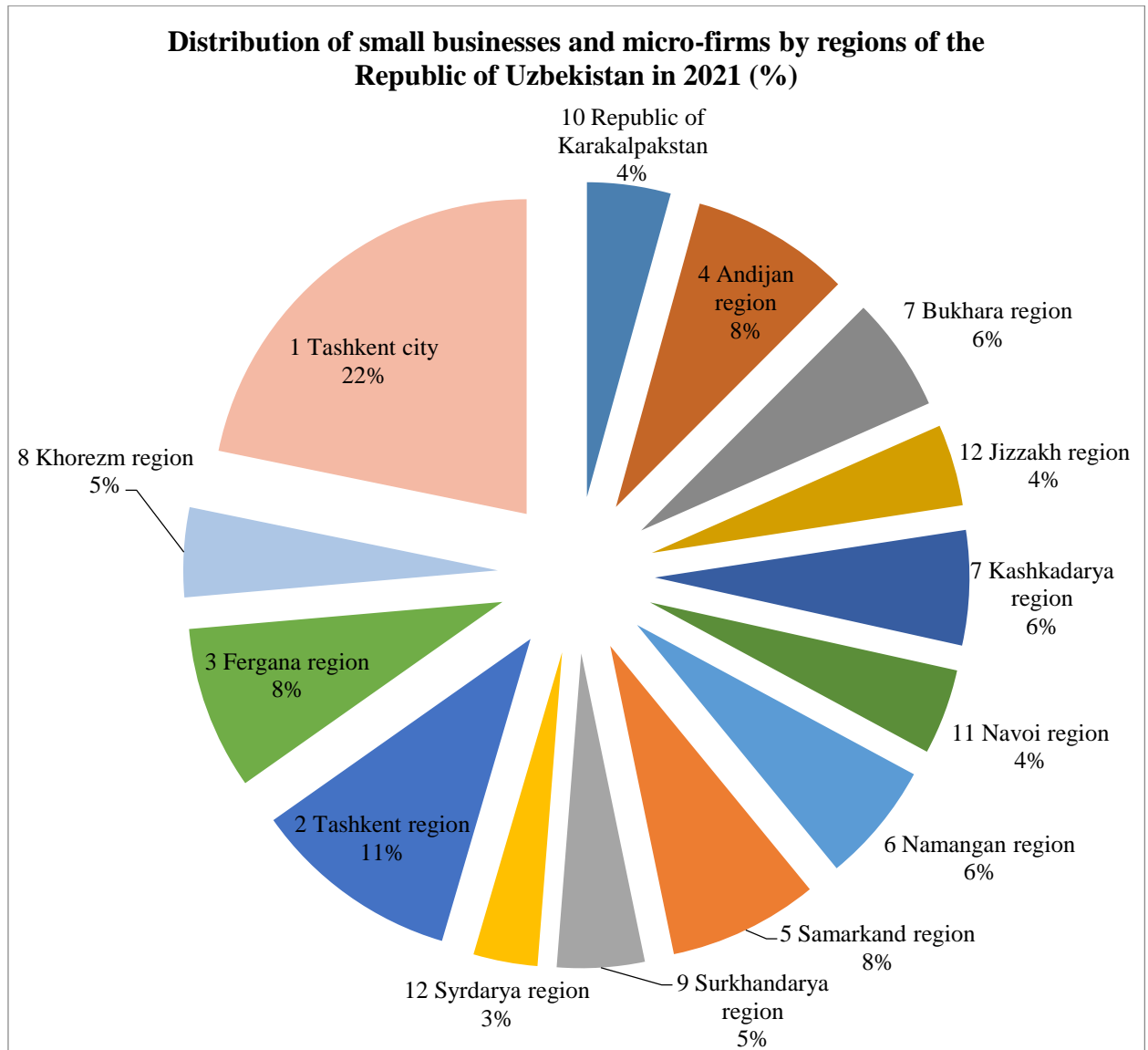
As can be seen from the table, if in 2020, 21.8% of small enterprises and micro-firms are located in this area, then in 2021, 20.5 percent of the total number of small enterprises and micro-firms of our country, or 89,786, are operating in the territory of Tashkent city. The next place is Tashkent region. In 2018, 25,128 small enterprises and micro-firms were registered in this region, and by 2021 there will be 45,935. Their share in the total was 10.4 and 10.5 percent, respectively.

