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**STATE REGULATION OF REGIONAL ENTREPRENEURSHIP
IN THE INNOVATIVE ECONOMY**

The development of small and medium-sized enterprises is one of the priorities of state policy in Kazakhstan. Its successful implementation determines the further economic and political development of the country. Currently, the country established a certain basis for the development of SME. The number of registered small businesses in the country is increasing annually. The share of small and medium-sized businesses in the country's GDP is around 25% in the private sector employs over 60% of the employed population. However, there is not enough focus on small business trade and the manufacturing sector. For example, more than 46% of active small businesses are concentrated in trade, repairing of motor vehicles and household goods, 14% – in construction, 12.1% – in the sphere of real estate operations, renting and business services, 10.9% – in industry. This involves the creation of favorable conditions for the transfer of small and medium-sized businesses in the manufacturing sector, as well as strengthening its position in the service sector.

In the current article authors tried to do the detailed analysis of different regions and accordingly it was found out that there are regional specificities of each area in Kazakhstan. Differences especially strongly manifested in comparison of regions with significant population, more developed industry, and significant reserves of minerals.

Key words: small and medium enterprises, small and medium business, state policy.

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**Государственное регулирование регионального предпринимательства
в инновационной экономике**

Развитие малых и средних предприятий является одним из приоритетов государственной политики в Казахстане. Его успешная реализация определяет дальнейшее экономическое и политическое развитие страны. В настоящее время страна создала определенную основу для развития МСП. Количество зарегистрированных малых предприятий в стране ежегодно увеличивается. Доля малого и среднего бизнеса в ВВП страны составляет около 25%, в частном секторе занято более 60% занятого населения. Однако недостаточно внимания уделяется торговле малым бизнесом и производственному сектору. Например, более 46% активных малых предприятий сосредоточено в торговле, ремонте автомобилей и предметов домашнего обихода, 14% – в строительстве, 12,1% – в сфере операций с недвижимостью, аренде и бизнес-услугах, 10,9% – в промышленности. Это предполагает создание благоприятных условий для передачи малого и среднего бизнеса в производственном секторе, а также укрепление его позиций в секторе услуг.

В данной статье авторы попытались провести подробный анализ различных регионов, и, соответственно, выяснилось, что в каждой области Казахстана существуют региональные

особенности. Различия особенно ярко проявились в сравнении регионов со значительным населением, более развитой промышленностью и значительными запасами полезных ископаемых.

Ключевые слова: малые и средние предприятия, малый и средний бизнес, государственная политика.

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Инновациялық экономикадағы өңірлік кәсіпкерлікті мемлекеттік реттеу

Шағын және орта бизнесті дамыту – Қазақстандағы мемлекеттік саясаттың басымдықтарының бірі. Оны табысты іске асыру елдің одан әрі экономикалық және саяси дамуын айқындайды. Қазіргі уақытта елімізде ШОБ дамыту үшін белгілі негіз қаланған. Елде тіркелген шағын кәсіпорындар саны жыл сайын артып келеді. Елдің жалпы ішкі өніміндегі шағын және орта бизнес үлесі шамамен 25%-ды құрайды, жеке секторда жұмыспен қамтылған халықтың 60%-дан астамы жұмыс істейді. Дегенмен, шағын бизнеске және өндіріс саласына аз көңіл бөлінуде. Мысалы, белсенді шағын кәсіпкерліктің 46%-ы саудада, автокөлік пен тұрмыстық заттарды жөндеуде, 14% құрылыс саласында, 12,1% – жылжымайтын мүлікте, лизинг және бизнесте, 10,9% – өнеркәсіпте шоғырланған. Бұл мақалада авторлар түрлі аймақтарынан терең талдау жүргізу арқылы Қазақстанның әр облысында, аймақтық айырмашылықтар бар екенін анықтады. Айырмашылықтар халық саны көп, өнеркәсіп саласы дамыған және пайдалы қазба қорлары бар өңірлерді салыстыру кезінде байқалды.

Түйін сөздер: шағын және орта кәсіпорындар, шағын және орта бизнес, мемлекеттік саясат.

Introduction

Regional business in a market economy is a leading sector that determines economic growth, structure and quality of the gross national product. In developed countries, nearly 55-60% of the companies is the small and medium-sized enterprises (SMEs) and they produce about half of the gross domestic product (GDP), as well as provide 70-80% of employment.

Kazakhstan is the first country in the Central Asian region, included in the pool of countries participating in the world's largest study on entrepreneurship. «Global Entrepreneurship Monitor» Project (GEM) is a common initiative of the leading business schools in the world, aimed at the study of entrepreneurial activity in the context of selected international countries. Currently more than 73 countries involved in the project, constituting 72.4% of the world population and 90% of global GDP. Interest in entrepreneurship in the Republic of Kazakhstan (RK) is much higher than in the US, Canada, Australia and Singapore. Small and medium enterprises (SMEs) are a favorable platform for productive employment in the regions of Kazakhstan. In world practice, level of development of SMEs is considered as an indicator of economic prosperity of the country. In this regard, domestic business has a permanent and special support from

the Government of Kazakhstan, since well-being of its citizens depends on the prosperity and stability of the economy [1]. The analysis presented in this research study will allow justifying the importance of regional business in Kazakhstan, to identify the problems and prospects of development of entrepreneurship.

