ASSESSMENT OF SOCIAL AND ECONOMIC INEQUALITY OF THE REGIONS OF KAZAKHSTAN

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Abstract- Kazakhstan has a big territory area. The republic is in the ninth place among the countries of the world. Because of negative social and economic consequences of interregional differences in socio-economic development, it is necessary to evaluate the main parameters of interregional stratification and socio-economic inequality. The aim of this study is to assess the social and economic inequality in Kazakhstan on regional level. The methodology of the study based on measurement of interregional disproportion of socio-economic development through comparison gross regional product per capita of 14 regions and 3 cities of republican significance relative to gross domestic product per capita for 2010–2020. The database ofstatistical data was the Bureau of National Statistics. Limitation of the study was lack of data for 2021 and 2022 for 20 regions of Kazakhstan. During the study, it was revealed that there is a socio-economic inequality in Kazakhstan, and it had intensified from 2010-2020. Obtained results will be useful to development of regional policy in inclusive development and overcome socio-economic inequality.

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Keywords - Inequality, Regions, Regional Differentiation, Socio-Economic Inequality, Factors Of Socio-Economic Inequality

I. INTRODUCTION

Kazakhstan occupies the ninth place among the countries of the world in terms of territory area, in addition, it has a huge natural resource potential. According to the administrative-territorial structure, the country is divided into 17 regions and 3 cities of republican significance. In connection with the above facts, it is not difficult to imagine how acute the problem of socio-economic inequality in the regions is. In principle, it can be assumed that it affects almost all countries of the world whose territory is over 1 square kilometer. Because this lack of communication and similarity of randomly located settlements complicates the same development of all regions. This can be due to different climatic, geographical zones, as well as the differential distribution of minerals across the territory, the specifics of specialization and production infrastructure. Even the peculiarities of the character, mentality and traditions of the population can be the reason for the inequality of socio-economic development of regions. It can be observed that all these differences, which led to social and economic inequality in the regions of Kazakhstan, were especially expressed in the middle of the twentieth century, when global industrialization began. In addition, since Kazakhstan gained independence, it has experienced many crises. In this regard, post-crisis stabilization measures and changes in the orientation of economic growth have shown the paramount importance of smoothing the socio-economic inequality of regional development for the speedy and effective achievement of the goals set for the state. Unfortunately, there is still a high differentiation of regional development in terms of economic and social indicators in Kazakhstan. If appropriate measures are not taken, and this trend persists, it can lead to the collapse of the country's economic security and a decrease in the standard of living of the population and the economy as a whole. Because backward and depressed areas can pull the entire economy of the country down as an anchor, only sucking in all the extra money from the state budget. Social and economic inequality can manifest itself for economic reasons, such as, for example, differentiation of wages and, accordingly, prices in the regions, imperfection of redistributive mechanisms of the state, and much more. At the same time, economic activity has had a huge impact on individual districts, and for many years many regions have been subjected to strong structural changes. As practice shows, regional economic inequality is a great danger to economic development, social unity and political stability. Unfortunately, the market mechanisms and policies that should promote prosperity and empowerment are no longer so effective. For example, in the European Union there are several different modes of regional economic activity that meet different challenges and development opportunities. But they, too, in turn, are not ideal and are not applicable for each of them, respectively, it is necessary to solve such problems point-by-point, taking into account the peculiarities of

this region. The exceptionally high degree of the existing differentiation in the economy and social sphere of Kazakhstan determines the relevance of the state regional policy aimed at consistently overcoming differences in the living standards of the population of the regions, leveling the socio-economic conditions of doing business, activating the processes of self-development of the most diverse subjects of the country.

