Regional Human Development Report 2016

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Inequalities and Human Development in Eastern Europe, Turkey, and Central Asia

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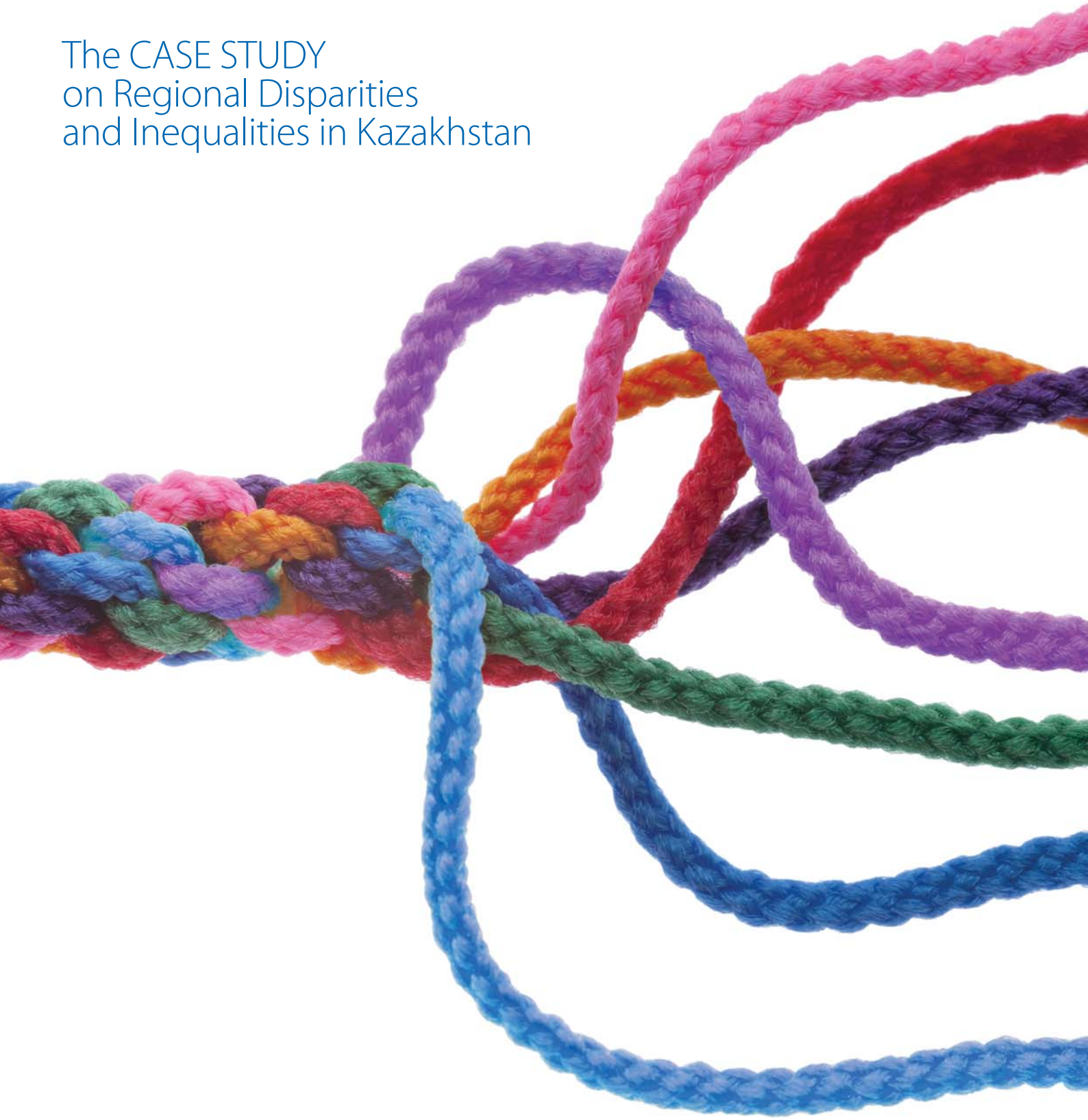
The CASE STUDY on Regional Disparities and Inequalities in Kazakhstan



REGIONAL DISPARITIES AND INEQUALITY IN KAZAKHSTAN.

Key provisions (1)

- ***Inequality of income and consumption in the Republic of Kazakhstan in the spatial aspect is mainly due to different industrial profiles of the regions.*** The oil and gas producing regions have a high level of income and consumption; the regions with a diversified manufacturing industry have an average level of income and consumption; the regions predominantly specialized in agriculture and the extraction of raw materials have a relatively low level of income and consumption.

- ***There are both interregional and intraregional differentiations of income and consumption.*** The interregional differentiation of income and consumption has poles: better-off "capital cities Astana and Almaty and West Kazakhstan" and poorer "southern and northern regions of Kazakhstan focused on agriculture." The intraregional differentiation of income and consumption is developed between urban and rural areas, large cities and small, medium-sized monotowns, rural territories, close to and remote from the "growth poles" – major cities.

- ***The calculation and the analysis of the IndRn well being index were perfomed, based on a comprehensive assessment of socio-economic development of the regions by a variety of parameters. A conclusion was made on the decrease of the interregional differentiation.*** In 2014, the IndRn index showed the gap between the minimum and maximum values by region – 1.8 times, whereas in 2007 the difference was 2.3 times.

- ***Indicators characterizing unequal opportunities, for example, in providing productive employment, at the regional level can be interpreted in different ways.*** On one hand, regional unemployment rates across Kazakhstan do not differ much and are mainly at the level just above or just below 5 percent, which indicates the relatively similar level of unemployment across the regions. On the other hand, the share of self-employed workers in the structure of employment varies by region (in 2014, the maximum was 45.7 percent, the minimum – 4.5 percent), which shows a considerable differentiation of opportunities to find jobs that meet the criteria of productive employment.

- ***Indicators of the availability of social infrastructure and enrollment are significantly differentiated by region.*** The regions with low GRP and per capita income more commonly have a high proportion of uneducated people aged 6-24 (around 30 percent and above in Almaty, North Kazakhstan, Kyzylorda and Akmola oblasts) and an insufficient number of doctors and beds in hospitals. Social indicators in more affluent Mangystau and Atyrau oblasts are low as well, that is, there is no direct correlation between the level of production in a region and the level of social infrastructure development.

- ***Quantitative housing indicators by region on average are reasonably good (over 15 square meters per person), but average indicators do not take into account qualitative characteristics of housing. Most of the housing stock was built until 1991.*** In addition, there is the problem of "people on the waiting list" from socially vulnerable groups, who either do not have the housing (they rent, live with relatives) or live in emergency accommodation, in deprived conditions. In the capital and major cities the share of internal migrants from other regions or rural areas, who need the housing and mainly rent it, is also significant. This, on one hand, creates additional channels for the sources of income of households renting out property, but, on the other hand, significantly undermines the consumer budget of households renting housing, which exacerbates inequality.

- ***Regional differences in the level, conditions and quality of life result in interregional migration flows from less prosperous regions to regions with high rates of socio-economic development, as well as in intraregional migration flows from rural areas to cities.*** Migration is not always caused by the difference between the potential of regions, ethnic reasons (return to the historic homeland, beneficial state policy to encourage repatriation) play an important role, as well as the demographic situation in the regions migrants come from (the agrarian overpopulation of southern regions, the problem of employment in the context of high labour supply.)

Policy Recommendations:

• ***A complete alignment of territorial differences within the country is difficult and impractical for objective reasons,*** the difference between economic potentials of regions is essential for the development of a competitive national economy, because rapidly developing regions become the drivers of the economic growth of the entire country;

• ***It is necessary to bridge, to the extent possible, the gaps of socio-economic development by region,*** especially if their lagging behind restricts the opportunity of the population to improve their employment potential, strengthen human capital (access to education and health services, skills development, etc..);

• ***A regional development policy should be focused on overcoming the poverty trap, where low household incomes result in low investments in human capital and the lack of investments in human development, in turn, leads to low incomes.*** To break this vicious circle the intervention of government agencies, development institutions, non-governmental organizations is needed to reduce the impact of existing income inequality (results) on further exacerbation of unequal opportunities. This is possible through the assistance in the construction of social infrastructure, as well as its use to develop available education, healthcare, culture, sports, social welfare and protection, through income redistribution between sectors, regions, different groups of population to support socially important sectors, socially-vulnerable population.

• ***It is necessary to concentrate the efforts of the private sector and local administrations on solving not only infrastructure problems, but also the problems of human capital development.*** It is relevant to address the issues of improvement of the quality of education, health and other socially important services, regional labor productivity growth by developing the skills of potential workers and employees, as well as fully supporting local entrepreneurship.

REGIONAL DISPARITIES AND INEQUALITY IN KAZAKHSTAN

Unequal opportunities, quality and conditions of life of the population in each country depend on a set of reasons that can be either common to all countries (a difference in people's abilities, different starting conditions for the development of these abilities, competition between people), or specific, determined by various conditions of historical development, social development, macro-economic factors, the political system of decision-making and other factors.

Inequality has spatial characteristics, formed under the influence of regional disparities, due to the differentiation of the potential of territories to provide public benefits and living conditions. And regional disparities can directly and indirectly impact on inequality. Indirect – due to the difference between objective characteristics, such as geopolitical conditions, when some areas are more fertile, better placed (sea access, proximity to transport routes and development centers, border areas) and have a more favorable climate for the development of industries (especially agriculture) and life-supporting infrastructure.

Regional disparities can have a direct impact on inequality also through subjective factors, such as availability and effectiveness of the policy of income equalization of population (the payment of regional social transfers, system of regional benefits,

grants, income redistribution through the budget system), competitive advantages of a region through a consistent policy of regional development.

Social inequality expressed in the difference between incomes, property status of the population, the difference in status in the social hierarchy, this is a consequence mainly of economic inequality.

CRITICAL ANALYSIS OF STATISTICAL DATA AND DATA ON REGIONAL DISPARITIES AND INEQUALITIES.

How to measure regional disparities that lead to interregional and intraregional differentiation in living standards of population, the difference between incomes, consumption, savings and accumulation of property among different groups?

Official statistics give you at least rough estimates and characteristics of regional disparities through the comparison of such indicators as gross regional product, price indices by region (important for adjustments in real incomes), indicators of infrastructure development, including social infrastructure, indicators of access and quality social services (education, healthcare, social protection and others), indicators of population income (wages, household income, social transfers – pensions, allowances, stipends, public loans), indicators of household consumption (household spending, the cost of the regional consumer basket, retail sales), indicators of property provision (housing, home improvement, availability of durable goods in the household, private deposits.)

In this regard, there may be the the following comments concerning the quality of the statistics:

- informal employment and concealment of income can lead to distortions in the income of population, at the regional level the impact of informal employment is very difficult to track;

- natural income from part-time farming is difficult to measure, which is particularly important given the high proportion of rural employment in private farms;

- the prices of goods and services vary by region in Kazakhstan, thus it is necessary to adjust the available indicators of population income, taking into account differences in the cost of living (the cost of the consumer basket) in each region;

- it is difficult to statistically record various social transfers to households in the form of regional benefits (such as benefits for public transport, free meals for children at school);

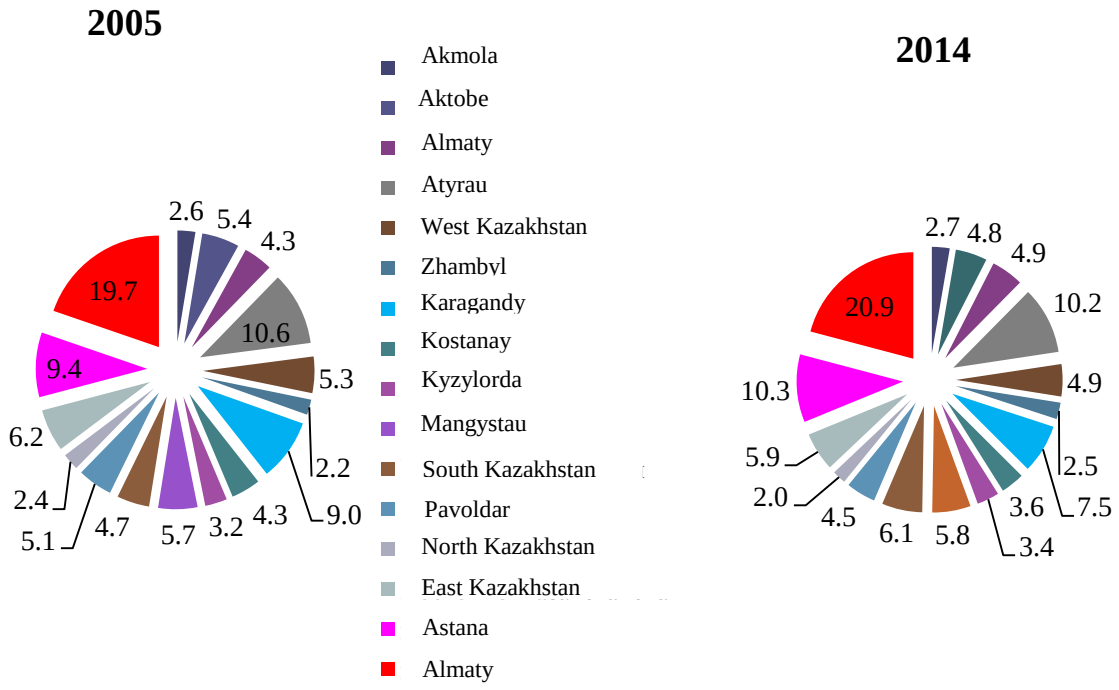
- assessments of the condition of households by region are also hampered by the fact that many citizens do not fully disclose their rights to ownership of immovable and movable property, provide information about deposits and other forms of investment of savings, assets that generate additional income.

However, it is necessary to work even with the incomplete statistical database to carry out a full analysis as the dynamics of the data reveals the general trends of regional development and changes in living standards (if the measurement technique has not suffered major changes.)

Regional development of the Republic of Kazakhstan in 2005-2014 remains uneven and differentiated depending on the industrial profiles of regions, natural resources (oil, gas, metal ores, etc), development of infrastructure (transport, communications, housing, social.) During this period, oil and gas producing regions of West Kazakhstan, Kyzylorda oblast have increased the gross regional product. First of all, it has become possible due to favorable prices in world commodity markets in the past decade and as a result the increased investment attractiveness of the oil and gas industry.

In addition, Astana and Almaty[1] have been developing relatively faster than other regions, primarily due to the accelerated construction of housing, offices and various buildings. Regions that develop primarily processing industries have consistently maintained positive growth (Karaganda, Pavlodar, East Kazakhstan, Kostanay), however, due to lagging behind the leaders in terms of their growth rates, the capital cities and the oil and gas producing regions, the share of these regions in Kazakhstan's GRP over the analysed period decreased (Figure 1.)

[1] Astana and Almaty are included in the list of 16 regions of Kazakhstan due to the fact that these cities of republican importance have a considerable economic potential comparable to those of other regions (oblasts), if we include their indicators in the indicators of oblasts, where they are located (Akmola and Almaty oblasts), their economic potential will be inflated in the analysis, as it will mostly form due to the effect of economies of the two cities.



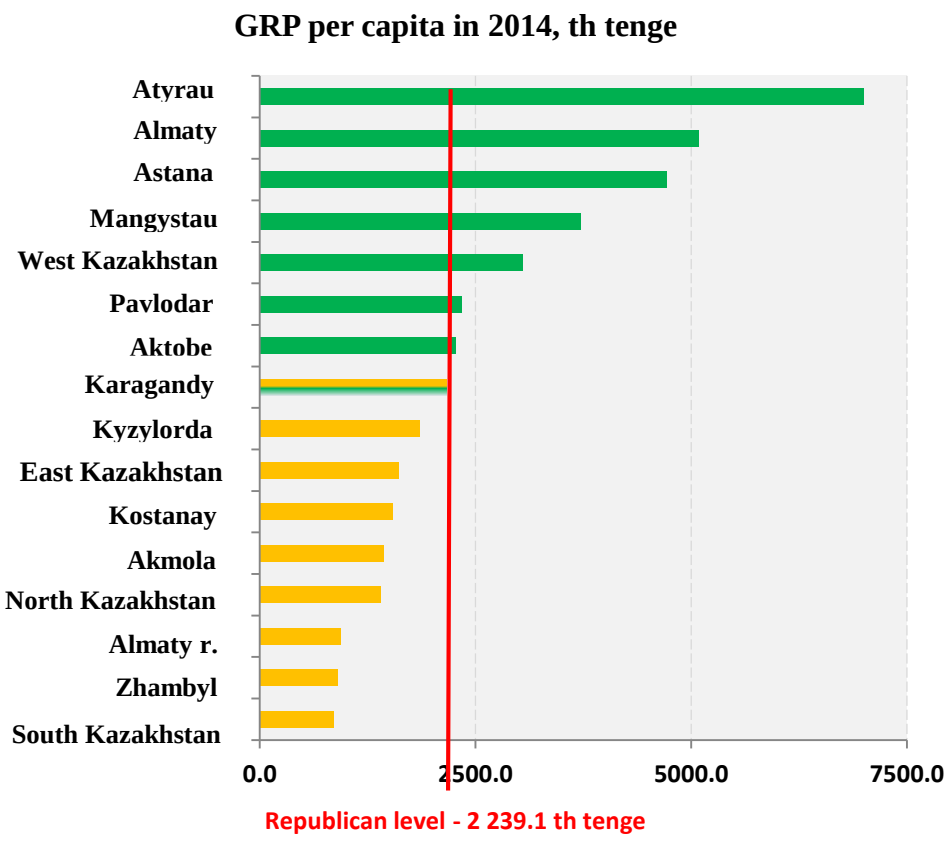
Note – Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan

Figure 1 – Kazakhstan's GRP structure for 2005 and 2014

Throughout the republic, GRP increased 4.5 times in 10 years.

In 2014, external factors for the development of Kazakhstan's economy deteriorated. There was a general slowdown in the world economic growth and the growth of geopolitical instability. Against the backdrop of difficult external economic conditions (decline in world oil prices since the summer 2014 and increased geopolitical risks), economic activity in Kazakhstan slowed down gradually, but remained on the track of sustainable development. The slowdown was observed in all sectors of economy with industrial production being most affected. Over time, the slowdown spread to non-tradable sectors of economy: services, construction, transportation, which depend on the income and business. The gross domestic product of Kazakhstan in 2014, according to final data, was 39.0 trillion tenge and in comparison with the previous year increased in real terms by 104.4 percent and in 2005 by 168.9 percent (1.7 times.) The main driver of economic growth last year was the construction industry and services. With regard to the gross regional product (hereinafter GRP), the largest share belongs to Almaty – 20.9 percent, while the smallest one belongs to North Kazakhstan oblast, 2.0 percent (compared to 2005 the decrease by 0.4 pp.) During 2005-2014, the share of East Kazakhstan (by 0.3 pp), Pavlodar (0.6 pp), Kostanay (0.7 pp), Karaganda (1.5 pp) and West Kazakhstan (0.4 pp) oblasts decreased in the GRP

structure. At the same time, high GRP growth rates in Astana (9.6 percent), Almaty (7.2 percent.)



Note – Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan

Figure 2 – GRP per capita in 2014, th tenge

In terms of GDP per capita in 2014, Atyrau, Mangystau oblasts, Almaty and Astana are in the lead. We should note a significant gap of indicators of the data from other regions (Figure 2.)

The second group consisted of five regions that specialize in the production of hydrocarbons and mineral resources, as well as their processing: Mangystau, West Kazakhstan, Pavlodar, Karaganda oblasts. GRP per capita in 2014 in this group is above the republican level.

The third group is represented by Kyzylorda and East Kazakhstan oblasts, where the industrial sector is also important – the first oblast produces oil and gas, the second one is known for the processing industry (non-ferrous metallurgy.)

The fourth group of regions is represented by the three oblasts of North Kazakhstan, which play an important role in the agricultural production of the

country, especially in grain production (Kostanay, North Kazakhstan, Akmola oblasts.) In addition, the macro-region specializes in mining.

The fifth group is represented by the regions of the south of Kazakhstan, where a relatively low level of industrial development in recent years, concentration on agriculture, coupled with a high population in these regions explain the low rates of GRP per capita.

The GRP and its regional differentiation reflect significant economic disparities in the regions of Kazakhstan. There is an almost 10-fold gap between the maximum and minimum values of

GRP per capita and its regional differentiation reflect significant economic disparities in the regions of Kazakhstan. There was an almost ten-fold gap between the maximum and minimum values of GRP per capita. International studies explain such gaps of territorial development in catching-up economies by the fact that the purpose of regional alignment is secondary, the priority is given to the support for strong regions with competitive advantages, which then bring other regions to their level and actively boost the development of the country as a whole.

Comprehensive analysis of relations between regional disparities and inequalities.

In general, the analysis of regional disparities and their impact on inequality requires the consideration of many indicators that characterize the region's economic potential, standard of living in the region, infrastructure development and access to social benefits.

For a comparative analysis of the regions from a variety of indicators the index method of combining diverse indicators can be applied. This method allows to calculate the integral index - the composite index of region's evaluation that can be used both for paired and multiple comparisons (the methodology for calculating the index is given in Annex B.)

As evaluation criteria, characterizing the regional socio-economic situation, to distinguish them by the level of household wealth, indicators were selected in Table 1.

They were characterized by their minimum and maximum values, an interval was selected to determine the value scale necessary for giving points while evaluating the regions by relevant indicators (Table 1.)

Table 1 – Indicators characterizing regional disparities

Indicator No	Indicator name	2014		
		Maximum value	Minimum value	Gap
1	GRP per capita, thousand tenge per person	7001.3	855.6	**8.2**
2	Investments in fixed assets, in million tenge	1038438	101758	**10.2**
3	Unemployment rate in % of economically active population	5.5	4.8	**1.1**
4	Rate of self-employed workers in economically active population structure	46%	5%	**10.1**
5	Ratio of per capita nominal income to the subsistence minimum, times	6.6	2.1	**3.1**
6	Household spending per capita in tenge (per month)	58212.6	24293.3	**2.4**
7	Average monthly salary in tenge	222 294	81 062	**2.7**
8	Ratio of average pension in a region to subsistence minimum, times	2.2	1.6	**1.4**
9	Gini coefficient	0.287	0.197	**1.5**
10	Assets ratio	6.2	3.4	**1.8**
11	Poverty rate with per capita incomes below the subsistence level	6.1	0.4	**15.3**
12	Average housing, sq. m. of the total area per inhabitant	28.5	15.9	**1.8**
13	Retail sales per capita in tenge	1011084	127216	**7.9**
14	Total amount of services per capita	979758	40270	**24.3**
15	Number of physicians per 10,000 persons	85.0	22.3	**3.8**
16	Number of nursing staff per 10,000 persons	116.8	61.4	**1.9**
17	Number of hospital beds per 10,000 persons	74.7	45.0	**1.7**
18	Cumulative percentage of school attendance rates of the population aged 6-24 in %	98.7	61.8	**1.6**
19	Placement of children (children per 100 places) in permanent pre-school institutions *	122.1	97.3	**1.3**
20	Emissions of air pollutants from stationary sources per capita in kg	809.0	21.7	**37.3**
Note – source: Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan				

Calculations to determine the IndRn index in the context of each region are shown in Annexes C-1, C-2, C-3, C-4, C-5.

Results of the score of the regions are given in Tables 2 and 3.

As Table 2 shows, the range of the well-being index values by region in 2007 goes from a minimum of 54 in Almaty oblast to a maximum of 125 in Almaty. The ratio of limit values (minimum and maximum) of regional indices – Kdif regional differentiation factor in 2007 is equal to: Kdif = 125 54 = 2.3 times.

Table 2. Scores on indicators and the IndRn well-being index in regions in 2007

Oblasts	Indicator number																				Ind_{Rn} in 2007
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Almaty	8	6	3	9	6	4	4	1	4	5	6	4	10	5	10	7	9	10	4	10	125
Astana	7	5	3	9	6	4	6	1	4	4	8	4	4	4	10	6	5	6	1	8	105
Atyrau	10	9	3	8	6	5	3	1	7	7	4	2	2	3	3	5	6	4	4	6	98
Mangystau	7	4	2	10	5	5	3	1	6	7	1	2	2	3	4	7	5	3	6	7	90
Karagandy	3	3	4	7	3	3	3	2	4	5	6	6	3	1	6	8	10	4	6	1	88
Kyzylorda	3	2	2	4	2	3	2	1	5	6	1	3	1	2	4	10	10	3	10	9	83
East Kazakhstan	2	2	4	5	2	3	3	2	4	4	5	4	3	1	5	7	9	4	6	8	83
West Kazakhstan	4	3	3	4	3	3	2	1	5	6	5	2	2	2	3	9	8	3	6	8	82
Pavlodar	3	2	4	7	3	3	3	2	5	5	6	4	2	1	4	7	9	4	5	1	80
Akmola	2	2	3	4	2	2	3	1	3	2	3	4	2	1	3	8	10	3	8	8	74
Aktobe	3	3	3	5	2	3	3	1	3	3	5	3	3	2	6	6	6	5	5	4	74
North Kazakhstan	1	1	4	4	2	2	2	2	5	5	3	4	2	1	1	7	9	2	7	8	72
Kostanay	2	2	3	4	3	2	2	2	4	5	5	4	2	1	1	5	7	4	5	7	70
South Kazakhstan	1	2	4	3	1	2	2	1	7	7	4	3	1	1	2	4	3	6	3	10	67
Zhambyl	1	1	3	3	2	2	2	1	6	6	5	2	1	1	2	7	5	3	3	10	66
Almaty o.	1	2	4	4	1	2	2	1	5	5	3	2	1	1	1	1	2	1	6	9	54

In the ranking outsider among regions in 2007, Almaty oblast, almost all values of the indicators were less than 5, except for the ecological indicator (the twentieth indicator), with the maximum point 9 for low air pollutant emissions from stationary sources per capita. The region has:

- relatively low level of GDP per capita;
- low real incomes of the population;
- low pensions (one subsistence wage);
- small retail trade turnover per capita;
- high population growth and social infrastructure growth lagging behind growth rates of the population reproduction result in a relative lack of doctors, nurses;
- very low percentage of the total enrollment of the population aged 6-24.

Similar low Ind_{Rn} values are obtained from the other two regions of South Kazakhstan – Zhambyl oblast (66 points) and South Kazakhstan (67 points.)

In regions where 2007 Ind_{Rn} values were in $70 \leq Ind_{Rn} < 80$ range indicators of socio-economic development are heterogeneous, some indicators give a very low rating point (for example, per capita GRP, per capita investment and services in Akmola oblast), while others are relatively high (in Akmola oblast the number of nurses per 10,000 persons, the number of beds, availability of kindergartens.) Apart from Akmola oblast, the group of regions includes Aktobe, North Kazakhstan and Kostanay oblasts.

In regions, where values of the regional well-being index were in the range $80 \leq Ind_{Rn} \leq 90$ in 2007, values on many indicators are between 3 and 7, although some indicators have a low score.

The leaders of the well-being index ranking, where the highest Ind_{Rn}, in 2007 included Atyrau oblast, Almaty and Astana, where values both of indicators characterizing the economic potential of the region and indicators of income and infrastructure development are high.

Table 3 shows the results of the evaluation on the regional Ind_{Rn} well-being index in 2014.