It should be noted that in Kazakhstan state support for SMEs has a multi-level character: measures are being taken in the area of reducing the tax burden, legalization of property and assets, facilitating access to credit resources, simplifying administrative procedures, organizing regional support centers for SMEs in the towns and villages of the republic. One way to allocation and distribution of budgetary funds is public procurement (PP), carried out through the state order. The public procurement procedures often involve SMEs.

However, SMEs in the Republic of Kazakhstan is experiencing serious difficulties connected with the need to improve public procurement legislation (PP) and their placement for an effective entrepreneurial activity; improving budgetary security and intergovernmental fiscal relations to provide financial support for the regions; the development of regional programs; elimination of administrative barriers and fighting corruption. There are some problems in the system of the PP, preventing successful development of Kazakhstani business,

which consequently affects the regional inequality. For example, the misuse of budgetary funds is not always clear, and the procedure is ineffective when placing state orders, as well as many socio-economic, political and international risks in the implementation of the public procurement process.

In this context, the study is of particular relevance in the implementation of effective public support to SMEs in the Republic of Kazakhstan and the development of priority directions of development. Moreover, as noted earlier, the relevance of the topic is because entrepreneurship is now the core of the sustainable economic and political development of the country.

Based on the analysis of the development of the SME sector in the regions of Kazakhstan and official statistics [2] authors draw following conclusions:

- Almaty, South Kazakhstan region and Almaty oblast are traditional leaders by the number of active SMEs in 2016;

- Almaty is the region with the highest number of SME enterprises; it has the best indicators of output and the number of employed people in it;

- there is a general positive trend of growth of SMEs in the Republic of Kazakhstan for 2005-2016 years: figures increased by more than 50%. The highest growth of small business units is observed in Astana;

- From a gender perspective, more than 40% of SMEs headed by women entrepreneurs, and their share is 85% in the average in Kazakhstan.

- The greatest number of people employed in SMEs is in Almaty (583 thousand), SKO (330 thousand), Astana (288 thousand) and Almaty region (284 thousand).

- Regionally, local SMEs of Almaty and Astana (47% out of the total output of Kazakhstan SMEs) implement the highest output.

Economic growth in Kazakhstan in recent years is provided largely due to the development of industries with raw material orientation, which carries the risk of a volatile economy, depending on world energy prices.

The purpose of research is to analyze and evaluate contemporary issues of state regulation of regional entrepreneurship in Kazakhstan.

Review of previous research

Following authors such as V. Lexin, V. Loginov, V. May, B. Preobrazhensky, I. Risin, A. Shvetsov, S. Chariton, B.A. Chub, B. Shtulberg devoted their works to the problems of modern regional policy. A. Bakulin, A. Bandurina, O. Betina, S. Glazyev,

T. Ivchika, A. Korobov, O. Pashkov, V. Sarantseva, V. Smagin, V. Yuriev studied choice of tools for state regulation of innovative processes.

A. Flynn and P. Davis, H. Reijonen et al., I. Offei et al., M. Vyklický et al., I. Bernhard and K. Grundén, K. Loader and S. Norton, D. McKevitt and P. Davis studied public procurement systems and SMEs, and their interactions [3-10].

Among domestic authors, one can distinguish scientific works of K.S. Mukhtarova [11-15], N.K. Nurlanova [16, 17], A.T. Myltykbaeva [18]. It is important to note the works of E.B. Zhatkanbaev [19], G.S. Smagulova [20], Mukhtar ES [21, 22] on questions of state regulation and control, as well as public procurement and the problems of their placement.

Hypothesis

The sector of small and medium business in Kazakhstan is characterized by high degree of regional differentiation. In this connection, the role of the statistical analysis of the most important indicators of development of this sector of the economy will certainly increase, as well as the statistical evaluation of the changes and the comparative analysis of the development of SMEs at the regional level in order to obtain analytical and development forecast information for possible use in the assessment of the current level of development and prospects of the further existence of the SME sector in Kazakhstan.

Research methodology

In the present study, the object is the regional business in Kazakhstan.

The following data collection methods were used:

- 1) Desk research by region (Table 1): collection and analysis of secondary socio-economic information, the official data of the Committee on Statistics of the Ministry of national economic and regional statistics; software development and analytical projections of state bodies, business associations, scientific and industrial organizations (NGOs), international organizations. Such software as spreadsheet Excel, Statistika package, SPSS package was used for processing statistical data in this analysis.

- 2) As a tool for author research, multidimensional statistics method like cluster analysis were used. It is a procedure for classifying the multidimensional data, wherein the input data is collected, including information on the selected objects, and the

subsequent sequencing of these objects at a relatively homogeneous nature of the group.

Thus, cluster analysis solves not only the problem of classifying the data, but determines its structure too. In other words, in this type of analysis, detection of compact but simultaneously differing sets of objects occurs, or a process for separating partial aggregate and cluster region based on their natural distribution.

It should be noted that cluster analysis is not a simple classification, since it is not limited to any number of the objects, or in an amount of features categories, as well as enables the user to analyze data of different typologies, such as temporal, spatial and others. This method of multidimensional data analysis is one of the important parts of the statistical research of various social and economic phenomena and processes [14].

