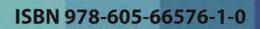


# The 4<sup>th</sup> International Geography Symposium BOOK OF PROCEEDINGS

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23-26 May, 2016 Kemer - Antalya - Turkey Editors Recep EFE İsa CÜREBAL László LÉVAI

<u>16</u>





## GEOMED 2016 4<sup>th</sup> International Geography Symposium

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# BOOK OF PROCEEDINGS

Editors Recep EFE, İsa CÜREBAL, László LÉVAI

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#### **Regions and Cities of The Republic of Kazakhstan: Modern State, Development Trends, Problems and Prospects**

Indira B. SARSENOVA<sup>1</sup> and Assel S. IKANOVA<sup>1</sup>

#### Abstract

Population of urbanized areas of Kazakhstan play a leading role in the socio-economic development of the country and, in many respects, they determine the trends and development of the Kazakh society. Therefore, the study of the problems of socio-economic development of the urban population of Kazakhstan gives an indication of the degree of development of society as a whole to determine its concerns and outline prospects for further development. From the first days of its occurrence the cities of Kazakhstan performed cityforming function. Analysis of their economic and demographic development shows that a significant part of the city, located in major metropolitan areas and which acts as the "second" and "third" cities, largely loses its "small cities" quality. During the Soviet period history in Kazakhstan the urban formation problems especially the development of urban settlement has received much attention. This is due to the fact that there is predominantly rural settlement. Cities should play a significant role not only in the equalization of the regional differences of Kazakhstan's economy, but mainly to create the base areas for the socio-economic, scientific-technical and cultural development of the country. In this regard, the article discusses the modern state and development of urban areas and other settlements, especially the socio-economic aspects should be considered in close connection with the general public and various demographic processes. Therefore, the given information about the natural and mechanical movement of the population can be considered as the original generalizing indicators of the processes that happen in population movement.

Key Words: Urbanization, Demography, City, Kazakhstan

#### **1. INTRODUCTION**

An important role in the settlement system of the republic play small and large cities. Exploring issues of demographic development, we took into account the fact that the rapid growth of large cities should be the transformation of the economic structure, the consistent release them from the non-core for the rank and status of production and other activities. The solution to this problem is possible on the basis of designed, evidence-based socio-demographic policy, which, in our view, should include a number of measures, taking into account the particular socio-economic, ethnic and demographic development of the urbanized regions of the country in previous decades.

Thus, the population of the urbanized territories of Kazakhstan playing a leading role in the socio-economic development of the country and, in many respects, they determine the trends and directions of development of the Kazakh society. Therefore, study of the problems of socio-economic development of the urban population of Kazakhstan gives an

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indication of the level of development of society as a whole to determine its concerns and outline prospects for further development.

Feature of development of cities of Kazakhstan lies in the fact that due to the historically established territorial placing some small, small town in a single settlement system cannot perform the role that they should have. This is due in the first stage of sociodemographic problems of the population of large, medium and small cities of Kazakhstan.

Solving these problems requires a deep study of the problems of existing urban settlements in the context of the areas of the Republic, taking into account their specific features. The importance of these problems is exacerbated by the ongoing process of urbanization.

In Kazakhstan, the city functions should be divided into external, related to the implementation of socio-economic problems on a national scale, and internal, relating to the area. Cities that have arisen on the basis of natural resources (such majority in Kazakhstan), specialty, performing mostly external functions. Cities are inherent in the complex a variety of combinations of running external and internal functions. Depending on this, their importance and role in the implementation of socio-economic problems are not the same.

For Kazakhstan, the practical importance is the experience of Japan, where about 50% of all industrial supplies accounted for the regions around Tokyo and Osaka. In Japan, signs of effective economic and urbanization may have a significant effect and urbanization factor is clearly traced. In this context, the expansion of the boundaries of the new capital, Astana, and the concentration in the area of new settlements and the development of local road networks are crucial to accelerate socio-economic development of Kazakhstan. It is possible that in the future, Astana and Karagandy cities with satellites will form the basis of the country's largest metropolitan area. Insufficient knowledge and validity of the underlying processes in the socio-economic and regional development of Kazakhstan's economy may have a negative impact on the forecasts for the next decade.

According to the development process of urbanization in Kazakhstan the level of the birth rate in an urban population has decreased in comparison with the rural one, and further there is also a decrease in birth rate in rural area. In some cases it can lead to the fact that the birth rate level in cities becomes higher, the causes of which are socio-economic and demographic factors, in particular the fact that there is a more balanced sex ratio in the cities.