Table 3. Points by indicators and regional Ind_{Rn} well-being index in 2014

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Ind_{Rn} in 2014
Almaty	8	6	5	9	8	10	8	5	6	6	10	9	10	7	10	10	6	9	5	9	156
Astana	6	6	5	10	8	9	9	5	7	7	10	10	10	10	10	10	6	6	2	8	154
Atyrau	10	10	6	9	10	6	10	4	7	8	9	5	6	8	2	6	3	3	2	6	130
Mangystau	5	5	6	9	7	7	10	3	8	8	9	5	4	4	2	7	1	3	6	7	116
Karagandy	3	5	6	8	5	8	6	5	5	5	9	7	7	2	6	9	6	4	6	1	113
West Kazakhstan	4	3	6	5	5	6	6	4	6	6	9	4	6	2	3	10	5	4	7	9	110
Pavlodar	3	4	6	7	5	7	6	5	7	7	9	7	7	2	4	8	6	2	5	1	108
Aktobe	3	6	6	7	4	7	6	4	6	6	9	5	9	2	5	6	2	3	3	7	106
East Kazakhstan	2	4	6	6	3	7	5	4	5	6	9	4	7	2	5	10	5	2	6	8	106
Kyzylorda	2	5	6	6	3	6	6	4	7	7	8	4	4	2	2	10	5	2	7	9	105
North Kazakhstan	2	2	6	6	3	6	5	4	5	6	8	5	5	2	3	10	6	2	7	7	100
Akmola	2	2	6	4	3	7	5	4	4	6	9	6	4	2	3	8	5	3	7	8	98
Kostanay	2	2	6	5	3	7	5	4	6	6	9	6	4	2	2	6	3	2	7	8	95
Zhambyl	1	3	6	3	2	5	5	4	7	8	8	2	3	1	2	8	3	3	6	9	89
South Kazakhstan	1	5	5	3	2	4	5	3	8	8	7	5	3	1	3	7	1	3	5	10	89
	1	5	6	5	3	8	5	3	6	7	9	3	3	2	1	2	1	1	7	9	87

In 2014, the same scale of values was applied to all indicators except for GRP per capita, through which points were assigned, thus, due to the several-fold growth of these indicators in 2007-2014, the Ind_{Rn} well-being index in 2014 increased significantly by region (by 1.2-1.5.) A different scale of values was used for GDP per capita in 2007, 2014, since there was a very large spread of values by year (there was a 3.3-fold increase by the minimum value of the index.) In general, there is a comparability of the composite indicator for evaluating Ind_{Rn} on two considered years, the dynamics for each indicator shows improvement in 2014 compared to 2007 on one particular region and the reduction or increase in the gap between the regions on individual values and Ind_{Rn} as a whole.

In 2014 $IndR_n$ values by region were as follows: the maximum value remained in Almaty (156 points), Astana is slightly lagging behind (154 points), the minimum value is again in Almaty oblast (87 points.)

The ratio of limit values (minimum and maximum) of regional indices – Kdif regional differentiation factor in 2014 is equal to: Kdif = 156 87 = 1.8 times.

The regions with relatively low figures of the well-being index (Ind_{Rn} <100 in 2014) - the three regions of South Kazakhstan and two regions of North Kazakhstan (Kostanay and Akmola) are characterized by:

- low levels of GRP per capita (1 or 2 points);

- high proportion of self-employed workers at a relatively low level of unemployment and relatively low wages in the region, which is indicative of problems of productive employment;

- low rates of services per capita (1 or 2 points by ranking);

- insufficient number of hospital beds and doctors per 10,000 persons (1-3 points);

- relatively low rates of enrollment (1-3 points.)

The next group of regions in which $Ind_{Rn} \geq 100$ but <110, includes Pavlodar, Aktobe, East Kazakhstan, Kyzylorda and North Kazakhstan oblasts. These regions have heterogeneous points:

- low: GRP per capita (2-3 points), low per capita income (3 points) and wages (the minimum 5 points, 6 points in 2014), services per capita (2 points), the overall rate of enrollment of the population aged 6-24 (3 points - in Aktobe, 2 points – in other regions);

- relatively high: number of nurses per 10,000 persons (6-10 points); low levels of pollutants (except for Pavlodar region, 7-9 points in other regions.)

The next group of regions that are close to the leaders, meet the condition $110 \leq Ind_{Rn} < 120$, these include Mangystau, Karaganda and West Kazakhstan oblasts. Due to the developed mining and manufacturing industries, they have good performance indicators by GRP per capita and investment, relatively low rate of self-employed workers, a relatively high level of income and expenditure of the population. At the same time, these three regions have different environmental indicators: the lowest figure is in Karaganda oblast, where there is an unfavorable situation regarding air pollutant emissions and high figures are in West Kazakhstan

and Mangystau oblasts. There is also a significant difference in the number of doctors per 10,000 persons (low figures in WKO, relatively good figures in Karaganda and Mangystau oblasts.) There is also a difference in the inequality of income distribution (by Gini coefficient and assets ratio), more uneven distribution is in Karaganda oblast and WKO.

Almaty and Astana and Atyrau remain to be the leaders by the regional index of well-being in 2014. The capital cities have the highest level of income and expenditure, housing, retail trade and services per capita, the biggest number of doctors, total enrollment. Atyrau oblast is far ahead of other regions in terms of GDP per capita and investment; it has high income and services rates. However, at the same time, Astana and Atyrau oblast struggle to ensure places for children in preschool institutions (overcrowdedness and lack of kindergartens.) Atyrau oblastalso has low ratings on the number of doctors per 10,000 persons and hospital beds, and low rates of total enrollment of the population aged 6-24.

In 2007, 15.2 percent of the population lived in the regions leading in the ranking of regional well-being evaluation, in 2014, 16.8 percent of the population, but 39.3 percent and 41.3 percent of country's GRP were in 2007 and 2014 (Table 4.)

Table 4. Regions by Ind_{Rn} in 2014

Ind_{Rn} в 2014	Regions in the group	Share in the country population		Share in GRP	
		2007	2014	2007	2014
Ind_{Rn} >120	Astana and Almaty, Atyrau oblast	15.2%	16.8%	39.3%	41.3%
110≤Ind_{Rn}≤120	Mangystau, Karagandy oblasts and WKO	15.2%	15.0%	19.6%	18.3%
100≤Ind_{Rn}<110	Pavlodar, Aktobe, Kyzylorda oblasts, EKO and NKO	22.7%	21.5%	20.0%	18.7%
Ind_{Rn}<100	Kostanay, Akmola, Zhambyl, Almaty oblasts and SKO	46.9%	46.6%	21.1%	21.7%

In 2007, 15.2 percent of the total population of the country lived in the regions close to the leaders (Mangystau, Karagandy and West Kazakhstan oblasts) and in 2014 – 15 percent, the participation of this group of regions in country's GRP in 2007 was 19.6 percent and in 2014 – 18.3 percent (table 5.)

In 2007 and 2014, 22.7 and 21.5 percent of the population respectively lived in the regions placed in the middle of the regional well-being ranking, their contribution to GRP was slightly less important – 20 and 18.7 percent respectively by year.

Table 5. Changes in regional ranking in 2014 compared with 2007 and their characteristics by population

No	Regions	Ind_{Rn}			Share of the population living in the region in %		Migration balance in 2014, persons.	
		2014	2007	Changes in regional ranking	2007	2014	internal	inter-regional
1	Almaty	156	125	const	8.4%	8.8%	-597	22589
2	Astana	154	105	const	3.7%	4.7%	375	17505
3	Atyrau o.	130	98	const	3.1%	3.3%	370	356
4	Mangystau o.	116	90	const	2.5%	3.4%	2091	1016
5	Karaganda o.	113	88	const	8.7%	8.0%	-3403	541
6	WKO	110	82	↑by 2	4.0%	3.6%	-565	-949
7	Pavlodar o.	108	80	↓by 2	4.8%	4.4%	-2370	-261
8	Aktobe o.	106	74	↑by 2	4.5%	4.7%	-191	-301
9	EKO	106	83	↓by 2	9.3%	8.1%	-3122	-4946
10	Kyzylorda o.	105	83	↓by 4	4.1%	4.3%	19	-2556
11	NKO	100	72	↑by 1	4.3%	3.4%	-2671	-2712
12	Akmola o.	98	74	↓by 2	4.9%	4.3%	-1497	-2855
13	Kostanay o.	95	70	const	5.8%	5.1%	-2260	-502
14	Zhambyl o.	89	66	↑by 1	6.6%	6.3%	-142	-7814
15	SKO	89	67	↓by 1	14.8%	15.9%	1382	-13576
16	Almaty o.	87	54	const	10.5%	11.6%	419	-5535

Regions lagging behind in the well-being ranking, have the highest proportion of the population 47 percent in 2007 and 2014, but make a relatively small

contribution to country's GRP – 21.1 percent in 2007 and 21.7 percent in 2014.

In the 2014 ranking as compared to the 2007 ranking there have been shifts in 9 regions mainly in the middle of the ranking, the positions of 6 regions remained unchanged. Pavlodar oblast, EKO, Kyzylorda, Akmola oblasts and SKO **went down** in the ranking. WKO, Aktobe oblast, SKO and Zhambyl oblast **improved their position** in the ranking.

The low value of the ranking in terms of GDP per capita mainly determined the low value of the overall Ind_{Rn} well-being ranking, indicating a strong influence of economic factors on the regional development. While in terms of GDP per capita Atyrau oblast has the highest position in the ranking, but it does not have similar high positions in terms of access to social benefits (education, health), thus, it is only placed third after Almaty and Astana in the final ranking.

Regions with the highest positions in the well-being ranking are net recipients (receiving regions) for internal and external migration. Although there was a negative balance of external migration in Almaty, it is compensated by an impressive internal migration surplus. This shows that regional disparities and different economic potentials increase migration and its territorial mobility.

Ultimately, this can level regional disparities due to the reduced demographic dependency of "poorer" regions, but there are some barriers to this process related to the complexity of the socio-economic integration of immigrants in a new place (difficulties with employment because of the mismatch of qualifications or the area of expertise of immigrants, the problem with housing in a new place, access to social benefits, etc.) Therefore, there can be a transfer of poverty to receiving regions, if no elaborate strategy to support the adaptation of internal and external migrants in a new location is carried out.

Regional disparities in the structure of domestic production, in the performance of regional factors of production, different levels of complexity and diversification of products manufactured in the region, development of industrial production and the service sector are important factors of interregional inequality both in terms of income and consumption, and factors of regional inequality with regards to provided opportunities (employment probability, productive employment, development of skills of the local workforce, strong competitive enterprises that provide stable income to local budget and local population.) To characterize regional disparities in Kazakhstan in terms of

development of their productive capacities, we used a study presented by a consulting company Whiteshield Partners on Diversification of Kazakhstan's economy: a capability-based approach[2] **(methodology and results of the study are presented in Annex D.)**

Regional disparities have another measurement plane; it is the **differentiation** of development indicators **in rural and urban areas.** Within the urban area there are also differences in consumption of large, medium and small cities, including single-industry towns, the parameters of social and economic development are closely dependent on the state of the city-forming enterprise. For example, there is a considerable gap in cash income per capita, the rural population receives 65 percent of the similar income in urban areas (thus, the urban population receives one and a half times more income than the rural population).

In the dynamics the gap has narrowed from 2006 to 2014, when at first, rural households used to receive a per capita income 54 percent from the same indicator in urban areas, but by 2012-2014, the backlog amounted to approximately one-third of the income of urban households (Figure 3.)

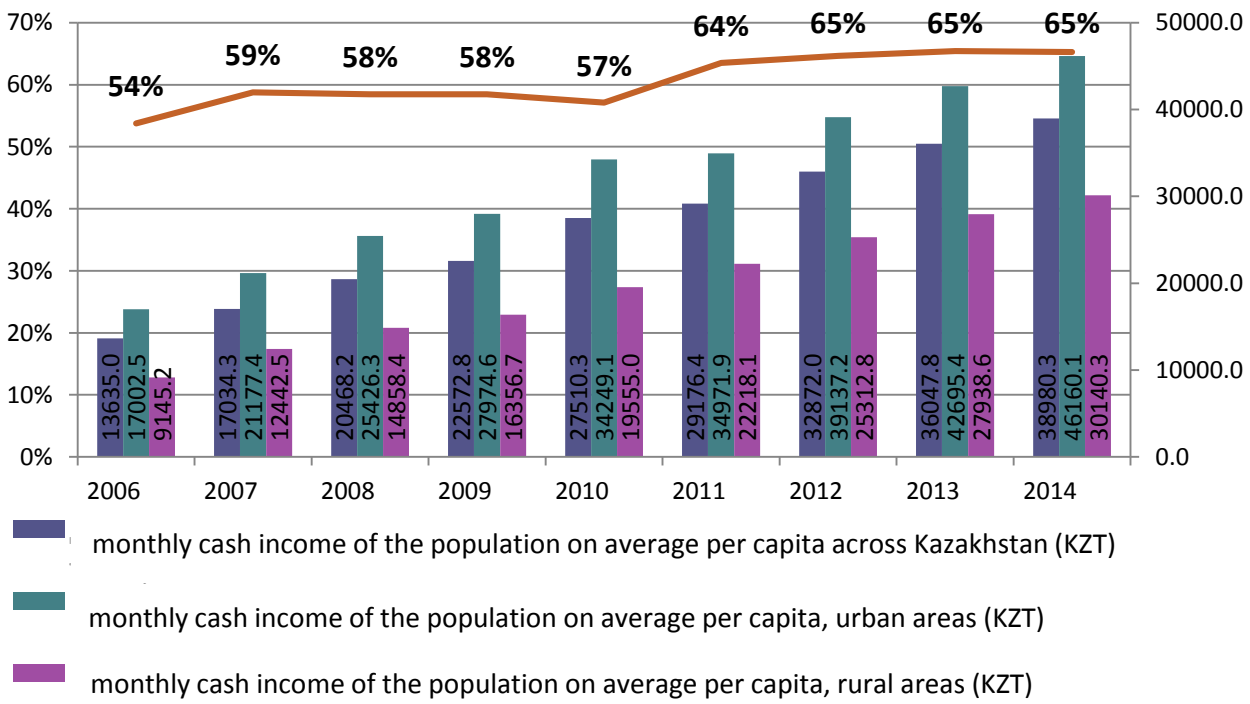


Figure 3 – The ratio of per capita income in rural and urban areas

[2] Diversification of Kazakhstan's economy: A capability-based approach. - Report by Whiteshield Partners (Fadi Farra, Olga Sigalova, Yulia Dmitrieva, Nadia Klos, Dinara Ospanova.) September 2015

The poor segment of Kazakhstan's population is also unevenly distributed in urban and rural areas. In 2014 only 0.9 percet of the urban population or 82 thousand of people in 15 thousand households received income below the subsistence level. In rural areas in the same year, 4 percent or 300 thousand people in 46.7 thousand households received income below the subsistence level. About 6 000 people living in rural areas were in extreme poverty (with income below food basket), there were not extremely poor people in urban areas in 2014.

Across the regions of Kazakhstan the poverty level in rural areas is relatively high in SKO (the share of the poor in rural areas is 7.6 percent or 127 thousand people), in industrialized Atyrau oblast (the share of the poor in rural areas is 5.5 percent, about 17 thousand people), Mangystau oblast (the share of the poor in rural areas is 5.1 percent, about 16 thousand people.) The poverty rate in rural areas is higher than the national average in WKO (4.4 percent, 14 thousand people) and Karaganda oblast (4.4 percent, 12 thousand people.)

In urban areas, the percentage of the poor is significant in Kyzylorda (2.7 percent) and Zhambyl (2.1 percent) oblasts. The share of the poor living in cities is above the national average in Akmola, Almaty oblasts, NKO, SKO and WKO (Figure 4.)

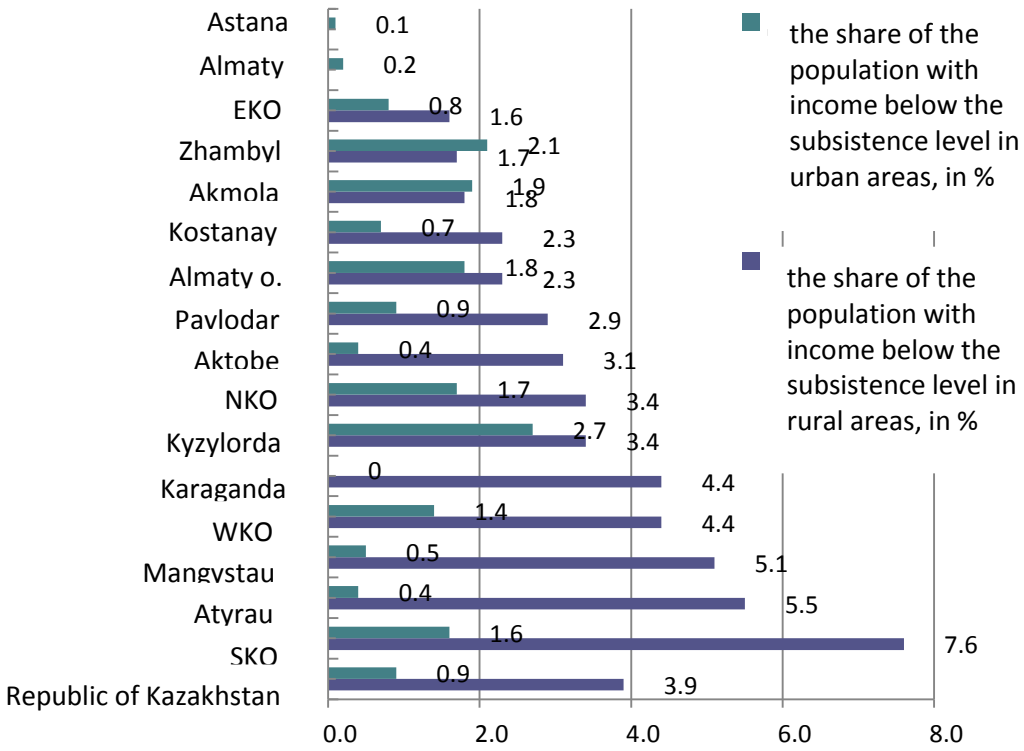


Figure 4 – The share of the poor in rural and urban areas in 2014

42.4 percent of the poor living in rural areas is concentrated in South Kazakhstan oblast, 11.6 percent in Almaty oblast, 5.6 percent in Atyrau oblast, 5.2 percent in Mangystau oblast.

The poor urban population is mostly concentrated in the southern oblasts of Kazakhstan, thus, 21.6 percent of the total urban population with income below the subsistence level lives in SKO, 11 percent in Zhambyl oblast, 10.3 percent in Almaty oblast, 9.4 percent in Kyzylorda oblast.

Income per capita in rural areas is low due to the following reasons:

- Kazakhstan has low agricultural production (except for export-oriented grain production, where labor productivity is relatively high) and, accordingly, wages in rural areas are low in comparison with industry and services;

- the size of rural households is substantially greater than of urban households, there is a relatively high proportion of households with a few minor children, this means that the dependency ratio in rural areas is high, which results in low income on average per capita of the rural population;

- employment in low-skilled labor sector is mostly common in rural areas, there is a high proportion of self-employed workers, which also exacerbates the problem of low wages in agriculture.

There is a constant outflow of young people from rural areas (Table 6) in the process of educational, labor migration to cities, which often develops into one-way migration (for permanent residence in cities.) The largest net outflow of rural youth is from South Kazakhstan, East Kazakhstan, Zhambyl, North Kazakhstan, Kostanay, Karaganda oblasts (more than 2,000 people per year.)

Table 6. The balance of internal migration of young people aged 14-28 in 2009-2014 at the regional level in rural areas

	Migration balance					
	2009	2010	2011	2012	2013	2014
Republic of Kazakhstan	-26607	-21973	-26345	-17685	-21663	-25064
Akmola o.	-2899	-2126	-1846	-1649	-908	-1206
Aktobe o.	-1230	-1729	-1236	-304	-149	-1237
Almaty o.	1009	2617	608	2084	1486	-1890
Atyrau o.	-617	-938	-805	-497	-613	-856
West Kazakhstan o.	-2282	-2637	-3313	-1968	-1426	-1642
Zhambyl o.	-2767	-2515	-2620	-2213	-3585	-2550
Karaganda o.	-2960	-2354	-2149	-1562	-2250	-2067

Kostanay o.	-2762	-2473	-2778	-2270	-1830	-2124
Kyzylorda o.	-1500	-1642	-1340	-1034	-1029	-1485
Mangustay o.	3007	2740	3076	3139	2227	1570
South Kazakhstan o.	-4396	-2957	-4009	-3208	-4257	-4780
Pavlodar o.	-2267	-1486	-1684	-1701	-2139	-1366
North Kazakhstan o.	-3141	-2460	-3000	-2524	-2953	-2417
East Kazakhstan o.	-3802	-4013	-5249	-3978	-4237	-3014

The positive balance of internal migration of young people is constantly seen in Mangystau oblast, and until 2014 there was a net inflow of youth in villages in Almaty oblast

Housing of the population.

The bulk of the housing stock in the Republic of Kazakhstan is highly deteriorated. Following the results of the 2009 national census, 12.3 percent of households out of 4,391,759 households lived in buildings constructed before 1960, 24.3 percent of households – in buildings dated 1960-1970, 21.5 percent of households – 1971-1980, 21.3 percent of households – 1981 -1990, 9.4 percent – 1991-2000, 8.5 percent – 2001-2008. These data suggest that more than 80 percent of the population lives in houses built during the Soviet Union. In 2009, more than half of households – 53 percent lived in buildings, operating over 30 years.

The bulk of households lived in separate apartments (53 percent) and individual houses (43 percent.) However there are households living in communal apartments (12 thousand households.), dorm rooms and apartments (75 thousand households) and even unsuitable buildings – summer houses (about 47 thousand households.)

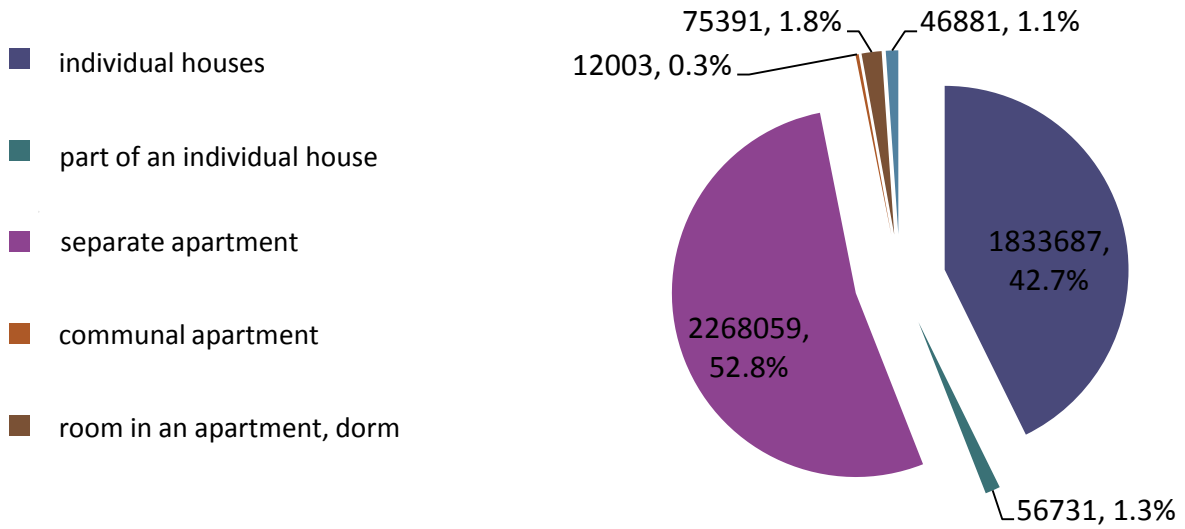


Figure 5 – Distribution of households by type of housing following the results of the 2009 census

In rural areas housing is more deteriorated than in urban areas. For example, 13.2 percent of rural households lived in houses, built before 1960, (11.7 percent of urban households live in such buildings), in houses built in 1960-1970 - 26.5 percent of rural households (23 percent of urban households), 1971-1980 - 21.1 percent of rural households (21.8 percent of urban households.)

In the regions of Kazakhstan the largest share of the population living in houses constructed in the Soviet period is presented in Kostanay, Karaganda, North Kazakhstan, East Kazakhstan, Pavlodar, Akmola, Zhambyl, West Kazakhstan oblasts (over 80 percent of households.)

The situation is more favourable in the new capital of Kazakhstan, Astana, where, following the census, less than a half of households lived in buildings constructed before 1991 (47 percent), less than a third of households lived in buildings built until 1981. Due to the high immigration rate and population growth in Astana, housing is under active and intensive construction (peaked in 2008.)

Atyrau and Mangystau oblasts also have a relatively low proportion of households living in houses built before 1991 – 63 and 66.4 percent, respectively.

In South Kazakhstan and Kyzylorda oblasts the share of households living in houses constructed before 1991 is also relatively low – about 70 percent (Figure 6.)

Moreover, the amenity level of housing is different by region. The best indicators of electricity provision in all regions, relatively high rates of water supply, strongly differentiated indicators of drainage and sewerage systems. Data on housing amenity in individual regions are represented in the collection Housing characteristics of the population in the Republic of Kazakhstan (Results of the 2009 National Population Census) issued by the RK Statistics Agency in 2011 (pp. 254- 283.)

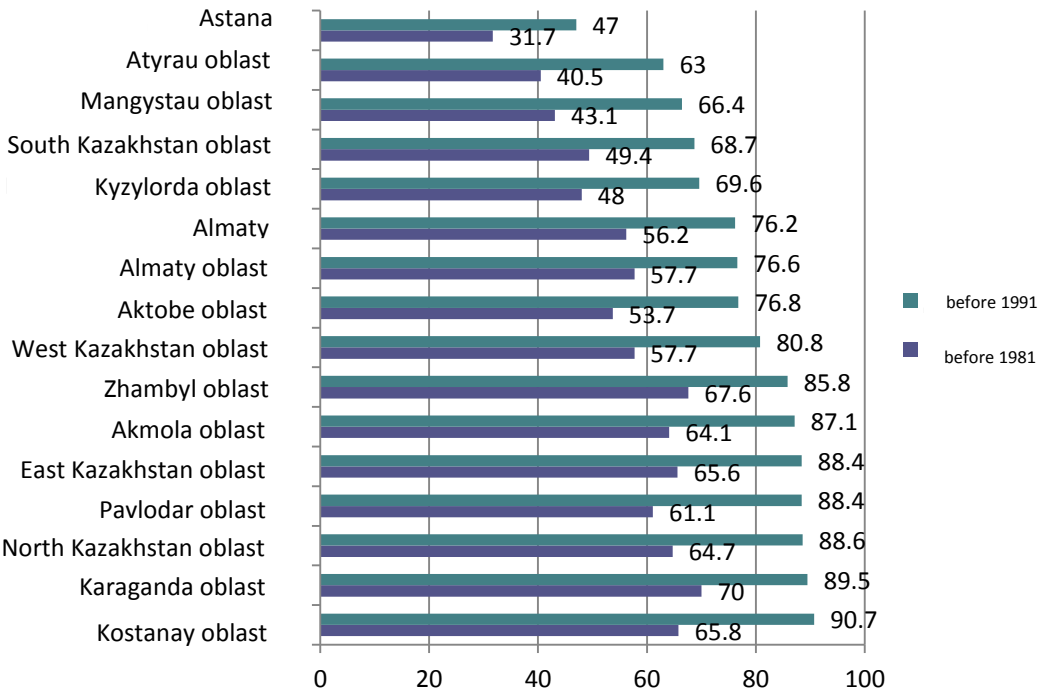


Figure 6 – The share of households living in houses built before 1981 and 1991, by region (according to the 2009 census.)

Inequality in ensuring the population with quality, comfortable housing in regions, as we see, is very different: the majority of the population lives in relatively old houses, utilities are also highly worn out, there is a significant proportion of housing with low amenity in many regions.

