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INDUSTRIAL AND REGIONAL ANALYSIS OF INDUSTRIAL PRODUCTION AND EXPORT IN UZBEKISTAN

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ANNOTATION

Industry plays an important role in the economic development of the country. The most important consumer goods are produced by industrial production, and the country's socio-economic development also depends on the development of this sector. This article analyzes the production and export of industrial products in the Republic of Uzbekistan at the sectoral and regional levels. The analysis used the methods of systematic analysis, comparative analysis, averages of the dynamics of national and regional industrial production and exports. As a result of the analysis, the development trends of exports of industrial products of Fergana region were identified. Based on the results of the analysis, proposals were developed for the further development of industrial production and exports.

KEYWORDS: *dynamic rows, advanced technologies, foreign investment, industrial production, export of industrial products, the Third Civilization.*

INTRODUCTION

At a time when the Coronavirus pandemic continues around the world and has a significant negative impact on the economy, it is necessary to achieve sustainable development of the country's economy. Industry is one of the most important foundations of sustainable economic development[1].

Nowadays the economy of our country is transitioning to a third civilization, the development of industrial sectors and industries will undoubtedly become one of the most important tasks[2]. As a result of the adopted program of priority development of industry and the consistent implementation of sectoral programs for modernization, technical and technological renewal of production, the role of processing industries with high added value, producing competitive products is growing[3].

President Sh. Mirziyoyev noted that: "The issues of modernization of industries and regions, increasing their competitiveness, development of export potential should be in the center of our constant attention. To do this, we need to more actively attract foreign investment and advanced technologies, as well as information and communication systems (ICT) in all areas"[4].

LITERATURE REVIEW

Kjeldsen-Kragh, Soren (2007) according to the theory of five sectors of the economy, i.e. primary (agriculture, mining, fisheries and forestry, etc.); secondary (industrial production and construction), tertiary (service); quaternary (knowledge economy); fifth (the highest sector, top executives, researchers, financial and legal advisers) it can be said that the taking main role for the industry is natural. This approach is aimed at improving the quality of life and employment, with a particular focus on population unemployment in sectors of the economy[5].

According to Jean Furaste (2019) (French economist and sociologist, one of the founders of the theory of industrial society), the distribution of labor between the three sectors of the economy, namely primary, secondary and tertiary sectors, develops at different stages: traditional civilization (labor quota 64.5%, respectively) 20%, 15.5%), the transition period (40%, 40%, 20%) and the third civilization (10%, 20%, 70%).

Ilyosov A. (2020) focused on some of the challenges in digital manufacturing and industrial product exports in the digital economy[6].

Kurpayanidi K., Ilyosov A. (2020) they studied problems of the use of digital technologies in industry in the context of increasing the export potential of the country [7].

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Kurpayanidi K. et al. (2020) analyzed the issue of a competitive national innovative system formation in Uzbekistan[8].

RESEARCH METHODOLOGY

The research used systematic analysis, synthesis, statistical grouping, abstract-logical reasoning, expert evaluation, and other methods.

ANALYSIS AND RESULTS

From 2010 to 2019, the volume of industrial production in the country increased by 8.7 times. In 2012, 2014, 2015, 2016 and 2019, industrial production fell by -3.9, -3.8, -2.8, -1.5 and -17.5 percent, respectively, compared to the previous year. . For example, in 2011 the chain growth rate was 124.8% compared to 2010, while in 2012 it was 120.9%, -3.9% behind. The rate of cumulative extinction was also 3.1%, 3.1%, 2.3%, 1.3% and 11.1% in these years. For example, in 2019, the extinction rate was 88.9% and the incremental extinction rate was 11.1% (100% -88.9%) (Table 1).

