Received on: 20 July 2022 Revised on: 09 August 2022 Accepted: 30 September 2022

RESEARCH ARTICLE
DOI: 10.47703/ejebs.v4i66.209

Regional Features of the Placement of Light Industry Enterprises in Kazakhstan

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For citation: Nurlanova, N.K., & Omarov, A.K. (2022). Regional Features of the Placement of Light Industry Enterprises in Kazakhstan. Eurasian Journal of Economic and Business Studies, 115-130.

Conflict of interest: author(s) declare that there is no conflict of interest.

Abstract

The purpose of the article is to identify the main factors of production placement, assess the concentration of light industry in the regions of Kazakhstan and develop proposals for the cluster organization of the industry. To achieve the goal, literary sources were studied, the main factors of production placement were identified, the level of concentration of light industry in the regions of Kazakhstan was assessed, the peculiarities of the placement of its enterprises were identified, proposals for the cluster organization of the industry were developed. The following methods were used: logical, generalizations, comparative analysis, economic-statistical, index, grouping, Krugman, Herfindal-Hishman methods. The hypothesis of the study was the assumption that the concentration of light industry in certain regions and the creation of regional clusters of the country will increase the level of competitiveness of the industry. The information base was provided by literary and Internet sources, scientific developments of domestic and foreign scientists on the studied problem: data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, data posted on the websites of the regions of Kazakhstan. As a result of the study, the factors of production placement were identified, the level of concentration of light industry branches in the regions of Kazakhstan was assessed, the peculiarities of the placement of Kazakhstani textile, leather, shoe and clothing industries were identified, the need to create regional clusters to increase the competitiveness of the industry was substantiated.

Keywords: Economy, Light Industry, Location, Concentration, Region, Cluster

SCSTI: 06.61.43
JEL Code*:* L6, L52, N6, O14

Acknowledgements: This study has been funded by the Committee of Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan (grant "Priorities and mechanisms of inclusive regional development of Kazakhstan in the context of overcoming the economic recession" AP09259004).

1. INTRODUCTION

Modern global challenges inevitably lead to a reduction in the volume of international trade, disruption of global technological chains, supplies of raw materials, goods, and services, and as a result, to a sharp increase in prices, including for essential goods.

President of Kazakhstan K.-Zh. Tokayev in his address to the participants of the World Economic Forum on May 24, 2022 stressed that in a difficult geopolitical situation, Kazakhstan must ensure the self-sufficiency of the national economy, reduce dependence on imports. Building a self-sufficient economy requires an increase in the share of the manufacturing industry in the structure of the national economy, first of all, essential goods. Meanwhile, in Kazakhstan in recent years, satisfaction of the needs of Kazakhstanis for many types of the light industry goods of domestic production has significantly decreased. Thus, the share of light industry in the total volume of the country's industry was less than 1%, despite the availability of raw materials and other resources. Therefore, there is an increase in the expansion of the Kazakh consumer market by manufacturers of foreign countries.

Today, the domestic light industry, designed to ensure the economic security of the country by meeting domestic demand, is urgently needed to solve many problems. Meanwhile, due attention is not paid to the regional aspects of the development of light industry, there are practically no studies of the territorial organization of light industry enterprises. In this industry that enough problems have accumulated in the modernization of the production of individual industries, in providing it with a raw material base, etc.

Increasing the availability of cheaper domestic light industry goods for the population and weakening import dependence implies solving the accumulated problems, and building new industrial enterprises and technological renewal of existing ones. This requires a study of the existing production potential of the industry, an assessment of its location and the level of concentration in the regions of Kazakhstan, which determines the relevance of the study.

The purpose of the article was to determine the main factors of production placement, to assess the level of concentration of light industry in the regions of Kazakhstan and to develop proposals for the cluster organization of the industry.

The hypothesis of the study was the assumption that the concentration of light industry in certain regions and the creation of regional clusters in the country will increase the level of competitiveness of the industry.

To achieve the goal and confirm the validity of the hypothesis put forward, a literary review of sources on the problems of placement and concentration of production in the spatial economy was made. The main factors of production placement were identified, the level of concentration of light industry was assessed and the features of the placement of industry enterprises in the regions of Kazakhstan were identified. Proposals for the cluster organization of the industry were developed.

The following methods were used: logical, generalizations, comparative analysis, economic-statistical, index, grouping, Krugman, Herfindal-Hishman methods.

The information base was provided by literary and Internet sources, scientific developments of domestic and foreign scientists on the studied problem: data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the

Republic of Kazakhstan, data posted on the websites of the regions of Kazakhstan.

As a result of the study, the main factors of production placement were identified, the level of concentration of light industry branches in the regions of Kazakhstan was assessed, the peculiarities of the placement of Kazakhstani textile, leather, shoe and clothing industries were revealed, taking into account the influence of not only the raw material factor and favorable geographical location, but also factors of "second nature", in particular, agglomeration effects from crowding and opportunities for economies of scale. It is concluded that it is necessary to create regional clusters based on light industry enterprises to increase the competitiveness of the industry.