The position of small enterprises and micro-firms according to the share of the total by regions is presented in the following figure (Figure 1). reflect the complexity, multifacetedness, interdependence and unevenness of its change, under the influence of territorial self-reinforcing and cumulative processes, based on the specific characteristics of the influence of endogenous factors . These spatial patterns of economic activity and small business development are reflected in the following.

1. The interaction of heterogeneous territorial entities with different resources, powers and abilities in a single economic-temporal space under the influence of endogenous factors leads to the formation of central-periphery direct and feedback relations, in which territorial self-reinforcing mechanisms are accumulated in a linear causal relationship. innovative development is manifested due to the creation of non-existent processes and synergistic effects. The center-periphery structure is the main and final principle of the construction of the geographical space, which gives rise to the

center-periphery way of development of the economy and its regions, in which the centers of different levels always attract resources from their edges.

In this regard, a hierarchy of spatial systems of business activity is created. This involves considering the evolution of small business in light of the impact of power relations of a different nature, as groups of entities interact in organizational fields with different economic and cultural values, power resources, and powers. With this approach, the development of the national economy implies the emergence of spatial characteristics of the value-institutional system change.



2. Spatial laws describe the evolution of the center-periphery mechanisms of innovative development of the regional economy, their characteristics are largely determined by the scale and activity of small businesses. They represent that large cities act as growth points or development poles due to the positive effects of the scale and structure of agglomerations. At the same time, production industries with a high

potential for innovative development become centers of "concentration" of other industries that are suppliers of resources or consumers of their products and services in their sphere of economic influence; technological, infrastructural, financial, scientific, educational and social-cultural polarization processes are developing in the future. Decentralized areas are changing due to the spread of impulses for innovative development and the formation of direct and feedback links mainly due to the spread of innovations, which depends on the characteristics of the process of interaction of formal and hidden knowledge.

3. Territorial evolution of business structures, regional evolution of economic activity, as a result of the complex interaction of centrifugal forces in the territorial space, various resources and dynamic capabilities are formed in connection with the movement of not only goods, but also labor, capital and economic structures. At the same time, small business has a significant impact on the nature, dynamics and direction of the processes of spatial changes, on the formation of knowledge formation and transfer mechanisms, and on the adaptation of regional entities to the changing business environment.

Territorial distribution of business activity and polarization of the territorial structure of the economy is determined by the ratio of benefits and costs that arise when its subjects are located in a certain area and reflects the relationship of positive and negative effects. This is due to various combinations of factors such as interaction costs between business structures (transportation and trade costs), increasing returns to scale, market size and variety of manufactured products. The trend of spatial concentration of business activity is typical for manufacturing agglomerations, which are sensitive to the impact of increasing income in terms of scale and network structure.

4. Formation of competitive advantages of regions occurs under the influence of a set of interconnected factors. As stated by P. Krugman, they can be divided into two groups; first, the availability and geographic location of natural resources demanded by the market, including the border of world trade routes, which reduces transportation costs; secondly, advantages created by economic activity (agglomeration effects, human capital, institutions supporting entrepreneurship, mobility of labor and financial resources, innovation, etc.).

5. World experience shows that in the course of the evolution of the industrial economy, the role of the first-order factors in the formation of the competitive advantages of regions - resource availability and geographical location factors - decreases, but the importance of the second-order factors, factors related to urbanization, agglomeration and the strengthening of highways, increases. In the future, the role of third-level factors - regional factors of innovative development - which fundamentally change the nature and mechanisms of increasing the competitiveness of regions is increasing. At the same time, the scale influence of large enterprises loses its previous importance, and the active participation of small business entities in the development of the region becomes important.

6. Complex processes of spatial development are accompanied by various types of "market failures" that cause insufficiency of self-development mechanisms of the market.