In 1999-2010 the changes in the dynamics of the size of city and rural populations were observed; they enable us to allocate some stages of development of the given process'. In this period a similar thing occurs not for the first time: in the 1990s the size of the urban population was reduced more intensively than the size of the rural one; in 1999-2005 the size of the urban population increased, and the rural one decreased; in 2006-2009 the quantity of townspeople reduced and countrymen increased. It was due to the administrative-territorial changes, and the transformation of some city settlements into rural areas.

At the beginning of the 21<sup>st</sup> century natural increase is becoming the leading component of the growth of Kazakhstan's population. In 2000-2010 the processes of natural reproduction defined the dynamics of population size.

In the methodological and information bases of scientific work the methodology of the geographical science of national and foreign authors has been used. In this work general scientific methods have been used, also modern methods of research, systematic and comparative-geographical analyses, methods of GIS technologies.

population of Kazakhstan — in 1999-2010 the population growth of the Republic of Kazakhstan was thanks to the townspeople.

The dynamics of the population of Kazakhstan, as earlier, was regionally differentiated. Two groups of regions are allocated: (a) with the increasing population (Southern, Western cities of Kazakhstan, and also the capitals — Astana and Almaty) and (b) with the decreasing population (East, Northern and Central cities of Kazakhstan).

Among the cities of the Republic of Kazakhstan the biggest as regards population and the most densely populated cities are still the South Kazakhstan oblast (part of a city population), and also a high natural increase is in the cities of 4 oblasts: Mangystau -23.2%, Atyrau -22.4%, Kyzylorda -22.1%, Zhambyl -16.8%, Almaty -14.3% (Fig.1). The listed cities of 5 areas are 50% of the whole population of the country and if we talk about Almaty city, it turns out that almost 59% of the inhabitants of the country have concentrated in the specified 6 large administrative-territorial cities of the republic.

As can be seen from the first table, population growth and increases in some cities is the decline in population. This is due to the fact that after the collapse of the Soviet Union quickly reduce the number of production, and this has led to the unemployment of large and small cities. To ensure reliable, can cause the picture in the form of diagrams.

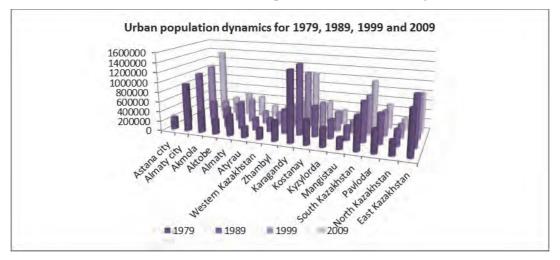


Fig.1 Urban population in Kazakhstan for 1979, 1989, 199 and 2009

#### Demographic Processes In Urban Areas In The Modern Period

In the last 20 years the general number of the population of Southern-Kazakhstan (especially South Kazakhstan, Kyzylorda, Almaty oblast and Almaty) and in the last 10 years the number of inhabitants in the West Kazakhstan region (in the cities of Mangystau, Atyrau and Aktobe oblast) grew annually and faster. In the years of formation as the capital of the country the size of the population of Astana has increased from 300 thousand to 700 thousand i.e. 2.3-fold. At the same time the number of inhabitants in other cities of 4 oblasts of the North Kazakhstan region has decreased annually, and continues reducing until today. The general size of the population in East and Central Kazakhstan has also considerably decreased.

The study of the demographic situation in large cities allows to some extent predict its in the whole country (taking into account, respectively, significant regional differences within demographic processes). The demographic situation is different in cities of different size and functional type. The most favorable demographic processes characteristic of the multifunctional development of medium-sized cities (from 50 to 100 thousand. People) and for a certain category of large (100 to 250 thousand people). the most unfavorable demographic situation (taking into account disparities by age and sex structure) formed in the super-large (with a population of up to 20 and especially up to 10 thousand people) specialized cities.

The authors have prepared the map of natural movement of urban population for the period of population censuses 1999 and 2009 with the help of GIS-technologies, which approve the received conclusions. Urban areas of Kazakhstan can be referred to the regions with the indicators of natural movement population. This indicator is rather high only in the urban areas of South regions, and the regions with a rather low level of the birth rate are in the urban areas of North and Eastern Kazakhstan (Fig. 2 and 3).