2. LITERATURE REVIEW

Based on the study and generalization of literary sources on the problem of territorial distribution of production, it follows that each region of a certain country has its specialization in the production of specific types of products supplied to domestic and foreign markets (Aiginger, 2006). In other words, the specialization of regions in the production of certain products and the concentration of this production in the region determine their role in the territorial division of labor (Amiti, 1998). The location of production, its concentration and specialization are influenced by factors such as natural conditions, raw materials, labor and other production resources, the level of socio-economic development, geographical location, historical background and others.

In Kazakhstan, the issues of the efficiency of production concentration are of particular importance due to the large territory of the country for the placement of production and the large differentiation of regions by the level of socio-economic development. A significant issue for making the right decisions in the implementation of regional policy is the study of trends in the localization of productive forces in the country.

The issues of specialization and concentration of production in spatial economics were raised in such major scientific fields as the theory of the central place of Perroux and Henderson, which is based on the idea of the leading role of the sectoral structure of the economy in spatial development (Perroux, 1955; Henderson, 1974), neoclassical theory, a new theory of trade, new economic geography. In turn, the factors explaining the regional specialization of production are divided into two groups: primary (raw materials, labor, land and location, capital) and secondary (territorial remoteness, entrepreneurial ability, innovative activity, information, etc.) (Tgaistaru, 2003; Martincus, 2002). The neoclassical theory focuses on primary factors. Economic activity is concentrated in the regions in accordance with the available factors of production and technologies. The economy of a country or its region specializes in the production of products based on their comparative advantages (Ricardo) or the presence of factors of production (Heckscher-Olin).

The new economic geography evaluates the location of production based on the ratio of two factors, such as economies of scale, direct and inverse relationships, and trade costs, and the difference in prices for factors of production (Fujita, 1999). Interregional demand differences are considered endogenous factors (Amiti, 1998). In conditions of growing profitability and trading costs, firms of its production tend to concentrate near

large markets. A large market is one in which a large number of firms and employees work (Baldwin, 1994; Ottaviano and Puga, 1997). The new economic geography models the processes of localization of production on the basis of interregional labor mobility (Krugman, 1991) and the mobility of firms in demand for intermediate goods (Venables, 1996).

Absolute and relative concentrations are distinguished in the literature. The industrial sector is considered to be concentrated if several countries account for a significant share of the total volume of this production (Midelfark-Knarvik, Overman, Kedding et al., 2000). The industrial sector is relatively concentrated if one of the activities differs from those that are on average most common in the volume of industrial production in countries. The neoclassical theory usually considers relative concentration, new economic geography studies absolute, new trade theory considers both types (Haaland, Kind, Torstensson et al., 1999).

The study of the theory and foreign practice of the issue of territorial localization and organization of industry and its individual branches indicates that their improvement, taking into account the more rational use of production factors, will contribute to an increase in output and improve quality characteristics.

The territorial organization of the industry is influenced by two main groups of factors: socio-economic and natural-geographical. The main role belongs to such socio-economic factors as the availability of a production base, investment opportunities for the organization of new and technological modernization of existing ones, support for local authorities and others. The level of impact of various factors mainly depends on the technical and economic characteristics of light industries.

Rational territorial organization of light industry provides for a close interweaving of sectoral and regional aspects of development, increasing work efficiency by minimizing the total costs of production and transportation of products, as well as improving territorial concentration and specialization (Hall, 1967).

The territorial organization of light industry is based on such principles as the elimination of fundamental differences in the levels of economic and social development of individual regions and economic districts or zones; uniform distribution of production throughout the country in order to make the most effective use of economic and natural resources of all regions; systematic strengthening of the territorial division of labor on the basis of integrated development and rational specialization of economic districts; the approximation of industry to the sources of raw materials, fuel, energy and areas of consumption of finished products. Also, the territorial organization of light industry is formed under the influence of many factors, the most important of which are: natural conditions and raw materials, the settlement of the population and labor resources, the development of productive forces, transport, economic and geographical location, historical and geographical features of the development of the territory, the level of development of science and others.

According to the cumulative influence of factors on the placement of light industry, all its branches and productions can be grouped as follows:

- focused on their own raw material base (primary processing of cotton, production of nonwovens, leather);
- labor-oriented (textile, knitting industry, haberdashery);

- consumer-oriented (shoe, sewing, felting, leather and fur, shoe, etc.).

Light industry, as a link of the territorial-industrial complex, acts as a branch of specialization in it, within which there is a certain functional dependence between sub-sectors and industries.

A distinctive feature of our research conducted in this article is that the assessment of the level of concentration of production facilities on the territory of the country was carried out on the example of the most important manufacturing industries for Kazakhstan and its consumer market: textile, clothing, leather. The results of the study presented in the article also differ from existing studies in the world and domestic science in that they are made in a regional aspect and reflect the peculiarities of the location of light industry in Kazakhstan.

3. METHODOLOGY

The research methodology is based on general scientific, private, empirical methods, including logical, generalizations, comparative analysis, economic and statistical, index, grouping, Krugman, Herfindal-Hishman methods.

The information base was provided by literary and Internet sources, scientific developments of domestic and foreign scientists on the studied problem: data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, data posted on the websites of the regions of Kazakhstan.