In applied statistics, multivariate statistical methods were not used for a long time due to lack of computer equipment for the processing of large data sets. These methods began to develop actively in the second half of the twentieth century, when high-speed computers appeared. They could do the necessary calculations in a second, whereas it took days, weeks, even months previously [15].

A great advantage of cluster analysis is that it provides an opportunity to make a partition of objects not on one basis, but on a number of grounds. In addition, cluster analysis, in contrast to the majority of mathematical and statistical methods does not impose any restrictions on the form of these objects, and allows you to explore many raw data almost of an arbitrary nature. Since the clusters are homogeneous groups, the problem of cluster analysis is to break objects to m (m – integer) clusters based on the attributes so that each object is owned by only one partition group. Thus the objects belonging to the same cluster should be homogeneous (similar) and objects belonging to different clusters – heterogeneous [16].

If clustering objects represented as a point in n -dimensional feature space (n – number of features that characterize the objects), the similarity between objects is determined by the concept of distance between the points, since it is intuitively clear that the smaller the distance between objects, the more similar they are.

Cluster analysis

Here is the distances functions (metrics) for cluster analysis of STATISTICA program used in the module.

Euclidean distance is the most popular metric, which represents the geometric distance in the multidimensional space. This metric, like most others, is sensitive to changes in the units of axes. For example, if you convert centimeters to millimeters, the numbering in the distance will be changed too. Therefore, cluster analysis involves a preliminary standardization of raw data when using the majority of metrics.

The square of Euclidean distance is used if you want to give more weight to objects more distant from each another.

Manhattan distance of urban areas reduces the impact of certain large differences between the same coordinates of the points, since these differences are not squared in the calculation of the distance (in contrast to the Euclidean metric).

Chebyshev distance is used when it is desired to determine two objects as different if they differ by a single coordinate.

Minkowski distance is used when it is necessary to increase or decrease the weight, referring to the dimension for which the respective objects are quite different.

Disagreement percentage is used in cases when the data are categorical [23].

All these distances are suitable if clustering of objects can be represented as points in n -dimensional space. In solving of large amount of problems of objects cannot be represented as a point in n -dimensional space. In this case, it is advisable to use metric 1 Pearson correlation coefficient as a distance.

There are enough algorithms of cluster analysis. All of them can be divided into hierarchical and non-hierarchical.

Hierarchical (treelike) procedures are the most common algorithms of cluster analysis for their implementation in the electronic computers. Agglomerate and divisional procedures can be distinguished.

The principle of hierarchical agglomerative procedure is a combination sequence of groups of closest elements first, and then more and more distant from each other. The operating principle of hierarchical divisional procedures, conversely, consists of successive groups of elements separating the farthest first, then increasingly close to each other. Most of these algorithms are based on the distance matrix (similarity). The disadvantages of hierarchical procedures should include the awkwardness of their computing implementation. At each step, algorithms require a computation of distance matrix; consequently, capacious computer

memory and a large amount of time are necessary. In this regard, the implementation of such algorithms with greater observations than several hundred is impractical, in some cases even impossible. The general principle of agglomerative algorithm is as follows. The first step in each case is considered as a separate cluster. Subsequently, there is an association of the two closest clusters at each step of the algorithm, and taking into account the accepted distance, distance matrix is recalculated whose dimension is obviously reduced by one.

The algorithm ends when all the observations are combined into one class. Most of the programs that implement hierarchical classification algorithm, provides a graphical representation of the classification in the form of a dendrogram [23].

Non-hierarchical methods reveal a high resistance to noise and emissions, incorrect choice of the metric, inclusion of irrelevant variables in the set involved in clustering. The price we pay for these advantages of the method is the word «a priori». The analyst must determine in advance the number of clusters, the number of iterations or a stopping rule, as well as some other clustering options. This is especially difficult for beginning specialists. If there are no assumptions about the number of clusters, it is recommended to use a hierarchical algorithms. However, if the sample size does not allow it, a possible way is a series of experiments with different number of clusters, for example, to start splitting aggregate data from the two groups, and gradually increasing their number, to compare the results. Through this «variation» of the results, enough flexibility of clustering is attained.

The STATISTICA program implements agglomerative methods of minimum variance such as tree clustering and two-way clustering, as well as divisional method of k-means.

Tree clustering method has different rules for hierarchical clustering:

1. The rule of a single connection. In the first step two closest objects are combined, i.e. objects that have a maximum similarity measure. In the next step, they are joined by object with maximum measure of similarity from one cluster of objects, i.e. for inclusion in a cluster requires the maximum similarity with only one member of the cluster. The method is also called the nearest neighbor method, since the distance between two clusters is defined as the distance between the two closest objects in the different clusters. This rule «puts» objects to

form clusters. Disadvantage of this method is the formation of too large elongated clusters.

2. The rule of full connections. The method eliminates the inherent weakness of single connection method. The essence of the rule is that the two objects belonging to the same group (cluster) have a similarity coefficient that is greater than a threshold value S . In terms of the Euclidean distance, this means that the distance between two points (objects) cluster must not exceed a certain threshold value d . Thus, d defines maximum allowable diameter of subsets, forming a cluster. This method is also called as the most distant neighbors, since a sufficiently large threshold value of d distance between the clusters is determined by the largest distance between any two objects in the different clusters.