II. LITERATURE REVIEW

The study of the inequality of socio-economic development of regions today is an urgent task of our time and occupies many minds of Kazakhstani and foreign scientists. Many authors prefer to use the phrase inequality and differentiation of regional development. This problem arises due to a variety of factors affecting it. For example, it may be a clear divergence of political, economic, social, ethnic, territorial, agglomeration and other structures that form a spatial heterogeneity of development (Usmanov, 2014). Other authors believe that the problem is not localized within the framework of the above-mentioned structures, it also permeates all aspects of society, intensifies crisis processes, aggravates the severity of the national issue, complicates political contradictions. And he believes that the problem of regional inequality is fundamentally of a deep nature, because it is caused by the natural and historical features of the country's development (Knyaginin& Lipetsk, 2008). The following authors explain the existence of these different regional development trajectories with the weakness of convergence processes between regions, and believe that a special approach is needed that strengthens the strongest regions and develops new approaches to promote opportunities in industrially declining and less developed regions (Iammarino et al., 2019). One of the reasons for the differentiated development of regions is also considered to be the different level of innovative development of regions (Ling, 2001). Another scientist studies the problems of inequality in urban development, and believes that this side of inequality is less noticeable, since such inequality has existed for centuries (Zubarevich&Safronov, 2013). Many authors investigate the relationship between economic growth and regional income inequality in a spatial econometric perspective and consider it the main factor in the differentiation of regional development (Panzera&Postiglione, 2022; Perugini& Martino, 2008; Prieto-Rodríguez et al., 2010). Thus, the problem of identifying factors of socio-economic inequality of regions in order to develop and implement appropriate policies is relevant for many countries and regions of the world (Usmanov, 2018). In this regard, domestic scientists propose to improve the regional policy of territorial development, which will be able to reduce the scale of intraregional differentiation of territories (Sermagambet & Smagulova, 2021). Some Russian scientists fear the disappearance of entire regions. They consider the features and opportunities of strategic development of the regions of the Republic of Kazakhstan, as well as trends in regional development and problems of regional extinction (Ibragimova&Turysbekova, 2022). It is obvious that the solution of these most important problems of management theory and practice should be based on analytical approaches that comprehensively and adequately take into account changes in the processes of socio-economic development of regions, allowing to identify the dynamics of the asymmetry of regional development, to make a comparative analysis of the levels of socio-economic development of regions. In this regard, the identification of strengths and weaknesses of existing approaches, methods and methodological schemes for diagnosing the phenomenon of interregional differentiation is of undoubted interest for the theory and practice of state regulation of territorial development (Skufina, 2007). The aim of this study is to assess the social and economic inequality in Kazakhstan on regional level.

III. METHODOLOGY

Socio-economic inequality in Kazakhstani regions were studied by DEA method (Kireyeva et al., 2022) and index method (Nurlanova et al., 2019; Tamenova et al., 2020; Sermagambet et al., 2022). In these methods one of main indicator that shape the dynamics of interregional stratification is gross regional product (GRP). So, in the study of inter-regional differences, the assessment of socio-economic differences, the dynamics of GRP indicators is analyzed. Another main indicator that characterizes the results of economic activity is the average per capita income of the population. Both indicators have positive impact on social development and closely related to it. Based on this, the assessment of the dynamics of regional inequality in the regions of Kazakhstan was carried out according to two indicators: GRP and wages. The database of this study is statistical data from Bureau of National Statistics for 2010, 2015, 2018 and 2020. Limitation of the study was lack of data for 2021 and 2022 for all regions. Before 2021 in Kazakhstan there were 14 regions and 3 cities of republican significance. At this moment there are no data for 3 new regions. Based on official data for 17 regions of Kazakhstan including 3 cities, for the purpose to identify regions with low, medium and high socio-economic development one indicator was calculated - growth or decrease in GRP per capita for each region relative to the average value for Kazakhstan.

Further, the regions were grouped into six groups depending on the calculated values according to the average value in the country: more than 150%, 110-

150%, 85-100%, 75-85%, 50-75% and less than 50%. All data were processed by MS Excel.

IV. RESULTS AND DISCUSSION

In Kazakhstan, there is a positive trend in the growth of GDP per capita, since 2010 it has grown by 2430.3 thousand tenge, an increase of 281% in 2020(Fig. 1). These indicators indicate the growth of the economy as a whole in the country and the increase of welfare of Kazakhstani people.