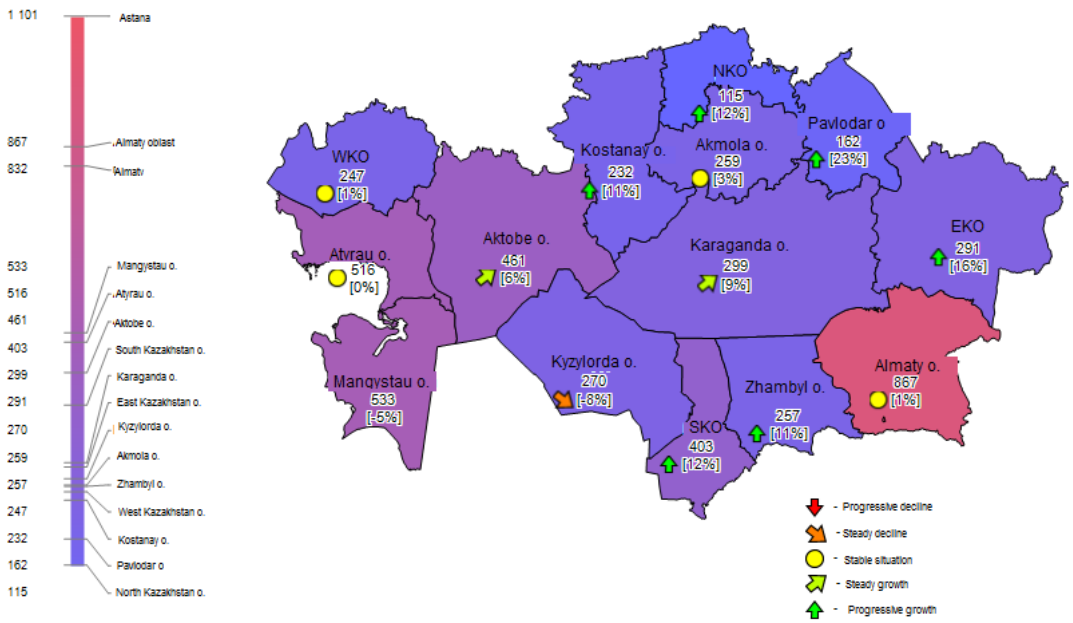


Figure 7 – Commissioning of the total area of housing in 2013 by region[3]

[3] Note: commissioning of the total area of housing is given in absolute terms, in thousand square meters, the increase of this indicator in 2013 relative to 2012 is indicated in %

Housing renovation, its construction and commissioning in total are the most intensive in recent years in Astana and Almaty, Almaty oblast, regions of Western Kazakhstan – Mangystau, Atyrau and Aktobe oblasts (Figure 7.)

However if you take into account the population growth in the regions and relate indicators of housing construction with the population in the regions, the situation is as follows: Astana lags behind all regions in terms of commissioning of the total housing area per 1, 000 persons (Figure 8.) Mangystau and Atyrau oblasts are leading in this indicator by a wide margin among other regions. This indicator is above average across the country in Kyzylorda, Almaty, West Kazakhstan, Akmola, Aktobe oblasts.

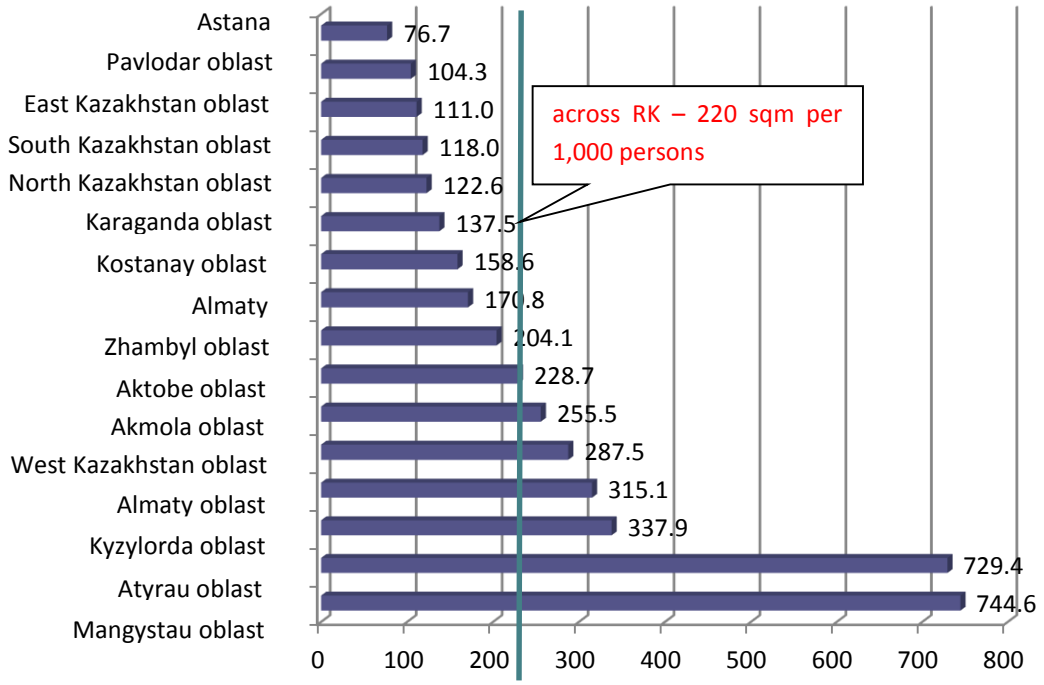


Figure 8 – Commissioning of the total housing area per 1,000 persons by region in 2014

Attention must be drawn to the **morbidity and mortality rates in the regions** as well, which also provide a mixed assessment of the quality of life in the regions of Kazakhstan, as well as give an idea about the level of medical care in the regions.

As for the general mortality rate, the highest rates are in the oblasts with the most "adult population" (Figure 9), that is, with the highest average age of the population (they have higher proportion of middle aged and elderly people than other regions.)

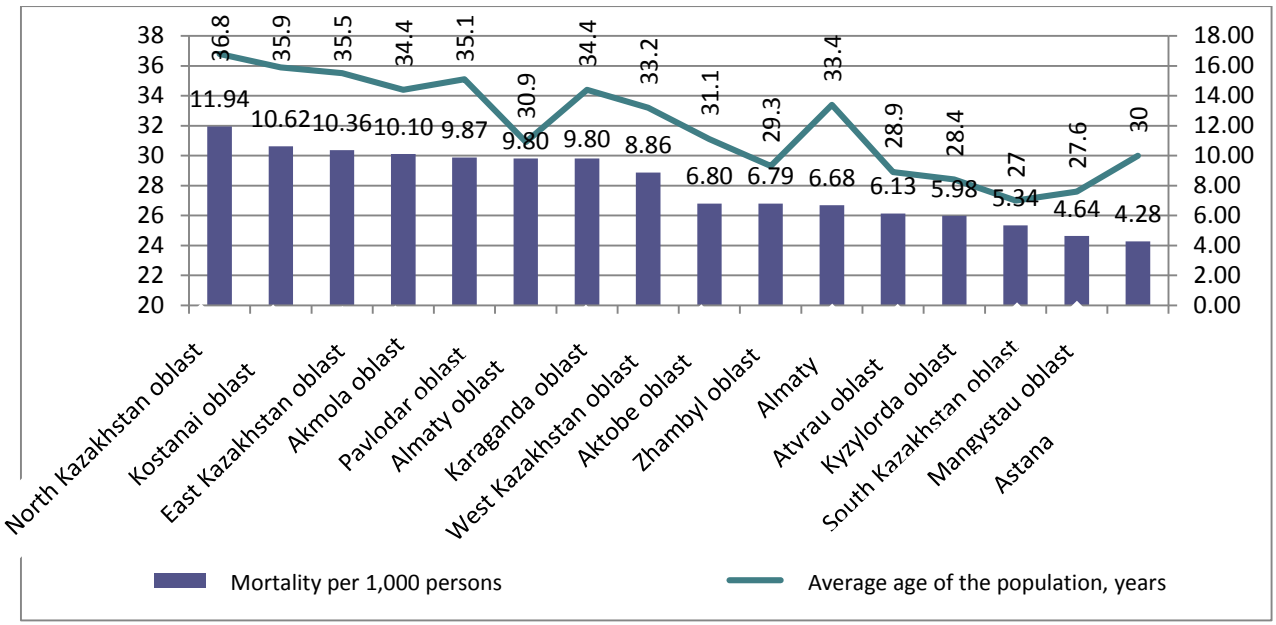


Figure 9 – Indicators of mortality and the average age of the population by region in 2014

The highest mortality rates are in NKO, Kostanay oblast and EKO, in these regions the population is “older”, so there is a correlation between the age-related diseases and greater likelihood of mortality at older ages, which explains the higher mortality rates in these regions. The group with mortality values from 8 to 10 persons per 1,000 persons includes Akmola, Pavlodar, Almaty, Karaganda, West Kazakhstan oblasts. Almaty oblast stands out in this category, where despite the relatively “young” population (the average age of the population is 30.9), there is a relatively high mortality rate – 9.8 persons per 1,000.

The next group of regions with relatively low mortality rates, below 8 and above 5, includes: Aktobe, Zhambyl, Atyrau, Kyzylorda, South Kazakhstan oblasts and Almaty. Almaty stands out here, and while having a relatively older population in the group (the average age is 33.4), demonstrates lower mortality rates than the regions with similar age indicators of the population. This is most likely due to the higher rates of quality of life, including the relatively high provision of health services and health infrastructure.

The lowest mortality rates are in Mangystau oblast and Astana. The low mortality rates in Mangystau oblast can be explained by the relatively young population, but a lower mortality rate than in South Kazakhstan oblast, where the age of the population is slightly “younger,” says that the higher indicators of the standard of living and the quality of life play a role here as well. In Astana, just like in Almaty, mortality is relatively lower than in the oblasts with population of the similar

average age (Almaty and Zhambyl oblasts), which also depends on better provision of health services and higher indicators of well-being of the population.

Mortality rates of children under 5 in the dynamics from 2007 to 2014 showed a two-fold decrease in the country.

By region the highest rate of child mortality (under 5) as of 2014 is in Kyzylorda, South Kazakhstan and Kostanay oblasts. East Kazakhstan and Zhambyl oblasts are also close to their figures. Child mortality is lower than the republican average (12.1 per 1,000 persons) in Akmola, Aktobe, Atyrau, Mangystau, Almaty, Karaganda oblasts, NKO and WKO. The three regions with better indicators of child mortality, that is the level below 10 per 1,000 persons, are Pavlodar oblast, Almaty and Astana. Astana and Almaty are the leaders in terms of low rates of child mortality, most likely due to the high provision of health services, health infrastructure and due to high living standards (Figure 10.)

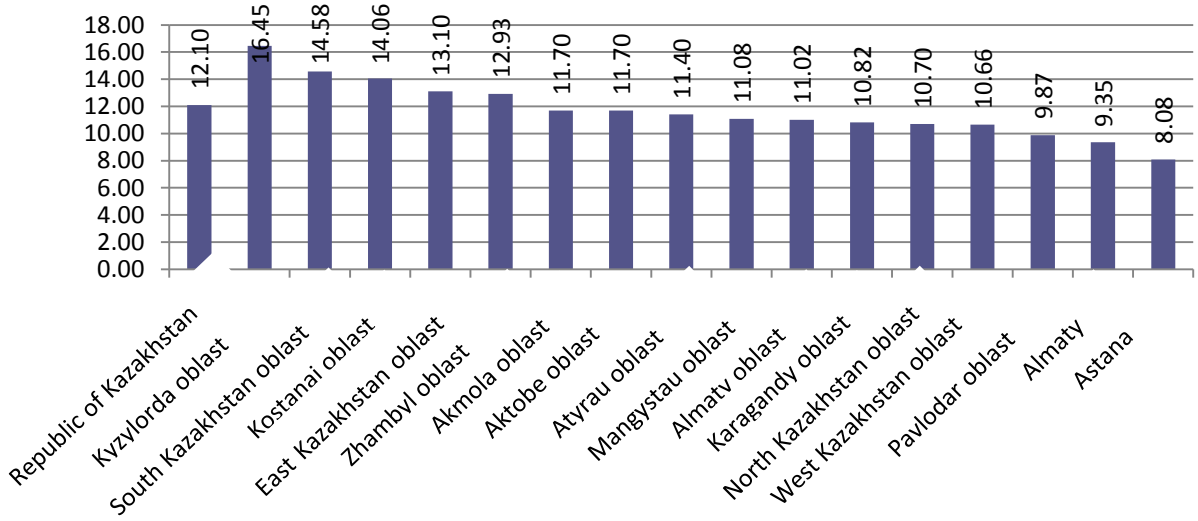


Figure 10 – Child mortality under 5 per 1,000 live births by region in 2014

Infant mortality rate (Figure 11) – the highest levels above the average in Kazakhstan (9.7 per 1,000 live births) have been in Kyzylorda, Kostanay, South Kazakhstan, East Kazakhstan, Zhambyl, Aktobe oblasts, where the most common reasons are related to conditions originating in the perinatal period, which indicates either the lack of medical examination of pregnant women in these regions or poor health indicators of women of reproductive age in general.

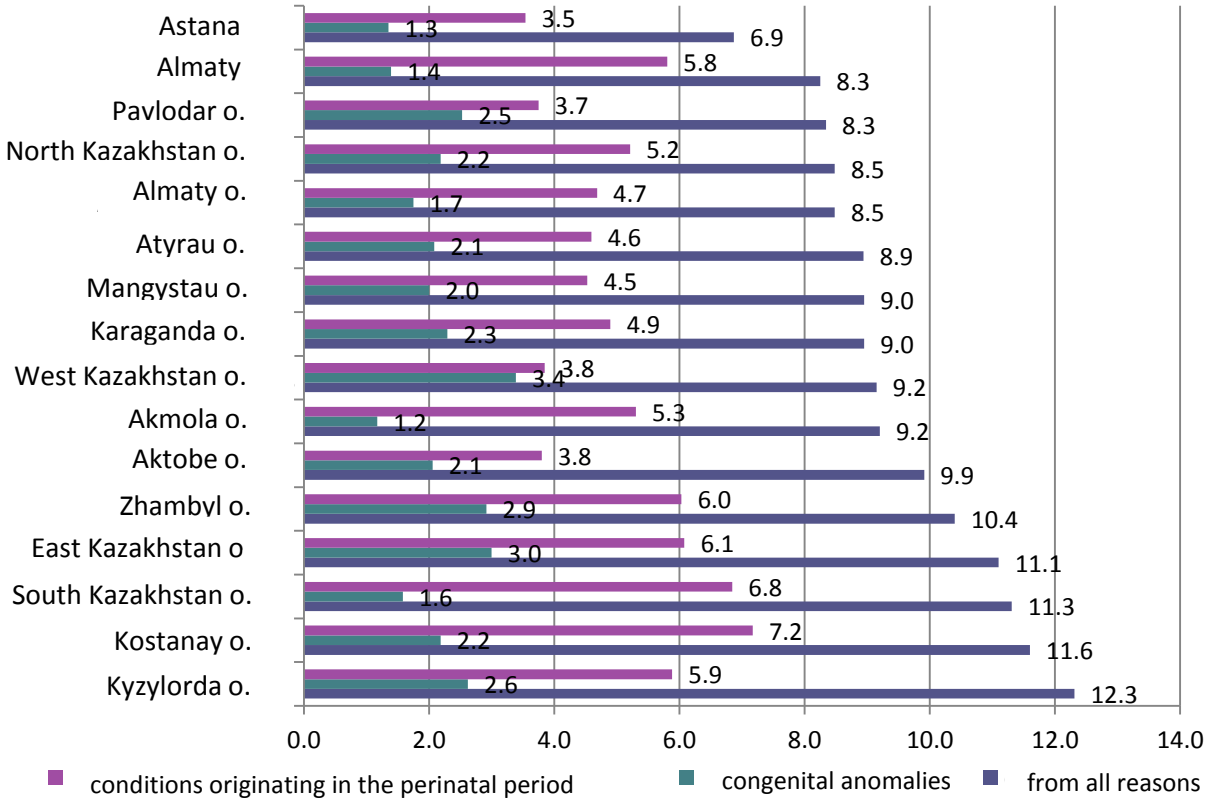


Figure 11 – Infant mortality under the age of 1 per 1,000 live births in 2014

Mortality in Kazakhstan mostly occurs for reasons (table 7) of circulatory system diseases (22.3 percent across Kazakhstan in 2014), malignant and benign tumors (12 percent) and accidents, injuries, poisoning (11 percent.) By region, the index, characterizing mortality rate by malignant and benign tumours, gives an idea about the quality of life in the region. Here the first place is taken by EKO, Pavlodar oblast, NKO, Akmola oblast, Karaganda oblast, WKO and Almaty (over 100 persons per 100,000.)

Table 7 – The main causes of mortality in RK regions in 2014

	Mortality by major causes per 100,000 persons					
	Circulatory system diseases	Malignant and benign tumors	Digestive diseases	Respiratory diseases	Accidents, injuries, poisoning	Infectious and parasitic diseases
Republic of Kazakhstan	168,98	92,91	63,72	70,81	85,88	9,08
East Kazakhstan oblast	249,59	147,99	79,95	124,55	126,91	12,91
Pavlodar oblast	240,63	144,51	71,19	91,88	116,67	12,73
North Kazakhstan oblast	283,22	137,34	103,18	171,33	137,34	7,84
Akmola oblast	212,48	124,44	55,84	78,12	120,23	7,2
Karaganda oblast	250,37	109,75	83,77	60,63	108,23	17,69
West Kazakhstan oblast	195,5	105,11	101,92	115	91,87	7,18

Almaty	159,01	103,52	46,61	48,34	63,02	9
Astana	145,14	91,76	21,59	31,07	56,02	5,52
Zhambyl oblast	152,5	88,49	51,3	52,67	74,39	7,79
Atyrau oblast	103,54	87,70	56,21	46,11	58,99	8,18
Kyzylorda oblast	97,39	87,61	27,86	49,84	48,36	8,04
Kostanay oblast	189,53	86,82	108,61	142,66	130,29	8,06
Aktobe oblast	157,77	75,15	77,48	70,24	79,68	11,28
Almaty oblast	159,2	71,71	76,06	79,37	85,98	5,72
Mangystau oblast	73,68	60,62	33,32	25,29	52,08	8,54
South Kazakhstan oblast	103,45	49,37	47,3	34,48	61,54	7,24

Morbidity of the population by regions shows that the highest rates are in Pavlodar oblast, Almaty and Astana (Figure 12.) In capital cities the situation with high morbidity is likely to be related to a high level of detection of diseases among the population, as they have sufficient number of medical specialists, polyclinics and hospitals with free and paid services. The leadership of Pavlodar oblast and strong performance of EKO can be explained by environmental factors (the high level of contamination from a variety of industrial facilities on site), a high probability of injuries in the industrial production – the main industries, creating jobs, as well as by more likelihood of diseases related to professional activities (due to dust, air-pollution and other hazardous working conditions.)

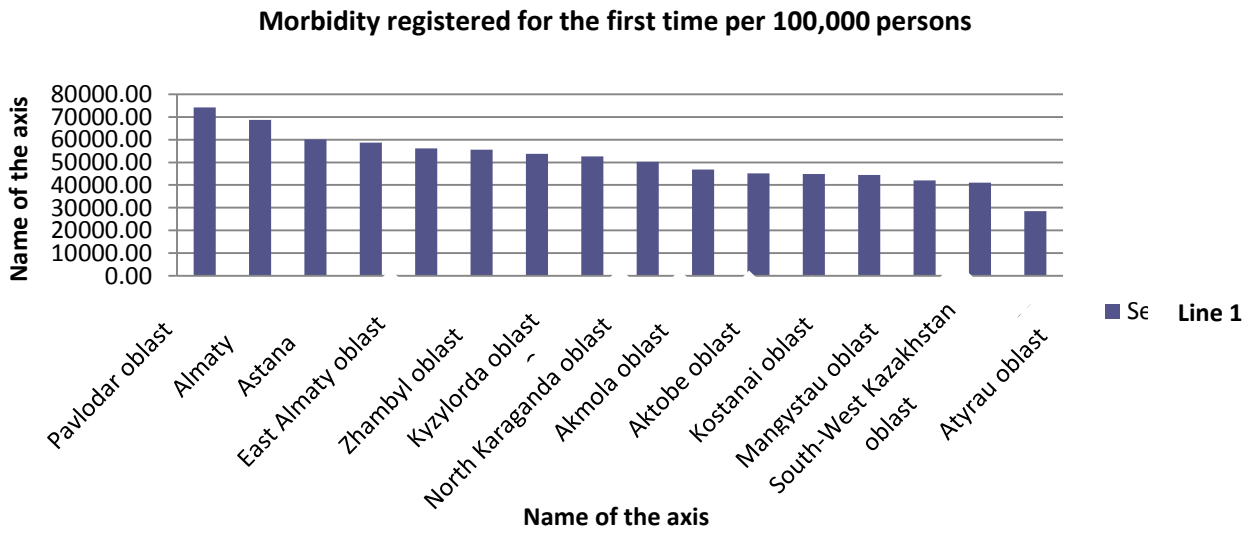


Figure 12 – The number of diseases registered for the first time per 100,000 persons in 2014 by region

Almaty, Zhambyl, Kyzylorda, North Kazakhstan, Karaganda oblasts are the regions where the number of diseases registered for the first time in life is higher than 50,000 per 100,000 persons.

Less than 50,000, but more than 40,000 diseases per 100,000 persons fall at Akmola, Aktobe, Kostanay, Mangystau oblasts, WKO and SKO.

The lowest morbidity rate was registered in 2014 in Atyrau oblast 28451 per 100,000 persons.

Prevalence of iron deficiency anemia shows the quality of nutrition of the population in the regions, especially among women, the health of pregnant women, mothers and children can be assessed by this indicator. The quality of food is heavily dependent on the standard of living of the population, sufficiency of income for diverse, nutrisious, iron-rich food (mostly proteins – meat, liver, eggs, fish, and fruits.)

The highest rates of the incidence of iron deficiency anemia (IDA) are in Kyzylorda, Zhambyl and Aktobe oblasts (Fig. 14), with significantly higher incidence of anemia among women. Mangystau and South Kazakhstan oblasts have the IDA indicators above 2000 diseases per 100,000 persons. Over 1,500 IDA diseases per 100,000 persons are detected in Atyrau, Almaty oblasts and Almaty. Over 1000 IDA diseases per 100,000 persons are detected in West Kazakhstan, East Kazakhstan and Pavlodar oblasts. The relatively low IDA incidence is in Akmola, Karaganda, North Kazakhstan, Kostanay oblasts and Astana (Figure 13.)

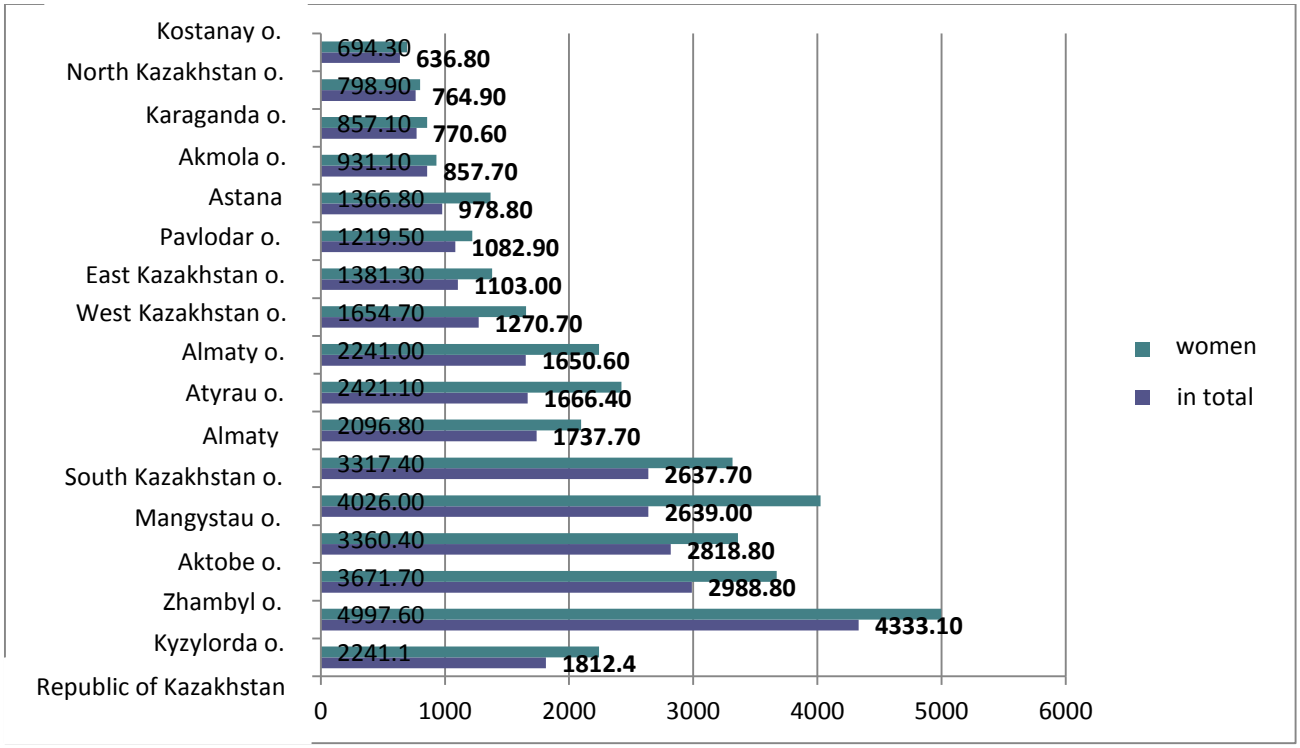


Figure 13 – The incidence of iron deficiency anemia per 100,000 persons (the entire population and women) by region in 2014.

In rural areas in all regions the incidence of iron deficiency anemia is higher than in urban areas.

The indicators of morbidity in the regional context characterize by many of their parameters the level and the standard of living, as well as the level of medical services. Many oblasts with low values of the IndRn well-being index have high rates of infant, child mortality and incidence of iron deficiency anemia, as well as a higher level of general morbidity of the population (Kyzylorda oblast, SKO, Zhambyl oblast), generally unfavorable mortality rates are in North Kazakhstan, Kostanay oblasts (+ high infant mortality), EKO.

The analysis of regional disparities through the example of 5 pilot oblasts.

For the comparative analysis of regional disparities one region from each regional group, categorized by the value of the IndRn well-being index in 2014 was selected:

- Almaty from the leading group with IndRn> 120;

- Mangystau oblast from the regional group, where 110≤IndRn≤120;

- Kyzylorda oblast from the regional group, where 100≤IndRn <110;

- South Kazakhstan oblast from the regional group, where IndRn <100.

North Kazakhstan oblast was selected additionally, so that one of the oblasts of Northern Kazakhstan was represented in the sample of regions.

Demographic indicators of the pilot oblasts.

With regards to the population growth (Figure 14) in five oblasts from 2004 to 2014: four regions experienced a positive demographic trend, one region alone saw a decline in the average annual population (AAP) in North-Kazakhstan oblast during the period under review, this figure decreased by 14 percent from 670 thousand to 573, 8 thousand people.

The highest positive AAP growth during the period under review was recorded in Mangystau oblast, where the population growth rate in 2004-2014 amounted to 68 percent. Almaty, where the population increased by 36 percent in 2004-2014 goes. SKO saw a positive 27 percent growth for the period, Kyzylorda oblast – 22 percent.