Table 1
Analysis of the dynamics of industrial production in Uzbekistan in 2010-2019

years / indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	2	3	4	5	6	7	8	9	10	11
Volume of industrial products, billion sums	38119,0	47587,1	57552,5	70634,8	84011,6	97598,2	111869,4	148816	235340,7	331006,6
1. Absolute growth, billion sums										
Chained	-	9468,1	9965,4	13082,3	13376,8	13586,6	14271,2	36946,6	86524,7	95665,9
Basic (compared to 2010)	-	9468,1	19433,5	32515,8	45892,6	59479,2	73750,4	110697	197221,7	292887,6
2. Growth rate, in%										
Chained	-	124,8	120,9	122,7	118,9	116,2	114,6	133,0	158,1	140,6
Basic (compared to 2010)	100,0	124,8	151,0	185,3	220,4	256,0	293,5	390,4	617,4	868,4
3. Accumula-tion rate, in%										
Chained	-	24,8	20,9	22,7	18,9	16,2	14,6	33,0	58,1	40,6
Basic (compared to 2010)	100,0	24,8	51,0	85,3	120,4	156,0	193,5	290,4	517,4	768,4
4. 1% increase in value, billion sums	-	381,2	475,9	575,5	706,3	840,1	976,0	1118,7	1488,2	2353,4
5. Absolute acceleration (or extinction rate), a) billion sums	-	-	497,3	3116,9	294,5	209,8	684,6	22675,4	49578,1	9141,2
b) at the expense of points	-	-	-3,9	1,8	-3,8	-2,8	-1,5	18,4	25,1	-17,5
6. Accelera-tion or extinction rate (%)	-	-	96,9	101,5	96,9	97,7	98,7	116,1	118,9	88,9
7. Accumu-lation acce-leration (or extinction) rate,%	-	-	3,1	-1,5	3,1	2,3	1,3	-16,1	-18,9	11,1

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According to Table 1, the average volume of industrial production in 2010-2019:

$$\bar{Y} = \frac{\sum Y}{N} (1)$$

In rows of moments of dynamics, the average level is determined in a special way[9]. To do this, the initial and final series of levels are added in half, and the rest are added in full, divided by one less than the total number of levels formed:

$$\bar{Y} = \frac{\frac{1}{2}y1+y2+\cdots+\frac{1}{2}yn}{n-1} = \frac{\frac{1}{2}(y+yn)+\sum_{i=2}^{n-1} Yi}{n-1}; (2)$$

This moment is called the chronological average of the series.

The average absolute increment is the result of determining the arithmetic mean of the chain absolute increments.

$$\Delta y = \frac{\sum \Delta y}{n} (3)$$

The average absolute acceleration is calculated by dividing the number of cycles by adding the absolute acceleration values:

$$dy = \frac{\sum di}{N} (4)$$

It is important to calculate the average velocities of the dynamics in determining the trends of the dynamics series and in their comparative analysis[10]. This is based on the results of aligning the dynamics series on the exponents (exponential function Y = f(a)).

If the series levels change in the same rhythm and direction, the average dynamic velocity is determined by calculating the geometric mean from the chain velocities:

$$K = \sqrt[n]{K1 * K2 * \ldots * Kn}; (2.5)$$

Here: Ki - chain growth rates;
n - is their number.

Thus, in 2010-2019, industrial production increased by an average of 31.0% per year.

Table 2
The results of the analysis of the dynamics of industrial production in Uzbekistan in 2010-2019

№	Indicators	Calculation formula	Calculation result
1	2	3	4
1.	Average volume of industrial production, bln. sum	$\bar{Y} = \frac{\sum Y}{N} (2.1)$	122253,6
2.	The average annual volume of industrial production, bln. sum	$\bar{Y} = \frac{\frac{1}{2}y1+y2+\cdots+\frac{1}{2}yn}{n-1} = \frac{\frac{1}{2}(y+yn)+\sum_{i=2}^{n-1} Yi}{n-1}; (2.2)$	115330,3
3.	Average absolute additional growth, bln. sum	$\Delta y = \frac{\sum \Delta y}{n} (2.3)$	29288,8
4.	Average absolute acceleration, bln. sum	$dy = \frac{\sum di}{N} (2.4)$	10774,7
5.	Average dynamic rate,%	$K = \sqrt[n]{K1 * K2 * \ldots * Kn}; (2.5)$	131,0

Let us focus on the analysis of the composition of industrial production by type of economic activity. In 2010-2019, the share of mining and open pit mining in the total industry is on a downward trend until 2016, and in 2016-2019 it is on an upward trend, but decreased from 15.0% in 2010 to 13.0% in 2019. It can be said that the rational and efficient use of natural resources is associated with the development of resource-saving technologies[11].