The largest city - the city of a millionaire	Amount	Population	Population density	Types of cities	
Almaty	1	Более 1 млн.чел	Densely populated cities 1 km2 – 4637,0	1 - type the city of republican	
Very big cities Astana, Shymkent	2	500000 – 1 млн.чел	1 км <sup>2</sup> – 927,3 и 21,4	significance	
Biggest cities Karaganda, Aktobe, Pavlodar, Taraz, Oskemen, Semey	6	250000 - 500000	The average population of the city, an average of		
Big cities			1 km 2 - 8 people.	2 - type the administrative	
Oral, Kostanay, Kyzylorda, Atyrau Petropavl, Temirtau, Aktau, Kokshetau, Turkestan, Ekibastuz, Taldykorgan	12	100000 – 250000		center of the city	
Middle city Zhanaozen, Zhezkazgan, Balkhash, Satpayev, Stepnogor, Kentau, Shakhtinsk, Ridder, Saran	9	50000-100000	Sparsely populated city an average of 1 km2 - less than 5 people.	3 - type of work	
Small city			-	such as city	
Aksu, Lisakovsk, Kapshagay, Zyryanovsk, Aris, Ayagoz, Baikonur, Arkalyk, Tekeli Karazhal, Lakeshire, Kurchatov	12	10000 -50000			

Table 2. Classification of Kazakhstan cities by population

		All the people	people		-	The	The population of the city	of the city		
Demone			The rate	Medium			The rate	Medium	The share	hare
Tregroups	1999	2012	of growth	The rate	1999	2012	of growth	the rate	nomilation	ation
			%	of growth			%	of growth	1999 I	2012
The Republic of Kazakhstan	14981281	16674959	111,3	0,85	7531542	9114433	121,0	1,50	50,3	54,7
Akmola	827254	731133	88,4	-0,95	301431	341745	113,4	1,0	36,4	46,7
Aktobe	682558	786209	115,2	1,10	344392	484786	140,8	2,65	50,5	61,7
Almaty	1557269	1909189	122,6	1,60	354307	442463	124,9	1,7	22,8	23,2
Atyrau	440286	542937	123,3	1,65	197611	260412	131,8	2,15	44,9	48,0
Western Kazakhstan	616800	612516	99,3	-0,05	248866	296823	119,3	1,40	40,3	48,5
Zhambyl	988840	1055942	106,8	0,55	419332	410554	6'16	-0,15	42,4	38,9
Karagandy	1410218	1357943	96,3	-0,25	1044605	1064041	101,9	0,15	74,1	78,4
Kostanay	1017108	879523	86,5	-1,10	465221	446395	96,0	-0,30	45,7	50,8
Kyzylorda	624991	712915	114,1	1,05	243424	301469	123,8	1,65	38,9	42,3
Mangistau	314669	545975	173,5	4,35	195891	282197	144,1	2,85	62,3	51,7
South Kazakhstan	1978339	2622125	132,5	2,20	719962	1025918	142,5	2,75	36,4	39,1
Pavlodar	806983	746829	92,5	-0°0	495847	514240	103,7	0°30	61,4	68,9
North Kazakhstan	725980	583651	80,4	-1,65	244972	238875	97,5	-0,20	33,7	40,9
East Kazakhstan	1531024	1394963	91,1	-0,70	796719	811406	101,8	0,15	52,0	58,2
Astana	328341	743014	226,3	6,50	328341	743014	226,3	6,50	100	100
Almaty	1130621	1450095	128,3	1,95	1130621	1450095	128,3	1,95	100	100

Table 3 - The territory of the Republic of Kazakhstan for 1999 and 2012 years, the pace of urbanization and population dynamics

		The average annual rate of	(t	(the forecast report)		
Regions	2012 (real)	growth of the population in 1999-2012	f the 2020 2030	The rate of growth		
The population of the city (all the people)	16674959	0,85	17843169	19419186	116	
		Oblasts				
The Republic of Kazakhstan (the population of the city)	9114433	0,85	10267341	11915669	131	
Akmola	341745	1,5	370060,9	408777,4	120	
Aktobe	484786	1	597615,3	776267,2	160	
Almaty	442463	2,65	506342,7	599313,6	135	
Atyrau	260412	1,7	308722,3	381901,8	147	
Western Kazakhstan	296823	2,15	331742,6	381224,4	128	
Zhambyl	410554	1,4	405653,1	399609,3	97	
Karagandy	1064041	-0,15	1076877	1093139	103	
Kostanay	446395	0,15	435793,3	422894,6	95	
Kyzylorda	301469	-0,3	342929,1	402713,6	134	
Mangistau	282197	1,65	353335,1	467982,6	166	
South Kazakhstan	1025918	2,85	1274581	1671805	163	
Pavlodar	514240	2,75	526712,1	542728,5	106	
North Kazakhstan	238875	0,3	235079,6	230420,1	96	
East Kazakhstan	811406	-0,2	821194,1	833595,5	103	
Astana	743014	0,15	1229685	1308288	151	
Almaty	1450095	6,5	1692366	2052894	142	