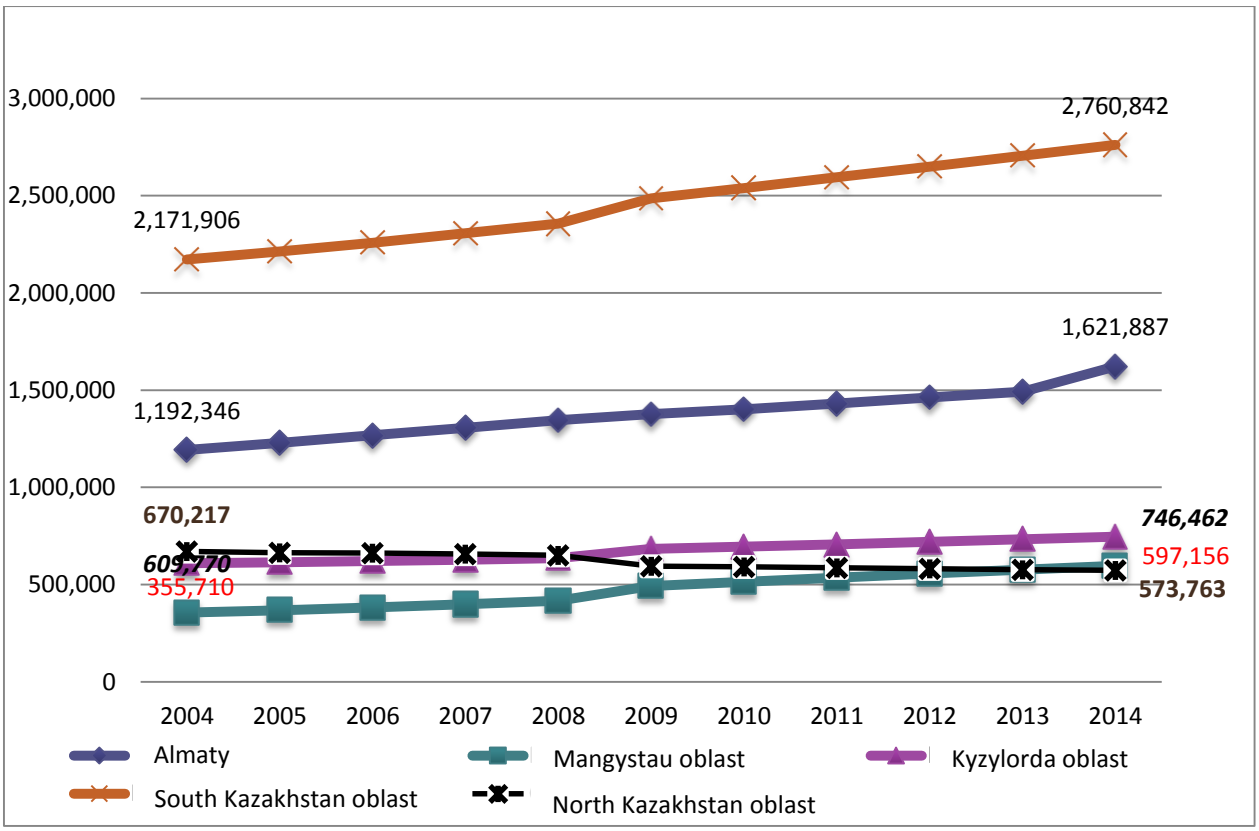
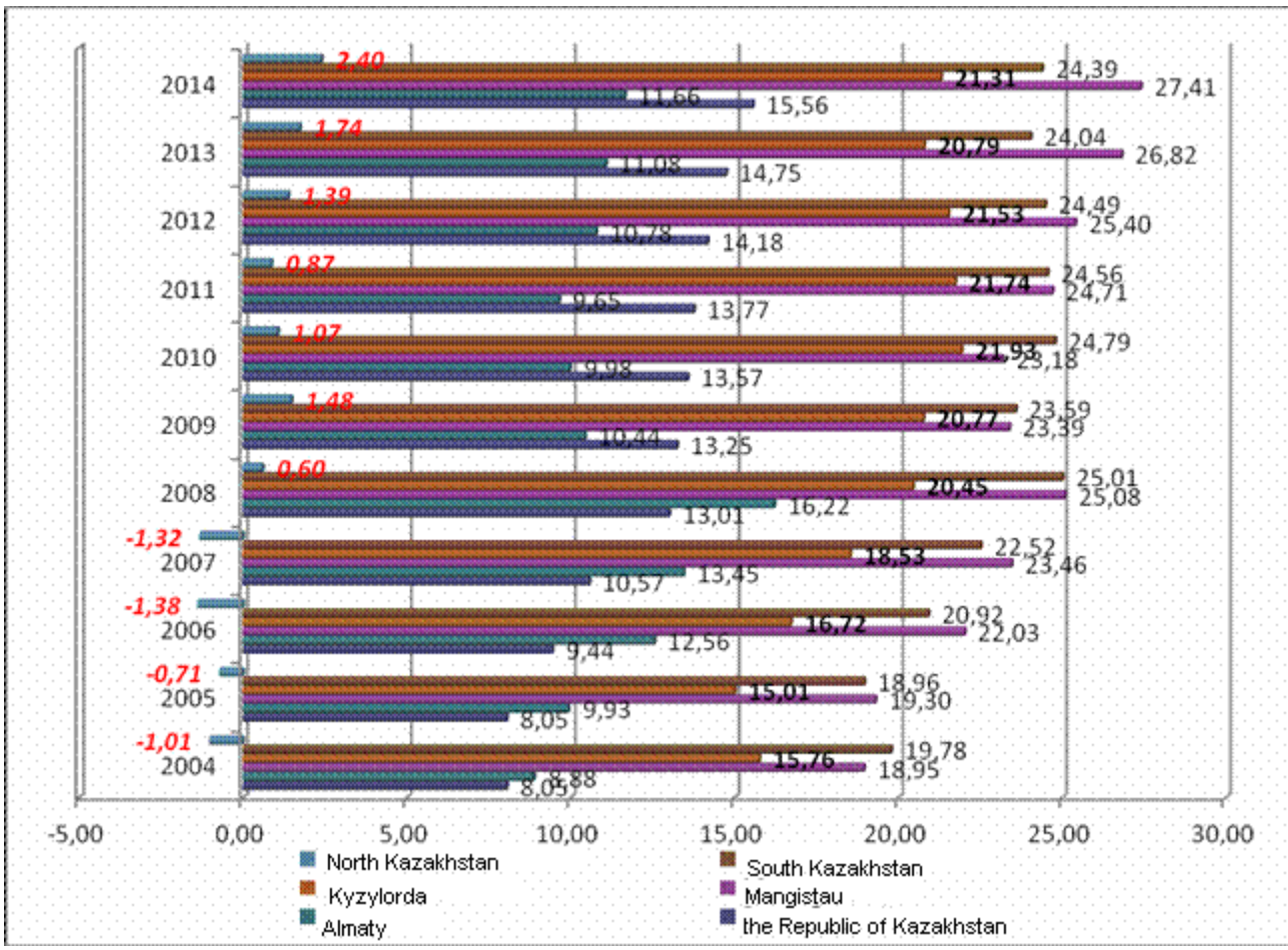


Figure 14 – Dynamics of the average annual population in 2004-2014 in 5 pilot oblasts.

The indices of the natural movement of population (fertility, mortality) and the figures of internal inter-regional and external migration have influenced the growth of population in the pilot oblasts.

During the period 2004-2014 (picture 15) North Kazakhstan oblast has had the lowest rates of the natural population increase, very high mortality rates (12-14 per thousand, which is 1.3-1.5 times higher than the republican level) and low birth rates (12-14 per thousand, which is 30-33% less than the republican level). Up to 2007 inclusively, this region had the natural population decline due to the mortality rate was higher than the birth rate. From 2008 to 2014, NKO has had a small positive natural growth of the population.



Picture 15 - Natural population increase in the Republic of Kazakhstan in 2004-2014 in pilot regions per thousand

Mangistau oblast and SKO have the highest rates of the natural population growth during the period under the review. Kyzylorda oblast has a little bit lower rates of the natural population increase; however its dynamics in the period 2004-2014 has been positive. The natural population growth in Almaty has increased from 9 per thousand in 2004 to 11.7 per thousand in 2014, although it is still lower than in Mangistau oblast and SKO. In 2004-2008, in Almaty the natural increase was higher than the average in the Republic, from 2009 to 2014 this region has been behind the average national rates.

External and internal migration in pilot regions

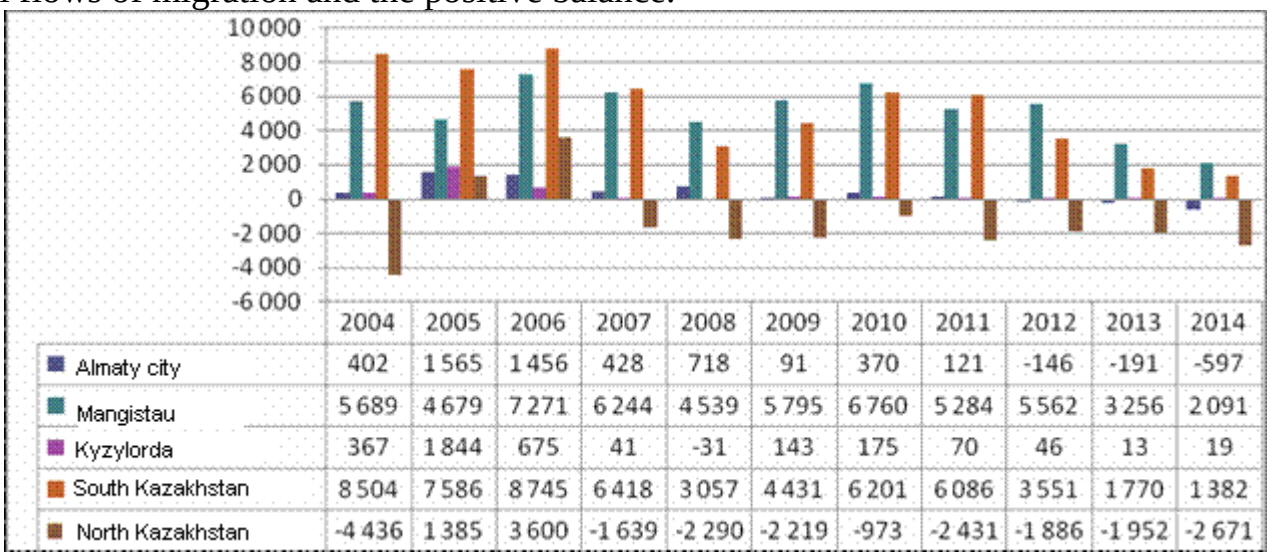
As for external migration in pilot regions: two regions – Mangistau and South Kazakhstan oblast are **regions-recipients**, in other words during the period under review they had a constantly positive net migration, nevertheless, the flow intensity has fallen over the last years (picture 17). Mainly, external immigrants have been come to this region within the framework of the ethic repatriation (the return to the historical homeland of ethnic Kazakhs - oralmans).

In general, in the period 2004-2014, North Kazakhstan oblast showed a negative net migration (except 2005 and 2006), namely it is a **region-donor** in terms of external migration. The most part of the Russian Federation continuously observes the migration decline of the population, which relates to the ethnic composition of the population (it is a relatively highly proportion of Russians in

the structure of the population, rather than in other regions) and proximity to the Russian Federation (the common border).

From 2004 to 2011 Almaty has witnessed a negligible positive balance, which in 2012 was replaced by negative net external migration. Although, the net external migration is not so high, but in general, in comparison to other regions, migration flows embrace the significant part of both migrants and immigrants, in other words the population mobility is comparatively high.

Generally, Kyzylorda oblast has neutral rates of external migration, in comparison to other regions there is a low intensity of external migration flows (insignificant flows of emigration and immigration). In 2004-2006 there were small flows of migration and the positive balance.



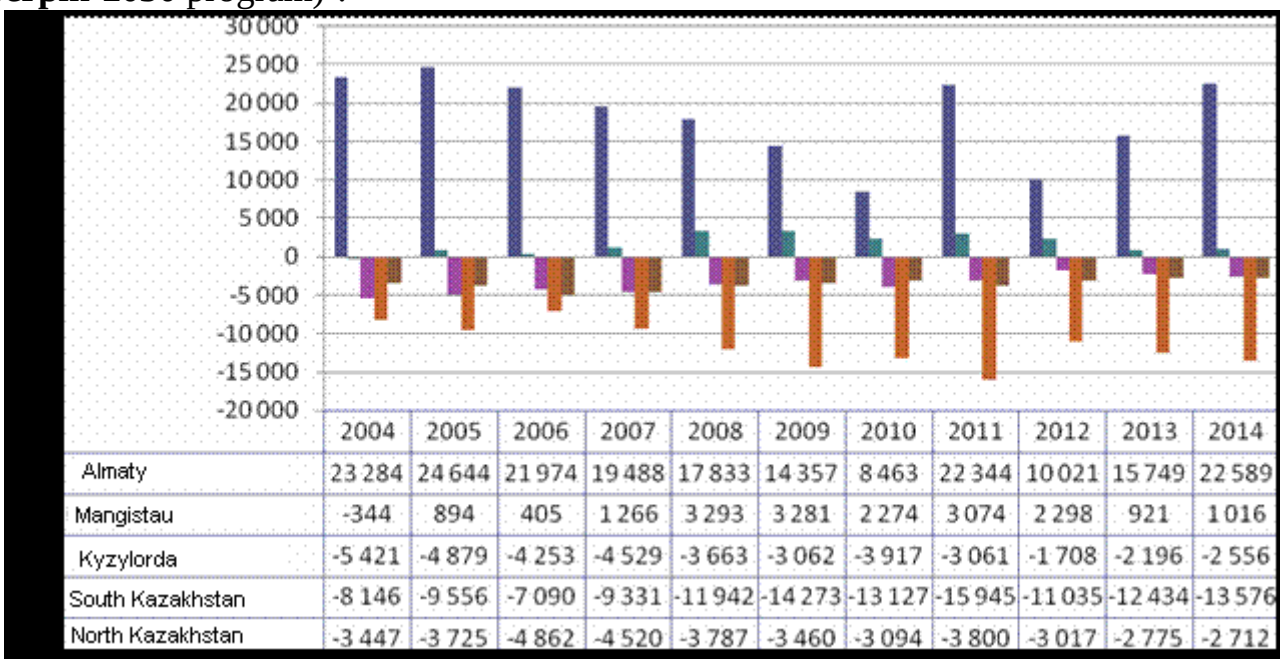
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Almaty city	402	1 565	1 456	428	718	91	370	121	-146	-191	-597
Mangistau	5 689	4 679	7 271	6 244	4 539	5 795	6 760	5 284	5 562	3 256	2 091
Kyzylorda	367	1 844	675	41	-31	143	175	70	46	13	19
South Kazakhstan	8 504	7 586	8 745	6 418	3 057	4 431	6 201	6 086	3 551	1 770	1 382
North Kazakhstan	-4 436	1 385	3 600	-1 639	-2 290	-2 219	-973	-2 431	-1 886	-1 952	-2 671

Picture 16 – Net external migration in 5 pilot regions of Kazakhstan in 2004-2014

Almaty is a bright example of the region-recipient in terms of internal migration (positive net migration was decreasing until 2010, it was a sharp growth in 2011, then in 2014 – intensive growth again). Partially, the immigration activeness in 2014 was explained by the change of territorial borders of Almaty and inclusion of the part of the territory of Almaty oblast in Almaty. Mangistau oblast is also a recipient of internal migration, however its positive balance is significantly lower comparing to Astana and Almaty.

Other 3 pilot regions – Kyzylorda, North Kazakhstan and South Kazakhstan are donors of internal migration (the number of leaving people is higher than arriving). If the negative balance of internal migration in Kyzylorda oblast and SKO is covered by high rates of natural growth, thus the negative net internal migration together with the net decrease of external migration influence the slowdown of demographic growth and create risks of the decline of the regional population (picture 17). Therefore, it is important **for NKO to conduct the policy of the promotion of measures for increasing quality and living standards of the population in the region in order to minimize immigration among citizens of the region, as well as boost policies towards the attraction of internal and**

external immigrants within the labor and educational migration (for example the **Serpin-2050** program)[4].



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Almaty	23 284	24 644	21 974	19 488	17 833	14 357	8 463	22 344	10 021	15 749	22 589
Mangistau	-344	894	405	1 266	3 293	3 281	2 274	3 074	2 298	921	1 016
Kyzylorda	-5 421	-4 879	-4 253	-4 529	-3 663	-3 062	-3 917	-3 061	-1 708	-2 196	-2 556
South Kazakhstan	-8 146	-9 556	-7 090	-9 331	-11 942	-14 273	-13 127	-15 945	-11 035	-12 434	-13 576
North Kazakhstan	-3 447	-3 725	-4 862	-4 520	-3 787	-3 460	-3 094	-3 800	-3 017	-2 775	-2 712

Picture 16 – Net internal migration in 5 pilot regions of Kazakhstan in 2004-2014

Generally speaking, the demographic situation in 4 pilot regions – Almaty, Mangistau, Kyzylorda and South Kazakhstan oblasts – is characterized positively, the population growth in the first region is due to internal migration and relatively favorable situation with regard to the natural population increase, in three other regions – because of the high birth rate and low mortality, giving the high natural growth of the population. As for pilot regions, only in NKO the demographic situation is not favorable, here is the low natural growth and high emigration activeness both external and internal.

Economic potential of pilot regions

The major criterion, characterizing economic potential of the regions is the Gross Regional Product (GRP). The table 8 illustrates the GRP dynamics in pilot regions in 2004-2014.

Table 8 Gross Regional Product in pilot regions in 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Bln. Tenge										
Almaty	1 102,2	1 497,4	2 272,7	2 675,9	2 949,6	3 175,3	3 923,4	5 205,2	6 086,4	7 523,7	8 519,1
Mangistau	295,8	432,2	594,0	756,6	1 095,8	1 108,5	1 484,8	1 866,6	1 739,4	2 004,3	2 379,3
Kyzylorda	179,8	242,4	363,8	499,6	685,2	641,6	859,1	1 103,6	1 247,4	1 400,9	1 375,5

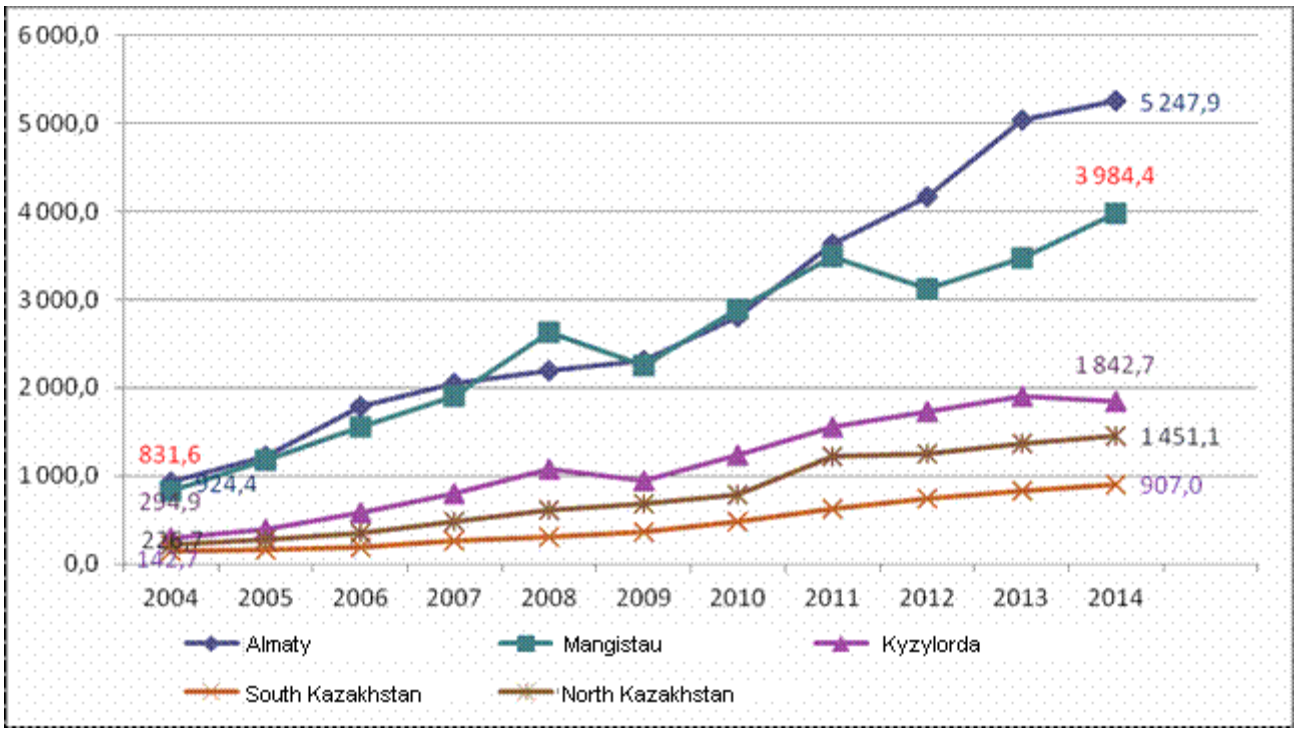
[4] http://serpin-2050.kz – official website of the program

South Kazakhstan	309,9	358,0	423,5	611,8	731,4	925,5	1 205,3	1 614,5	1 983,8	2 252,1	2 504,2
North Kazakhstan	151,9	184,7	236,9	320,4	403,0	403,9	467,0	714,3	724,3	791,9	832,6
	in % out of GRP in all regions of RK										
Almaty	18,8%	19,7%	22,3%	20,8%	18,4%	18,7%	18,0%	17,7%	18,9%	20,3%	20,9%
Mangistau	5,0%	5,7%	5,8%	5,9%	6,8%	6,5%	6,8%	6,4%	5,4%	5,4%	5,8%
Kyzylorda	3,1%	3,2%	3,6%	3,9%	4,3%	3,8%	3,9%	3,8%	3,9%	3,8%	3,4%
South Kazakhstan	5,3%	4,7%	4,1%	4,8%	4,6%	5,4%	5,5%	5,5%	6,2%	6,1%	6,1%
North Kazakhstan	2,6%	2,4%	2,3%	2,5%	2,5%	2,4%	2,1%	2,4%	2,2%	2,1%	2,0%
	Growth in % by 2004 in accrued total										
Almaty	1,0	1,4	2,1	2,4	2,7	2,9	3,6	4,7	5,5	6,8	7,7
Mangistau	1,0	1,5	2,0	2,6	3,7	3,7	5,0	6,3	5,9	6,8	8,0
Kyzylorda	1,0	1,3	2,0	2,8	3,8	3,6	4,8	6,1	6,9	7,8	7,6
South Kazakhstan	1,0	1,2	1,4	2,0	2,4	3,0	3,9	5,2	6,4	7,3	8,1
North Kazakhstan	1,0	1,2	1,6	2,1	2,7	2,7	3,1	4,7	4,8	5,2	5,5

As you can see from the table, Almaty contributes mostly to the GDP of the country – in 2004 the region gave 18.8% of the total GRP, in 2014 its share increased up to 21% (in the period under review, 8-9.4% of the population concentrated in Almaty). South Kazakhstan and Mangistau oblast follow Almaty in terms of the significance of contribution. Kyzylorda oblast ensured 3-4% of GRP of all regions in the period under consideration. The lowest GRP share belongs to North Kazakhstan oblast – only 2-2.5% in the considered period (although with respect to the population it is comparable with Mangistau oblast in recent years).

The GRP dynamics per capita (picture 18) shows that Almaty and Mangistau oblast have high economic potential, over the period they increased this indicator by 8 times and 7.7 times correspondingly. They also preserved a comparatively high level of GRP per capita comparing to the average value in the Republic (in 2014 in Almaty – 2.3 times higher than the national average level, in Mangistau oblast – 1.5 times higher). In other regions the GRP per capita is lower than the average rate in the whole Republic: in 2014 in Kyzylorda oblast – 22% less, NKO – 32%, SKO – 62%.

The rate of GRP per capita in NKO is higher than in SKO, while GRP in 2004-2014 in SKO grew by 8 times, and in NKO – 5.5 times. This relates to the fact that the population in NKO is substantially lower than in SKO, and the population growth rates are comparatively very low (over the whole period the average annual population in NKO fell by 14%, in SKO in opposite it grew by 27%). It appears that GRP growth is “eaten” by the high level of the average annual population growth.



Picture 18 - Dynamics of GRP per capita in thousands of tenge in 5 pilot regions

Mangistau oblast has the highest rates of GRP growth, rather than the population growth (however the population increase rates in this region are very high in comparison to the population growth in other regions), that is why this region preserves the biggest economic potential.

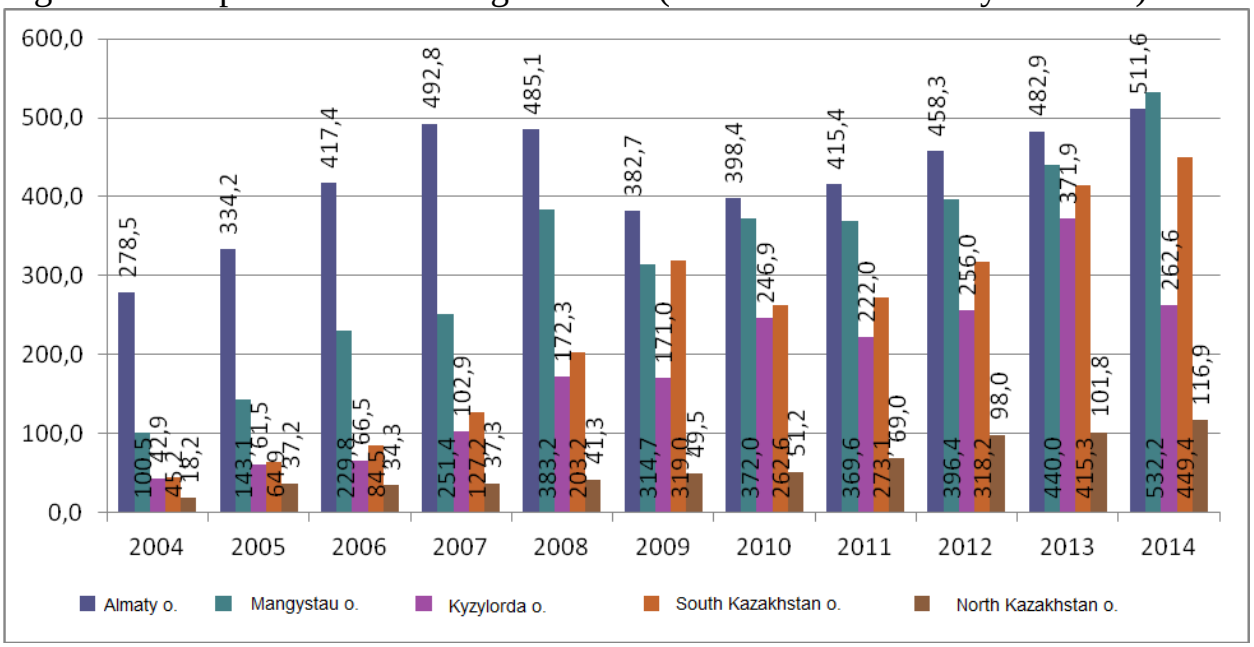
Investment potential of pilot regions

Investment potential in the regions under review during the period 2004-2014 has changed unevenly.

Almaty was a leader in terms of the volume of fixed capital investment among 5 regions until 2013. However, if in 2004 the difference with other regions relating this criterion was not big (2.7 times higher than in Mangistau oblast, 6 times higher than in Kyzylorda oblast and SKO, 15 times higher than in NKO), then in 2013 this gap has significantly reduced (picture 19). This is due to the fact that fixed investments in Almaty have increased in the period 2004-2007 from 78.5 bln. tenge to 492.8 bln.tenge, a slight lowering was in 2008, in 2009-2010 the volume of investments has declined to 383-398 bln. tenge, then in 2010-2013 the gradual recovery has taken place approximately to the level of 2008 – 483 bln. tenge annually.

In 2004 Mangistau oblast took leadership with regard to the volume of investments among 5 pilot regions, fixed investments over the period 2004-2014 have increased from 100.5 bln. tenge to 532.2 bln. tenge (by 5.3 times in nominal terms).

South Kazakhstan oblast has also improved its investment potential during the period under consideration: fixed capital investments have risen from 45.2 bln. tenge in 2004 up to 449.4 bln. tenge in 2014 (in nominal terms – by 11 times).