To analyze the geographical concentration and regional specialization of the national economy, the index method was used as a methodological approach, and the localization, concentration and specialization indices of Herfindahl–Hirschman and Krugman served as evaluation tools.

In particular, to determine the level of specialization of economic areas, such indicators as the localization coefficient, the production coefficient per capita, the coefficient of interdistrict marketability (Animitsa et al., 2014) were used. At the same time, it should be noted that the coefficients of territorial specialization and concentration are mainly calculated on the basis of production indicators, such as the volume of shipped products, the structure of GDP or GRP, the structure of employment and the structure of exports. In foreign practice, the Herfindahl–Hirschman index (Herfindahl, 1950; Hirschman, 1964) is most often used as a tool for analyzing territorial concentration and specialization, along with the Krugman index (Krugman, 1991).

The Krugman Index (KDI) is a calculation of the sum of squares of the shares of territorial concentration and specialization and is widely used in the United States and European countries. The maximum value of the index is equal to one, which indicates a large concentration of the industry in the region or the region specializes in this industry. Consequently, a high specialization coefficient indicates the homogeneity of the economy of the studied territory. The lower the indicators of territorial specialization or concentration, the more diverse the structure of the economy of the analyzed territory, that is, more opportunities for the development of the territory in the future.

The Herfindahl–Hirschmann Index (HHI) is calculated according to the formula (1):

$$HHI = \sum_{i=1}^{n} x_i^2, \text{ where} \quad (1)$$

x_i^2 - the share of the industry in the total volume of manufacturing industry in the region.

To analyze the placement of certain types of economic activity in the regions, the traditional localization indicator is used according to the formula (2):

$$CL=(V\_bc/V\_br \times 100):(V\_ic/V\_ir \times 100) \quad (2)$$

Where:
CL – coefficient of localization;
Vbc - the volume of production of light industry in the region;
Vbr - the volume of production of the country's light industry;
Vic - the volume of manufacturing industry in the region;
Vir - the volume of the country's manufacturing industry.

Using the localization coefficient, it is possible to determine how often the concentration of a particular type of economic activity exceeds the average for the republic. This means that the localization coefficient characterizes the region relative to the specifics of industrial production. Calculations of the indicator can be made not only by the number of people employed in the economic sector but also by the output volume and the cost of fixed assets. This coefficient has a good applied purpose and is widely used in the developing and implementing of regional economic policy. Also, the localization coefficient allows the identification of potential regional clusters.

4. FINDINGS AND DISCUSSION

Placement factors are diverse and unstable; they can change depending on the development of transport infrastructure, demographic problems, purchasing power, etc. It is possible to distinguish the main ones – raw materials, consumer, labor resources, which should include the necessary number of qualified workers. At the same time, various factors may have a predominant influence on the placement of enterprises in different branches of light industry.

Based on official regional statistical data for 2015-2019, we analyzed the quantitative placement of light industry enterprises in the regions of Kazakhstan. Shown in table 1.

TABLE 1. Placement of light industry enterprises by regions of Kazakhstan

Industries/sub-sectors	Regions	The number of enterprises in 2015	Produced products in 2015, million tenge	The number of enterprises in 2019	Produced products in 2019, million tenge
	Akmolinskaya	9	3384	8	3 825,4
	Turkestan	19	4884	24	12 621
	Zhambylskaya	-	221,7	-	140,3
	Almaty	15	2135,8\	12	5770,7
Мап	Aktobe	6	152	10	736

	Atyrau	8	572	6	2414
	East Kazakhstan	12	961,4	11	1409,5
	Kyzylorda	-	230,0	16	783,0
	Karaganda	8	511,8	6	561,5
	Pavlodar	12	2870	8	5813
	West Kazakhstan	6	311	6	127
	Kostanay	9	1201	8	2075
	North Kazakhstan	5	205,6	4	306,9
	Mangystau	2	67	-	44
	city of Almaty	29	1080	25	1950
	Shymkent	14	9926,5	12	20878,3
	Nursultan	9	778,3	9	783
Clothing production	Akmolinskaya	5	356,8	4	358,5
	Turkestan	6	250	5	355
	Zhambylskaya		505,3		1161,7
	Almaty	16	5709,2	21	9807,1
	Aktobe	5	415	7	1408
	Atyrau	7	572	9	1625
	East Kazakhstan	24	3048,4	28	2906,7
	Kyzylorda	-	138	-	451
	Karaganda	30	4373	39	4291,8
	Pavlodar	25	1438	19	1128
	West Kazakhstan	9	632	11	731
	Kostanay	11	1809	10	1673
	North Kazakhstan	5	1580,2	6	967,6
	Mangystau	4	1214	8	2280,0
	city of Almaty	63	7063	73	6766
	Shymkent	20	6266,9	21	4557,1
	Nursultan	16	1995,9	18	3497,1
Manufacture of leather and related products	Akmolinskaya	2	54,3	2	796,3
	Turkestan	3	66	1	21
	Zhambylskaya	1	318,7	1	2 220,8
	Almaty	2	526,5	4	941,1
	Aktobe	-	-	1	2
	Atyrau		-	-	62
	East Kazakhstan	4	606,1	3	463,8
	Kyzylorda	-	-	-	-
	Karaganda	3	596,8	6	595,1
	Pavlodar	-	1	1	53
	West Kazakhstan	-		1	28
	Kostanay	1	124	-	10
	North Kazakhstan	1	-	1	-
	Mangystau	1	558	1	667
	city of Almaty	4	2943	8	4752
	Shymkent	3	304,2	6	521,1
	Nursultan	-	36,7	2	178,3