Table 4. Towns and cities of the Republic of Kazakhstan to predict the number of people agglomerations (in thousands)

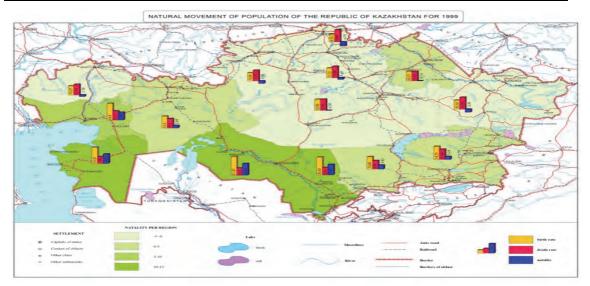


Figure 2.Natural movement of population of the Rebuplic Of Kazakhistan for 1999

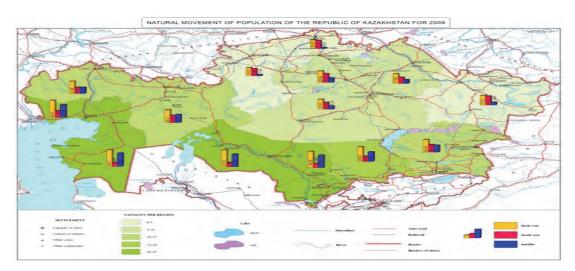


Figure 3. Natural movement of population of the Rebuplic Of Kazakhistan for 2009

#### CONCLUSIONS

In conclusion we can note that the positive tendencies of a natural increase in urban population were outlined in modern Kazakhstan. And in 2015 the natural increase coefficient of an urban population was 13.4 ‰.

These conclusions are reflected in the maps prepared with the help of GIS-technologies. The regional features and the basic tendencies of demographic processes of Kazakhstan cities in the modern period are presented on them.

The quantitative indicators of urban areas and the urban population of Kazakhstan had been analyzed, also the typology of cities on the basis of number of population created in this paper.

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Sustainable development of the modern city - is a balanced stable socio-economic and environmental development, based on the rational use of the resource potential of the city, not exceeding the maximum permissible load on the environment and urban ecosystems.

Socio-economic processes, the structure of industrial production and specialization have a distinctly pronounced regional character and they are influenced substantial by territorial differences. In this connection there is need for special consideration of the problems of transition to sustainable development of individual regions: regions, cities and districts. Sustainable development strategy should be implemented in specific territories, as each territory has its own distinctive features: a set, scale and nature of the problems of sustainable development, approach to their solution, and the tools used to implement such approaches.

Astana – the young capital, which is developing dynamically, transformed into a Smart City. This is its comparative advantage compared to other major cities of Kazakhstan (Development Program of Astana city for 2016-2020, 2015). The main goal of the sustainable development of the Astana city is to increase the level and quality of life of population through the best use of internal and external factors that ensure the dynamic development of the economic and social sphere while preserving the reproductive potential of the natural complex.

#### **Study Area**

Concept of Transition of Kazakhstan to sustainable development for 2007-2024 defines the vision of principles, the basic mechanisms of achieving stability in all spheres of life of the republic (Concept of Transition of Kazakhstan to sustainable development for 2007-2024, 2006). This requires that economic, social, environmental and political factors of development have been integrated and treated as a single process aimed at increasing the quality of society.

The dynamic development of major cities at present provides for a presence of mechanism of effective management. In the construction of the concept of sustainable development of economy and social sphere of large cities the important role plays works of classics of economic scienceAt the root of the theory and practice of a market economy were J. Adams, A. Smith, D. Rikkardo, J. Keynes, M. Friedman, E. Dolan, P. Samuelson, A. Nordhaus, C. McConnell, S. Brue, R. Murphy. Theoretical, methodological and applied problems of the market economy rose in numerous works of Kazakh economists: N. Nazarbayev, A. Koshanov, K. Sagadiev, U. Baymuratov, E. Turkebayev et al.

Significant contribution to the research and problem solving of functioning management and development of large cities made by Russian scientists M. Branch, G. Golts, A. Gutnov, O. Kudryavtsev, G. Lappo, B. Horev, A. Treyvish. For foreign authors, whose works are of greatest interest include E. Atkinson, J. Stiglitz, V. Ostrom, Le Corbusier and others.

The severity of the issues related to sustainable development of large cities, as well as the morphology of the economic space, require their deep and thorough research. Despite the availability of publications, these issues have not been sufficiently addressed in the review of scientific developments and are the subject of constant debate among scientists. The need for an integrated, systematic approach to the problem of sustainable development of large cities, as well as the need for new theoretical and practical generalizations caused relevance, defined purpose and main objectives of the study.