In this regard, there is a need to apply various horizontal and vertical connections, cooperative and market mechanisms, and scientific and technical processes within the framework of the common territorial space to regulate the formation of resources and capabilities of the regions, the formation of knowledge and the transfer of knowledge, which ensure the proportional and uneven development of dynamic capabilities. They allow to obtain the best cumulative-synergistic macro effect in a strategic perspective based on market opportunities and risks.

Based on these laws, we can see the distribution of small businesses and micro-firms in our country by types of economic activity from the following table (Table 2).

Table 2. Analysis of distribution of small businesses and micro-firms by types of economic activity [10].

No	Indicators	2018 year		2019 year		2020 year		2021 year	
		Quantity , unit	%	Quantity , unit	%	Quantity , unit	%	Quantity , unit	%
1	Total	229666	100	262930	100	334767	100	411203	100
2	Agriculture, forestry and fisheries	20530	8,9	23975	9.1	28847	8.6	40719	9.9
3	Industry	48566	21.2	56233	21.4	69970	20.9	82746	20.1
4	Construction	23807	10.4	28955	11.0	36021	10.8	40695	9.9
5	Trade	62714	27.3	70457	26.8	100573	30.0	131597	32.0
6	Transport and storage	11779	5.1	13121	5.0	15157	4.5	17056	4.2
7	Accommodation and dining services	16964	7.4	19565	7.5	25461	7.6	29947	7.3
8	Information and communication	6167	2.7	6738	2.6	7621	2.3	9221	2.2
9	Provision of health care and social services	4417	1.9	5364	2.0	6370	1.9	7588	1.9
10	Other types	34722	15.1	38431	14.6	44747	13.4	51634	12.5

As can be seen from the data of this table, the highest share in the distribution of small enterprises and micro-firms in our country by types of economic activity belongs to trade. In 2018, 62,714 small enterprises and micro-firms were active in this field, and in 2021, there were 131,597. Its share in the total was 27.3 and 32.0 percent, respectively.

The phenomenon of industrial agglomeration or regional concentration is often explained using neoclassical equilibrium models that take into account returns to scale. According to this approach, in accordance with J. Williamson's theory of territorial disparity and A. Fisher's and E. Hoover's theory of territorial development stages, a gap in spatial levels appears in the initial stages, development first increases, and then territorial disparities decrease. The trajectory of regional differentiation takes the shape of an inverted U, the so-called Williamson curve. According to the theory of J. Williamson, in the initial stages, economic growth is concentrated in the central regions

(core) of the country, and then spreads to the peripheral regions. Therefore, with the growth of national wealth, the high degree of regional polarization is replaced by the leveling of regional differences. Regional policy should not limit the movement of market forces of agglomeration, which initially have a positive effect, and then, as a result of the accumulation of negative effects, the flow of capital and labor is directed to poor regions [11].

However, this theory does not take into account the influence of all contextual and institutional factors of the market. First, the continuous production of innovations in the center leads to the dependence of the growth of the backward regions on the transfer of new technologies. Secondly, border regions have more opportunities to attract public investment in social and logistics infrastructure. Therefore, with the growth of national wealth, regional inequality increases under the influence of market forces of agglomeration.

World experience shows that at the end of the 20th century, economic inequality significantly increased in catching up with countries, which ensured the rapid development of regions with clear competitive advantages, as a result of which the economies of these countries also developed more successfully. Gradually, attention is being paid to the development of other regions, but at the same time, the policy of encouraging the development of local regions with a competitive advantage, increasing agglomeration and innovation effects, is being continued.

Today, the differences in approaches to the formation of territorial models of innovative development of small businesses are mainly determined by the fact that these models have different structural and dynamic characteristics due to the diversity of the business environment, and are divided into different ranked groups depending on the selected classification criteria. Studying the characteristics of regional innovation processes in the development of small business allows to classify them, it helps to understand the systematization of knowledge and the mechanism of creation of innovations and their use, makes it possible to compare the possibilities of creating competitive advantages, evaluates alternative approaches and ways of further development of business entities.

Conclusions. Based on the characteristics of the interaction between production-technological, cultural-value, organizational-institutional and cycle-time factors, the nature of participation in the processes of creation, transfer and repetition of innovations is important.