Note: Compiled by authors

Thus, according to statistical data, in 2015, 166 enterprises operated in the production of textile products. In 2019, their number decreased to 159 units. Textile manufacturing enterprises are available in almost all regions of the country. In 2015, textile industry

enterprises produced products worth 29,492.1 million tenge, and in 2019, despite the reduction in their number, this amount increased by two times and amounted to 60,238.6 million tenge. The increase mainly occurred in Shymkent, Turkestan, Almaty, Kostanay, Atyrau, and Pavlodar regions. A significant increase in output was associated with a three-year contract from 2016-2019, for the supply of military uniforms.

The largest placement of enterprises producing textile products in 2019 falls in Almaty and the Turkestan region. In Almaty, there was a reduction in the number of enterprises from 29 in 2015 to 25 in 2019, and in the Turkestan region increased from 19 in 2015 to 24 in 2019. In the Turkestan region, the increase was due to the resumption of such large enterprises as Melange and Utex, closed in 2016 due to bankruptcy. Shymkent and Almaty region are next in terms of the number of enterprises, with 12 enterprises each. It should be noted that Shymkent produced textile products for 20,878.3 million tenge, which is the highest indicator in the republic as a whole.

In the production of clothing, the situation is slightly different. In 2015, about 246 enterprises operated, the total output amounted to 37,366.7 million tenge. The number of enterprises in 2019 increased to 279, and the total output reached 43,964.6 million tenge. The largest concentration of enterprises in the regions of the country is observed in the cities of Almaty (73 enterprises in 2019), Karaganda region (39 enterprises in 2019), East Kazakhstan Region (28 enterprises in 2019) and Almaty region (21 enterprises in 2019).

The smallest number of enterprises is recorded in the production of leather and related products. The largest number of enterprises in 2019 reached 8 in Almaty, followed by Shymkent and Karaganda regions with 6 enterprises each. For the rest of the regions, the number of enterprises ranges from 4 to 1. The leaders in terms of products produced in 2019 are Almaty (4752 million tenge) and Taraz (2,220.8 million tenge).

Using statistical data for 2015, 2019, to determine the localization coefficient of light industries, we made calculations for 14 regions and three megacities of the Republic of Kazakhstan. Shown in table 2.

TABLE 2. Localization coefficients of the textile industry of light industry in the regions of the Republic of Kazakhstan for 2015, 2019

No.	Regions	Textile industry products produced in 2015, million tenge	The manufacturing industry of the region in 2015	Coefficient of localization in 2015	Textile industry products produced in 2019, million tenge	The manufacturing industry of the region in 2019	Coefficient of localization in 2019
1	Akmolinskaya	3384	231 415	2,96	3825,4	641 931	1,14
2	Turkestan	4884	172 028	5,75	12621	244 586	9,91
3	Zhambylskaya	221,7	196 723	0,23	140,30	352 056	0,08
4	Almaty	2135,8	462 705	0,94	5770,7	883 047	1,26
5	Aktobe	152	264 391	0,12	736	605 300	0,23
6	Atyrau	572	335 679	0,35	2414	525 597	0,88
7	East Kazakhstan Region	961,4	826 835	0,24	1409,5	1 560 350	0,17
8	Kyzylorda	230	90 556	0,51	783	145 740	1,03

9	Karaganda	511,8	1 062 250	0,10	561,5	1 991 428	0,05
10	Pavlodar	2870	677 761	0,86	5813	1 292 964	0,86
11	West Kazakhstan	311	107 058	0,59	127	215 384	0,11
12	Kostanay	1201	244 474	1,00	2075	645 990	0,62
13	North Kazakhstan	205,6	120 537	0,35	306,9	195 535	0,30
14	Mangystau	67	116 154	0,12	44	175 628	0,05
15	Almaty	1080	504 496	0,43	1950	813 929	0,46
16	Shymkent	9926,5	240 542	8,36	20878,3	497 401	8,06
17	Nursultan	778,3	324 403	0,49	783	786 485	0,19
Note: Compiled by authors							

As noted above, the localization coefficient shows the degree of concentration of this industry in this region. If the coefficient is greater than one, then it is assumed that this industry is considered a branch of specialization.

According to the calculations made for 2015, the highest localization coefficient in the textile industry was in Shymkent (8.3). Next are the Turkestan, Akmola and Kostanay regions. In 2019, a significant increase in the localization coefficient compared to 2015 is observed in the Turkestan region by 1.72 times. Also, an increase occurred in the Almaty region; the coefficient was - 1.26 and the Kyzylorda region -1.03. A decrease in the localization coefficient is observed in the Akmola region from 2.96 in 2015 to 1.14 in 2019. A slight decrease occurred in the city of Shymkent (8,06). Shown in table 3.