It should be noted that research on sustainable development of large cities in Kazakhstan are under-represented. In our view, it is appropriate to draw the attention of

scientists and experts in the sustainable development issues of large cities such as Astana, which currently is promising basis for integration into the world economic community.

The current pace of development of the world economy placing new demands on the development of economic systems and determines the need for a holistic theoretical and methodological basis ensuring sustainable development of large cities, the study of problems of development of economy at the national level.

Cities - the most important links of the entire system of territorial organization of the population, framework of unified social and economic development of Kazakhstan. At the beginning of 2015, in 87 cities of Republic of Kazakhstan (including Baikonur, operating under lease of Russian Federation), 2 cities of the republic value, 38 regional and 47 district value, and in 30 settlements, with the status of settlements with urban population resided 9 868.6 thousand people (56.6% of the total population of the Republic of Kazakhstan).

#### **MATERIALS AND METHODS**

The information base served as the official data of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, the Departments of Statistics of Astana and Akmola region (http://www.stat.gov.kz, http://www.astana.stat.kz, http://www.akmola.stat.gov.kz).

To analyze the potential of Astana were examined data on socio-demographic and economic indicators of Astana city in dynamics for 1998-2014 years., Ie, for the period of formation and the becoming of the Capital.

For data processing were used software packages ArcGIS, DemProj, and module Statistical Analyst.

In writing the article were used as a common scientific and geographical methods: statistical and comparative geographical analysis, cartographic.

#### **RESULTS AND DISCUSSION**

1. Development dynamics of the large cities of the Republic of Kazakhstan

The population of the Republic of Kazakhstan at the beginning of 2016 amounted to 17 670.9 thousand people, including urban population of 10 066.7 thousand people, accounting for 57%.

In 2015, there were 87 cities in Kazakhstan, of which only three cities had a number of population of over 500 thousand people (Almaty, Astana, Shymkent). Number of cities with number of population over 100 thousand people - is 22, in which resided 43% of the population of the country (Demographic Yearbook of Kazakhstan, 2015, p. 7-10). The proportion of the population living in cities, especially large cities is constantly growing.

The vast majority of cities of Kazakhstan today presented the so-called "small" and "medium-sized" cities with a population of less than 100 thousand residents. In 2014, the number of small towns with population less than 50 thousand people was in Kazakhstan 59. The population of more than 50 thousand people, but less than 100 thousand people, to date, have cities such as Ridder, Baikonur, Balkhash, Satpayev, Kentau, Stepnogorsk, Zhanaozen, Shakhtinsk.

Almost all the "small" and "medium-sized" cities were characterized by population decline during the 1990s, mainly due to active migration due to the deteriorating economic situation and the social and living conditions of life (number of population of small towns, usually, depends on the state of the city-forming enterprises). Since 2002, in a number of such urban settlements there has been population growth (for example, the cities

Stepnogorsk, Balkhash, Zhezkazgan, Saran, Lisakovsk, Turkistan, Schuchinsk, etc.). However, at the present stage, there are the cities of regional and district values, where the number of population continues to decline (eg, Shakhtinsk, Aksu, Arkalyk, Ayagoz, Zyryanovsk, Ridder, Abay, Karkaraly, Aral), in which were registered 1423.5 thousand people (Nyusupova G.N., 2010, p. 147-151).

Today, Kazakhstan has the only urban "millionaire" – Almaty city. The number of population over 1 million people was formed in the Almaty city to the beginning of 1982. Thus, Almaty is the only metropolis in Kazakhstan. During the period from 1989 to 2015 the population of Almaty increased by 582 thousand people from 1 121.4 thousand to 1 703.5 thousand people (Table 1). Especially rapidly Almaty city developing since 2001. The share of the population of the Almaty city in the number of urban population of Kazakhstan is also increasing: in 1989 it amounted to 11.9%, then from 1999 to 2002. - 13.4%, in 2009 15.7%, in 2015 - 17.3%. There are the data of the official statistics, but in Almaty city focused sufficiently large number of unregistered population (migrants from other regions and rural areas, migrant workers from neighboring countries and others.). According to the 2015 data in Almaty city the number of population is 1 703.5 thousand people, and in Almaty agglomeration about 2.5 million people.