The share of manufactured industry shows an increase in 2011, 2013, 2014, 2016 and 2018, and a decrease in 2015, 2017 and 2019 (Table 3).

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Table 3
The structure of industrial production by type of economic activity in 2010-2019 (as a percentage)

Types of economic activity	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	2	3	4	5	6	7	8	9	10	11
Industry - total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Mining and open pit mining	15,0	12,7	14,7	12,7	11,0	11,1	9,6	12,3	12,3	13,0
Manufactured industry	73,8	77,2	75,8	78,3	79,9	79,0	80,3	79,1	80,6	79,9
Water, gas, steam supply and air conditioning	10,7	9,5	9,0	8,4	8,5	9,2	9,4	7,8	6,2	6,4
Water supply; sewage system, waste collection and disposal	0,5	0,6	0,5	0,5	0,6	0,7	0,7	0,8	0,9	0,7

The analysis of the level of industrial production by regions shows that in 2010-2019, Tashkent, Tashkent, Andijan, Navoi, Kashkadarya and Fergana regions were the leaders in the production of industrial products, while Syrdarya, Jizzakh and Surkhandarya regions are the lowest (**table 4**).

Table 4
Volume of industrial production by regions in 2010-2019 (in current prices; billion sums)

	Production volume of canoat products									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Republic of Uzbekistan	38119,0	47587,1	57552,5	70634,8	84011,6	97598,2	111869,4	148816	235340,7	331006,6
The Republic of Karakalpakstan	697,2	897,8	1034,2	1368,8	1717,2	2387,6	4265,7	6773,3	10911,9	12 729,7
Regions:										
Andijan	4701,4	5727,3	6934,9	9278,6	10463,2	9744,6	7965,7	13269,8	27454,7	33 027,3
Bukhara	1674,8	2202,6	2457,8	3073,9	3972,6	5143,9	5569,6	6422,3	8601,2	14 585,8
Jizzakh	522,7	659,6	785,7	933,3	1195,8	1474,5	2001,2	2548,8	3581,8	4 789,5
Kashkadarya	4957,5	5043,6	6076,4	6849,4	7194,7	8721,9	9632,2	10945,9	14529,5	20 552,2
Navoi	4038,5	4865,7	5761,1	7087,3	8238,9	9286,9	10657,9	13072,9	22892,4	44 540,4
Namangan	1007,0	1358,1	1615,6	1892,1	2315,2	2861,8	3475,7	4615,5	6586,6	9 092,4
Samarkand	2011,2	2485,6	3222,0	3880,1	4966,4	6095,5	7446,0	9242,0	13488,1	15 863,3
Surkhandarya	756,4	925,8	1101,8	1321,4	1615,3	1910,7	2200,7	2356,4	3234,7	4 402,8
Syrdarya	926,8	1211,4	1528,1	1929,3	2363,1	2820,6	3522,3	3806,5	5163,1	7 217,0
Tashkent	5471,2	7286,5	8112,1	10418,3	12474,6	14401,0	16864,7	21693,4	37724,4	53 930,5
Fergana	3265,5	4120,1	4596,9	5290,8	6596,4	7170,2	8040,7	9728,5	13613,8	19 490,5
Khorezm	628,6	852,4	1014,2	1297,2	1920,8	2616,0	2802,7	4070,4	6457,2	8 811,6
Tashkent city	6984,4	9628,9	12516,4	15531,3	15468,5	18986,1	23511,9	30459,6	43274,1	58 748,5

During the study period, the absolute growth rate of industrial production in the country averaged 8.7 times[12]. The Republic of Karakalpakstan (18.3), Khorezm (14.0), Navoi (11.0), Tashkent (9.9), Jizzakh (9.2), Namangan (9.0) and Bukhara (8.7). Kashkadarya (4.1), Surkhandarya (5.8) and Fergana (6.0) regions have the lowest growth rates (Figure 1).