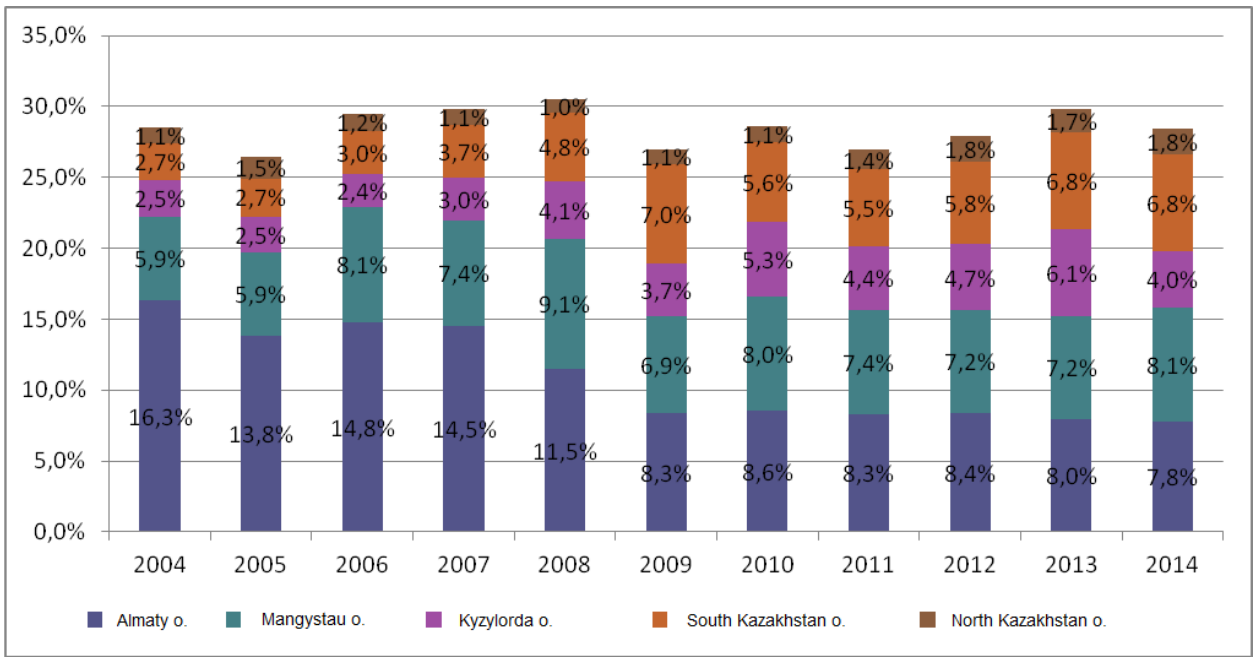


Picture 19 – Fixed capital investments in 5 pilot regions in 2004-2014 (bln. tenge)

The growth of fixed investments was uneven in Kyzylorda oblast, but in general, its volume grew from 43 bln. tenge to 262.6 bln. tenge over the period 2004-2014.

Among 5 pilot regions the lowest volume of investments was in fixed capital, although, in general, they increased from 18.2 bln. tenge to 117 bln. tenge in 2004-2014.

As for the total volume of fixed investments (FI) in the Republic of Kazakhstan, the share of pilot regions has fluctuated between 27% and 30.5% in 2004-2014. Almaty decreased its share from 16.3% in 2004 to 7.8% in 2014. Mangistau oblast, in opposite, has increased its share from 5.9% to 8.1% in the period under review. Prior to 2013 Kyzylorda oblast has been accumulated its share in FI of the Republic from 2.7% in 2004 to 6.8% in 2014. In 2009 this share was 7% in the context of decreasing of the share of Almaty, Mangistau and Kyzylorda oblasts.



Picture 20 – The share of fixed capital investments of pilot regions in Kazakhstan in 2004-2014

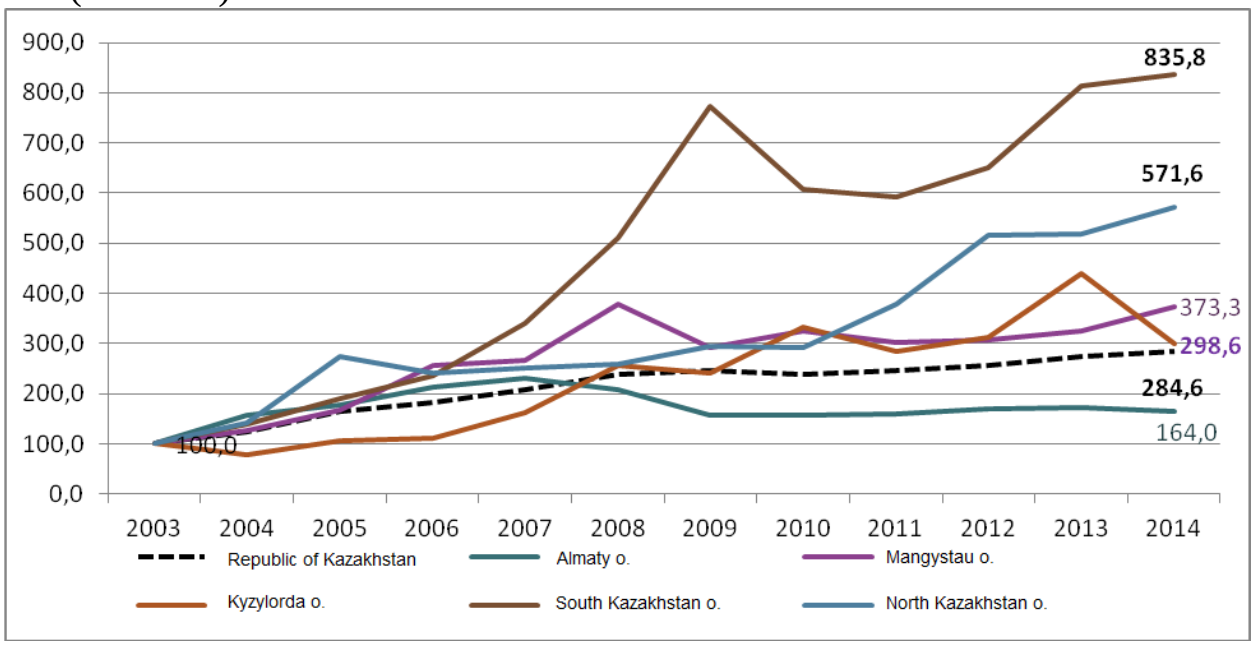
As for the dynamics of fixed investments in the Republic, in general there was a positive trend of investment growth (table 9), except for 2010, when it was the real decrease of FI by 3% due to the world financial crisis in 2008. In the pilot regions the Index of Physical Volume (IPV) of fixed investments has changed unevenly. Each region had years of high rates of FI (the "peak" in Almaty in 2004 was 157.7%, in Mangistau oblast in 2006 – 152.2%, in Kyzylorda oblast in 2008 – 156.3%, in South Kazakhstan in 2008 – 150%, in NKO in 2004 – 143.1%, in 2012 – 136.3%)

Table 9– The IPV of fixed capital investments in pilot regions (in % against the previous year)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
The Republic of Kazakhstan	**123,1**	**134,1**	**111,1**	**113,5**	**114,8**	**102,9**	**97,0**	**102,9**	**104,1**	**106,9**	**104,2**
Almaty (city)	157,7	111,9	120,1	109,3	90,0	75,4	100,4	100,6	106,3	102,5	94,8
Mangistau	126,9	132,6	152,2	103,9	141,9	77,2	111,8	93,0	101,5	105,8	114,7
Kyzylorda	78,4	136,5	103,8	147,1	156,3	94,3	138,1	85,5	110,3	140,2	67,9
South Kazakhstan	140,5	135,4	124,0	144,2	150,0	151,3	78,6	97,5	110,2	124,7	102,8
North Kazakhstan	143,1	191,9	88,0	103,9	103,2	113,5	99,5	129,3	136,3	100,3	110,5

Totally, in 2003, using the accrued method to 2014, the highest growth of fixed investments was in SKO – by 8.4 times, in NKO – 5.7 times, in Mangistau – 3.7 times (picture 21). Over this period fixed capital investments in Kazakhstan have increased by 2.8 times in real terms, Kyzyorda oblast had approximately the

same level (by 3 times), Almaty had the level of real fixed investments below than that (1.6 times).



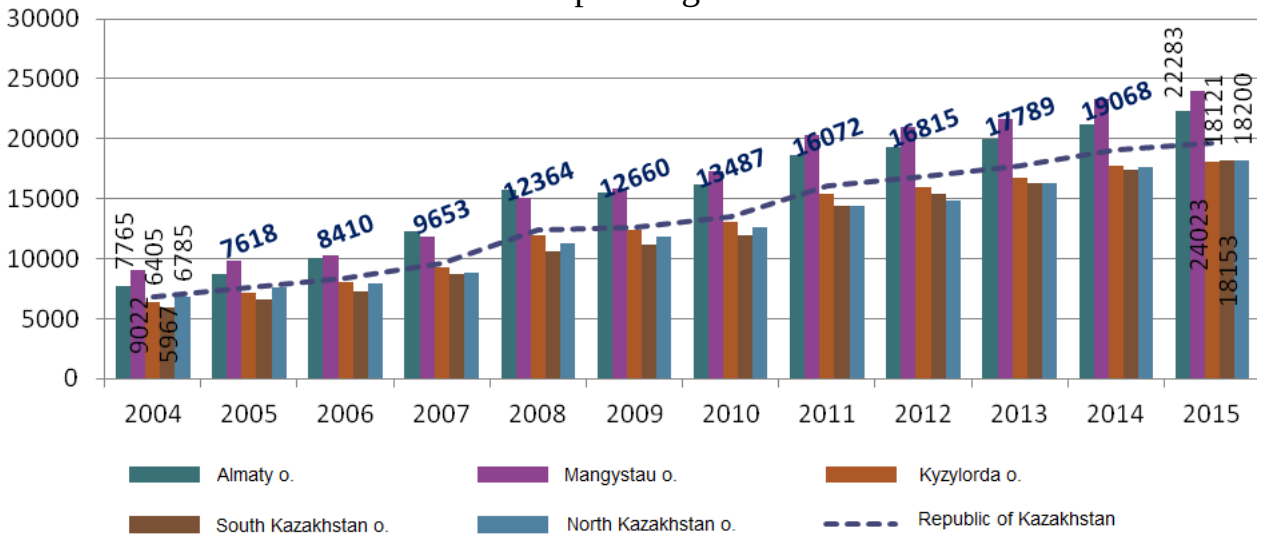
Picture 21– The IPV of fixed capital investments in 5 pilot regions and in the Republic of Kazakhstan in general (in % using the accrued method since 2003)

Among the pilot oblasts, South Kazakhstan oblast has considerably improved its investment potential over the period under consideration and reduced the gap from regions-leaders with respect to this criterion. At the same time, despite the relatively high level of total fixed capital investments, Almaty observes the damped growth of fixed capital investments, which can weaken the economic potential of this region in the future. The contribution of Almaty to the regional structure of fixed investments in the Kazakhstan has been decreasing. Therefore, measures will be needed to attract investments to Almaty in order to preserve and strengthen current comparative competitive advantages of the region.

Living standards in pilot regions

Analyzing the differences in living standards in the region, there is a need to take into account the rate, which characterizes the cost-living differential – the level of the subsistence minimum in pilot regions. This criterion is higher than the national average levek during the period 2004-2015 in two regions – Mangistau oblast and Almaty. In three other regions – Kyzylorda oblast, SKO and NKO, the level of subsistence minimum was less than the national average level in the period under review. Over the whole period, the cost of life in the regions has risen: if the average republican level increased by 2.9 times, then in SKO – by 3 times, in Almaty – 2.9 times, in Kyzylorda oblast – 2.8 times, in Mangistau oblast and NKO – 2.7 times. The difference in the cost of life between SKO, NKO and Kyzylorda

oblast has reduced over the period, as well as the gap between minimal and maximum value of this criterion in 5 pilot regions – from 1.5 times to 1.3 times.



Picture 22– The level of the subsistence minimum in average per capita

The differentiation of the regions with regard to cost of living reduces the gap between their revenues, because the regions with relatively high incomes per capita have comparatively high costs of living (the cost of minimum consumption basket).

The 2030 Agenda for Sustainable Development, adopted by the UN in September 2014, consists of 17 goals, focused to eliminate poverty, preserve resources of the planet and ensure prosperity for all. Each of the goals has a range of indicators to be achieved in the next 15 years. The tenth goal is "Reduced inequalities", one of the dimensions of this goal is the share of income of 40% poor population in the structure of the whole population. These indicators in the regions of Kazakhstan are calculated on the basis of the data of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan (table 10).

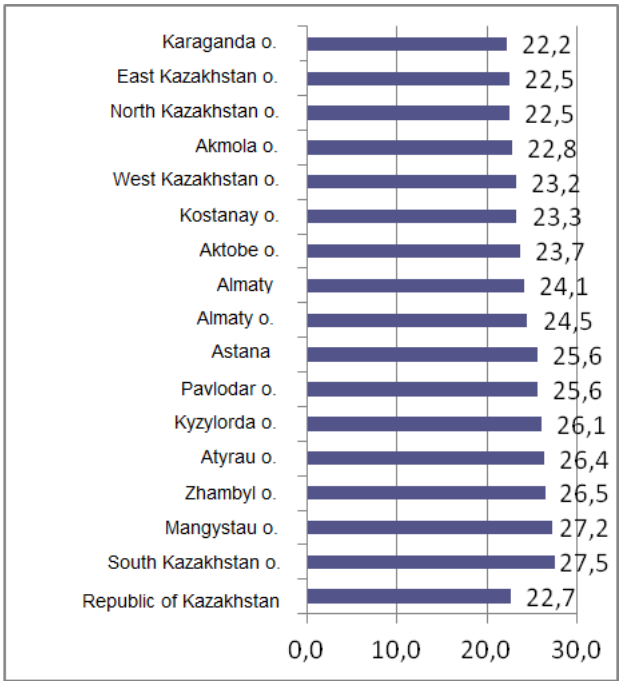
Table 10 – Dynamics of the share of income of 40% poor population in the structure of the population in the regions of Kazakhstan in 2010-2014

	Share of 40% poor population in the structure of the whole population					The growth in 2014 comparing to 2010 in %
	2010	**2011**	**2012**	**2013**	**2014**	
The Republic of Kazakhstan	22.7	21.9	22.2	22.7	22.7	100%
Akmolinsk	23.3	22.5	22.8	23.3	22.8	98%
Aktubinsk	22.9	22.8	22.7	23.4	23.7	103%
Almaty	23.5	24.4	23.9	24.5	24.5	104%
Atyrau	26.6	25.2	26.5	26.9	26.4	99%
West Kazakhstan	24.5	24.2	23.1	22.7	23.2	95%
Zhambyl	26.4	25.0	25.7	26.9	26.5	100%
Karagandy	23.0	21.9	21.1	22.0	22.2	97%

Kostanai	23.7	23.8	23.6	23.5	23.3	98%
Kyzylorda	25.9	24.0	25.0	26.0	26.1	101%
Mangistau	28.7	29.0	28.7	27.7	27.2	95%
South-Kazakhstan	26.9	26.8	27.4	27.3	27.5	102%
Pavlodar	24.0	23.2	23.6	25.4	25.6	107%
North-Kazakhstan	23.2	21.5	21.3	22.3	22.5	97%
East-Kazakhstan	22.6	22.4	22.5	22.7	22.5	99%
Astana	21.9	23.0	25.0	25.5	25.6	117%
Almaty (city)	24.7	23.7	24.4	24.1	24.1	98%

In the context of the growth of income of the population in the regions of Kazakhstan in 2004-2014, the redistribution of income for the benefit of 40% most poor people was in the following regions (table 10): the city of Astana (the share of income of low 40% increased from 21.9 to 25.9%), Pavlodar oblast (from 24 to 25.6%), Almaty oblast (from 23.5 to 24.5%), Aktubinsk oblast (from 22.9 to 23.7%), SKO (from 26.9 to 27.5%), a small increase of income of low 4 deciles in the structure of income of the population was in Kyzylorda oblast (from 25.9 to 26.1%). There were fluctuations of this indicator in Zhambyl oblast, in the beginning it was the decline from 26.4% in 2010 to 25% in 2011, then it was the increase from 26.9 in 2013 and again – the small decrease up to 26.5%.

The shares of income of 40% poor and low-income people in the structure of the population of West Kazakhstan oblast reduced from 24.5 in 2010 to 22.7% in 2013 and up to 23.2% in 2014. Karaganda oblast also observed a tendency towards decreasing the share of lowest 4 deciles – from 23% in 2010 to 21.1 in 2012, then it was a small increase from 22.2 in 2014. Similarly, NKO witnessed a decline of the share of income of lowest 40% of the population from 23.2% to 21.3% in 2012 and again an increase up to 22.5 to 2014. The more stable was the distribution of income of 40% poor of the population in Atyrau oblast (26.2-26.5%), NKO (22.4-22.7%), in the city of Almaty (24-24.7%).



Picture 23 – The share of 40% of less rich peoplein regions of Kazakhstan in 2014

In general, the growth of income in the majority of regions shows uneven distribution of income between 40% of less rich people and 60% of more rich people of the regions.

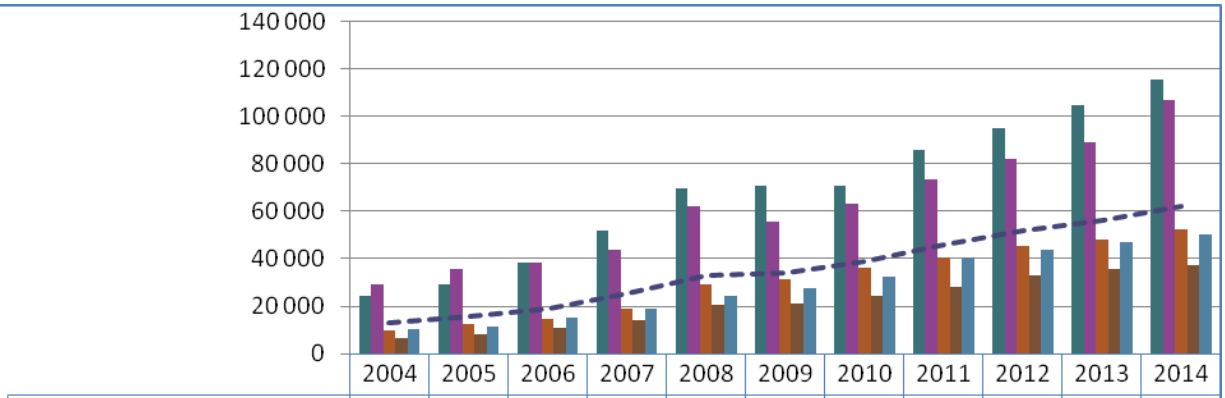
In SKO less wealthy 40% people receive 27.5% of income, in Karagandy oblast – 22.2% of income of the population (picture 23). Over 5 last years there is a gradual growth of this share of low-income people in the population, in opposite Karagandy oblast observes the decrease of this share.

Considering 5 pilot regions with regard to the distribution of income among the less wealthy 40% - the lowest share is in NKO (22.5%), then in ascending order – Almaty (24.1%), Kyzylorda oblast (26.1%), Mangistau oblast (27.2%), SKO (27.5%).

Almaty and Mangistau oblast are leaders in terms of per capita nominal income in 2004-2014, their rates are 1.6-2 times higher than the average republican level, 3-4 times higher than in SKO, where the lowest per capita income was observed during the period under review.

In three other regions – Kyzylorda, NKO and SKO the level of per capita income is less than the republican, especially in SKO, where per capita nominal income was 50-60% out of the average republican level in the period 2004-2014.

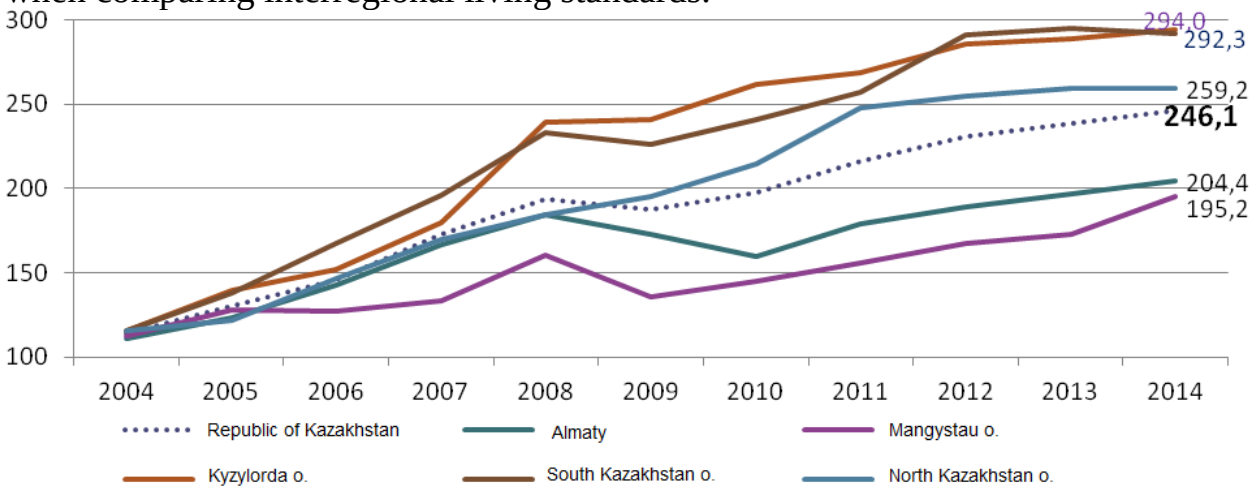
However, the nominal growth of indicators in the pilot regions with low rates of per capita average income (in SKO, in NKO and Kyzylorda oblast) over the period under consideration was higher in comparison to the regions with high level of the average per capita income (in Almaty and Mangistau oblast). This allowed to reduce the gap between maximum and minimum rates of the average per capita income during the period from 4.5 to 3 times.



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Almaty	24 235	29 347	38 190	51 703	69 881	71 012	70 543	85 882	95 184	104 925	115 763
Mangystau o.	29 417	35 713	38 317	43 914	62 194	55 851	63 059	73 188	82 203	89 157	106 757
Kyzylorda o.	9 553	12 385	14 602	18 889	29 052	31 168	36 183	40 451	45 163	48 200	52 308
South Kazakhstan o.	6 433	8 206	10 790	14 308	20 320	21 238	24 196	27 972	33 152	35 391	37 312
North Kazakhstan o.	10 084	11 405	14 939	19 033	24 178	27 413	32 161	40 394	43 581	46 910	50 447
Republic of Kazakhstan	12 817	15 787	19 152	25 226	32 984	34 282	38 779	45 936	51 594	56 235	62 007

Picture 24 – Dynamics of the average per capita nominal income of the population in 5 pilot regions

Real money income of the population in 5 pilot regions grew gradually (picture 25): the faster growth over the period was observed in the regions with lower average per capita income of the population (real income in SKO and Kyzylorda oblast grew almost in 3 times and in NKO – 2.6 times). In the regions with higher average per capita income in 2003-2014 the growth of real income was comparatively lower – approximately by 2 times in the city of Almaty and Mangistau oblast. This leads to the decrease of the gap between the average per capita income in the pilot regions and reduction of the level of economic inequality when comparing interregional living standards.

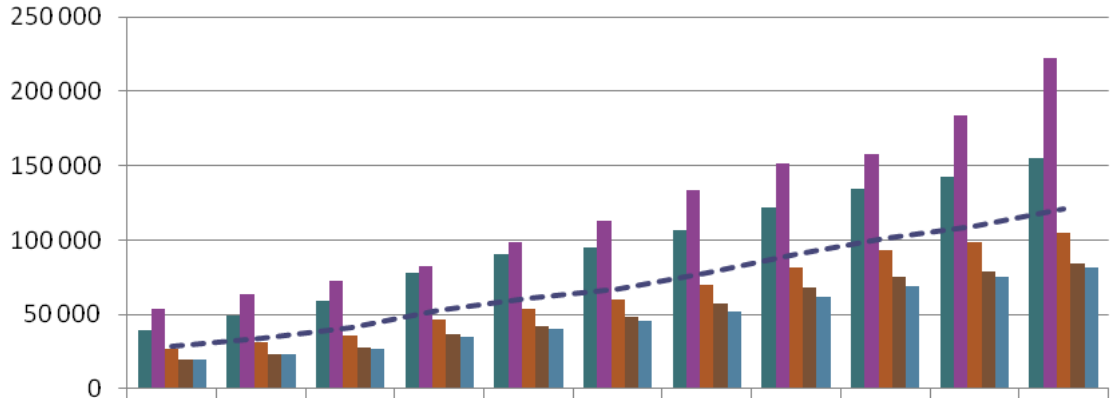


Picture 25 – Indexes of real money income of the population in 5 pilot regions of the Republic of Kazakhstan in 2004-2014 (by accrued total since 2004)

The differences in the level of the average per capita income in the regions under review are related to the differences in salaries in particular regions, which comprise a significant portion in the sources of income for households.

In the period 2004-2014 the highest rate of the nominal average monthly salary among 5 regions under review was in Mangistau oblast, and this relates to the specialization of the regional economy in the field of oil and gas extraction that established the highest wages in Kazakhstan over the period (due to the high pricing environment on the external commodity markets). Almaty had the average monthly salary that is higher than the average level in the Republic. The average monthly salary in other three regions – Kyzylorda oblast, SKO and NKO - was lower than the average republican level (picture 26). Low levels of wages were in the regions with agricultural specialization and high share of rural population.

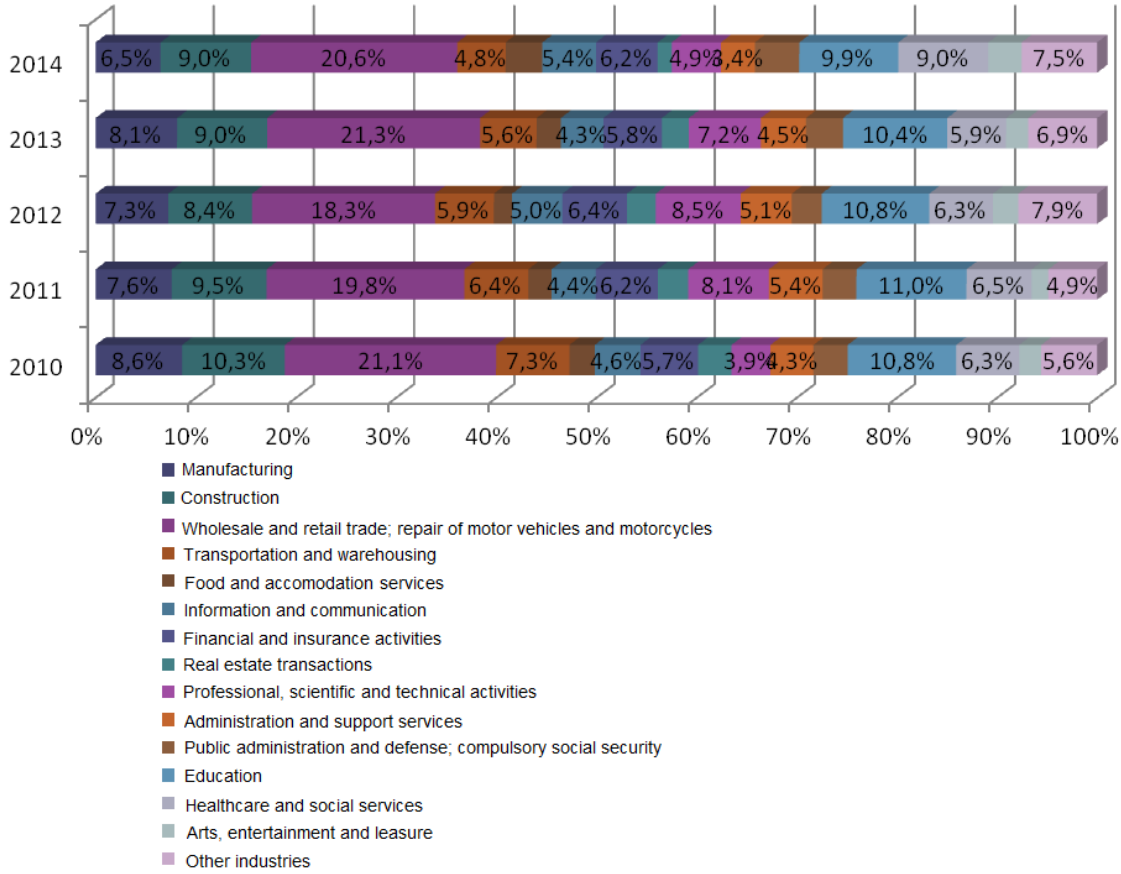
The difference between the maximum level of this indicator in the regions under consideration in Mangistau oblast and its minimum level in North Kazakhstan oblast in 2004-2014 was 2.5-2.8 times.