1000	1000	2000	<b>2</b> 015
			2015
276003	326939	613006	872655
1121395	1128989	1365632	1703481
252978	253088	391669	450154
147234	142497	240570	302242
160744	143396	169809	185876
48300	48871	113014	140641
507318	436864	460039	498055
135424	123389	147295	159488
223558	221429	214961	231911
150425	157364	230422	277810
329681	300503	336810	358895
239606	203523	202454	216234
125245	109515	122980	130103
317112	269574	324492	343523
118623	97996	146844	165290
303961	330125	320634	362993
213551	170481	176496	185533
77692	102505	142899	256924
199522	195459	247236	288400
322221	310950	314953	333350
380091	423902	603499	885799
135006	127197	125012	152762
	252978 147234 160744 48300 507318 135424 223558 150425 329681 239606 125245 317112 118623 303961 213551 77692 199522 322221 380091	2760033269391121395112898925297825308814723414249716074414339648300488715073184368641354241233892235582214291504251573643296813005032396062035231252451095153171122695741186239799630396133012521355117048177692102505199522195459322221310950380091423902	27600332693961300611213951128989136563225297825308839166914723414249724057016074414339616980948300488711130145073184368644600391354241233891472952235582214292149611504251573642304223296813005033368102396062035232024541252451095151229803171122695743244921186239799614684430396133012532063421355117048117649677692102505142899199522195459247236322221310950314953380091423902603499

Table 1: Dynamics of number of population of major cities of Kazakhstan, people

*Source:* Compiled by authors based on Committee of Statistics data (The Committee of Statistics of the Republic of Kazakhstan, 2016).

Significant population growth of Almaty city was due to suburbs. The high density of rural settlements, their proximity and the expansion of the area around Almaty city, played a crucial role in deciding on the inclusion of the villages and towns in the city limits. Active development of Almaty neighborhoods by building houses, cottages also played a role in getting the status of the city of nearby villages. Especially these processes developed rapidly the past 15 years, which contributed to the expansion of the limits of the urban agglomeration. Only in 1999, expanding the boundaries of the Almaty city has led to an increase in population of 8.7 thousand people. And in 2014 the expansion of the city limits was 23.2 ha, as a result of number of population increased by 94.1 thousand people.

Dynamics of the number of population of Astana city represents special interest. Astana in 1997 became the capital of the Republic of Kazakhstan. Since that time, the city is experiencing, so to speak, "urban boom." The constant influx of population in Astana leads to the fact that the city's population is growing very rapidly. Thus, from 1989 to 2015 the number of population of Astana increased 3.2 times (from 276.0 thousand to 872.7 thousand people). Accordingly, increased and its share in the urban population of the Republic: in 1989 - 2.9%, in 1999 - 3.9%, in 2009 - 7%, in 2015 - 8.8%. Capital status gives Astana additional attractiveness, both for internal migrants as well as for migrant workers from other countries, foreign investors, businessmen, entrepreneurs of different level and tourists. Focusing in the city a large number of population of young ages contributes to increase its numbers and by birth. In addition, people are seeking different options of resettlement in the capital itself.

It should be noted that only since 2005, Astana has become the second most populous city in Kazakhstan. In the period from 2000 to 2004 inclusive, the second place by largest population held Shymkent city. Since 2000, the Shymkent city by number of population has moved into second place in the republic, "displacing" the Karagandy city to the third place, which for many years was regarded as the second city in Kazakhstan by number of population and in terms of socio-economic development (since 2001 population of Karagandy becomes smaller than population of Astana). By the beginning of 2003 the number of population of Astana city has exceeded 500 thousand people. Although in the preparation of a master plan development of the capital it was assumed that the half-million mark the city will reach only by 2010, and all projects were associated with this target population. To date, the number of population of Astana city is 872.7 thousand people.

Although, in the first years of the transfer of the capital (1997-2000 years) a number of rural settlements have been introduced in the metropolitan area (conurbation), in the near future a significant growth in the number of citizens due to the inclusion of new rural settlements is not expected. At this time around Astana city there is no zone of closely spaced rural settlements. Nevertheless, in comparison with 1997, there has been an increase in urban areas in 2.7 times, that achieved by the development of new, uninhabited area.

To date, dynamically developing large cities of Kazakhstan (in addition to the Almaty and Astana) are Karagandy, Shymkent, Aktobe, Atyrau, Taraz, Oral, Oskemen.

2. Problems and prospects for sustainable development of the Astana city

Under the sustainable development of Astana city is understood the continuous improvement of quality of life of population. The concept of quality of life is determined primarily by the presence of the work and the appropriate remuneration, the state guaranteed minimum package of health services, education and social welfare, environmental quality and engineering infrastructure, public safety, political stability (Strategic Plan for Sustainable Development of Astana city until 2030, 2006).