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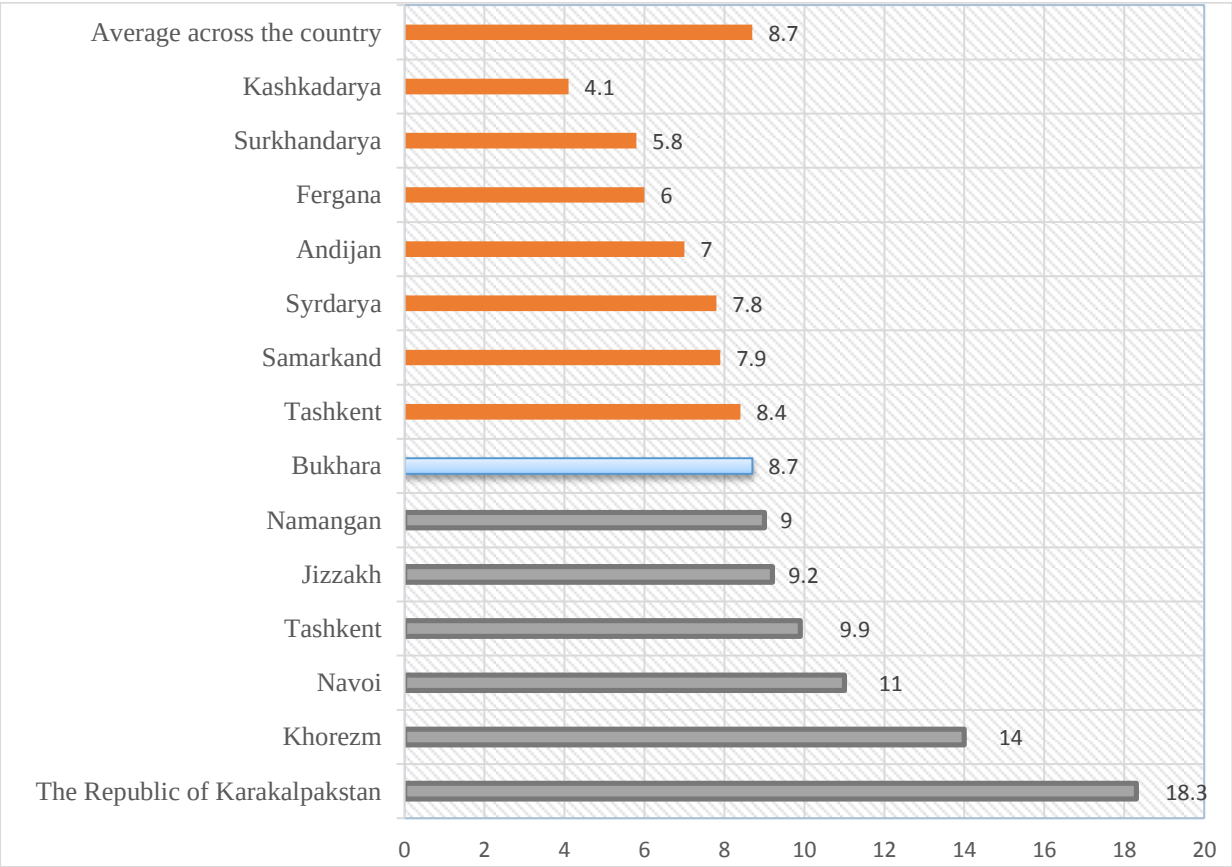

Figure 1. Absolute growth of industrial production in 2010-2019, times

The analysis of product types shows that the share of cotton fiber in the structure of exports from 2010 to 2019 ranged from 12.1% to 1.6%, the share of food products from 9.7% to 8.8%, energy sources and petroleum products 22 , From 8% to 14.5%, and machinery and equipment from 5.5% to 2.4%. The services sector grew from 10.2% to 19.7% (Table 5).