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Almaty	39 614	49 201	59 240	78 021	90 239	95 139	106 597	121 674	134 378	142 310	155 242
Mangystau o.	53 832	63 959	72 086	82 055	98 743	112 907	133 148	151 041	157 358	183 914	222 294
Kyzylorda o.	26 400	30 948	36 116	46 859	53 333	60 227	69 753	81 518	93 361	98 813	104 485
South Kazakhstan o.	19 389	22 854	27 586	36 707	41 679	48 610	57 545	67 721	75 467	78 705	84 550
North Kazakhstan o.	19 166	23 011	27 182	34 522	39 790	45 755	51 689	61 712	68 921	74 853	81 062
Republic of Kazakhstan	28 329	34 060	40 790	52 479	60 805	67 339	77 611	90 028	101 263	109 141	121 021

Picture 26 – The nominal average monthly salary 5 pilot regions (in tenge) in 2004-2014

The differences in wages are bound with the differences in the sectoral employment structure in the regions (picture 27).

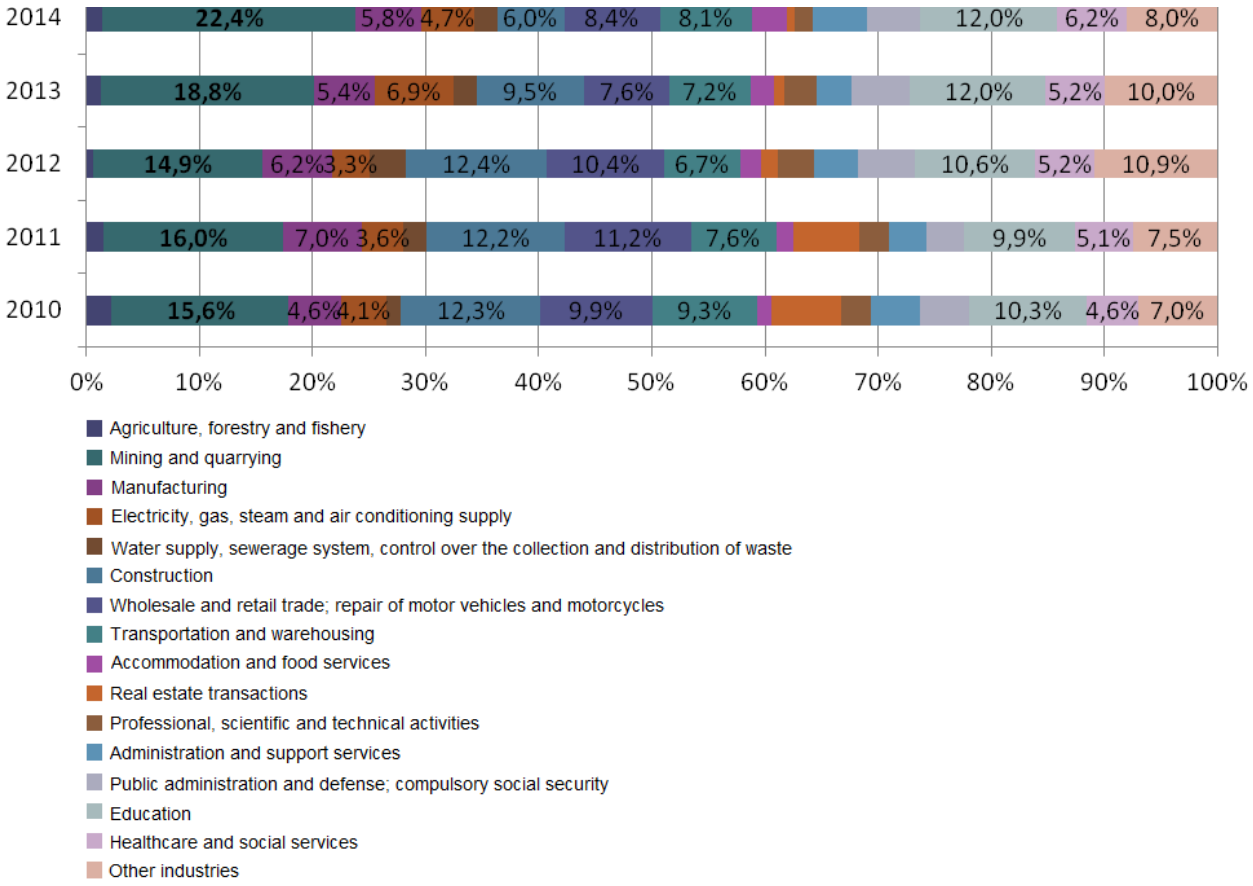


Picture 27 – The sectoral employment structure in Almaty in 2010-2014

Over the period 2010-2014 in Almaty the number of employed people has increased by 12% from 677,000 to 764,500. The employment is highly diversified in the sectors of the economy, the significant share for employment is provided by manufacturing industry (however, the share has fallen from 8.6% to 6.5%), construction, trade, education, financial sphere, healthcare (picture 27). The service industry ensures the employment of 80% employed in Almaty (the share of the service sector grew from 79% to 82% over the period under review).

In Mangistau oblast the employment in 2010-2014 increased by 21% from 205,000 to 249,000. Employed workers are mainly concentrated in the following sectors: in industry – from 25% to 36% (the share of manufacturing industry has risen from 15.6% to 22.4%), in construction (over the period the share decreased from 12.3% to 6%), in the wholesale and retail trade (8-10% out of all the employed in the region), in education (10-12%), transportation and warehousing (6-9%).

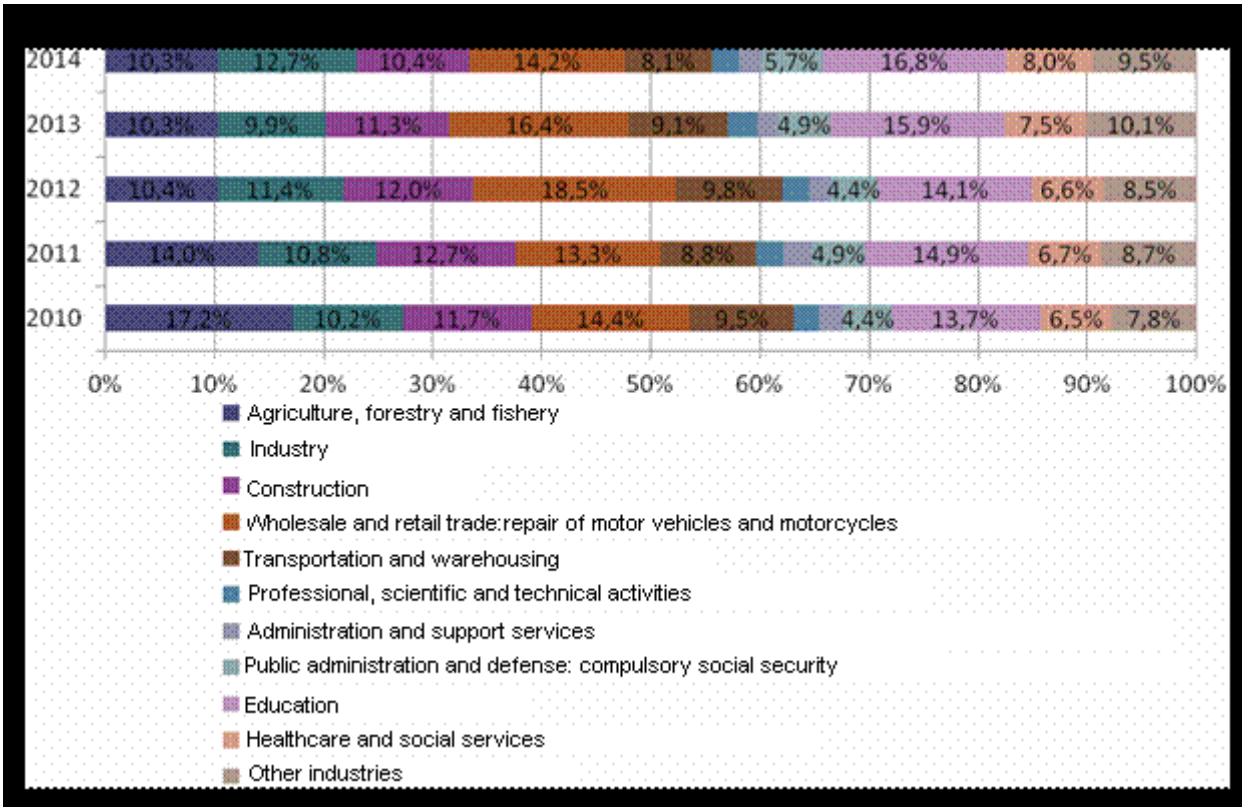
In this region, 56-60% of employed people work in the sphere of the production of goods, while less of the half of employees work in the service industry.



Picture 28 – The sectoral employment structure in Mangistau oblast in 2010-2014

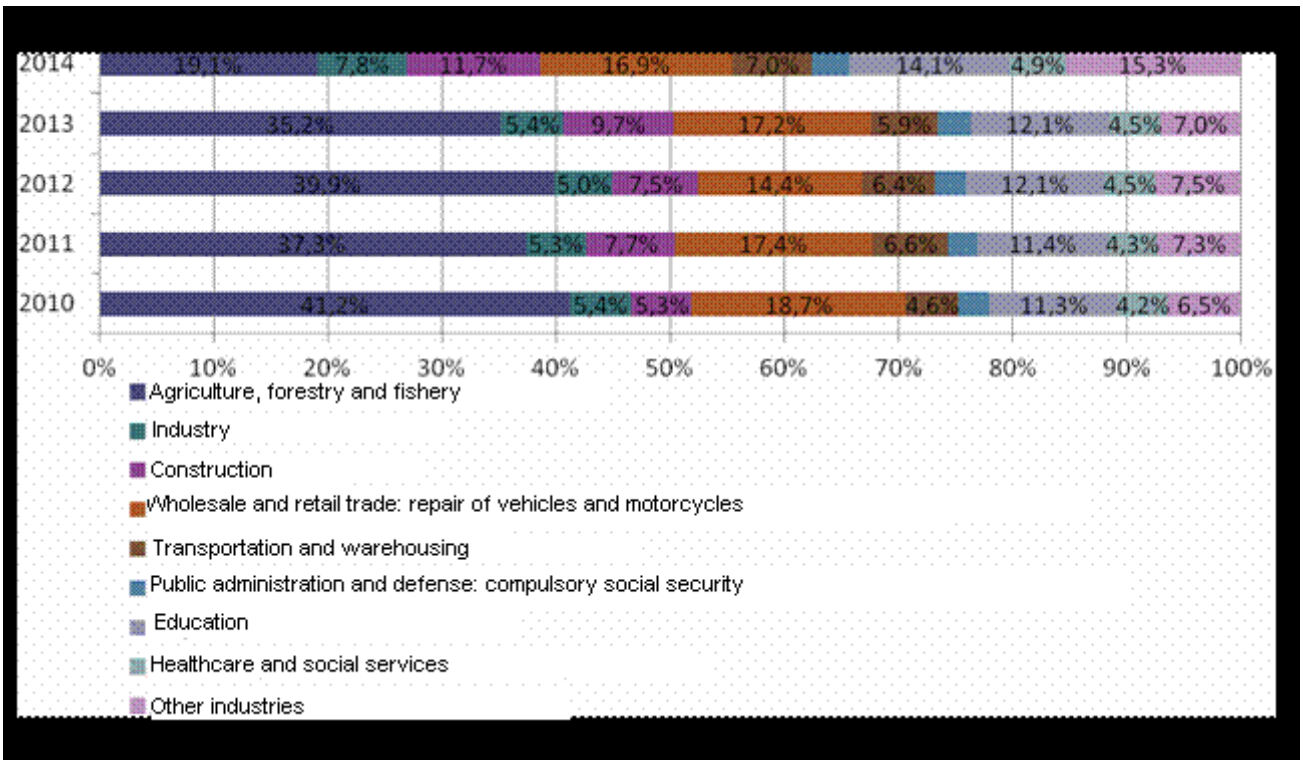
Over the evaluation period, Mangistau oblast has witnessed the decrease of employed people in the areas: real estate transactions (decreased by 87%), construction (decreased by 41%), agriculture (decreased by 26%), professional, scientific and technical activities (25%), art, entertainment and recreation (15%).

In Kyzylorda oblast the number of employed has risen by 4% in the period 2010-2014. The production of goods creates jobs for 32-34% employed in the region, while the number of employees in the agriculture reduced by 37% and the share in the employment structure had fallen from 17.2% to 10.3%, the share of employees in the industry increased from 10.2 to 12.7%. In the service industry the highest employment is in the fields of trade (13-18% of all employed in the region), education (14-17% of all employed), transportation and warehousing (8-9.5%).



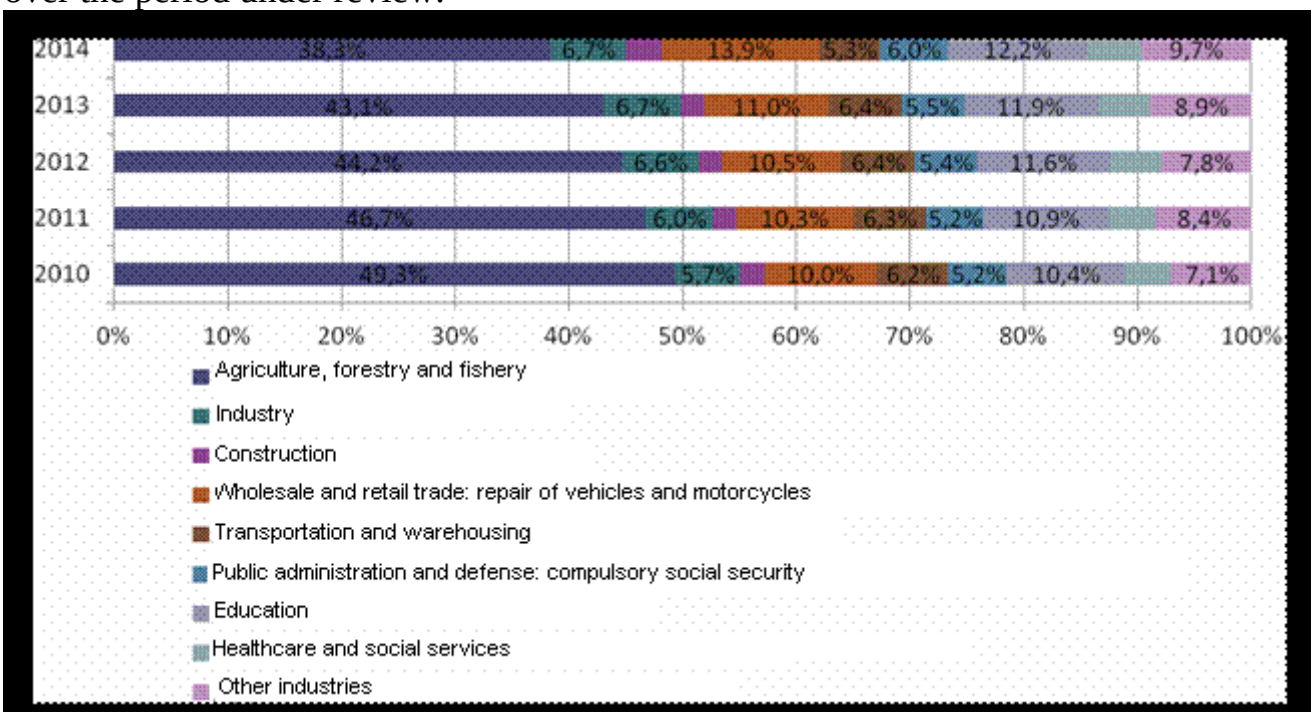
Picture 29 - The sectoral employment structure in Mangistau oblast in 2010-2014

During the period 2010-2014, in South Kazakhstan oblast the number of employees has changed by 6.6% from 1091 to 1163 people. The highest portion of employees is concentrated in the agriculture, although the share of the employed in this area has fallen from 41% to 19% (especially in 2014). Trade ensures the employment for 17-18.7% of the employed population of the region, education – for 11-14% of all the employed. In the construction, the share of the employed increased from 5.3% to 11.7%, in transportation and warehousing – from 4.6% to 7% (picture 30).



Picture 30 - The sectoral employment structure in South Kazakhstan oblast in 2010-2014

In North Kazakhstan the number of employed in 2004-2014 decreased by 12% from 358,000 to 314,000 people. The major part of employed is concentrated in agriculture, although the share of employed here decreased from 49% to 38% over the period under review.



Picture 31 - The sectoral employment structure in North Kazakhstan oblast in 2010-2014

In trade the share of the employed increased from 10% to 14%, in education – from 10 to 12.4%, in industry – from 5.7% to 6.7%. In general, the sectors, financed from the state budget create the main part of employed in the service industry.

The regions, which structure of employed has a high share of agriculture and social spheres, financed by the budget (Kyzylorda oblast, SKO and NKO), show low rates of the average per capita income of the population and low level of wages. In order to level incomes there is a necessity to undertake measures for improving productivity in agriculture, to develop spheres for manufacturing agricultural products.

D) Future trends, demonstrating the possible progress in the matters of regional changes and inequality for different groups of the population

The second half of 2014 and 2015 were marked by the decrease of prices on oil and other resources exported by Kazakhstan, that led to the fall of incomes of large industrial enterprises engaged in extracting and manufacturing industries, worsened the performance of related industries (transport, storage and etc.), reduced budget revenues of the country. Additionally, due to the unfavorable external environment, the national currency exchange rate declined by more than 2 times, which strengthens inflation processes and causes the fall of real income of the population, decrease of its customer demand, reevaluation of the budget revenues towards decreasing, decline of business activity of small and middle entrepreneurs because of the cost increase on crediting, renting (if there is a link to US dollar), purchasing of foreign machinery, equipment, materials, components.

Under these conditions, the regions-leaders in terms of the GRP per capita and income level, in the situation of favorable prices on exported commodities (oil-extracting regions in Western Kazakhstan, specializing in the ferrous and non-ferrous metallurgy Karaganda, Pavlodar, Eastern Kazakhstan oblasts) can lose their competitive advantages, and living standards of the population in these regions may worsen. In turn, regions, specializing on the fields oriented on internal demand – agriculture, light and food industry, services – may improve their positions.

Sectoral development programs of the regions in their essence are mechanisms of interregional redistribution of resources. Currently, the financing of regions in the republic is carried out in the framework of the existing system of interbudgetary relations, which is based on the redistribution of budget means from regions-donors to regions-recipients (provision of budget subventions for economically less developed oblasts). This system of interbudgetary relations of the republic provides insufficient incentives for local executive bodies (both regions-donors and recipients) to increase the growth of the socio-economic development of their territories. This situation is mostly influenced by the lack of a

single transfer calculation system (except general transfers) and clear priorities while forming targeted transfers.

The Program for Development of Regions until 2020, established by the Government decision No.728 of the Republic of Kazakhstan as of 28 June 2014, focused to create conditions for the advancement of the social and economic potential of regions through the formation of the rational territorial organization of the country, encouragement of the concentration of the population and capital in the centers of economic growth. This program is based on the following programs and with its adoption they became ineffective: “Development of regions”, “Programs for development of monotowns for 2012-2020”, “Modernization of housing and utilities infrastructure for 2011-2020”, “Akbulak for 2011-2020”, “Affordable housing - 2020”.

The funding of the program is being carried out and will be mainly conducted due to and within means of the republican budget, in a less extent – at the expense of local mechanisms and non-budget means. The program is one of the mechanisms for the implementation of the “Forecast scheme for territorial and spatial development of the country until 2020”, approved by the Decree No. 118 of the President of the Republic of Kazakhstan of July 21, 2011.

The major problem of the engineering infrastructure of Kazakhstan’s cities is the deterioration of water-pipe, sewage, heating and power networks, automobile roads. In rural regions in addition to the deterioration of existing water-pipe networks, internal roads, power networks, there is the gradual deterioration of social infrastructure facilities – schools, hospitals, feldsher’s stations. The Program for Development of Regions until 2020 minimizes inequality in regional aspects due to the promotion of house construction and expansion of area of affordable housing for disadvantaged population, modernization of engineering networks, development of rural territories, employment for socially vulnerable categories within the implementation of the program “Employment Road Map 2020” in the regions.

In the future due to the reduction of the budget revenues in the period of low oil prices, which is especially actively sequestrates the investment part of the state budget rather than the current part, risks of the reduction of financing of planned investments to the modernization of the housing infrastructure and engineering networks of cities and villages of Kazakhstan will increase. In its turn it can aggravate regional inequality because of further decrease of the capacity of cities and villages (except Astana and Almaty, which have less deteriorated infrastructure and better development characteristics).

In 2016, in accordance with the Address of the President of the Republic of Kazakhstan as of November 30, 2015, there is a need to develop separate programs for 6 macroregions – South, North, Central-East, West, Almaty and Astana. It is necessary to promote small and medium business for large regional projects. That is why the entrepreneurship support program “Business Road map 2020” should be a part of investment programs of macroregions. It is imperative to provide measures for facilitating mobility of labor resources, first of all, focused to boost migration from labor-excessive to labor-deficient regions. Macroregions should

unite in a single transport, logistics and communication architecture, establishing in the framework of the "Nurly Zhol" program. Currently, 11 projects on key areas "Center-South", "Center-East", "Center-West" have been implementing.

In addition to efforts for the development of macroregions and strengthening of mutual ties between them, the Address also establishes the course for further implementation of social measures to support the population: *"Since January 1, 2016 salaries for healthcare workers will be increased – in average up to 29%, education – 29%, social protection – up to 40%. It would be rational to apply differentiated approach to different categories of state employees. In the next year 25% increase of the level of social benefits, including invalidity and survivor's pension, as well as grants. From January 1, 2016 we have been indexing solidarity pension in advance of 2% of the inflation level. In 2016 the salary for state servants of corpus "B" will be increased by 30%"*[5].

To implement these measures a new model of the wage payment system for civil servants will be introduced, stipulating the division of positions of civil servants in 4 categories, depending on education, qualification, level of responsibility and difficulty of the work performed: the introduction of the new model will stimulate career and professional growth of employees and will ensure the realization of the task of the Head of State regarding the increase of salary for the core staff depending on qualification in the system of healthcare – from 7% to 28%, education – from 15% to 29%, in other spheres – from 28% to 40%. In order to introduce this model, 272.6 bln. tenge have been additionally allocated from the republican budget since 1 January 2016, including from local budgets in the form of targeted transfers – 228.8 bln. tenge.

From 1 January 2016 solidarity pensions grew by 9% in comparison to the previous pension payments (minus standard pension payment, which increased by 7% from 11,182 to 11,965). Payments were advanced with consideration for the increase of the minimum calculation index (MCI) and subsistence minimum (minimal salary - MS), which are taken up as a calculation basis for these benefits.

These measures will help to support poorest segments of the population in the regions in the context of growing inflation, decrease of real income of the population. Moreover, the analysis of regional differences in the level of education of the population aged 6-25 shows that this indicator has low values mainly because of low access to professional education. The Address of the President within the implementation of the new social policy declares that 2017 will be a starting point for a new project – "Free vocational-technical education for all", which will allow to make large-scale investments to the human development in the region.

Additionally, from 2014 Kazakhstan has been implementing the "Serpin-2050" program to regulate internal migration from labor-excessive southregions of Kazakhstan to North Kazakhstan, in which demographic tendencies and external and internal migration aggravate risks, with substitution of leaving working force

[5] Address of the RK President N. Nazarbayev to the people of Kazakhstan "Kazakhstan in the new global reality: growth, reforms, development", November 30, 2015 - http://www.akorda.kz/ru/addresses/poslanie-prezidenta-respubliki-kazahstan-nnazarbaeva-narodu-kazahstana-30-noyabrya-2015-g

by newly arriving to the market young workers. The program envisages the allocation of grants for education in universities and colleges of North and Central Kazakhstan, Pavlodar oblast, EKO and Atyrau oblast of high school graduates from southern regions of Kazakhstan, Manistau and Kyzylorda oblasts, thus, stimulating educational migration with the future perspective of the employment and permanent living in the regions of studying. In 2014, 2500 grants were allocated, in 2015 – 6200. This program focuses on dealing with issues related to the expansion of education for the population in the regions with outflow of migrants, and in the meantime, their future adaptation as potential immigrants to the labor markets of receiving regions is planned.

The Development Program for Regions until 2020 is being implemented in several areas and its great attention is given to the development, modernization of housing infrastructure, engineering and technical networks of the first and second level cities, towns and monotowns, rural settlements, as well as effective and rational use system of drinking water and waste water for the population. Targeted indicators of the program consist of expected parameters of the total population in agglomerations (first level cities), second and third level cities (towns and monotowns) after the implementation of the program, indicators of housing improvement, production of the total housing area, water supply and water waste.

The great role in the program is given to mechanisms of public-private partnership, preferential lending, and construction of city infrastructure.

Conclusions and recommendations for concerned parties

1. What the word "differences" means in the regional context of Kazakhstan?

It is the difference in the economic potential of regions, presence of various conditions for economic activities, predetermined by objective reasons (deposits of natural resources, environmental conditions, soil fertility, water resources), as well as by subjective factors (historical development of economic system of a region, level of the development of infrastructure facilities, traditional economic pattern and interregional communications, etc.).

2. What are main reasons of regional differences that lead to multifold forms of inequality in Kazakhstan?

Inequality of income and consumption is mainly led to the differentiation of salaries in the regions, related to differences in the **sectoral structure of regional production**. Highest levels of salaries are in industrially developed regions (oil and gas extracting regions, regions with developed metallurgy and chemical industry), as well as in Almaty and Astana, which have developed service industry, more diversified economy and production with high level of complexity. Low incomes are in the regions focused on agriculture and with less developed industrial production (extraction of raw materials, food and textile industries with low processing).

Social inequality, when population in different regions has unequal access to limited resources of material and spiritual consumption, may be caused by regional differences in the access to services of healthcare and education, social welfare, social infrastructure, transport infrastructure, as well as distinctions in housing – in quantitative and qualitative characteristics of housing (level of comfort, wear factor, distance from social and cultural sites – schools, hospitals, stores, leisure organizations, etc.)

Unequal opportunities mean that different segments of the population have unequal "starting" conditions for the implementation of their potential (labor, entrepreneurship, creativity). For instance, unequal education opportunities – unequal access for low-income sections of the population to high quality education, including vocational education, which leads to the reduction of their competitiveness in the labor market, and because of low qualification and skills, they are less paid for labor. Inequality of possibilities in the spatial aspect results from disparities in quality education services of regions, underdevelopment of the local business training system in regions, isolation of the system of professional education from the requirements of employers towards competences of future specialists, difference in functional literacy of the population. Additionally, there is huge gap in the levels of investment attraction, distribution of innovations, development of investments, complexity of manufactured products.

3. What are trends of regional distinctions in Kazakhstan?

The dynamics of regional differences in the level of income, consumption and poverty is decreasing. The differentiation of salary has been keeping at the same level. Gini Index also shows the reduction of inequality for distribution of income, aimed at the consumption.

As for housing, each oblast demonstrates the growth of quantitative indicators to a greater or lesser extent, therefore the gap and differentiation on this criterion has been decreasing in the inter-regional comparison. However, if considering the level of deterioration and upgrading of housing, then the situation is not so unambiguous. The innovation of housing facilities has been going on more rapidly in Astana and Almaty, in Atyrau and Mangistau oblasts, but it is slower in other regions, which with the time may deepen regional disparities in qualitative characteristics of housing (and degree of deterioration of housing, level of its comfortability, state of engineering infrastructure, quality of communal services).

4. **What are future prospects of regional differences in Kazakhstan?**

Considering the new reality of Kazakhstan, in which the future policy of economic development is dictated by low prices in the world commodity markets, the importance of previous drivers for economic growth in the regions has been disappearing. Oil extracting regions of Kazakhstan can not, as it was in previous decades, accelerate the pace of real salaries and other factor incomes, as well as enhance its production and social infrastructure, which may lead to gradual decline of the differentiation of salaries. In turn, regions with growing economic capacity, such as Almaty oblast, can increase its income and consumption rates of the population through the diversification of the production and development of services industry, and also improve infrastructure development rates (also via the agglomeration effect of proximity to the city of Almaty, which acts as the "growth pole").