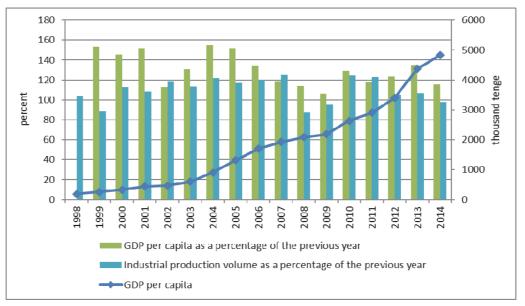
At the same time, priority in achieving sustainable development of the city is given to the person providing the worthy conditions of life and development as a person.

#### 2.1. Development of Urban Economics

The desire of the city to the development of a diversified economy, the introduction of information technologies, innovations implies a high rate of growth of all sectors of the economy: industry, construction, retail and wholesale trade, transport and communications, and other types of services that will allow Astana in 2030 to become one of the thirty the most competitive cities in the world.

Acquiring the status of capital city of Astana marked the prospects for the development of its economy. At the end of 2014 the volume of gross regional product of Astana city amounted to 4 023.8 million tenge, for the city accounting for 10.3% of total GDP. In the structure of GRP the largest share occupy trade and services (86.8%), including the services - 64.2%, wholesale and retail trade - 22.6%. The share of industrial production and construction is 3.6% and 9.6% respectively.

The volume of GDP per capita by the end of 2014 amounted to 4 826.6 thousand tenge, which is twice the average for the country (2 258.1 thous. tenge). Nominal growth of this indicator in comparison with the year 2013 (4376.1 thousand tenge) was 10.3%, an increase in 2012 (3396.1 thousand. tenge) 42% (Figure 1).



Source: Compiled by authors based on data of Department of Statistics of Astana (The Department of Statistics of Astana, 2016).

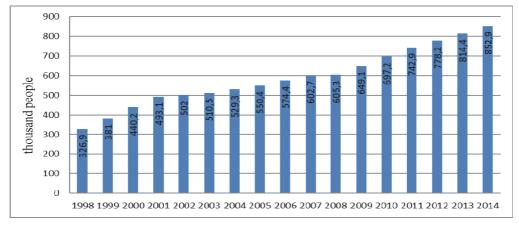
Figure 1: Dynamics of the major economic indicators of Astana for 1998-2014 years

During the study period (1998-2014) industrial output increased from 20.2 billion tenge in 1998 to 344.7 billion tenge in 2014. The growth index in 2013 relative to 2012 was 6.7%, there was a decline of up to 2% in 2014.

2.2. Socio-demographic indicators of the development of the city

The dynamics of the total number of population of Astana city for 1998-2014 years was generally positive. The number of population in 2014 was 852.9 thousand people. Compared

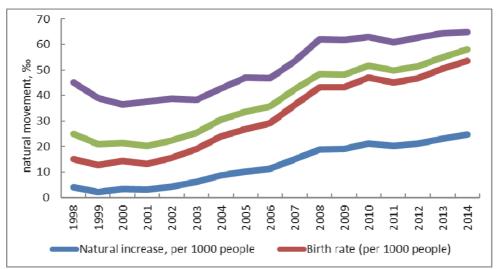
to 1998 the population increased by 526 thousand people, or by 160.9%, from 326.9 thousand people in 1998 to 852.9 thousand people in 2014 (Figure 2).



*Source*: Compiled by authors based on data of Department of Statistics of Astana (The Department of Statistics of Astana, 2016).

#### Figure 2: The number of population of Astana city for the 1998-2014 years

At the same time the natural increase rose from 4 per 1,000 people in 1998 to 24.7 per 1000 in 2014. The natural increase of the population during the study period underwent various changes, if in 1998 the natural growth rate was 4‰, followed by a decline to 2.1‰ in 1999. Since 2001, the indices of natural population growth had a positive upward trend (Figure 3).



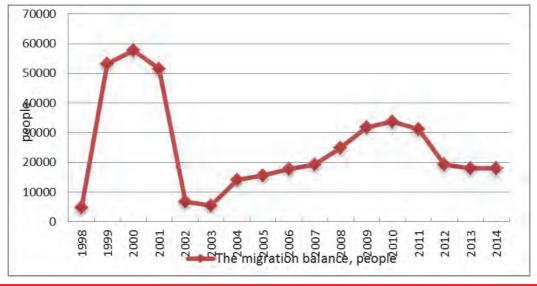
Source: Compiled by authors based on data of Department of Statistics of Astana (The Department of Statistics of Astana, 2016).