Table 5
Dynamics of export structure in 2010-2019

Indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	2	3	4	5	6	7	8	9	10	11
Export structure	100	100	100	100	100	100	100	100	100	100
Cotton fiber	12,1	9	9,3	8,1	7,7	5,9	5,3	3,8	1,6	1,6
Food products	9,7	13,3	6,4	10,3	12,4	10,5	5,7	7,0	7,8	8,8
Chemical products and wares	5,1	5,6	5,6	4,2	4,7	4,9	6,9	7,0	6,5	5,0
Energy sources and petroleum products	22,8	18,5	34,6	24	23	21,4	14,2	12,8	19,1	14,5
Ferrous and non-ferrous metals	6,9	7,4	7,8	6,7	7,2	6,6	5,9	7,3	8,4	7,2
Machinery and equipment	5,5	6,6	6,5	5,7	4	1,3	1,8	2,8	1,5	2,4
Services	10,2	11,8	17,3	20,6	22,4	24,5	25,8	19,7	21,9	19,7
others	27,7	27,8	12,5	20,4	18,6	24,9	34,4	39,6	33,2	40,8

Fergana region is one of the regions of the Republic that has a place in industrial production[13]. A number of reforms are being carried out in the region to develop industry. In particular, according to the Resolution of the Cabinet of Ministers of July 22, 2019 No 617 "On measures to accelerate the implementation of investment projects and industrial development in Fergana region":

- May 2019 to May 2020 was declared a “milestone year” for the implementation of investment projects and industrial development in Fergana region;

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- In Fergana region, every Wednesday was designated as the "Day of implementation of investment projects and industrial development";
- Implementation of investment projects and industrial development in Fergana region was identified as a priority task of the governor of Fergana region;
- For the implementation of investment projects and the development of industrial potential in Fergana region, the heads of khokimiyats, sectors, territorial public administration bodies of Fergana region and districts (cities) are personally responsible.

As a result of the measures taken in 2010-2019, the region's industrial production will increase almost sixfold, with an absolute volume of 16225 billion sums[14]. Although industrial production declined in 2010 and 2017, we can see that it increased in the range of 3% to 10% over the remaining years (Figure 2).