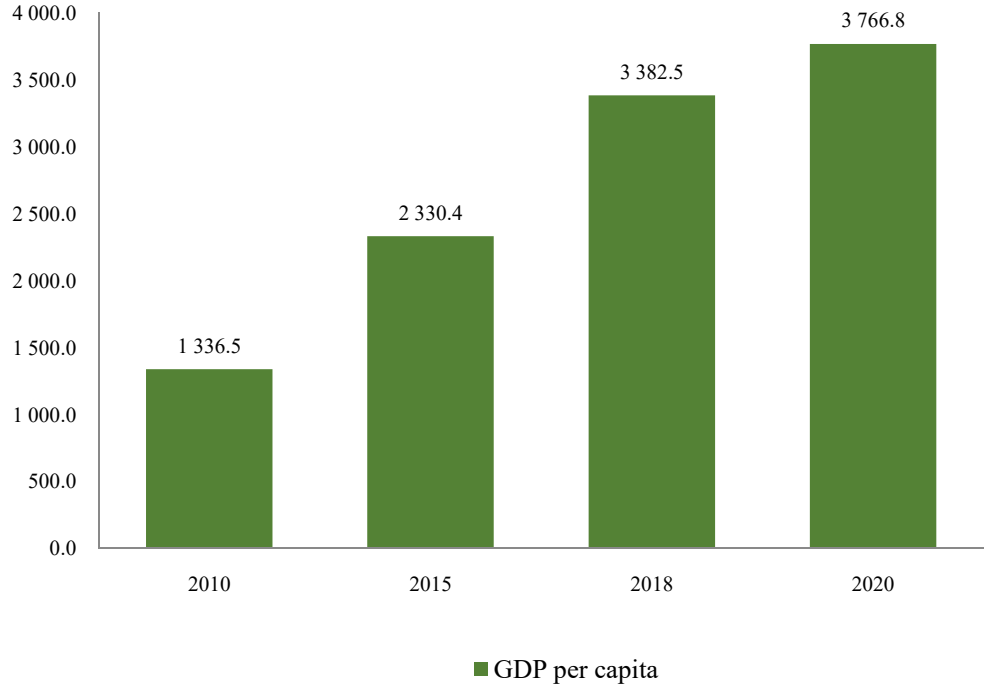

Figure 1. GDP per capita in the Republic of Kazakhstan, thousand tenge
Note- complied by the authors

In the period from 2010-2020 GRP per capita in Kazakhstani regions increased. More than 3 times is in Akmola, Almaty, Zhambyl, Karaganda, Kostanay, North-Kazakhstan, East-Kazakhstan regions and Shymkent city. Less than 2 times is in Kyzylorda and Mangistau regions.But in the regions, this indicator is the difference relative to the average value for the country (Table 1).

Year	2010	GRP per capita relative to GDP per capita	2015	GRP per capita relative to GDP per capita
GDP per capita	1 336,5		2 330,4	
Akmola	798,1	60%	1 513,9	65%
Aktobe	1 523,1	114%	2 135,0	92%
Almaty	537,9	40%	1 021,3	44%
Atyrau	5 401,0	404%	7 171,2	308%
West-Kazakhstan	1 730,4	129%	2 699,6	116%
Zhambyl	429,0	32%	918,3	39%
Karaganda	1 387,7	104%	2 248,9	97%
Kostanay	970,8	73%	1 561,7	67%
Kyzylorda	1 236,5	93%	1 534,3	66%
Mangystau	2 890,4	216%	3 443,0	148%
Pavlodar	1 384,6	104%	2 293,1	98%
North- Kazakhstan	790,1	59%	1 467,2	63%

Turkestan		0%		0%
East-Kazakhstan	889,8	67%	1 656,2	71%
Astana c.	2 635,7	197%	5 574,8	239%
Almaty c.	2 797,3	209%	5 439,6	233%
Shymkent c.	474,6	36%	891,1	38%
Note- complied by the authors based on source (Bureau of National Statistics, 2023)				

Table 1. Distribution of GRP by groups of regions relative to the national average of GRP per capita, 2010 and 2015

In Kazakhstan there are regions whose GRP per capita are below than the GDP per capita in the republic. In 2010 these include Akmola, Almaty, Zhambyl, Kostanay, Kyzylorda, North Kazakhstan, East Kazakhstan regions and Shymkent city. GRP per capita in Aktobe, Atyrau, West-Kazakhstan, Karaganda, Mangystau, Pavlodar regions and Almaty and Astana cities are higher than the GDP per capita. And the highest GRP per capitawas in Atyrau region – 5,401.0 thousand tenge, the lowest one was in Zhambyl – 429.0 thousand tenge. Tthe difference relative to the average value for the country, 2018 and 2020 is presented in the table 2.