3. Non-weighted pair medium rule. The distance between two clusters is defined as the average distance between all pairs of objects therein. The method is effective when the objects actually form different groups, but it works equally well in the case of extended (chain-type) clusters.

4. Weighted average pair rule. Identical to the previous method, except that the size of the respective clusters is used as a weighting factor in calculating. It is advisable to use this method when unequal cluster sizes are alleged.

5. Non-weighted centroid method. The distance between two clusters is defined as the distance between their centers of gravity.

6. The weighted centroid method. It is identical to the previous one, except that the weights used in calculating the distance to account for the difference between the cluster sizes. Therefore, if there is (or suspected) significant differences in cluster sizes, this method is preferable to the previous one.

7. Ward Rule. In this method, intra sum of squared deviations is used as an objective function, which is the sum of the squares of the distances between each point (object) and the average for the cluster that contains this object. At each step, two clusters are combined that result in minimum increase of the target function, i.e. intra-group sum of squared deviations. This method is aimed at uniting closely spaced clusters. It is noticed that Ward's method leads to the formation of clusters of approximately equal size and shaped hyper spheres.

For the cluster analysis, we need data on SME development: the number of active SMEs, employment in SMEs, output of SMEs, and the GRP (see Table 1):

Table 1 – Input data for analysis of the characteristics of SMEs in 2016

Regions of Kazakhstan (oblasts)	Number of active SMEs, units	Employment in SMEs, person	Output SMEs, mln. tenge	GRP, mln. tenge
1	2	3	4	5
Akmola	49 515	137 127	301 349	1 160 319,6
Aktobe	50 250	131 720	344 035	1 732 221,4
Almaty	157 809	293 315	622 973	2 084 528,4
Atyrau	46 688	119 323	523 264	4 141 222,0
WKO	39 598	108 100	737 275	1 813 019,6
Zhambyl	63 995	139 295	242 611	1 050 430,8
Karaganda	85 906	239 776	488 585	3 163 481,1
Kostanay	60 368	164 503	317 048	1 454 467,1
Kyzylorda	41 651	86 249	164 393	1 233 191,1
Mangistau	47 111	106 483	498 783	2 050 996,0
SKO	184 889	334 266	563 816	2 560 856,6
Pavlodar	44 343	132 395	425 748	1 864 496,2
NKO	34 333	109 940	224 166	910 882,1
EKO	98 890	244 282	380 370	2 436 711,1
Astana	99 187	283 480	2 116 368	4 560 578,9
Almaty city	185 150	584 683	2 607 977	8 660 567,2

Compiled on the basis of the source [2].

For the purpose of cluster analysis, the raw data have been presented in a more comparable form. For this purpose, it was necessary to transform values. The result of this transformation is shown in Table 2:

Table 2 – The converted data

Regions of Kazakhstan (oblasts)	Number of active SMEs, units	Employment in SMEs, person	Output SMEs, mln. tenge	GRP, mln. tenge
1	2	3	4	5
Akmola	-0,60226	-0,49614	-0,52136	-0,72014
Aktobe	-0,58802	-0,53818	-0,4593	-0,42481
Almaty	1,49554	0,71833	-0,05372	-0,24288
Atyrau	-0,65702	-0,63458	-0,1987	0,81918
WKO	-0,79436	-0,72184	0,11247	-0,38309
Zhambyl	-0,32176	-0,47928	-0,60677	-0,77689
Karaganda	0,10268	0,30203	-0,24912	0,31428
Kostanay	-0,39202	-0,28327	-0,49854	-0,56824
Kyzylorda	-0,75459	-0,89175	-0,7205	-0,68251
Mangistau	-0,64883	-0,73441	-0,2343	-0,2602
SKO	2,02011	1,03675	-0,13974	0,00309
Pavlodar	-0,70245	-0,53293	-0,34049	-0,35651
NKO	-0,89635	-0,70753	-0,63359	-0,84895
EKO	0,3542	0,33706	-0,40647	-0,06102
Astana	0,35995	0,64185	2,11766	1,03574
Almaty city	2,02517	2,9839	2,83246	3,15295

Usually all cluster analysis methods can be divided into two categories in the literature: hierarchical and iterative [24].

In hierarchical statistical analysis the procedure of formation of clusters is based on distance matrix (or a measure of similarity) between objects.

Iterative methods of cluster analysis has significant difference, which lies in the fact that the clustering mechanism begins with the fact that the researcher is given a certain amount of initial conditions (the number of generated clusters, the boundaries of the completion of the classification process, etc.) (see Table 3).

Table 3 – Steps of agglomeration

The order of the agglomeration (clusters)						
Stage	Joint cluster		Coefficients	Stage of the first appearance of cluster		Next stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	2	3	4	5	6	7
1	2	12	0,032	0	0	2
2	2	10	0,064	1	0	5
3	9	13	0,089	0	0	8
4	1	6	0,089	0	0	5
5	1	2	0,093	4	2	6
6	1	8	0,099	5	0	7
7	1	5	0,157	6	0	8
8	1	9	0,160	7	3	11
9	7	14	0,230	0	0	12
10	3	11	0,444	0	0	13
11	1	4	1,176	8	0	12
12	1	7	1,207	11	9	13
13	1	3	1,606	12	10	14
14	1	15	6,304	13	0	15
15	1	16	13,252	14	0	0

Classification of all regions of Kazakhstan obtained by figures in Table 5 is made by inter-group relations and measures of the distance – Euclidean distance squared; dendrogram showing the clustering process was obtained (see Figure 1).