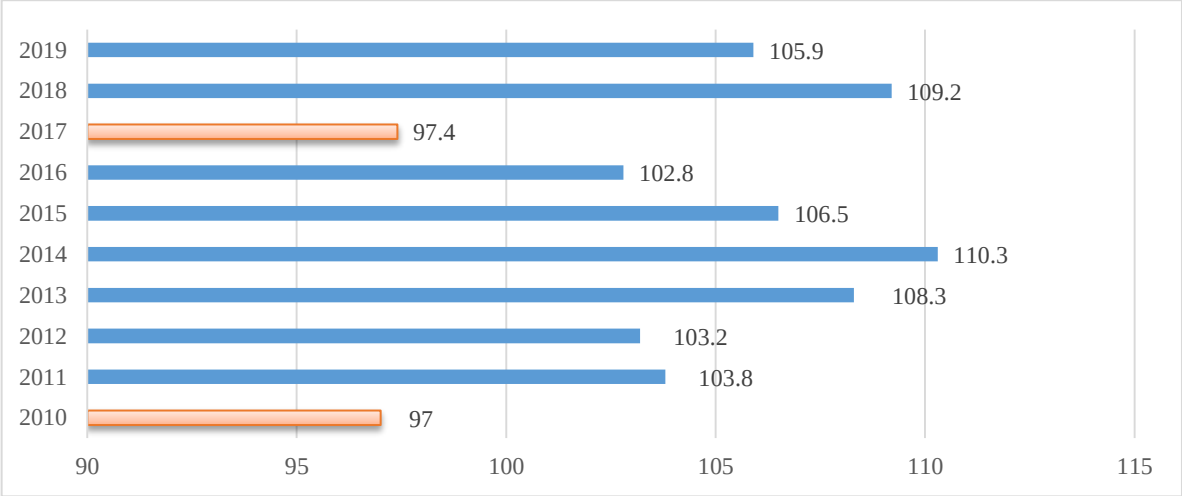

Figure 2. Growth rates of industrial production in Fergana region in 2010-2019,%

During the reporting period, the share of regional industrial production in the total indicator of the Republic decreased from 8.7% to 5.9% (Figure 3).

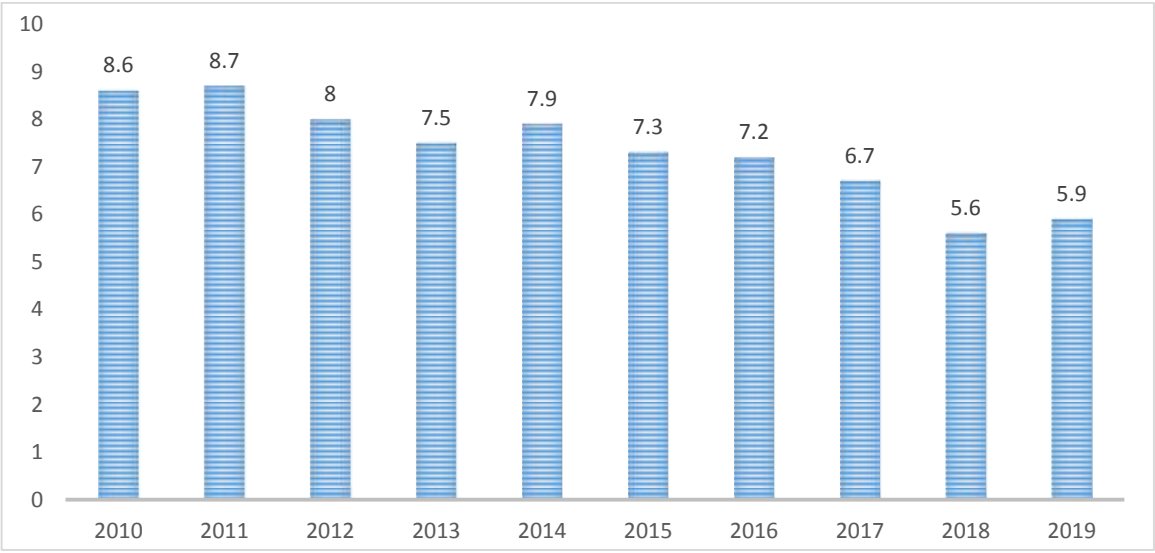

Figure 3. The share of industrial production of Fergana region in the total industrial output of the republic in 2010-2019, in%

Despite the fact that the region's industrial production has increased in absolute terms during the years under review, its share in the country's total decreased to 2.8%, the highest in 2011 - 8.7%, the lowest in 2018 - 5.6%[15].

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CONCLUSIONS AND SUGGESTIONS

In conclusion, it can be said that until recent years, the export of industrial products in the region did not fully reflect the economic potential of the region. We can further increase our export potential and strengthen our position in international trade by making full use of our existing opportunities, using the practical experience gained by leading exporting companies and implementing the following proposals:

- Increase the volume of exports through the full use of the production capacity of regional industrial enterprises and industry enterprises engaged in export activities;
- Take measures to attract industrial projects launched in the framework of the program of socio-economic development of Fergana region in 2020-2021 to export activities;
- take measures for the full and timely installation of imported machinery and equipment and the export of products manufactured at these enterprises;
- it is necessary to develop organizational and economic mechanisms to support exports. In particular, according to the World Trade Organization, there are 178 export-oriented organizations, and the system is effective in the United States, Great Britain, Japan, South Korea, Germany, and China;
- International trade administration, ie the creation of a system to protect the interests of national exporters abroad and provide export services;
- Develop measures to enter these markets with an in-depth study of the markets of South Korea, Oman and Latvia.