Figure 3: Natural movement indicators of population of Astana for the period 1998-2014 years

This is due mainly to the rapid increase in the birth rate, which increased by 2.5 times since 1998, this figure increased from 11‰ to 28.96‰ in 2014 (3rd place among the regions,

Migration population growth in capital during the period 1998-2014 years was positive, and the balance of migration has increased more than 3.7 times (from 4816 to 17 880 people). The rate of migration growth annually in the order of 17-19 thousand people. For example, in 2014 balance of migration amounted to 17.9 thousand people (2nd place among the regions after the Almaty city, where it was 22.1 thousand people), of which 70.8% are working-age population and 23.5 % - younger than working age.

To the Astana city population mostly comes from Akmola, South Kazakhstan, Karagandy, East Kazakhstan regions and Almaty city.



Source: Compiled by authors based on data of Department of Statistics of Astana (The Department of Statistics of Astana, 2016).

Figure 5: The migration balance of Astana city for the 1998-2014 years (people)

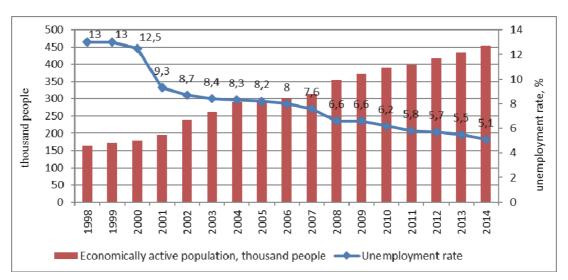
Coverage by education of population of the capital of the aged 6-24 years is one of the main indicators of the level and quality of life in the Republic of Kazakhstan.

Analysis of changes in the values of total enrollment proportion of the population aged 6-24 years for the 1999-2014 years showed that at the present time in Astana 74.9% of the population aged 6-24 years covered by training, compared with 1999, this index increased of 28%.

In Astana there is the largest total share of enrollment of the population by education aged 6-24 years marked in 2008 - 91.5%. The level of education of the population aged 6-24 years has become much increase from 2000 to the present.

The economically active population in the Astana city in absolute terms has increased over the period of 1998 - 2014. Number of active population increased from 164.2 thousand people to 454.6 thousand people.

Unemployment is extremely important and multi-faceted sphere of economic and social life. The unemployment rate in the capital has decreased significantly over the 1998-2014 years. As compared with 1998 in 2014 the unemployment rate decreased by more than two and a half times (from 13% to 5.1%). And it is lower than average republican population which is 6% (Figure 6).



Source: Compiled by authors based on data of Department of Statistics of Astana (The Department of Statistics of Astana, 2016).

*Figure 6: Economically active population and unemployment rate of Astana city for the 1998-2014 years* 



Source: Compiled by authors based on data of Department of Statistics of Astana (The Department of Statistics of Astana, 2016).

Figure 7: Average appointed monthly pension and share of the population with incomes below the subsistence level

The main indicators of social security determining the level of socio-economic development of any country is the size of pensions and social benefits. Since 1998, the pension system in Kazakhstan has moved from the distributive to the cumulative operating principle.

In Astana, from 1998 until 2003, ie, 5 years increased the average size of pensions in twice (from 4 269 tenge to 8 572 tenge). And for 10 years (1998 -. 2015), this figure increased by 4 times (from 4269 tenge to 16 500 tenge).

Over the pension reform years (1998-2009) the average size of pensions in Astana increased by 16 718 tenge. In 2014, this figure reached up to 44 941 tenge and in comparison with 1998 increased by 10.5 times.

An analysis of the proportion of people with incomes below the subsistence level in Astana shows that since 2001 there was a marked decrease in the proportion of the population with incomes below the subsistence minimum, if their share in 2001 was 7.7% of the total population, in 2014 their share was 0.4%, which 7.3 times lower than in 2001 (Figure 7).

#### CONCLUSION

In accordance with the Strategic Plan of Sustainable Development of Astana city until 2030, Astana should develop as the capital of administrative and cultural center and center of innovative technologies, the city of future - Smart City. In this connection it is necessary to stimulate the development of traditional industries and services outside of the city, improve the quality of life of population, improve environmental living conditions.

Results of the study revealed the competitive advantages of the capital and the prospects for its further sustainable development.

Currently, in Astana implemented a large number of regional programs of socioeconomic development of the city.

Astana is located in the center of the country and is geographically centrally located transportation hub of rail and road networks. In the long term there is a real opportunity to significantly improve its place in the international air transport.

The favorable geopolitical position of the capital is determined by the position, which today holds Kazakhstan in Central Asia and in international community, according to two factors: firstly, it's significant reserves of natural resources; secondly, the "advancement" of Kazakhstan in political, economic and social spheres in comparison with its neighbors, making it the undisputed leader and reliable partner in the region.

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