From Table 3 «Steps of agglomeration», it is possible to draw a conclusion about significant increase in coefficient that indicates the distance between two clusters which in turn is determined based on the selected distance measure.

This sharp fluctuation recorded in step 9. Most generally acceptable number of clusters is equal to the difference of the number of observations (observations we consider are 15) and the number of steps after which a sharp increase begins sharp increase (in Table 3 it occurs at step 9). Thus, we can conclude that the optimal number of clusters in relation to our data is $15 - 9 = 6$. This conclusion

can be reached after consideration of the association dendrogram, which also demonstrates that after the six groups the union occurs at greater distances and therefore are not appropriate.

The analysis showed that the existing set of areas is optimally divided into 6 groups. This separation conducted by k-medium shown in Table 4.

The data in Table 4 shows that the first cluster is represented by one region – the city of Almaty, the latter sixth cluster represented by 9 regions – WKO, Mangistau, Akmola, Aktobe, Zhambyl, Kostanay, Kyzylorda, Pavlodar and North Kazakhstan, it is also the most largest by the number of regions. The second and fifth clusters represented by just one area.

Now we will try to identify the characteristics of each clusters. This requires the profile development of each cluster by the proposed technique (see Table 5).

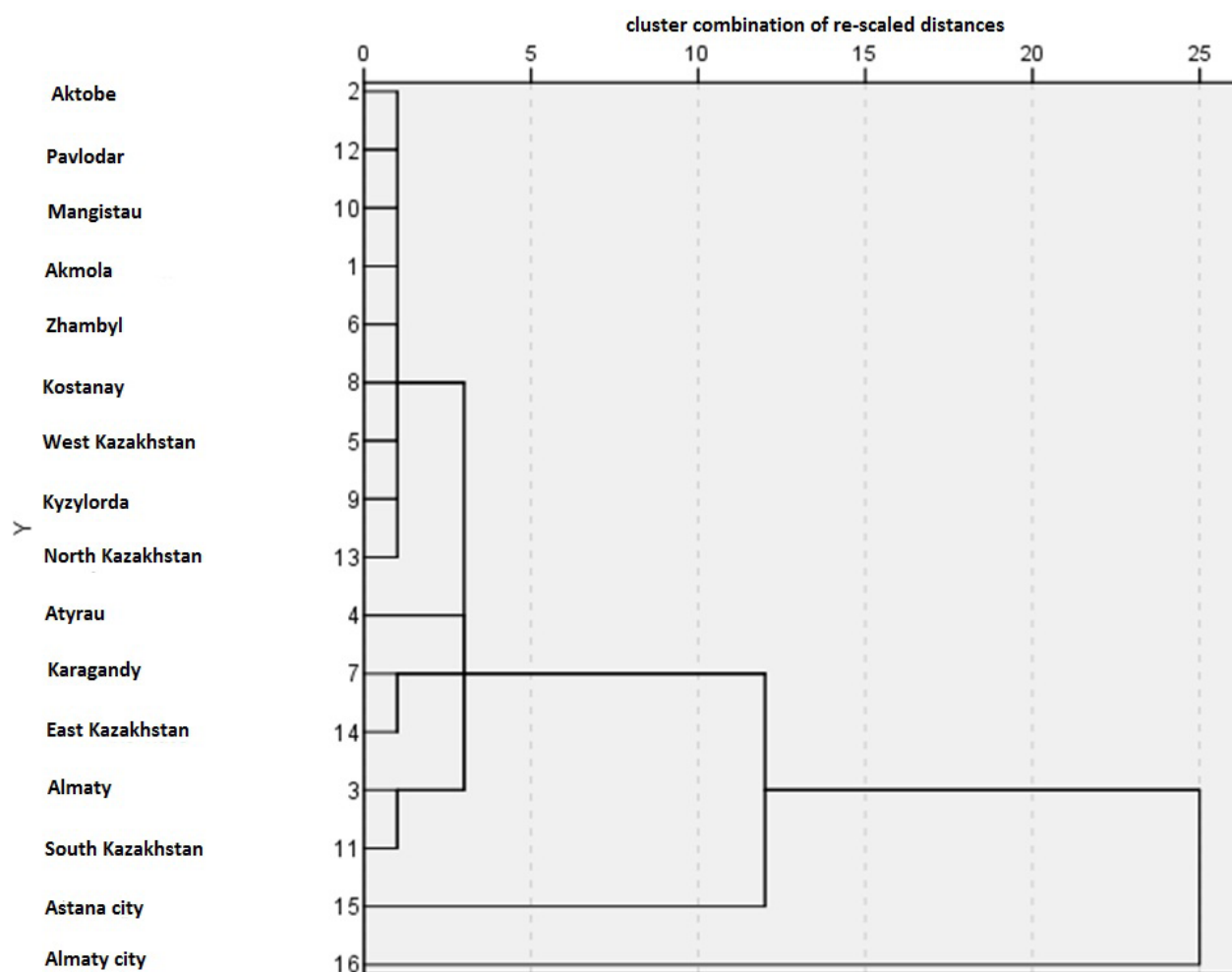


Figure 1 – The dendrogram distribution areas

Table 4 – Ranking of the regions on the basis of cluster method

Regions of Kazakhstan	Location
1	2
Almaty city	1
Astana	2
Almaty	3
SKO	3
Karaganda	4
EKO	4
Atyrau	5
WKO	6
Mangistau	6
Aktobe	6
Pavlodar	6
Akmola	6
Zhambyl	6
Kostanay	6
Kyzylorda	6
NKO	6

It is necessary to consider the average values characterizing each cluster, this initial cluster centers actually are averages for each cluster (see Table 6).