TABLE 3. Coefficients of localization of clothing production in the regions of the Republic of Kazakhstan for 2015, 2019

Region	**Produced products in 2015, million tenge**	**The manufacturing industry of the region in 2015**	**Coefficient of localization in 2015**	**Produced products in 2019, million tenge**	**The manufacturing industry of the region in 2015**	**Coefficient of localization in 2019**
Akmolinskaya	356,8	231 415	0,25	358,5	641 931	0,15
Turkestan	250	172 028	0,23	355	244 586	0,38
Zhambyl	505,3	196 723	0,41	1161,7	352 056	0,87
Almaty	5709,2	462 705	1,97	9807,1	883 047	2,92
Aktobe	415	264 391	0,25	1408	605 300	0,61
Atyrau	572	335 679	0,27	1625	525 597	0,81
East Kazakhstan	3048,4	826 835	0,59	2906,7	1 560 350	0,49
Kyzylorda	138	90 556	0,24	451	145 740	0,81
Karaganda	4373	1 062 250	0,66	4291,8	1 991 428	0,57
Pavlodar	1438	677 761	0,34	1128	1 292 964	0,23
West Kazakhstan	632	107 058	0,94	731	215 384	0,89
Kostanay	1809	244 474	1,18	1673	645 990	0,68
North	1580,2	120 537	2,10	967,6	195 535	1,30

Kazakhstan						
Mangystau	1214	116 154	1,67	2280	175 628	3,42
Almaty	7063	504 496	2,24	6766	813 929	2,19
Shymkent	6266,9	240 542	4,17	4557,1	497 401	2,41
Nursultan	1995,9	324 403	0,98	3497,1	786 485	1,17

In the production of clothing for 2015, high localization coefficients are observed in the cities of Shymkent, Almaty, and in North Kazakhstan, Almaty, Mangistau and Kostanay regions. Compared to 2015, in 2019, the localization coefficient increased in the Almaty region by 1.5 times, in the Mangystau region by almost 2 times and in Nur-Sultan by 1.17 times. Along with this, in 2019, in some regions and cities (North Kazakhstan Region, Almaty, Shymkent), there was a decrease in localization coefficients. Shown in table 4.

TABLE 4. Coefficients of localization of production of leather and related products in the regions of the Republic of Kazakhstan for 2015, 2019

Region	Produced million tenge of products in 2015	Manufacturing industry of the region in 2015	coefficient of localization in 2015	Production of million tenge was produced in 2019	The manufacturing industry of the region in 2019	coefficient of localization in 2019
Akmolinskaya	54,3	231 415	0,23	796,3	641 931	0,66
Turkestan	66	172 028	0,37	21	244 586	0,05
Zhambylskaya	318,7	196 723	1,58	2 220,80	352 056	3,33
Almaty	526,5	462 705	1,11	941,1	883 047	0,56
Aktobe	-	264 391	-	2	605 300	0,00
Atyrau	-	335 679	-	62	525 597	0,06
East Kazakhstan	606,1	826 835	0,71	463,8	1 560 350	0,16
Kyzylorda	-	90 556	-	-	145 740	0,00
Karaganda	596,8	1 062 250	0,55	595,1	1 991 428	0,16
Pavlodar	1	677 761	0,00	53	1 292 964	0,02
West Kazakhstan	-	107 058	-	28	215 384	0,07
Kostanay	124	244 474	0,49	10	645 990	0,01
North Kazakhstan	-	120 537	0,00	-	195 535,4	-
Mangystau	558	116 154	4,68	667	175 628	2,01
city of Almaty	2943	504 496	5,68	4752	813 929	3,09
Shymkent	304,2	240 542	1,23	521,1	497 401	0,55
Nursultan	36,7	324 403	0,11	178,3	786 485	0,12
Note: Compiled by authors						

As shown in Table 4, in 2015, in the production of leather and related products, high localization coefficients were observed in the cities of Almaty, Shymkent, as well as in Mangistau, Zhambyl and Almaty regions. However, in 2019, the indicators fell in the Mangystau region by 2.33 times, in the Almaty region by 2 times, and in the cities of

Shymkent, Almaty by 2.23 and 1.84 times, respectively.

Since we are conducting research on light industry sectors, we need to find out their level of concentration and specialization in the regions of the country. To analyze the level of regional concentration of light industry sectors, we used official data published in regional statistical collections of the Republic of Kazakhstan. Based on these data, we calculated concentration indices for 14 regions and 3 megacities of Kazakhstan for 2015 and 2019. Concentration indices for all other regions of Kazakhstan for 2015 and 2019 were calculated similarly. Shown in table 5.