Within the framework of the considered approach, it is important to distinguish four types of regional models of innovative development of small business, which play a key role in understanding the laws of the formation of the innovative profile of small business development - national, national-territorial, regional and less developed peripheral, they can have different levels of development (low, medium, high).

The first type of model - the nationally oriented model of innovative development of small business - ensures the satisfaction of national needs and the needs of international markets for innovation. In this model, fundamental research is particularly

important in universities and small businesses that actively collaborate with knowledge producers and innovation firms in other regions. An example of this type of model is the technopolis established in countries such as France, Japan, and Taiwan, which is characterized by a limited degree of interaction between innovative small firms within the policy framework, as well as developed vertical ties with them. Large firms in these areas are generally regarded as anchors of technopolises. The research functions of universities and corporations are mainly focused on creating radical innovations.

The second type of model - the national-regional model of innovative development of small business is aimed at meeting the national and regional needs for innovation. The main producers of innovation here are both small firms and universities. This model is characterized by the development of research and development, provides the creation of radical and improved innovations, innovative small firms actively cooperate with universities and small firms of the region. This model related to the implementation of the network approach is typical for Germany, Austria and Scandinavian countries. The research competence is mixed, allowing for fundamental and applied developments aimed at the needs of small firms. The third type of model is a territorially oriented model of innovative development of small business. This implies meeting mainly regional needs for innovation with little involvement of universities as producers of knowledge. Here, an important link between small firms and universities exists mainly in the field of practical development. Innovative small firms usually interact with small firms in the same area and also cooperate with competitors (cooperation). The result of their activity, as a rule, is the improvement of innovations created to solve practical problems. Examples of this type of model are the networks of small and medium-sized enterprises in Italy's industrial regions, as well as the innovative small business centers located in these regions. Companies mainly use synthesized knowledge (synthetic knowledge) in their work. New knowledge, as a rule, is created not as a result of deduction and abstraction, but as a result of inductive circuits of tests, experiments, computer simulations and practical work.

The fourth type of model is an underdeveloped peripheral model with a low level of innovative potential and innovative activity of entrepreneurship. Economic and technological changes in the activity of entrepreneurial firms are implemented slowly due to the presence of various important obstacles (economic, cultural, institutional, organizational, material and technical, infrastructure, etc.) [12].

REFERENCES

1. Klamer, AA Pragmatic View on values in Economics // Journal of Economic Methodology. 2003. June. V. 10. 2. pp. 192–21
2. Etzkowitz, H., Leydesdorff, L. The Dynamics of Innovation: From National Systems and "Mode 2" to a Triple Helix of University-Industry-Government Relations Research Policy. 2000. V. 29.
3. Markov, S. Franchising: reshenie problem razvitiya biznesa / S. Markov // Problem theory and practical management. 2006. No. 3. S. 104–107.

4. Crevoisier, O. Beyond/Territorial Innovation Models: The Pertinence of the Territorial Approach. *Regional Studies*. 2014. V. 48. 3.
5. The State Statistics Committee of the Republic of Uzbekistan "Small entrepreneurship in Uzbekistan 2017-2020" collection. Tashkent-2021. pp. 54-55
6. Williamson, JG Regional Inequality and the Process of National Development: a Description of the Patterns. *Economic and Cultural Change*. 1965. 13. pp. 1–84.
7. Romanenko Elena Vasilievna "Razvitie malogo predprinimatelstva v usloviyakh innovatsionnoy ekonomiki". Saint Petersburg – 2018
8. Alojnovich, R. R. The importance of digital payment systems in the digital economy. *Scientific and technical journal of namangan institute of engineering and technology*.
9. Rashidov, R. A. (2023, January). Factors limiting the development of the small business sector. In *International Scientific and Current Research Conferences* (pp. 54-56).
10. Alojnovich, R. R. (2023). The need for government regulation of small business. *International Journal Of Management And Economics Fundamental*, 3(01), 13-20.
11. Rashidov, R. A., & Salokhiddinov, Z. N. (2023). Specific characteristics of private business development. *International Journal Of Management And Economics Fundamental*, 3(03), 14-24.
12. Alojnovich, R. R. (2022). Issues of using bank credits in development of family entrepreneurship. *World Journal of Advanced Research and Reviews*, 15(1), 418-423.
13. Rakhimberdievich, U. S., & Alojnovich, R. R. (2022). Directions for increasing labor productivity in agriculture. *Galaxy International Interdisciplinary Research Journal*, 10(10), 179-182.
14. Rashidov, R. (2023). Issues of regional development of small business. *Scientific and Technical Journal of Namangan Institute of Engineering and Technology*, 8(1), 311-318.
15. Rashidov, R., & Shermatov, A. (2023, June). Issues of using cost-effective technologies in the cotton industry. In *AIP Conference Proceedings* (Vol. 2789, No. 1). AIP Publishing.
16. Rashidov, R. (2023, June). Criteria for the effectiveness of using resultable technologies in cotton. In *AIP Conference Proceedings* (Vol. 2789, No. 1). AIP Publishing.
18. Zamira, H. (2023, June). Features of entrepreneurship in the field of household services. In *International Scientific and Current Research Conferences* (pp. 38-42).
19. Zamira, H. (2023). Innovative development of household services. *International Journal Of Management And Economics Fundamental*, 3(11), 79-86.