5. **What are conditions for the emergence, enforcement and preservation of regional differences?**

Regional differences in Kazakhstan emerged due to the historically formed structure of regional production, the specialization of regions has been even in the Soviet period and was mainly focused on extracting industry and low processing manufacturing industry, as well as on the development of areas serving the internal consumption (electrical energy industry, water supply, agriculture, non-deep processing of agricultural products). Disparities can be caused by characteristics of demographic reproduction of a region (gender and age structure of the population, level of demographic pressure, coefficient of replacement of working population, life expectancy, etc.), level of production concentration and density of the population in the territory of a region. Differences can be also explained by the proximity to certain "growth poles" (to intensively developing industrial centers, capital cities), proximity to countries – potential trade, business partners and potential investors (for example, border areas with China, Russia), proximity to sales market, their size, presence of transport routes (for instance, the transport corridor "Western Europe-Western China") and transport hubs of strategic importance. In addition, regional disparities can be influenced by various production and social infrastructure. In the employment structure (sectoral employment structure, correlation between productive forms of employment and non-productive employment, share of low-productive informal employment), regional differences can result from the difference in the production capacity of regions, as well as multistructurality of economic system of a region (coexistence of traditionally formed extensive productions and relatively new fields of the

industry and service sphere, requiring developed skills and competences). The gap between regions in the level of human capital: more advanced skills and competences and high competition of working force in the industrially developed regions and capital cities, low level of skills and professional competences in rural and some distant from educational centers areas.

In case of absence of a policy of regional development alignment, regional differences can be cemented and preserved. The balancing policy was conducted in Kazakhstan through the inter-budgetary distribution (allocation of grants for regions-recipients at the expense of higher tax pressure and budget withdrawals from regions-donors). Moreover differences at the level of infrastructure development were decreasing due to financing from the republican budget of the development support programs for different territories, monotowns, construction of affordable housing, modernization of engineering networks, development of transport routes.

6. Are there any special types (signs) of regional differences in the sphere of human development, which require special attention? Which types of regional differences aggravate inequality in Kazakhstan?

Regional disparities in education, in particular between vocational and pre-school education, can further deepen the problem of inequality. It is necessary to specially pay attention to the programs for the development of functional literacy, business training programs and legal bases in the sphere of entrepreneurship regulation, development of free initial and higher vocational education (high schools, colleges, vocational courses), education on the base of industrial enterprises in order to increase access to working professions and develop entrepreneurial skills.

Regional differences in the employment structure, presence of regions with the high share of self-employment, which is partially carried out in the informal sector and very often has low productivity. There is a need to increase labor productivity of self-employed in these regions through the stimulation of their entrepreneurial initiatives, to support them via microcrediting programs and leasing of necessary production machinery, purchasing of technological lines, increase of cattle population in order to improve quality characteristics of the production. Or there is support through the development of auxiliary industries (for example, for livestock breeders – the establishment of feed-preparing companies, storages, warehouses, agricultural products, development of veterinary support, selection facilities, etc.)

7. What are the factors, which help to overcome regional differences?

This is, firstly, the state policy for redistribution of income between regions and inside regions through interbudgetary relations, tax system, social security system (assistance to socially vulnerable sections of the population through money transfers, social assistance and various preferences).

The degree of the development of local government bodies, level of professional competence of local executive bodies in addressing the issues of the communal sphere of cities, villages in the territory of a region, engineering infrastructure and communications, in the implementation of development

strategies of territories, in the implementation of measures, increasing investment attractiveness of a region and promotion of its production potential.

Programs for the development of vocational and technical education for socially vulnerable segments of the population, efficiency enhancement of programs for retraining and qualification improvement and other forms of assistance to the population employment in the regions, having poor education, they also can help to tackle regional disparities.

Main focus – determination of a special role of regional differences in the human development and dealing with inequality.

1. **How the determined models of regional differences impact the policy of Kazakhstan for achieving higher levels of human development and promotion of equality?**

The model of regional disparities, demonstrating the difference between regions in terms of the potential of receiving income, employment structure, housing, provision of education and medical services, and also production capacity and investment attractiveness, shows the following channels of influence on the policy of Kazakhstan towards achieving higher levels of human development and promotion of equality:

For regions of South and North Kazakhstan, mainly specializing in agriculture, it is necessary to strengthen competitiveness and efficiency of agro-industry and other areas, which have comparative advantages. In addition to infrastructure projects, implemented by the state within the "Nurly Zhol" program, there is a need to further support in these regions the policy of the production diversification, innovation promotion in promising sectors, also through the "Business Road Map 2020";

The analysis of differences between the level of income and money transfers, adjusted to the cost of life (in 2004 and in 2014 the differences between maximum and minimum value were 1.5 times and 1.4 times correspondingly), illustrates 2 times difference between regions in terms of the average per capita income and 1.4 times difference with regard to the level of pensions. The Kazakhstan's policy on achieving higher levels of human development and promotion of equality should consider these distinctions in the next context: taking into account different cost of living in regions, it is necessary to index transfers in the differentiated manner. In Mangistau oblast in 2014 the cost of minimum consumer basket (subsistence level) was 1.4 higher than in Zhambyl oblast.

If adjusting the level of average pension in these regions to subsistence level, then it turns out that in Mangistau oblast retired persons in average only receive 1.6 out of the subsistence level, in Zhambyl oblast – 1.9, and despite the fact that the nominal pension in Mangistau oblast is higher (36,000 tenge against 31,000 tenge), its real size with the consideration of prices is lower than in Zhambyl oblast. In 2007 the size of pensions in Mangistau oblast was 0.9 of the subsistence level, thus it was lower than the cost of minimum food basket. By 2014 the situation has improved, however, it would be fair to index social transfers, including pensions, benefits, student grants, by introducing correction regional coefficients with the consideration of the difference in cost of minimum consumer basket in each basket. In this case, socially vulnerable sections of the population, receiving social benefits (pensioners, disabled persons, families with many children, students, single mothers) managed to compensate losses of regional differences in cost of

living. This measure would also increase effectiveness of the state social policy for leveling regional differentiation of incomes in part of social transfers.

The differences identified between quantitative and qualitative indicators of the provision of housing for the population in regions evidence the importance of policies for the construction of affordable housing in regions (except Astana and Almaty, Atyrau and Mangistau oblasts, where the construction is more intensive) and significant role of modernization projects for housing and communal engineering networks. In the framework of the promotion of injections of the state and international organizations to infrastructure projects, there is a necessity to pay attention to the increase of investment activeness in the construction of new housing in regions and modernization of housing sector in regions, improvement and advancement of living conditions (gasification, quality water provision, energy-saving technologies for heating and electrification, etc.). Besides that it is necessary to expand instruments of concessional housing lending for people, who need their own houses or advancement of living conditions.

There are also disparities in the sphere of affordability and provision of vocational education for youth in regions, which also should be taken into consideration during the formulation of a new development policy for free vocational and technical education, providing more state grants for youth from regions with low rates of education provision and low prospect of future employment.

While addressing environmental problems, the difference of regional policies is that each type of settlement and district in a region can have its own special, specific environmental challenges. For instance, large cities face the problem of air pollution, water contamination caused by transport, coal thermal power stations, industrial enterprises and it is required to tackle challenges by “targeted” measures: ban on the use of automobile fuel, not corresponding to EURO-4 standards, transition to gas, as a more environmentally friendly fuel for the development of electric and heat energy for city transport as well. In industrially-developed regions, there are safety matters relating storage and secondary use of production waste (for instance, sulphur wastes in areas of Western Kazakhstan, where oil extracting deposits are located). Without dealing with these issues through the regional policy measures, it is difficult to address challenges related to the growth of somatic diseases among the population, the most frequently caused by ecological factors.

2. What are specific examples (cases) of regional disparities causing social, economic and environmental inequality?

Social inequality is firstly caused by regional disparities in income level, social transfers inclusive of differentiation of cost of living:

1) Poverty and low income level, causing poor investments to human assets (to resume education for children, healthcare services, organize leisure time and develop sports) are the most spread among rural population. Low income in

their turn is related to low labor productivity in Kazakh agriculture (however labor productivity in grain producing regions in North Kazakhstan is higher than in vegetables and industrial crops specializing regions of South Kazakhstan). Measures on increasing labor productivity in agriculture, on increasing mechanization and automation of industries, concentration of efforts of separated industries to solve common problems (development of rural cooperation forms) are needed. It is also important to develop the infrastructure maintaining preservation of yield among arable farms and preservation of the productive herd among livestock farms. This could include measures on construction of new and modernization of old feed stockpiling bases and overhaul parks for agricultural machinery, granaries, forage warehouses, mini-factories and mini-facilities for refining agricultural products (windmills, bakeries, dairy plants, sausage making shops, vegetables processing facilities). Moreover, rural dwellers face inequality of opportunities because of low accessibility of financial services, including microcredits, financial leasing caused by insufficiency of present collateralized property or by difficulties in confirmation of earnings and lack of guarantees.

2) Regional disparities in cost of living and cost of housing also create social disparity on accessibility indexes and level of housing amenities for various layers of population:

- income level of significant number of population, in those regions where cost of living and cost of housing are relatively higher, complicates access to owner-occupied dwelling-house and puts high load on their expenditures budget for their housing rent;
- low income level In some regions and corresponding unfavorable underwriting of the majority of population in region decreases interest of private investors in allocating funds to projects on construction and modernization of housings in regions, which in its turn aggravates the problem of deterioration of housing and utility networks in the region.

3) Regional disparities in accessibility and quality of medical services, which depends on development level of social infrastructure in regions (hospitals, clinics, ambulatories) and on number and level of qualified healthcare professionals (doctors, paramedical staff) also increases inequality of opportunities in receiving healthcare services within regions (between cities and rural area) as well as between regions.

Economic disparity is rather connected with regional disparities in the level if economic potential composed of industrial potential, potential of wealth and services market development and investment climate in a region. Economic inequality is caused by both uneven development level of producing structure in regions of Kazakhstan and traditional economic system of the regions with different industrial composition and related specialization.

Moreover, **economic disparity in the regions is related to different development levels of transport infrastructure.** There are regions connected with other regions of the country and connected with other countries (boundary regions of Kazakhstan) by railroads, motorways, pipelines, gas pipelines and having high transit capital and lower transport expenditures (by time and cost of

transportations). At the same time some regions of Kazakhstan and remote areas within them are distant from main transport routes, consequently they suffer from high expenditures arising from transportation of cargo and passengers both ways (due to low reward from the economy of scale). Such regions lose their competitive advantages due to high pressure on cost of revenue of produced goods of transport expenditures; moreover, imported goods from other regions of Kazakhstan gain extra upcharge which reflects on comparative growth of cost of living in the region. In conditions of extreme continental climate in the most of the territory of Kazakhstan also due to weather conditions transportation of goods and passengers may worsen, which will lead to deterioration of stability of supplies of goods and resources produced in the regions, which are necessary for essential services and economic activities of the regions. In order to stabilize economic opportunities in the regions it is important to improve quality of regional characteristics and their quantity by means of motorways, railways and provide development of road infrastructure which will provide steadiness of communication by roads (snow barriers, afforestation across roadways, and provision of the machinery for road clearance in line with security and illumination systems).

Distribution of **environmental disparity** is connected with examples of regional disparities:

- access to high quality drinking water: there are regions in Kazakhstan where population (especially in rural areas) is poorly provided with water (imported water, low quality indicators of water, pollution of water sources). Along with that there are problems related to arable farming in some rural areas caused by lack of irrigation water.

- pollution of environment by solid, liquid, gas wastes (from household garbage to industrial emissions), virtual absence of waste management. This leads to inequality of living conditions in regions with a pollution exceeding the MAC.

3. What kinds of inequalities are most influenced by regional disparities?

Regional disparities mostly influence such economic inequalities as inequality of opportunities, because its presence exacerbates other types of inequality – social and environmental inequality, which mostly act as inequality of results. Thus regional disparities (level of transport expenditures caused by different development of transport infrastructure, difference in level of qualification of labor resources, presence and scale level of development of engineering networks and communications) causing economic inequality also leading to deepening of social inequality due to difference in potential of regions in providing factor incomes as well (remuneration of labor, revenues from real estate, income) and in provision of local budget with taxes for economic activity. Environmental inequality could be decreased by nature oriented undertakings, which in its turn depends on level of economic potential of a region.

4. **What are specific examples (cases) of regional disparities impeding human development in Kazakhstan?**

Regional disparities impeding human development in Kazakhstan first of all are differences in level and quality of life of rural and city population. Despite the fact that the process of immigration from rural areas to cities is taking place, the share of rural population of Kazakhstan still remain relatively high (43%) in certain regions particularly (Almaty oblast 77%, the SKO, NKO – 60% of population lives in villages). Unproductive labor mostly in the form of self-employment is distributed specifically among rural population, where employment is presented in informal sector. Rural population in all regions has significantly lower incomes than city population. Furthermore, social infrastructure and service sector in rural area are developed less than in cities. That is the reason why the issue of coverage by high quality healthcare services is extremely topical in rural areas of several regions (partial solutions may include onsite medical trains and bodies of specialists to certain remote areas in accordance with "Salamatty Kazakhstan" program). Moreover, rural youth face the problem of professional education coverage since secondary schools are common in rural areas, while colleges or vocational schools are relatively small in number there. This leads to low level of professional skills among rural youth and cause employment problems in a perspective.

5. **Which institutional and political structures facilitate the decrease of regional disparities?**

Institutional structures, which deal with increase of welfare of population of a region and decrease the gap between region in socio-economic development at local level, are local executive bodies (offices of akim, regional branches of various departmental structures), bodies of local legislative authority (maslikhats), regional branches of development institutions ("Damu" Fund, National Chamber of Entrepreneurs), socio-entrepreneurial corporations (SEC), regional network of financial institutions (banks, insurance companies, micro-financing organizations) as well as various non-governmental organizations (NGOs) dealing with issues of social development of regions and environmental problems. Along with that the role of businesses is significant – leadership and top management of backbone enterprises as well as major regional investors. International organizations which partially or fully financing and facilitating decreases of regional disparities and their adverse effect on inequality of opportunities also play special role in implementation of infrastructural projects and projects on intergovernmental integration.

Political structures contributing to decrease of regional disparities are regional branches of political parties (Nur Otan), which initiate multifarious proposals on improving living conditions of populations in regions or eliminating certain barriers impeding development of regions to the parliament of the country or local maslikhats. Moreover there are various social movements which organize events on improving regional infrastructure and provision of public amenities ("Zhasyl

El”) or environmental projects or projects on preservation of historic heritages and on development of ethno-tourism.

Annex A.

Literature review.

Equity and Development. World Bank Report 2006 (World Bank, 2006). Authors of the 2006 "Inequality and development" report of the World Bank assert that more uniform distribution of revenues in the country does not impede sustainable growth but facilitate it. The point is that there are two types of inequality which should be distinguished: **inequality of results** and **inequality of opportunities.** Notwithstanding conventional wisdom about redistribution policy is a burden of business sector which in its turn decrease incentives for effective labor, and as a result decrease the pace of economic growth; as the report says "under initially unequal opportunities huge reserves of human capital remain unused," consequently halting development. Balancing initial conditions – firstly through improve access of high quality education and healthcare – the most important resource for economic development.

Daron Acemoglu & James Robinson. Why Nations Fail (Crown Publishing, 2012). The key factors of sustainable growth, according to authors, are economic and political institutions – "rules of game" by which people and organizations cooperate. Authors differentiate two types of institutions: extractive institutions and inclusive institutions. The first type concentrates political power in hands of narrow group – the elite; the second type distributes political power among various organizations and individuals. The former institutions allow the elite to redistribute wealth in their own favor and limit the influence of people to policies under implementation. The later institutions make the elite more accountable to the needs of common people and create incentives for entrepreneurship and trade. Countries following the path of evolution of institutions from the first type to the second one earlier than others, along with being the wealthiest countries are enjoying more smooth distribution of incomes among their citizens.

U. T. Aliyev. Economic growth, living standard and inequality in oil-producing countries of the former Soviet Union countries// Living standards of population of regions of Russia – 2014. - No 2 (192) – c. 97-108.

The author suggests that special attention must be paid to such forms of inequality which arise from structural shifts in economies of oil-producing countries. Rent incomes in developing countries with underdeveloped institutions could cause various types of inequality: 1) global inequality (such countries as Qatar, Kuwait, Brunei and other countries receiving huge incomes from export of oil while having small population, which lead to record-breaking incomes per capita); 2) vertical inequality (when small groups control resource rent and gain a lion's share of income); 3) **horizontal inequality** (when rich for natural resources regions within the country receive the majority of income and develop, and remaining regions having no access to resource rent are left behind); 4) gender inequality (there are data on gender inequality related to horizontal inequality); 5) inequalities arising from structural shifts in economy and employment (incomes of workers in fuel and energy complex and banking and financial field are significantly higher than incomes of the majority of population working in other

fields) ; 6) inequality between cities and rural households (resource rent of a lot of developing countries is concentrated in hands of central government in capitals and does not reach remote areas). The majority of oil exporting countries face the outflow of a pert of revenue from the country, consequently population of a country does not enjoy all advantages from export of resources (according to preliminary statistics of Statistical Review of World Energy 2013 Kazakhstan faced the outflow of 1942 USD on the PPP per capita).

Results of economic growth in the country and growth of revenue from export of resources do not always convert to growth of quality and living standard of citizens.

The Gini ratio in Azerbaijan and Russia is counted by financial incomes of a population, while in Kazakhstan it is counted by consumption. The Gini ratio on consumption, reflecting inequality, to some extent is lower than inequality in financial incomes. This suggestion is supported by findings in the article called "Forecasting inequality in population income in Kazakhstan" (authors: B. Mukhamadiyev, C. Kunitsa, T. Kudasheva //Kazakh economic herald. – 2013. - No2-3 – c 2-14), where by assistance of the methodology, developed by I. Kolmakov, authors had got the assessment of recount of the Gini ratio on financial incomes of population in Kazakhstan, which equals 43.31 (2009) and 44.20 (2012). One of the reasons of this significant difference in inequality indexes in Kazakhstan, which were assessed by financial incomes and consumption, is that differentiation in financial incomes of population is always higher than differentiation in consumption. This is connected with the fact that financial incomes include finances going to savings, which practically absent among poor population, but significantly high among wealthier population.

The article called "Assessment of dimensional inequality in Kazakhstan arising from oil revenues" authors of which are Svetlana Kunitsa and Tatyana Kudasheva (//Kazakh economic herald – 2014 - No1-2 – p 2-15) for the purpose of assessment of territorial (dimensional) disparities suggest to use the new ratio – regional disparities ratio (Kr). Regional disparities ratio shows average share of population which redistribute other income-bearing quintile groups only due to presence of regional disparities in cost of living. For example, during distribution of incomes part of a population could appear in a higher quintile (decile), however, considering high cost of living in a region, after corrections on minimum wage, these people could appear in a lower income quintile (decile). From the other side, individuals having low income and living in a region with low cost of living could move from low income quintiles (deciles) to high income quintiles (deciles). Using regional disparities ratio it is possible to assess influence of different costs of living in regions to changes in distribution of individuals by quintile (decile) income groups. Regional disparities ratio may change from zero (absence of regional disparities) to 100 (total regional disparity). According to estimates of authors, made on the basis of research materials of 12000 households of the Statistics Agency of Kazakhstan the regional disparities ration (Kr) comprised 21.9% in 2009.

Problems of regional disparity and territorial (dimensional) inequality assessment and in Russia, Kazakhstan and other CIS countries are considered in **works of Natalya Zubarevich** (articles called “Development and inequality: dimensional point of view” - http://www.intelros.ru/pdf/repnoe/2015/3.pdf, “Inequality of population incomes: dimensional projection”// Pro et Contra magazine - 2013.- No6. - c.48-60). The articles provide the results of socio-economic inequality analysis using adjusted Gini ratio, corrected on number of a population in a region. Based on this index the author makes a conclusion that economic disparity between regions in Kazakhstan is higher than in Russia and Ukraine. Process of easing differentiation of regions on incomes per capita in Kazakhstan, according to Zubaravich, started in the second half on 2000s, however it had gradually halted. The author explained such situation by less extensive redistribution policy than in Russia and Ukraine and concentration of high paying jobs in the new capital and oil producing regions of West Kazakhstan as well as on the other side – low living standards of rural areas, which dominate in regions of South Kazakhstan.

“Diversification of the economy of Kazakhstan based on potential opportunities” research was undertaken by Whiteshield Partners – consulting company on strategies and governmental policies – financed by the EBRD Shareholder Special Fund jointly with the Government of Kazakhstan.

The research, in order to assess capability of regions in building economy of knowledge, opportunities to diversify their production based on data about structure of export in regions of Kazakhstan, provide Regional Capability Index, RCI, which include such indexes as complexity of regional economy economy, diversification and industrialization.

Basic results: Kazakhstan is lagging behind other regional competitors economic complexity index (ECI) and opportunity value (OV). Improvement of positions is possible during big diversification of economy.

Economy of Kazakhstan is characterized by low ECI and OV. During the last decade the ECI have been fluctuating and remaining in a sufficiently low level. The same trend is observed in regional level.

Almaty and Karaganda oblasts, Almaty and Astana cities are leading regions in producing compound products. Developing regions (e.g. Akmola and Zhambyl oblasts) has a potential to improve their positions in the rating. Producing regions (WKO, Aktobe, Mangistau and Kyzylorda oblasts) are rounding the rating out.

Comparisons of regions: comparative advantages in industrial sectors and peculiar barriers were identified for three pairs of regions – Almaty and South Kazakhstan oblasts, Karaganda and Pavlodar oblasts, Atyrau and West Kazakhstan oblasts.

1. Almaty and South Kazakhstan oblasts – the regions with densest population and different dynamics of Regional Capability Index: Almaty oblast is leading, while South Kazakhstan oblast is losing its positions.

2. Karaganda and Pavlodar oblasts – two largest industrial regions of Kazakhstan with stagnating Regional Capability Index and lack of positive dynamics in sector of economy of knowledge.
3. Atyrau and West Kazakhstan oblasts – two important producing regions with varying dynamics: Atyrau oblast attracts more investments and develops service sector, while West Kazakhstan oblast loose its comparative advantages.

Results of the research provide recommendations for regional policy in the form of matrix of key political measures and the map of priority cities. Three regional policy strategies were highlighted, namely –“Rescue”, “Leverage” и “Innovation” for various groups of regions based on Regional Capability Index statically and dynamically. Examples of horizontal and vertical measures were provided for every strategy. Five cities, priority support of which could strengthen positive effect on transferring knowledge were recommended

This method involves the derivation of regional estimates by values of each of the indicators characterizing various aspects of the socio-economic situation of population, households, as well as the indicators of the regional infrastructure development.

It is understood that the vast majority of the selected indicators has a definite, positive or negative interpretation, ie, higher numerical index value indicates a qualitative increment (positive or negative) of the characteristic of a particular aspect of the socio-economic situation of the population in a region.

Indicators that do not have in this sense a definite interpretation, but which are necessary for calculations or illustrative in nature (for example, the territory of the region) are attributed zero scoring values or they are omitted entirely. Indicators that have a negative value, for example, “annual crime rate” can be given negative scoring values, neutral indicators can be attributed zero values.

The scale of ranges of real values for each of the indicators for all regions is based to obtain scoring values. Ranges are determined based on the difference between the minimum and maximum values for each indicator.

Ranges are divided into 10 equal intervals where each interval corresponds to a certain number of scores equal to the interval number (from 1 to 10.)

The sum of scoring values for all indicators in a region, derived in accordance with the 10-point grading scale, represents the well-being index of households in a region. Indices for individual groups or sets of indicators can be developed for a more precise evaluation of certain aspects of the regional situation.

The socio-economic situation in a region Rn to assess regional disparities will be characterized, thus, by composite index, which represents the sum of scoring values of the set of indicators:

$$Ind_{Rn} = \sum_{i=1}^{I} M(i) \qquad (1),$$

where i – index, I – the number of indicators in the set, M – the scoring value, corresponding to the value of the i-th index. [6]

[6] M. Lyamina Modelling of the system of regional scores in the field of mortgage lending based on the index method of combining diverse indicators (Лямина М.А. Моделирование системы балльных оценок региона в области ипотечного кредитования на основе индексного метода объединения разномерных

The ratio of limit (minimum and maximum) values of regional indices is considered as a coefficient of regional differentiation.

$$K_{dif} = Ind_{R\min} / Ind_{R\max} \qquad (2),$$

The composite index allows to characterize the socio-economic situation of individual regions on a range of indicators that have different measurements and conduct inter-regional comparisons of a variety of aspects that make up the well-being of the regional population of Kazakhstan.

Depending on the nature of research, some indicators being in these cases the most important, can be attributed increasing weighting factors. In our case, in order to simplify the analysis, weighting factors equal for all (= 1) were used for all indicators. If a researcher finds the aspects of regional development significant for the analysis, a greater importance can be given to indicators characterizing these aspects. For example, if a researcher wants to focus on the development of social infrastructure in a region, indicators characterizing social infrastructure or the level of coverage of the regional population by this infrastructure, are assigned values greater than 1.

The choice of indicators for the regional well-being index is explained by the following reasons:

1. GDP per capita and investments in fixed assets by region – these indicators assess economic potential of regions and compare regions in combination with other indicators by criteria of effectiveness of regional production and investment attractiveness;

2. The unemployment rate as a percentage of the economically active population (EAP) and the share of self-employed workers in the economically active population structure can give an assessment to the development of the labor market in regions. Since the unemployment rate does not reflect the situation with unproductive employment in the form of a substantial proportion of self-employed workers mainly in the informal sector of the economy, the second indicator provides an additional assessment of effectiveness of the labor market in a region.

3. The ratio of per capita nominal income to the subsistence minimum, per capita cash expenditure of households, average monthly salary in tenge, ratio of

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показателей) / 8th International Scientific-Technical Conference Artificial Intelligence. Intelligent Systems (AI-2007). - Donetsk: IAI Nauka i osvita, 2007.- p. 333-335.

average pension in a region to the subsistence minimum – these four indicators give an idea about inter-regional differences in the level of income, transfers and public consumption.

4. Gini coefficient and assets ratio make it possible to include criteria of unequal intraregional income distribution among the population in a regions in the overall analysis of the well-being of regions.

5. The share of the poor with per capita income below the subsistence minimum allows to consider in a comprehensive assessment of a region the poverty incidence among its inhabitants.

6. Average housing provision (sq m of total area per person) – this figure makes it possible to quantify the affordability of housing in regions, although it can not give a qualitative description of this property, the degree of improvement and deterioration.

7. Retail sales per capita in tenge, the total amount of services per capita show the degree of development of the consumer goods and services market in regions

8. The number of physicians per 10,000 persons, nurses per 10,000 persons, hospital beds per 10,000 persons – these components can assess the development of social infrastructure in a region and the provision of socially significant services, in this case medical services.

9. The total share of enrollment of the population aged 6-24 in % incorporates not only secondary education coverage, but also secondary vocational schools (colleges, vocational schools) and higher education. Given the fact that nearly 100 percent of the population aged 6-15 is covered by incomplete secondary education, we can say that the differentiation of the indicator used by me is achieved through different coverage in regions by professional education, thus, regional figures varied from 61 to 98 percent in 2014. These differences in enrollment result in unequal conditions for the reproduction of the human capital in a region, leading to a deterioration of growth rates of labor force's skills in regions with low enrollment. In turn, these effects exacerbate the inequality of results (by income - less educated people receive low incomes), and opportunities (people with poor professional education have fewer competitive advantages in the labor market and, accordingly, they have limited employment opportunities.)

10. Provision of places (children per 100 places) in permanent pre-school institutions is an important addition to a comprehensive regional analysis, as experts from international organizations (OECD, the World Bank, UNDP)

emphasize the importance of early childhood education for the further development of human capital in a country. And early learning efficiency is reduced due to overcrowded pre-school institutions, therefore minimal values are attributed higher scores.

11. Emissions of air pollutants from stationary sources (per capita in kg) are an indicator of the environmental situation and impact on human life, the "payment" for the development of regional industry. The lower the emissions, the higher the scoring for a region. Per capita pollution by solid waste and soil (earth) industrial waste pollution, pollution of regional waters by household and industrial wastes, land degradation would also give a more complete picture.

Appendix C -1.

Table – Calculation of index ratings of regions based on 20 selection indicators.