TABLE 5. Concentration coefficients in textile production by regions of the Republic of Kazakhstan for 2015, 2019

Region	Produced products in 2015, million tenge	Manufacturing industry of the region in 2015	The share of manufactured products in the manufacturing industry in 2015	HHI	Produced products million tenge in 2019	The manufacturing industry of the region in 2019	Share of manufactured products in the manufacturing industry in 2019	HHI
Akmolinskaya	3384	231 415	0,0146	0,000214	3 825,4	641 931	0,00596	0,000036
Turkestan	4884	172 028	0,0284	0,000806	12 621	244 586	0,05160	0,002663
Zhambylskaya	221,7	196 723	0,0011	0,000001	140,3	352 056	0,00040	0,000000
Almaty	2135,8	462 705	0,0046	0,000021	5770,7	883 047	0,00653	0,000043
Aktobe	152	264 391	0,0006	0,000000	736	605 300	0,00122	0,000001
Atyrau	572	335 679	0,0017	0,000003	2414	525 597	0,00459	0,000021
East Kazakhstan	961,4	826 835	0,0012	0,000001	1409,5	1560350	0,00090	0,000001
Kyzylorda	230	90 556	0,0025	0,000006	783	145 740	0,00537	0,000029
Karaganda	511,8	1 062 250	0,0005	0,000000	561,5	1991428	0,00028	0,000000
Pavlodar	2870	677 761	0,0042	0,000018	5813	1292964	0,00450	0,000020
West Kazakhstan	311	107 058	0,0029	0,000008	127	215 384	0,00059	0,000000
Kostanay	1201	244 474	0,0049	0,000024	2075	645 990	0,00321	0,000010
North Kazakhstan	205,6	120 537	0,0017	0,000003	306,9	195 535	0,00157	0,000002
Mangystau	67	116 154	0,0006	0,000000	44	175 628	0,00025	0,000000
Almaty	1080	504 496	0,0021	0,000005	1950	813 929	0,00240	0,000006
Shymkent	9926,5	240 542	0,0413	0,001703	20878,3	497 401	0,04197	0,001762
Nursultan	778,3	324 403	0,0024	0,000006	783	786 485	0,00100	0,000001
Note: Compiled by authors								

The results obtained show that the greatest concentration of the textile industry in 2015 was observed in Shymkent (0.001703). Further, the most concentrated are the Turkestan and Akmola regions (0.000806, 0.000214). In 2019, the concentration coefficients increased in Shymkent (0.001762) and Turkestan region (0.002663). In the same year, a significant decrease in concentration indicators was observed in the Akmola region. Shown in table 6.

TABLE 6. Coefficients of concentration in the production of clothing in the regions of the Republic of Kazakhstan for 2015, 2019

Region	Production of million tenge was produced in 2015	Manufacturing industry of the region in 2015.	The share of manufactured products in the manufacturing industry in 2015	HHI	Produced products million tenge in 2019	The manufacturing industry of the region in 2019	The share of manufactured products in the manufacturing industry in 2019	HHI
Akmolinskaya	356,8	231 415	0,00154	0,000002	358,5	641 931	0,0006	0,000000
Turkestan	250	172 028	0,00145	0,000002	355	244 586	0,0015	0,000002
Zhambylskaya	505,3	196 723	0,00257	0,000007	1161,7	352 056	0,0033	0,000011
Almaty	5709,2	462 705	0,01234	0,000152	9807,1	883 047	0,0111	0,000123
Aktobe	415	264 391	0,00157	0,000002	1408	605 300	0,0023	0,000005
Atyrau	572	335 679	0,00170	0,000003	1625	525 597	0,0031	0,000010
East Kazakhstan	3048,4	826 835	0,00369	0,000014	2906,7	1 560 350	0,0019	0,000003
Kyzylorda	138	90 556	0,00152	0,000002	451	145 740	0,0031	0,000010
Karaganda	4373	1 062 250	0,00412	0,000017	4291,8	1 991 428	0,0022	0,000005
Pavlodar	1438	677 761	0,00212	0,000005	1128	1 292 964	0,0009	0,000001
West Kazakhstan	632	107 058	0,00590	0,000035	731	215 384	0,0034	0,000012
Kostanay	1809	244 474	0,00740	0,000055	1673	645 990	0,0026	0,000007
North Kazakhstan	1580,2	120 537	0,01311	0,000172	967,6	195 535	0,0049	0,000024
Mangystau	1214	116 154	0,01045	0,000109	2280	175 628	0,0130	0,000169
city of Almaty	7063	504 496	0,01400	0,000196	6766	813 929	0,0083	0,000069
Shymkent	6266,9	240 542	0,02605	0,000679	4557,1	497 401	0,0092	0,000084
Nursultan	1995,9	324 403	0,00615	0,000038	3497,1	786 485	0,0044	0,000020
Note: Compiled by authors								

In the garment industry in 2015, high production concentration coefficients were observed in Shymkent, Almaty, Almaty, North Kazakhstan and Mangistau regions. Kostanay, West Kazakhstan regions and the city of Nur-Sultan can be attributed to the medium-concentrated ones. The low-concentration regions include the Karaganda and East Kazakhstan regions. In 2019, the situation with concentration levels worsened. A high concentration of production is observed in Mangystau and Almaty regions, the average concentration in Shymkent and Almaty, and a low concentration of production is observed in North Kazakhstan, West Kazakhstan, Zhambyl regions and in Nur-Sultan. Shown in table 7.