C O N T E N T S

PRIMARY PROCESSING OF COTTON, TEXTILE AND LIGHT INDUSTRY

Nabidjanova N., Azimova S.

Study of physical-mechanical properties of fabrics used for men's outer knit assortment 3

Nabidjanova N., Azimova S.

Development of model lines of men's top knitting assortment 7

Noorullah S., Juraeva G., Inamova M., Ortiqova K., Mirzaakbarov A.

Enhancing cotton ginning processing method for better fibre quality 12

Kamalova I., Inoyatova M., Rustamova S., Madaliyeva M.

Creating a patterned decorative landscape using knitted shear waste on the surface of the paint product 16

Inoyatova M., Ergasheva Sh., Kamalova I., Toshpo'latov M.

State of development of fiber products – cleaning, combing techniques and technologies 21

Vakhobova N., Nigmatova F., Kozhabergenova K.

Study of clothing requirements for children with cerebral palsy 30

Mukhametshina E., Muradov M.

Analysis of the improvement of pneumatic outlets in the pneumatic transport system 37

Otamirzayev A.

Innovative solutions for dust control in cotton gining enterprises 45

Muradov M., Khuramova Kh.

Studying the types and their composition of pollutant mixtures containing cotton seeds 50

Mukhamedjanova S.

Modernized sewing machine bobbin cap hook thread tension regulator 53

Ruzmetov R., Kuliyeu T., Tuychiev T.

Study of effect of drying agent component on cleaning efficiency. 57

Kuldashov G., Nabiev D.

Optoelectronic devices for information transmission over short distances 65

Kuliev T., Abbasov I., F.Egamberdiev.

Improving the elastic mass of fiber on the surface of the saw cylinder in fiber cleaning equipment using an additional device 73

Yusupov A., Muminov M., Iskandarova N., Shin I.

On the influence of the wear resistance of grate bars on the technological gap between them in fiber separating machines	80
--	-----------

Kuliev T., Jumabaev G., Jumaniyazov Q.

Theoretical study of fiber behavior in a new structured elongation pair	86
---	-----------

GROWING, STORAGE, PROCESSING AND AGRICULTURAL PRODUCTS AND FOOD TECHNOLOGIES

Meliboyev M., Ergashev O., Qurbonov U.

Technology of freeze-drying of raw meat	96
---	-----------

Davlyatov A., Khudaiberdiev A., Khamdamov A.

Physical-chemical indicators of plum oil obtained by the pressing method	102
--	------------

Tojibaev M., Khudaiberdiev A.

Development of an energy-saving technological system to improve the heat treatment stage of milk	109
--	------------

Turg'unov Sh., Mallabayev O.

Development of technology for the production of functional-oriented bread products	115
--	------------

Voqqosov Z., Khodzhiev M.

Description of proteins and poisons contained in flour produced from wheat grain produced in our republic	120
---	------------

CHEMICAL TECHNOLOGIES

Choriev I., Turaev Kh., Normurodov B.

Determination of the inhibitory efficiency of the inhibitor synthesized based on maleic anhydride by the electrochemical method	126
---	------------

Muqumova G., Turayev X., Mo'minova Sh., Kasimov Sh., Karimova N.