№	*Name of the indicator*	*Base year for calculation of the index*	*Assigned ratings on the range-based indicators*									
			1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***
1	GRP per capita	2007	250-500	501-750	751-1000	1001-1250	1251-1500	1501-1750	1751-2000	2001-2250	2251-2500	more than 2500
		2014	700-1400	1401-2100	2101-2800	2801-3500	3501-4200	4201-4900	4901-5600	5601-6300	6301-7000	more than 7001
2	Fixed investments, millions KZT	2007, 2014	up to 50000	50001-150000	150001-250000	250001-350000	350001-450000	450001-550000	550001-650000	650001-750000	750001-850000	more than 850001
3	Unemployment rate	2007, 2014	more than 9 %	8.1-9%	7.1-8%	6.1-7%	5.1-6%	4.1-5%	3.1-4%	2.1-3%	2	less than 1%
4	The share of workers who are self-employed in EAP (Economically Active Population) statistics	2007, 2014	more than 60%	48.1%-60%	42.1-48%	36.1-42%	30.1%-36%	24.1%-30%	18.1-24%	12.1-18%	6.1-12%	up to 6%
5	Ratio of average per capita income to the subsistence minimum, times	2007, 2014	less than 2	2.0-2.5	2.6-3.0	3.1-3.5	3.6- 4.0	4.1- 4.5	4.6-5.0	5.1-5.5	5.6-6.0	more than 6
6	Households monetary expenditures per capita, KZT (per month)	2007, 2014	less than 10000	10001-15000	15001-20000	20001-25000	25001-30000	30001–35000	35001-40000	40001-45000	45001-50000	more than 50000
7	Average monthly wages , KZT	2007, 2014	less than 20000	20000-39999	40000-59999	60000 – 79999	80000-99999	100000-119999	120000-139999	140000-159999	160000-179999	more than 180000
8	Minimum old-age pension to minimum subsistence level ratio, times	2007, 2014	0.9-1.1	1.2-1.4	1.5-1.7	1.8-2.0	2.1–2.3	2.4-2.7	2.8-3.0	3.1-3.3	3.4-3.6	more than 3.6
9	The Gini index	2007, 2014	more than 0.390	0.361-0.390	0.331-0.360	0.301-0.330	0.271-0.300	0.241-0.270	0.211-0.240	0.181-0.210	0.151 - 0.180	less than 0.150

10	Assets ratio	2007, 2014	more than 10.1	9.1-10.0	8.1-9.0	7.1-8.0	6.1-7.0	5.1-6.0	4.1-5.0	3.1-4.0	2.1-3.0	less than 2
11	The percentage of the poor population with income below the subsistence minimum	2007, 2014	more than 21.1	18.0-21.0	15.1-18.0	12.1-15.0	9.1-12.0	7.1-9.0	5.1-7.0	3.1-5.0	1.1-3.0	less than 1
12	Average amount of living space per person, in square metres	2007, 2014	less than 15.0	15.1-16.5	16.6-18.0	18.1-19.5	19.6-21.0	21.1-22.5	22.6-24.0	24.1-25.5	25.6-27.0	more than 27

№	*Name of the indicator*	*Base year for calculation of the index*	*Assigned ratings on the range-based indicators*									
			1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
13	Retail trade turnover per capita, KZT	2007, 2014	less than 50000	50001-125000	125001-200000	200001-275000	275001-300000	300001-375000	375001-450000	450001-525000	525001-600000	more than 600001
14	The total volume of services per capita	2007, 2014	less than 50000	50001-150000	150001-250000	250001-350000	350001-450000	450001-550000	550001-650000	650001-750000	750001-850000	more than 850001
15	Number of active physicians per 10,000 population	2007, 2014	less than 25	25.1-30	30.1-35	35.1-40	40.1-45	45.1-50	50.1-55	55.1-60	60.1-65	more than 65.1
16	Number of paramedical personnel. per 10 000 population	2007, 2014	less than 60	60.1-65	65.1-70	70.1-75	75.1-80	80.1-85	85.1-90	90.1-95	95.1-100	more than 100
17	Number of hospital beds per 10 000 population	2007, 2014	less than 50	50.1-55	55.1-60	60.1-65	65.1-70	70.1-75	75.1-80	80.1-85	85-90	more than 90
18	Share of the provision of education for population aged 6-24 years old, %	2007, 2014	less than 65	65.1-70	70.1 -75	75.1-80	80.1-85	85.1-90	90.1-95	95.1-100	100.1-105	more than 105
19	The provision of preschool child care facilities (for every 100 places)	2007, 2014	more than 125	120.1-125	115.1-120	110.1-115	105.1-110	100.1-105	95.1-100	90.1-95	85.1-90	less than 85%
20	Air pollutant emissions from stationary sources, kg	2007, 2014	more than 425	375.1-425	325.1-375	275.1-325	225.1-275	175.1-225	125.1-175	75.1-125	25.1-75	less than 25

Table – Performance of certain regions based on 20 selection indicators in 2007

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Akmola oblast	406.3	103 071	8.0	40.2	2.2	14 516	36540	1.1	0.338	9.4	16.6	18.9	67 980	28077	30.7	92	98.5	71.1	93.2	105
Aktobe oblast	678.9	225 176	7.4	34.3	2.5	16 868	50271	1.0	0.342	8.6	10.3	17	141 845	57354	48.7	82.6	75.8	81.4	106.1	292
Almaty oblast	550.7	142 636	6.7	40.4	1.8	13 518	39483	1.0	0.297	6.8	18.1	15.5	31 562	22677	24.6	58.1	52.8	61.7	101.7	38
Atyrau oblast	1234.0	764 403	7.4	16.4	4.5	15 749	94373	0.9	0.235	4.9	13.0	16.3	100 936	316611	31.7	78.8	73.5	79.8	110.3	222
West Kazakhstan oblast	617.7	186 264	7.8	37.2	2.6	13 593	50242	1.1	0.286	5.8	10.3	16.5	112 376	78574	33	99.9	81.1	72.5	100.2	77
Zhambyl oblast	266.5	29 940	7.7	46.9	2.0	12 608	33996	1.1	0.251	5.1	9.9	15.5	43 429	15019	28.7	87.5	65.4	72.4	116.3	21
Karaganda oblast	1144.3	151 887	6.7	23.7	2.6	17 218	44236	1.2	0.307	7.0	8.5	21.1	148 197	35182	45.3	94.7	101.1	77.6	103.1	944
Kostanai oblast	560.4	96 419	7.5	39.3	2.6	14 615	37584	1.2	0.310	6.9	10.4	19.4	69 021	30093	25.4	78.7	80	78.2	106.6	129
Kyzylorda oblast	499.6	102 934	8.2	40.0	2.0	11 156	46859	1.1	0.278	5.8	24.6	16.9	46 762	52545	36.4	117.6	95.8	71.2	82.2	58
Mangystau oblast	756.6	251 416	8.5	6.0	3.7	15 377	82055	0.9	0.251	5.0	26.9	15.4	78 720	187296	36.3	88.1	68.8	73.3	106.9	163
South Kazakhstan oblast	611.8	127 175	6.9	46.1	1.6	11 201	36707	1.1	0.240	4.6	14.3	17.7	37 058	16852	29.1	74.2	57.4	85.2	119.4	17
Pavlodar oblast	592.0	129 981	6.9	22.6	2.6	16 897	42297	1.2	0.287	6.7	8.3	19	103 875	35904	37.9	86.1	89.4	77.3	104.7	772
North Kazakhstan oblast	320.4	37 287	6.9	40.2	2.2	13 064	34522	1.2	0.284	6.2	16.0	19.4	65 465	21076	24.3	86.6	86.9	65.4	97.9	105
East Kazakhstan oblast	800.5	126 537	6.6	32.0	2.5	15 541	42137	1.3	0.308	7.1	9.8	18.4	128 958	39128	40.7	88.5	85.8	76.9	104.5	117
Astana	1134.2	424 245	7.6	7.8	4.2	30 984	79210	1.1	0.326	7.5	3.2	18.2	271 168	334185	72.1	84	68.7	88.4	153.1	76
Almaty	2675.9	492 751	7.8	6.5	4.2	23 195	78021	1.0	0.308	6.8	8.5	19.1	670 274	394877	76	88.9	85.6	134.5	112.8	12
maximum	2675.9	764403,0	8.5	46.9	4.5	30984.0	94373	1.3	0.342	9.4	26.9	21.1	670274	394877	76.0	117.6	101.1	134.5	153.1	944

minimum	266.5	29940,0	6.6	6.0	1.6	11156.0	33996	0.9	0.235	4.6	3.2	15.4	31562	15019	24.3	58.1	52.8	61.7	82.2	12
Disparity between maximum and minimum values, times	10.0	25.5	1.3	7.76	2.7	2.8	2.8	1.4	1.5	2.0	8.4	1.4	21.2	26	3.1	2.0	1.9	2.2	1.9	79

Table 1.1 – Performance of certain regions based on 20 selection indicators in 2007

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Akmola oblast	1061.0	141 716	4.9	36.8	2.9	36 059	85412	1.9	0.277	5.6	2.9	21.6	246 920	87137	30.2	92.8	59.6	71.5	98.4	114.9
Aktobe oblast	1849.1	496 248	4.9	20.4	3.5	37 691	106265	2.0	0.261	5.3	1.8	20.8	529 171	119945	45	84.4	54.9	72.3	117.6	149.3
Almaty oblast	1824.0	431 364	4.9	32.8	2.4	40 457	89283	1.6	0.247	4.8	2.5	17.6	172 802	64720	22.3	61.4	45	61.8	98.6	27.1
Atyrau oblast	4023.4	1 038 438	5.0	11.4	6.6	33 959	221664	1.8	0.213	3.7	2.8	20	321 870	730376	29.1	83.8	57	71.4	122.1	189.8
West Kazakhstan oblast	1907.8	193 869	5.0	36.0	3.7	32 130	108223	2.0	0.267	5.2	2.9	19.5	321 843	148093	30.6	102	68.4	79.7	98.1	71.3
Zhambyl oblast	988.3	248 842	4.9	45.7	2.3	28 456	81874	1.9	0.225	3.9	3.1	15.9	167 428	40270	27.2	93.9	65.5	71.1	101.3	35
Karaganda oblast	2968.5	405 015	4.9	13.7	3.8	44 999	107821	2.2	0.287	6.2	1.4	22.6	408 672	126791	46.2	99.3	74.7	75	103.1	439.3
Kostanai oblast	1356.5	180 419	5.0	33.3	2.9	35 383	90602	2.0	0.269	5.4	2.5	21.9	259 160	72989	26.1	80.8	69.5	66.9	97.3	117.8
Kyzylorda oblast	1384.4	371 935	5.0	27.1	2.9	31 788	104485	1.9	0.223	4.1	3.2	19.1	231 860	122516	28.6	106.9	69.7	67.7	97.9	41.3
Mangystau oblast	2220.1	440 025	5.0	8.0	4.6	37 958	222294	1.6	0.203	3.7	3.0	20.9	243 218	282691	29	88.7	45.2	70	103.4	147.9
South Kazakhstan oblast	2362.4	415 277	5.4	42.7	2.1	24 293	84550	1.7	0.197	3.4	6.1	20.3	127 216	40502	33.3	86.8	46.4	72.1	108.9	21.7
Pavlodar oblast	1766.4	276 246	4.8	20.1	3.8	36 236	102310	2.1	0.224	4.2	1.5	22.8	384 826	94250	39.3	931	72.2	69.6	107.4	809
North Kazakhstan oblast	807.0	101 758	5.0	28.6	2.9	33 836	81062	2.0	0.287	6.0	4.2	20.9	275 969	62174	30.3	111.4	71.3	66.3	97.6	125.5
East Kazakhstan oblast	2237.7	301 168	4.8	29.7	2.9	37 077	99130	2.0	0.280	5.6	2.5	19.5	425 352	90533	42.2	103.9	69.7	68.2	102.4	93
Astana	3937.0	547 490	5.1	4.5	5.4	46 450	177809	2.1	0.232	4.1	0.4	28.5	812 792	979758	85	116.8	70.9	85.4	120.0	78.1
Almaty	8018.3	482 877	5.5	7.4	5.4	58 213	155242	2.1	0.250	5.1	0.6	26.7	1011084	588271	78.3	103	71	98.7	105.4	26.8
maximum	8018.3	1038438	5.5	45.7	6.6	58212.6	222294	2.2	0.287	6.2	6.1	28.5	1011084	979758	85.0	116.8	74.7	98.7	122.1	309.0
minimum	807.0	101758	4.8	4.5	2.1	24293.3	81062	1.6	0.197	3.4	0.4	15.9	127216	40270	22.3	61.4	45.0	61.8	97.3	21.7
Disparity between maximum and minimum values, times	9,9	10,2	1,1	10,15	3.1	2.4	2.7	1.4	1.5	1.8	15.3	1.8	7.9	24	3.8	1.9	1.7	1.6	1.3	37.3

Table 1.1 – Index ratings of the regions based on 20 selection indicators in 2007
(The values of all indicators are equal to 1)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	IndRn в 2007 году
Акмолинская	2	2	3	4	2	2	3	1	3	2	3	4	2	1	3	8	10	3	8	8	74
Актюбинская	3	3	3	5	2	3	3	1	3	3	5	3	3	2	6	6	6	5	5	4	74
Алматинская	1	2	4	4	1	2	2	1	5	5	3	2	1	1	1	1	2	1	6	9	54
Атырауская	10	9	3	8	6	5	3	1	7	7	4	2	2	3	3	5	6	4	4	6	98
Западно-Казахстанская	4	3	3	4	3	3	2	1	5	6	5	2	2	2	3	9	8	3	6	8	82
Жамбылская	1	1	3	3	2	2	2	1	6	6	5	2	1	1	2	7	5	3	3	10	66
Карагандинская	3	3	4	7	3	3	3	2	4	5	6	6	3	1	6	8	10	4	6	1	88
Костанайская	2	2	3	4	3	2	2	2	4	5	5	4	2	1	1	5	7	4	5	7	70
Кызылординская	3	2	2	4	2	3	2	1	5	6	1	3	1	2	4	10	10	3	10	9	83
Мангистауская	7	4	2	10	5	5	3	1	6	7	1	2	2	3	4	7	5	3	6	7	90
Южно-Казахстанская	1	2	4	3	1	2	2	1	7	7	4	3	1	1	2	4	3	6	3	10	67
Павлодарская	3	2	4	7	3	3	3	2	5	5	6	4	2	1	4	7	9	4	5	1	80
Северо-Казахстанская	1	1	4	4	2	2	2	2	5	5	3	4	2	1	1	7	9	2	7	8	72
Восточно-Казахстанская	2	2	4	5	2	3	3	2	4	4	5	4	3	1	5	7	9	4	6	8	83
г.Астана	7	5	3	9	6	4	6	1	4	4	8	4	4	4	10	6	5	6	1	8	105
г.Алматы	8	6	3	9	6	4	4	1	4	5	6	4	10	5	10	7	9	10	4	10	125

Table 1.1 – Index ratings of the regions based on 20 selection indicators in 2007

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	IndRn в 2014 году
Akmola oblast	2	2	6	4	3	7	5	4	4	6	9	6	4	2	3	8	5	3	7	8	98
Aktobe oblast	3	6	6	7	4	7	6	4	6	6	9	5	9	2	5	6	2	3	3	7	106
Almaty oblast	1	5	6	5	3	8	5	3	6	7	9	3	3	2	1	2	1	1	7	9	87
Atyrau oblast	10	10	6	9	10	6	10	4	7	8	9	5	6	8	2	6	3	3	2	6	130
West Kazakhstan oblast	4	3	6	5	5	6	6	4	6	6	9	4	6	2	3	10	5	4	7	9	110
Zhambyl oblast	1	3	6	3	2	5	5	4	7	8	8	2	3	1	2	8	3	3	6	9	89
Karaganda oblast	3	5	6	8	5	8	6	5	5	5	9	7	7	2	6	9	6	4	6	1	113
Kostanai oblast	2	2	6	5	3	7	5	4	6	6	9	6	4	2	2	6	3	2	7	8	95
Kyzylorda oblast	2	5	6	6	3	6	6	4	7	7	8	4	4	2	2	10	5	2	7	9	105
Mangystau oblast	5	5	6	9	7	7	10	3	8	8	9	5	4	4	2	7	1	3	6	7	116
South Kazakhstan oblast	1	5	5	3	2	4	5	3	8	8	7	5	3	1	3	7	1	3	5	10	89
Pavlodar oblast	3	4	6	7	5	7	6	5	7	7	9	7	7	2	4	8	6	2	5	1	108
North Kazakhstan oblast	2	2	6	6	3	6	5	4	5	6	8	5	5	2	3	10	6	2	7	7	100
East Kazakhstan oblast	2	4	6	6	3	7	5	4	5	6	9	4	7	2	5	10	5	2	6	8	106
Astana	6	6	5	10	8	9	9	5	7	7	10	10	10	10	10	10	6	6	2	8	154
Almaty	8	6	5	9	8	10	8	5	6	6	10	9	10	7	10	10	6	9	5	9	156

Regional Capability Index is a composition of four indicators:

- Regional Economic Complexity Index (RECI) reflects export potential of the region divisible by productivity of knowledge. If a region has high RECI, usually it has to capable of exporting a lot of commodities. However it is not a case, when the production process is expensive and there are a lot of barriers for business. In such case politicians has to pay special attention to development of markets and improvement of business environment in order to convert knowledge to products. It is hard adequately assess the RECI during low diversification of export in a region (as in case with Atyrau, Mangystau oblasts, WKO and Kyzylorda oblasts).
- Contribution of a region to service sector is incorporated to the RCI in the form of alternative complexity of a product to services. It is calculated as relations between share of services in the GRP of a region and average share of services in the GRP of a country. If the region according to this index is lagging behind other regions, politicians have to focus on increasing capability of regional production of services. Industrial process as it is could be easier in these regions due to lower level of infrastructural development, which correlates with the level of services development.
- Number of comparative advantages – number of products of a region with developed comparative advantages. This indicator means the diversity of produced commodities in a region. Even if the complexity of export is low, high diversification means that the basis for future growth of local production will be development of organizations (enterprises), combining different types of knowledge in order toproduce and export more compound products.
- Contribution of Processing Sector Index – correlation between share of processing sector in the GRP of a region and whole processing sector in the GRP of a country.

Regional Capability Index is calculated as follows:

$$RCI= 0.25*RECI+0.25 *SC+ 0.25*nRCA+0.25*PC \qquad (3)$$

Leaders of the RCI – group 1: Almaty, Almaty oblast, Astana, Karaganda oblast.

Following table provides the rating of regions of Kazakhstan on Regional Capability Index according to the research of Whiteshield Partners as of 2014 (based on 2013 data)

Table D -1

Regions	1. Complexity of economy		2. Diversification	3. Industrialization	Regional Capability Index	Groups
	Regional Index of economic complexity	Contribution to service sector	Number of identified comparative advantages	Contribution to processing sector		
Variables	25%	25%	25%	25%		

Almaty	97	68	100	6	100	Group 1
Almaty oblast	97	68	60	44	81	Group 1
Astana	72	100	11	1	64	Group 1
Karaganda oblast	42	11	15	100	58	Group 1
Zhambyl oblast	74	7	38	36	52	Group 2
Akmola oblast	77	16	21	39	52	Group 2
EKO	30	14	38	36	48	Group 2
Pavlodar oblast	49	1	14	81	48	Group 2
NKO	85	4	16	21	40	Group 3
SKO	30	14	38	64	33	Group 3
Kostanai oblast	53	7	22	26	33	Group 3
Atyrau oblast	15*	40	1	6	13	Group 3
Mangystau oblast	15*	32	3	4	10	Group 4
Aktobe oblast	15*	8	4	24	9	Group 4
WKO	15*	10	2	7	2	Group 4
Kyzylorda oblast	15*	13	1	2	1	Group 4

Leader of the RCI – group 1: Almaty, Almaty oblast, Astana, Karaganda oblast.

Almaty is a leader on number of identified RCI comparative advantages in the country. Its export is represented by line of products from minerals and low compound food products to complex processed chemicals and equipment. The city is second on contribution to service sector. High indicators in performance of Almaty is a result of former status of the capital city, significant investment to its infrastructure, presence of special economic zones and favorable location near borders with China (to establish trade and other business ties).

Almaty oblast is a leader in RECI. The region uses its advantage of close proximity to Almaty, agglomerative effect or so called effect of oil stain spread. Almaty oblast is powerful in agriculture, metallurgy (mostly iron and steel) as well as production of machinery, plastic and organic chemicals.

The third in the RCI – **Astana** has three times less processing sector compared to Almaty, but it has comparative RCA advantages in production of grain, glassworks, plastic, energy blocks, machinery and transport. The city has moderate Economic Complexity Index. However, Astana is a leader in the country in contribution to service sector: share of services in the GRP of the region is almost three times higher than the same indicator on average in the country.

Group of leaders is rounded out by former industrial center – Karaganda oblast – which is a leader in the share of processing industry in the GRP of the region – three times more than average indicators across the country. However, export of Karaganda oblast is focused on several types of economy. With 47 comparative RCA advantages in such sectors, as metallurgy, extraction of mineral resources, fuel, plastic and rubber and clothing, the region takes 9th place among 16 regions on diversification.

Group 2 of the RCI rating include two types of regions on from performance perspective. On the one side there are Akmola and Zhambyl oblasts. These are small developing regions with high performance enjoying significant

progress in development of their industrial capacities during last years. On the other hand there are Pavlodar and East Kazakhstan oblasts, which are significant and old industrial centers, enjoying the second place in the PC of the GRP of the region.

One of the smallest and poorest regions – **Zhambyl oblast** takes only 3% of production sector of Kazakhstan. However, is has well diversified economy with 31 RCAs in agriculture and food industry, 24 RCAs in leather, textile and tailoring industry, 12 RCAs in production of mineral glass and metals, 11 RCAs in machinery and 5 in chemical industry. Presence of RCAs in such complicated branches, as production of machinery, metallurgy and chemicals identified the index of complexity.

Akmola oblast – this small in share of contribution to the GRP of the country but developing region has firm position in the RECI with comparative advantages in metallurgy and machinery. However, 61% of export of oblast comes from agriculture, that is why the level of diversification there is moderate (takes 7 place on the RCAs among 16 regions).

Pavlodar oblast takes 7th place in RCI. This is a second largest industrial center of the country. Pavlodar oblast has the RCAs in metallurgy, extraction of mineral resources, fuel industry, and production of equipment, plastic and rubber. However, as in case with Karaganda oblast, export is focused on several categories of products, consequently has lower diversification assessment (44 RCAs).

East Kazakhstan takes 8th position in regional Capability Index. This is another large industrial region with powerful mining industry, metallurgy, machinery production and production of food. With 107 RCAs East Kazakhstan oblast is more diversified compared to Karaganda and Pavlodar oblasts, but with production of lower index of economic complexity. All these three industrially developed oblasts has lower shares in services.

Group 3 of the RCI rating include regions significantly lagging behind the leaders.

North Kazakhstan and Kostanai oblasts are ranging 9 and 10 places in the rating respectively. They have low amount of output in industry and in service sector, and high indicators of poverty (5% and 3% respectively).

With RCAs in metallurgy, production of glassworks, machinery building and textile industry, **North Kazakhstan** has relatively high RECI, but its sector of education has to be supported, in order to use its potential in the future.

Kostanai oblast is one of the basic agricultural producers along with Akmola and North Kazakhstan oblasts. The region has low production capability on production output, however, its performance is gradually improving – share of processing industry increases from 3% to 4% from total level of the sector in Kazakhstan.

South Kazakhstan oblast takes 11th place in the RCI. The region is huge from the point of view of contribution to GRP and takes 4th place on absolute size of processing industry sector. However, South Kazakhstan has low indicators of economic complexity and lower share in the field of services. This is the most populated region with highest level of poverty in the country (6%). South

Kazakhstan is quite variegated on comparative advantages (75 RCAs), but with a lot of advantages, mainly due to low complexity production, such as fish, meat and other agricultural products. The region also has powerful positions in oil refinery and pharmacy, fuel processing and production of chemicals; the latter has 65% and 15% of export of the region respectively. Establishment of firm business environment and support of educational sector could stimulate development of functional capabilities of this field with high capability to develop comparative advantages.

Atyrau oblast has the best position in the RCI among oil and gas producing regions. This field in Kazakhstan is leading on the GRP per capita in investments to the basic capital. Low number of comparative RCAs of the region is distributed between fuel industry (considering 99% of export), equipment building and flow of investments. While having high incomes from oil and flow of investments, Atyrau also has favorable conditions for development of service sector, taking high position across the country by absolute amount of the sector.

The last group on the RCI include only extracting regions – Mangistau, Aktobe, West Kazakhstan and Kyzylorda oblasts, which take 2th, 6th, 3 and 4th places on size of mining sector. Along with atyrau oblast, these regions took 30% of general GRP of Kazakhstan in 2013.

Mangystau oblast take 13th place in the RCI, and has the best comparative advantage in service sector, but is lagging behind in terms of development of processing industry. However, the region has comparative advantages in the RCAs in production of clothing, black metals and equipment.

Aktobe oblast takes 14th place in the RCA and is successful within its group due to size of processing industry (3% in Kazakhstan) and presence of huge diversification (19 RCAs). Along with fuel, the oblast also exports black metals, chemicals, mine and food.

Economy of **West Kazakhstan oblast** (15th place in the RRCI) lacks diversification, crude oil and gas comprises 99% of its export. However, the oblast has some comparative advantages in production of non-ferrous metals and agri-business.

Kyzylorda oblast takes 16th, the last place in RCI. Its industry is almost completely comprises of mining sector, production of which is 92,2% of its export and has only few RCAs in fuel production.

The RCI is reflected in the research of Whiteshield Partners in dynamics since 2001to 2013, and had been quite stable for the last ten years. However, number of regions prevail other regions by pace of growth of opportunities, assessed by the RCI rating. In order to highlight the consistency, which is a basis of regional evolution of the RCI, regions were separated for two groups in dependence to their RCI dynamics:

- worsening the capability (3 regions) – South Kazakhstan, West Kazakhstan and East Kazakhstan oblasts;

- Stagnating by the RCI (7 regions) – Aktobe oblast, Astana, Karaganda and Pavlodar oblasts, Almaty, Kostanai and Akmola oblasts;

-Improving the capability (4 regions) – North Kazakhstan, Atyrau, Zhambyl and Almaty oblasts.

The research of Whieshield Partners highlights two basic groups of factors of negative development of regional opportunities. These factors include various barriers for business like complicated access to finances, problems with available qualified labor forces as well as in the field of taxation.

Indirect factors include quality management, development of education and conditions of institutional environment.

The research also groups regions in matrix (table D- 2) on placement in the RCI and its dynamics for recommendations on their development strategies.

Table D-2.

	RCI dynamics		
	Falling RCI	Constant RCI	Growing RCI
Groups 1 and 2 on the RCI – high capability regions	**East Kazakhstan oblast**	**Almaty, Astana, Karagandy and Pavlodar oblasts**	**Almaty oblast**
Groups 3 – 4 on the RCI – low capability regions	**West and East Kazakhstan oblasts**	**Aktobe, Kostanai, Akmola oblasts**	**Zhambyl, Atyrau, North Kazakhstan oblasts**

The research further provides recommendations, in dependence to capability level of a region on the RCI and its historic dynamics, three development strategies. Development strategies for regions with different capabilities and the RCI dynamics are provided in the following Table D-3

Whiteshield Partners also provided recommendations in is research on priority support of five cities in order to receive positive effect of knowledge distribution, including Astana, Karaganda, Almaty, Taldykurgan and Atyrau.

Table D – 3.

	RCI dynamics		
	Falling RCI	Constant RCI	Growing RCI
Groups 1 and 2 on the RCI – high capability regions	**“Rescue strategy”** Targeted measures of horizontal and vertical policies. It is important to increase complexity in industrial sectors based on comparative advantages.	**“Innovation strategy”** Support of research and development, partnership of private and governmental sectors, cooperation of business and universities, stimulation of targeted direct foreign investments to non-resource sector.	
Groups 3 – 4 on the RCI – low capability regions		**“Leverage strategy”** Need for broad diversification and formation of RSAs in products clusters. General measures of horizontal policy, including decrease of barriers and improvement of conditions for business.	

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