REFERENCES

1. *Employment by Major Industry Sector. Employment Projections, U.S. Bureau of Labor Statistics, 4 Sept. 2019. https://www.thoughtco.com/sectors-of-the-economy-1435795.*
2. *Kjeldsen-Kragh, S. (2007). The role of agriculture in economic development: the lessons of history. Copenhagen Business School Press DK.*
3. *Ilyosov A. (2020). Some problems in digital production and export of industrial products in the digital economy// Economics and finance. 2020. №3. 175-182 p. ISSN 2010-9997*
4. *Kurpayanidi, K. I., & Ilyosov, A. A. (2020). Problems of the use of digital technologies in industry in the context of increasing the export potential of the country. ISJ Theoretical & Applied Science, 10 (90), 113-117. Doi: https://dx.doi.org/10.15863/TAS*
5. *Kurpayanidi, K. et al. (2020). The issue of a competitive national innovative system formation in Uzbekistan. E3S Web of Conferences. – EDP Sciences, 2020. – T. 159. – C. 04024. DOI: https://doi.org/10.1051/e3sconf/202015904024*
6. *Szalavetz, Andrea (2019). "Industry 4.0 and capability development in manufacturing subsidiaries," Technological Forecasting and Social Change, Elsevier, vol. 145(C), pages 384-395. DOI: https://doi.org/10.1016/j.techfore.2018.06.027*
7. *The main macroeconomic indicators of the Republic of Uzbekistan for January-December 2019 (2020). T .: The State committee of the Republic of Uzbekistan on statistics.*
8. *Azimova, F. P. (2019). Priority directions for development of the silk industry in the Republic of Uzbekistan. American Journal of Economics and Business Management, 2(4), 107-114.*
9. *Kurpayanidi, K. I. (2019). Actual issues of activation of foreign economic activity in the economy of Uzbekistan. ISJ Theoretical & Applied Science, 04 (72), 60-65. Doi: https://dx.doi.org/10.15863/TAS.2019.04.72.10*
10. *Kurpayanidi, K. I., & Abdullaev, A. M. (2018). Activation of foreign economic relations on the basis of innovative development. Practice of Uzbekistan. LAP LAMBERT Academic Publishing, European Union, Germany.*
11. *Kurpayanidi, K., Mamurov, D. (2019) Features of the Support of the Innovative Activity: Foreign Experience and Practice for Uzbekistan. Bulletin of Science and Practice 5(11):255-261. DOI: https://dx.doi.org/10.33619/2414-2948/48/29*
12. *Kurpayanidi, K.I. (2018). «Doing Business 2018: Reforming To Create Jobs» that you need small business in Uzbekistan. ISJ Theoretical & Applied Science, 03 (59): 43-53. Doi: https://dx.doi.org/10.15863/TAS.2018.03.59.8*
13. *Margianti, E.S., Ikramov, M.A., Abdullaev, A.M., Kurpayanidi, K.I., Misdiyono (2020) Role of goal orientation as a predictor of social capital: Practical suggestions for the development of team cohesiveness in SME's. Gunadarma Pulisher, Indonesia. http://dx.doi.org/10.13140/RG.2.2.28953.44641*
14. *Tadjiev, S., & Donzé, P. Y. (2020). FDI policies in protected industries: the Uzbek automobile industry since 1991. International Journal of Business and Emerging Markets, 12(3), 313-335.*
15. *Yusupov, S. S. (2019). Strategic of development of export potential for engineering industry of Uzbekistan. ISJ Theoretical & Applied Science, 03 (71), 584-588. Doi: https://dx.doi.org/10.15863/TAS.2019.03.71.59*