Spectroscopic analysis of a sorbent based on urea, formalin, and succinic acid and its complexes with ions of Cu(II), Zn(II), Ni(II)	131
--	------------

Babakhanova Kh., Abdukhalilova M.

Analysis of the composition of the fountain solution for offset printing	138
--	------------

Babakhanova Kh., Ravshanov S., Saodatov A., Saidova D.

Development of the polygraphic industry in the conditions of independence	144
---	------------

Tursunqulov J., Kutlimurotova N., Jalilov F., Rahimov S.

Determination zirconium with the solution of 1-(2-hydroxy-1-naphthoyazo)-2-naphthol-4-sulfate	151
---	------------

Allamurtova A., Tanatarov O., Sharipova A., Abdikamalova A., Kuldasheva Sh.

Synthesis of acrylamide copolymers with improved viscosity characteristics	156
--	------------

Amanova N., Turaev Kh., Alikulov R., Khaitov B., Eshdavlatov E., Makhmudova Y.	
Research physical and mechanical properties and durability of sulfur concrete	165

MECHANICS AND ENGINEERING

Abdullaev E., Zakirov V.	
Using parallel service techniques to control system load	170
Djuraev R., Kayumov U., Pardaeva Sh.	
Improving the design of water spray nozzles in cooling towers	178
Anvarjanov A., Kozokov S., Muradov R.	
Analysis of research on changing the surface of the grid in a device for cleaning cotton from fine impurities	185
Mahmudjonov M.	
Mathematical algorithm for predicting the calibration interval and metrological accuracy of gas analyzers based on international recommendations ILAC-G24:2022/OIML D 10:2022 (E)	192
Kulmuradov D.	
Evaluation of the technical condition of the engine using the analysis of the composition of gases used in internal combustion engines	197
Kiryigitov Kh., Taylakov A.	
Production wastewater treatment technologies (On the example of Ultramarine pigment production enterprise).	203
Abdullayev R.	
Improving the quality of gining on products.	208
Abdullayev R.	
Problems and solutions to the quality of the gining process in Uzbekistan.	212
Yusupov D., Avazov B.	
Influence of various mechanical impurities in transformer oils on electric and magnetic fields	216
Kharamonov M.	
Prospects for improving product quality in textile industry enterprises based on quality policy systems	223
Kharamonov M., Kosimov A.	
Problems and solutions to the quality of the gining process in Uzbekistan.	230
Mamahonov A., Abdusattarov B.	
Development of simple experimental methods for determining the coefficient of sliding and rolling friction.	237

Aliyev E., Mamahonov A.	
Development of a new rotary feeder design and based flow parameters for a seed feeder device	249
Ibrokhimova D., Akhmedov K., Mirzaumidov A.	
Theoretical analysis of the separation of fine dirt from cotton.	260
Razikov R., Abdazimov Sh., Saidov D., Amirov M.	
Causes of floods and floods and their railway and economy influence on construction.	266
Djurayev A., Nizomov T.	
Analysis of dependence on the parameters of the angles and loadings of the conveyor shaft and the drum set with a curved pile after cleaning cotton from small impurities	272
ADVANCED PEDAGOGICAL TECHNOLOGIES IN EDUCATION	
Jabbarov S.	
Introduction interdisciplinary nature to higher education institutions.	276
Tuychibaev H.	
Analysis of use of sorting algorithms in data processing.	280
Kuziev A.	
Methodology for the development of a low cargo network.	289
Niyozova O., Turayev Kh., Jumayeva Z.	
Analysis of atmospheric air of Surkhondaryo region using physico-chemical methods.	298
Isokova A.	
Analysis of methods and algorithms of creation of multimedia electronic textbooks.	307
ECONOMICAL SCIENCES	
Rashidov R., Mirjalolova M.	
Regulations of the regional development of small business.	315
Israilov R.	
Mechanism for assessment of factors affecting the development of small business subjects.	325
Yuldasheva N.	
Prospects of transition to green economy.	334
Malikova G.	
Analysis of defects and solutions in investment activity in commercial banks.	346