TABLE 7. Concentration coefficients in the production of leather and related products by regions of the Republic of Kazakhstan for 2015, 2019

Region	Production of million tenge was produced in 2015	The manufacturing industry of the region in 2015	The share of manufactured products in the manufacturing industry in 2015	HHI	Produced products million tenge in 2019.	The manufacturing industry of the region in 2019	Share of manufactured products in the manufacturing industry in 2019	HHI
Akmolinskaya	54,3	231 415	0,00023	0,000000	796,3	641 931	0,00124	0,000002
Turkestan	66	172 028	0,00038	0,000000	21	244 586	0,00009	0,000000
Zhambylskaya	318,7	196 723	0,00162	0,000003	2220,80	352 056	0,00631	0,000040
Almaty	526,5	462 705	0,00114	0,000001	941,1	883 047	0,00107	0,000001
Aktobe	-	264 391	-	-	2	605 300	0,00000	0,000000
Atyrau	-	335 679	-	-	62	525 597	0,00012	0,000000
East Kazakhstan	606,1	826 835	0,00073	0,000001	463,8	1560350	0,00030	0,000000
Kyzylorda	-	90 556		0,000000	-	145 740		-
Karaganda	596,8	1 062 250	0,00056	0,000000	595,1	1991428	0,00030	0,000000
Pavlodar	1	677 761	0,00000	0,000000	53	1292964	0,00004	0,000000
West Kazakhstan		107 058	-	-	28	215 384	0,00013	0,000000
Kostanay	124	244 474	0,00051	0,000000	10	645 990	0,00002	0,000000
North Kazakhstan	-	120 537		-	-	195535, 4		-
Mangystau	558	116 154	0,00480	0,000023	667	175 628	0,00380	0,000014
city of Almaty	2943	504 496	0,00583	0,000034	4752	813 929	0,00584	0,000034
Shymkent	304,2	240 542	0,00126	0,000002	521,1	497 401	0,00105	0,000001
Nursultan	36,7	324 403	0,00011	0,000000	178,3	786 485	0,00023	0,000000
Note: Calculated and compiled by the authors on the basis of data from the Bureau of National statistics								

In 2015, the Mangystau region and Almaty showed high concentration coefficients in the production of leather and related products. In 2019, high levels of production concentration were observed in Zhambyl and Mangystau regions, and in Almaty, the concentration coefficient remained at the level of 2015.

The analysis showed that in the Turkestan region, and in particular in Shymkent, the highest indicator of concentration and localization in the production of textiles. As is known, the competitive advantages of the Turkestan region are a high level of natural resources and human potential. The most important problem of improving the territorial organization of the textile industry in the Turkestan region is the elimination of the existing disparity between the production of cotton, cotton fiber and their processing. The creation of missing enterprises for the primary processing of raw cotton will increase the production of cotton fabrics in the country, which are in high demand in the domestic market, and eliminate irrational logistics.

5. CONCLUSIONS

Based on the results obtained, conclusions can be drawn about the feasibility of

creating a regional textile cluster in the Turkestan region. For example, in Shymkent, there has already been an attempt to create a cotton-textile cluster in the SEZ "Ontustik". There are suitable conditions for business development. There is infrastructure – gas supply, telephony, developed road infrastructure, electrical substation, water supply and sewerage. Investors, according to the legislation of the Republic of Kazakhstan, are exempt from paying corporate income tax, property and land tax and VAT. Moreover, there is a real possibility of creating a chemical fiber cluster since an oil refinery is located next to the SEZ.

A regional cluster in the Turkestan region can be created based on such raw cotton processing enterprises as LLP "Cotton Processing Plant "Myrzakent", LLP "AkAltyn", JSC "Makta Corporation", LLP "KhansuarInvestCompany", LLP "Bagara-Makta". Local enterprises producing cotton fabrics include Azala Textile LLP, where the entire cotton processing cycle is carried out. Also, such enterprises as Azala Cotton LLP (Shymkent) are engaged in the production of finished textiles.

At the same time, based on analysis results, the creation of a regional textile cluster in Almaty, based on the existing two enterprises "AKHBK-Kargaly" LLP and "Universal Advertising" LLP.

The improvement of the territorial organization of the garment industry consists of the creation of enterprises with unified cutting and preparatory workshops and the subsequent development of sewing clusters. In the future, this will have an impact on the level of foreign trade in textile fabrics. The shortage of enterprises performing a full cycle of production of fabrics used in the garment industry leads to a decrease in the production of finished textiles, their high cost and an increase in import volumes. Based on the results of localization and concentration of production, regional sewing clusters can be created in cities such as Shymkent, Almaty, as well as in North Kazakhstan, Almaty, Mangistau and Kostanay regions.

In the garment industry, large enterprises on the basis of which sewing clusters can be created include the corporation "Saule Sewing Factory" LLP (Shymkent), "DianaPlus" LLP (Uralsk), "Kazakhstan Text-line" LLP (Almaty), "KazSPO-N" LLP, "Erke" LLP-nur" (Almaty), LLP "Knitting factory "Zheide", LLP "Altex", LLP "PKF"of Kazakhstan Text-Line", LLP "KazSPO-N", LLP "Talgar Knitting Factory", LLP "Rauan1.