In a result of our analysis, we see that each region of Kazakhstan has significant regional features.

Thus, the hypothesis that the sector of small and medium business in Kazakhstan is characterized

by high degree of regional differentiation was confirmed.

Differences strongly appear in regions with significant population, developed industry and significant reserves of minerals. At the same time, the areas with a strong agriculture have quite low figures describing SMEs activities such as the number of the employed population or number of active SMEs.

Table 5 – The initial cluster centers

Observations	Cluster					
	1	2	3	4	5	6
1	2	3	4	5	6	7
Zscore: the number of active SMEs, units	2,02517	0,35995	2,02011	0,10268	-0,65702	-0,75459
Zscore: employment in SMEs, person	2,98390	0,64185	1,03675	0,30203	-0,63458	-0,89175
Zscore: output of SMEs, mln. tenge	2,83246	2,11766	-0,13974	-0,24912	-0,19870	-0,72050
Zscore: GRP, mln. Tenge	3,15295	1,03574	0,00309	0,31428	0,81918	-0,68251

Table 6 – Ranking of regions by the cluster profile

Regions of Kazakhstan	Clusters	Cluster profile
1	2	3
Almaty city	1	The highest average values for all indicators
Astana	2	Average values of this cluster are substantially different from the smaller ones, but much smaller than cluster 3 by the values for all parameters except output and GRP per capita
Almaty	3	The values of the first two indicators is much higher than the average for the second and fourth clusters, but the values of GRP and the output is lower than the highest values in the second, fifth and sixth clusters
SKO	3	
Karaganda	4	Most of the indicators is the smallest in comparison with the regions of the first cluster mean values. However, the average value of GRP closest to the highest value in the region of the third cluster.
EKO	4	
Atyrau	5	The lowest values of the indicators the number of active SMEs and number of employees. The other values of the indicators in comparison with the average values of other regions are not very different
Akmola	6	All values are the lowest in comparison with other regions
Aktobe	6	
WKO	6	
Mangistau	6	
Zhambyl	6	
Kostanay	6	
Kyzylorda	6	
Pavlodar	6	
NKO	6	

Let us consider the problem areas, which are included in the six clusters in the field of SMEs in detail:

1) Akmola region. SMEs of Akmola region are experiencing financial problems, as the limited access to credit due to lack of collateral, high interest rates of remuneration, long periods of consideration of documents from credit institutions; the absence of tax benefits; lack of benefits in the field of credit relations.

2) Aktobe region. The region's economy is characterized by a narrow specialization, deep raw material orientation and the lack of sufficient incentives for the development of entrepreneurship in the manufacturing industry. Density of transport routes is one of the lowest in the country; all this leads to high transport costs in the production and reduce the competitiveness of products in the region. The profile of the competitiveness of SMEs is limited by objective barriers like low density of population, an underdeveloped network of cities, inflow of low-skilled migrants from other regions.

3) West Kazakhstan region. There are problems such as unregulated migration; disparities in the levels of average monthly income of urban and rural populations; high resource dependence of the region; low share of manufacturing sector and deterioration of the industrial equipment; risky agriculture; high deterioration of agricultural equipment; administrative barriers to the development of SMEs; low availability of industrial zones and free economic zone; low level and limited market capacity of SME products.

4) Mangistau region. This region also has problems in the SMEs sector, including weak legislative support in regulation of trading activity; a high level of shadow economy; lack of awareness of domestic producers about a possibility of protection from the dumping and subsidized imports; insufficient level of development of domestic trade infrastructure. Mangistau region is characterized by a relatively small size and low population density, a low proportion of self-employed; mismatch of professional qualification structure of the unemployed, a significant percentage of citizens who do not have secondary or higher professional education, the lack of personnel in the working-class occupations, the poor quality of the labor force. There is a shadow employment; youth and female unemployment rates remains high. Proportion of the unemployed who do not have a profession is relatively high.

5) Zhambyl oblast. For Zhambyl region, SMEs plays a crucial role in the creation of new jobs for

the growing labor force. However, the small number of large enterprises prevents the formation of SMEs in the services industries, «Business to Business» (B2B), and the low level of human capital does not allow developing innovative types of SMEs.

The region is characterized by poor application of strategic management and competitive advantages factors.

6) Kostanai region. There are problems like sectoral imbalance: predominant share of the mining industry in the production and investment volumes, the low level of diversification of small businesses; in industry, virtually no production of high-tech and science-intensive products; a slowdown in the development of the regional economy as a result of the conservation of energy shortage; increase in import dependence of the domestic market due to the lag in technological development and sectoral disparities of regional economy. There are no industrial zones and free economic zones.

7) Kyzylorda region. The region is characterized by mono specialization on the oil and gas production. There are problems like the problem of power shortage and ecology; a low level of innovative activity, SMEs, trade; slowdown in lending, thus slowing the rate of development of SMEs. There is lack of development at the regional level of mature investment institutions, weak development of collective investment; weak support for cooperation and large-scale production in almost all regions of the country.

8) Pavlodar region. Creating conditions for the development of SMEs is of a general systemic character. Limited access to appropriate resources is a major barrier to entry to the market for SMEs.

9) North-Kazakhstan region. Creating conditions for development of small and medium-sized businesses require solutions to problems such as non-full-time capacities of industrial enterprises; general technical and technological backwardness of industrial enterprises; depreciation of 60-80% of electrical networks and substations; low level of public roads and infrastructure in many parts of the road transit roads; low levels of urbanization; mono functionality of small towns; weak diversification of small business, reduction in the number of active subjects of small business; insufficient production capacity for the processing of industrial waste.

According to the authors, Kazakhstan should clearly express the regional policy for the development of the SME sector. Desk research was conducted for a more detailed analysis of these regions.

The development level of the Kazakhstan's regions and their roles differ significantly in the

country's economy, since there are fundamental differences in the gross regional product (GRP), socio-economic and demographic indicators. Economic development in market conditions showed both competitive advantages and disadvantages of the individual regions' economy.

In addition, the regions of Kazakhstan have significant differences in the amount of the tax base, and therefore, various possibilities for the formation of budget revenues.

There is a budget leveling mechanism involving the redistribution of income between regions, between the national and regional budgets in order to align budgetary security of regions of Kazakhstan.

According to with the Budget Code of the Republic of Kazakhstan, general transfers (subventions) and targeted transfers are credited to the local budget revenues. To date, 13 of the 16 regions of Kazakhstan are dependent on the national budget subventions, which mean that they are unable to solve socio-economic development problems of the territory using domestic financial sources. Moreover, this dependence is only strengthened, reducing incentives for local government agencies to develop their own tax base, which has a negative impact on SMEs activity.

«Subventionary» refers to the financial dependence of local budgets on subsidies from the higher budget, as a result of deficit of their own income to provide services (works, products), and guaranteed by the state in accordance with the directions of spending from the budget.

The weakness of the own budget sources determines a high degree of subvention-dependence of most regions of the country.

One way to allocate and distribute of budgetary funds is public procurement carried out through the state order. State customers make acquisition at the expense of taxpayers (the state budget) in the public interest. The public procurement procedures often involve SMEs. There are certain problems in the PP systems that prevent successful development of Kazakhstani business, which consequently affects the regional inequality. For example, improper use of budgetary funds, uncertainty and inefficiency of the procedure when placing state orders, as well as many socio-economic, political and international risks in the PP process.

The organization of the PP sets strict procedural requirements, to minimize the scope for abuse and inefficiency. Foreign expert determines the meaning of «procurement» as a set of practices and techniques that can help to ensure the interests of

the buyer during the procurement campaign through tendering [25].

The use of new approaches can significantly improve the efficiency of the budgets of all levels, reduce the likelihood of abuse and give a new impetus to the development of SMEs in Kazakhstan.

Conclusions and recommendations

In a result of the study, the importance of regional business for the development of Kazakhstan's economy and the high differentiation of the regions were revealed in the area of SME development for entrepreneurs and for the state as a whole.

On the basis of cluster analysis, authors found that there are regional specificities of each area in Kazakhstan. Differences especially strongly manifested in comparison of regions with significant population, more developed industry, and significant reserves of minerals.

At the same time, the regions with a strong agriculture have low indicators characterizing the activity of both SMEs and the entire region as a whole, such as the number of the employed population, the number of active SMEs. Nine underdeveloped regions were revealed: Western Kazakhstan, Mangistau, Aktobe, Pavlodar, Akmola, Zhambyl, Kostanay, Kyzylorda, and North Kazakhstan.

There is a budget leveling mechanism involving the redistribution of income between regions, between the national and regional budgets in order to align budgetary security of regions of Kazakhstan. One way to allocation and distribution of budgetary funds are public procurement carried out through the state order.

Analysis of international experience in the procurement of goods, works and services for state needs allows us to offer a number of enhancements for use in Kazakhstan's public procurement mechanisms. It is necessary to organize the procurement process to provide each regional office the ability to respond to their needs promptly and effectively, at the same time respecting the mandatory legal requirements.

However, delegation of authority from central organs of the Republic of Kazakhstan to subordinates may result in the risk of reducing the effectiveness of budget spending. Accordingly, it is necessary to establish effective interaction mechanisms between parent organizations and local governments in the implementation of such approach.

Following measures are proposed as the necessary steps to create an effective public procurement system: removal of artificial

(administrative) barriers to participation in open competitions; intensification of competition between business entities, development of SME's ability to respond to state needs; the adequacy of the price and profit production costs; innovation; open information space and other [26].