Based on the results obtained, the most promising areas for creating regional clusters in the leather and footwear industry today are the Almaty and Zhambyl regions. Regional clusters can be created in Zhambyl region on the basis of the Tarazkozhobuv LLP plant and Almaty region on the basis of the Almaty Tannery LLP Almaty Tannery. At these factories, a complete cycle of leather processing is underway, low-grade products are produced: semi-finished products of Vetbl, crust, cheprak, polucheprak, etc. In the Mangystau region in 2019, the situation is deteriorating, which requires timely measures on the part of the regional leadership.

Despite the large enterprises available in the East Kazakhstan Region, such as Semipalatinsk Leather and Fur Combine LLP, Semipalatinsk Shoe Factory LLP, Rudnensky Tannery LLP, localization and concentration indicators are closer to zero. Localization and concentration coefficients for the Almaty region remain stable from 2015 to 2019.

The results of the analysis show that the creation of regional clusters of the cotton-

textile, clothing and leather-footwear industries in the regions of the country will increase the level of its competitiveness. With the active use of the strengths and capabilities of each area, it is possible to achieve significant success in its development. Namely, the regions have opportunities for the production of fabrics and nonwovens, animal skins from their raw materials and oil refining products.

For active work on the formation of regional clusters, it is necessary to create working groups under the regional administrations in order to develop programs for the development of textile, clothing and leather and shoe production, conduct an analysis to identify the prospects for the development of the industry and create conditions for stimulating business investment activity.

Taking into account the proposals for the creation of regional clusters, it can be argued that the hypothesis put forward by the authors that the concentration of light industry in certain regions will increase the level of competitiveness of the industry can be confirmed in practice.

The results obtained can be used in further scientific research to analyze the distribution of productive forces, assess the level of concentration of industrial enterprises and determine the territorial localization zones of various sectors of the national economy, as well as recommendations for improving the territorial organization of production and making effective management decisions on the implementation of economic policy in the regions.

References

1. Aiginger, K. (2006). Specialization and Concentration: a Note on Theory and Evidence. *Empirica*, 33, 255–266. https://doi.org/10.1007/s10663-006-9023-y
2. Amiti, M. (1998). New Trade Theories and Industrial Location in the EU: A Survey of Evidence. *Oxford Review of Economic Policy*, *14*(2), 45-53.
3. Animitsa, E.G., Animitsa, P.E., & Denisova, O.Y., (2014). Evolution of scientific views on the theory of the allocation of productive forces [Evolutsiya nauchnyh vzglyadov na teoriyu razmesheniya proizvoditelnyh sil]. *Ekonomika regiona*, 2, 21-32. (In Russ.)
4. Baldwin, R. (1994). *Towards an Integrated Europe*. CEPR, London.
5. Fujita, M., Krugman, P., & Venables, A.J., (1999). *The Spatial Economy. Cities, Regions and International Trade*. MIT Press, Cambridge, MA
6. Haaland, J., Kind, H., Midelfart-Knarvik, K., & Torstensson, J. (1999). What determines the economic geography of Europe? *CEPR Discussion Paper,* 2072
7. Hall M. (1967) Measures of Concentration. *Journal of the American Statistical Association*, *62*(317), 162–168. https://doi.org/10.1080/01621459.1967.10482897
8. Henderson, J. V. (1974). The Sizes and Types of Cities. *American Economic Review, 64*(4), 640–56.
9. Herfindahl, O. C. (1950). *Concentration in the Steel Industry*. Columbia University.
10. Hirschman, A. O. (1964). The Paternity of an Index. *The American Economic Review*, *54*(5), 761–762.
11. Krugman P., (1991). Increasing return and economic geography. *Journal of Political Economy*, *99*(3). https://doi.org/10.1086/261763

12. Krugman, P. (1991). Increasing returns and economic geography. Journal of political economy, 99(3), 483-499.
13. Martincus, C. D. (2002). *Mercosur and fiscal competition help to explain recent locational patterns in Brazil.* In the Annual Meeting of LACEA, Madrid.
14. Midelfart-Knavik, K., Overman, H., Redding, S., &Venables, A. (2000). The Location of European Industry. *Economic Papers,* 142. https://doi.org/10.4337/9781845423407.000012
15. Ottaviano, G., & Puga, D., (1997). *Agglomeration in the Global Economy: A Survey of the New Economic Geography.* CEPR Discussion Paper.
16. Perroux, F. (1995). Note sur les notion de pole de croissance. *Economie Appliquee, 7*(1-2), 307-320.
17. Traistaru, I., Nijkamp, P., Resmini, L. (2017). The emerging economic geography in EU accession countries: Concluding remarks and policy implications. In The Emerging Economic Geography in EU Accession Countries (pp. 442-449). Taylor and Francis. https://doi.org/10.4324/9781315199597-25
18. Vasiliev, E. A. (2007). O nekotoryh pokazatelyah spetsializatsii regiona [On some indicators of specialization of the region]. *Bulletin of the TSEU, 3*(43). (in Russ).
19. Venables, A.J. (1996). Equilibrium locations of vertically linked industries. *International economic review, 37*(2), 341-359. https://doi.org/10.2307/2527327

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