References

- 1 Kulbatyrov N. Kazakhstan entered the list of the world study on business for the first time [electronic resource] // URL: <https://primeminister.kz>.
- 2 The official website of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan. [electronic resource] // Access: www.stat.gov.kz.
- 3 Flynn, A., & Davis, P. (2016). Firms' experience of SME-friendly policy and their participation and success in public procurement. *Journal of Small Business and Enterprise Development*, 23(3), 616-635. doi:10.1108/JSBED-10-2015-0140
- 4 Reijonen, H., Tammi, T., & Saastamoinen, J. (2016). SMEs and public sector procurement: Does entrepreneurial orientation make a difference? *International Small Business Journal*, 34(4), 468-486. doi:10.1177/0266242614556661
- 5 Offei, I., Kissi, E., & Badu, E. (2016). Public procurement policies and strategies for capacity building of SME construction firms in Ghana. *International Journal of Procurement Management*, 9(4), 455-472. doi:10.1504/IJPM.2016.077705
- 6 Vyklický, M., Man, P., Heidt, R. F., & Jurčík, R. (2016). Qualification requirements for foreign suppliers in public procurement-evidence from the Czech Republic. *Danube*, 7(1), 19-39. doi:10.1515/danb-2016-0002
- 7 Bernhard, I., & Grundén, K. (2016). Networking and e-government for local development -experiences gained by entrepreneurs in small enterprises in Sweden. *International Journal of Entrepreneurship and Small Business*, 29(2), 154-175. doi:10.1504/IJESB.2016.078701
- 8 Loader, K., & Norton, S. (2015). SME access to public procurement: An analysis of the experiences of SMEs supplying the publicly funded UK heritage sector. *Journal of Purchasing and Supply Management*, 21(4), 241-250. doi:10.1016/j.pursup.2015.02.001
- 9 Loader, K. (2015). SME suppliers and the challenge of public procurement: Evidence revealed by a UK government online feedback facility. *Journal of Purchasing and Supply Management*, 21(2), 103-112. doi:10.1016/j.pursup.2014.12.003
- 10 McKeivitt, D., & Davis, P. (2015). How to interact, when and with whom? SMEs and public procurement. *Public Money and Management*, 35(1), 79-86. doi:10.1080/09540962.2015.986897
- 11 Mukhtarova K.S. Kazakhstan Way of Innovation Cluterization // International Conference on Economics, Finance&Management Sciences (COES&RJ-SG14/2). – Singapore 17-18 Nov. – 2014. – C. 1-7.
- 12 Mukhtarova K.S. et al. Analysis of the data on science, education and innovation activities in the regions of the Republic of Kazakhstan using patterns for the 2003-2012. // *Bulletin of KazNU, economic Series*. – 2014. – №2 (102). – 20-25.
- 13 Mukhtarova K.S., Kupeshova S.T. Innovative Development of Kazakhstan: Problems and Perspectives // ICBE-2016 conference proceedings, Jeju, South Korea.
- 14 Mukhtarova K.S. Income distribution and poverty in a transition economy: a monograph. – Almaty: Al-Farabi Kazakh National University, 2000. – 224 p.
- 15 Mukhtarova K.S. Analysis of innovative activity in regions of Kazakhstan // *The Journal of Asian Finance, Economics and Business* Vol.1 No.4 – Pp. 23-27.
- 16 Nurlanova NK Problems of innovative development of the regions of Kazakhstan and ways of their solution. // *Economics and finance*. – Tashkent Institute of the Academy of Sciences of Uzbekistan, 2011. – №12. – S. 2-7.
- 17 Nurlanova, NK innovative development of Kazakhstan regions of scenarios and assessment of their feasibility // *Problems of development of the territory*. – 2014. – № 4. – S. 82-96.
- 18 Myltykbayeva A. Innovation Potential of Kazakhstan's Regions: Evaluation and Ways for Development // *Eurasian journal of social sciences and humanities*, Vol 1, No 2. – 2016. – C. 33-36.
- 19 Zhatkanbayev E.B. State regulation of the economy. – Almaty: Economics, 2013. – 232 p.
- 20 GS Smagulova and others. The organization of public service in the Republic of Kazakhstan. – Almaty, Qazaquniversiteti, 2016. – 196 p.
- 21 Mukhtar ES Problems and solutions in the system of public procurement RK // Proceedings of the international scientific-practical conference «Crisis management of the economy of Kazakhstan in the external environment of turbulence conditions.» Almaty, 24-25 November 2016 – Almaty: Kazakh University, 2016. – P. 212-215.
- 22 ErnurMukhtarThe examples of reverse logistics application in inter-sector partnerships – good practices // *Journal of international studies*. – Vol. 9, №3, 2016.
- 23 Cluster analysis [Electronic resource] // Access: http://statlab.kubsu.ru/sites/project_bank/claster.pdf.
- 24 B.G. Mirkin Introduction to Data Analysis: tutorial and workshop for undergraduate and graduate – M.: Publishing house: Yurayt, 2015. – 174 p.
- 25 Nesterovich H.B. Procurement. Principles of organization of the procurement of products for state needs // *Information-analytical bulletin «Tenders»*. 1998. – N 12.
- 26 Januzakov N.T. Increasing the transparency of the public procurement system of the Republic of Kazakhstan // Collection of scientific works of young scientists «Modernization processes of economic development» / Ed. A.E. Miller. – Omsk: Publishing House of the Omsk State Technical University, 2014. – 55-59 p.