Year	**2018**	**GRP per capita relative to GDP per capita**	**2020**	**GRP per capita relative to GDP per capita**
GDP per capita	**3 382,5**		**3 766,8**	
Akmola	2 301,0	68%	3 102,5	83%
Aktobe	3 136,0	93%	3 329,8	90%
Almaty	1 378,2	41%	1 805,2	50%
Atyrau	12 465,5	369%	11 883,2	363%
West-Kazakhstan	4 295,8	127%	4 151,2	121%
Zhambyl	1 366,3	40%	1 675,8	45%
Karaganda	3 431,9	101%	4 431,7	123%
Kostanay	2 367,0	70%	3 314,5	92%
Kyzylorda	2 088,1	62%	2 033,3	53%
Mangystau	5 682,5	168%	4 335,1	112%
Pavlodar	3 641,1	108%	4 151,4	117%
North- Kazakhstan	2 177,7	64%	2 877,7	75%
Turkestan	838,2	25%	1 174,2	31%
East-Kazakhstan	2 598,8	77%	3 369,8	84%
Astana c.	6 359,5	188%	6 873,6	167%
Almaty c.	6 635,9	196%	6 913,0	170%
Shymkent c.	2 217,1	66%	2 360,3	55%
Note- complied by the authors based on source (Bureau of National Statistics, 2023)				

Table 2. Distribution of GRP by groups of regions relative to the national average of GRP per capita, 2018 and 2020

In 2020, the Atyrau region remained the leader, and the Turkestan region had the minimum value. The highest GRP per capita was in Atyrau region – 11,883.2 thousand tenge. The lowest GRP per capita was in Turkestan region – 1,174.2 tenge. The gap between the highest GRP per capita and the lowest one was 4,926.4 thousand tenge in 2010 and 10,709.0 thousand tenge in 2020. This indicates an increase in the gap between regions. Although the GRP per capita in the regions grew up there are a lot of regions whose GRP per capita are below than the GDP per capita(Akmola, Almaty, Zhambyl, Kostanay, Kyzylorda, North Kazakhstan, East Kazakhstan regions and Shymkent city). And in Aktobe region, there is a noticeable decrease from 114% to 90%. In Akmola, Almaty, Zhambyl, Karaganda, Kostanay, Pavlodar, North Kazakhstan, East Kazakhstan regions and Shymkent city had increase in GRP per capita relative to GDP per capita. The opposite situation is in Atyrau, West Kazakhstan and the cities of Astana and Almaty. The indicators of other regions are close to the average value (Table 3).

Regions in relation to the GDP per capita, %	2010		2015		2018		2020	
	No Regions	% GRP in GDP (%)	No Regions	% GRP in GDP (%)	No Regions	% GRP in GDP (%)	No Regions	% GRP in GDP (%)
More than 150	4	53%	3	44%	4	49%	3	38%
110-150	4	23%	2	15%	3	18%	4	25%
85-100	1	5%	3	16%	1	5%	2	10%
75-85	0	-	-	0%	1	4%	2	10%
50-75	4	13%	5	19%	5	18%	4	13%
Less than 50	4	6%	4	7%	3	6%	2	4%
Total	17	100%	17	100%	17	100%	17	100%

Table 3 - Distribution of GRP by groups of regions of the Republic of Kazakhstan relative to the country's GDP per capita

The share of poor regions in the country has decreased in recent years by 2 regions, and in 2020, the Mangistau region fell out of the richest regions. The total share of GRP in GDP of the three strongest regions (Aktau region, Almaty city, Astana city) decreased from 53% to 38%. Regions with readings above the average accounted for 76% (53% + 23%) of GDP in 2010, and in 2020 it decreased by 9% and amounted to 63%.

Thus, a stratification between the regions of the Republic of Kazakhstan is established. In Kazakhstan there is social and economic inequality of the regions. And from 2010 to 2020 the gap of socio-economic development between regions is increased.

V. CONCLUSION

The aim of this study was the assessment the social and economic inequality in Kazakhstan on regional level. Based on the study, the following conclusions were obtained.Firstly, in Kazakhstan, there is a positive trend in the growth of GDP per capita, since 2010 it has grown by 2430.3 thousand tenge, an increase of 281% in 2020 that indicate the growth of the economy as a whole in the country and the increase of welfare of Kazakhstani people.

Secondly, in Kazakhstan there are significant gaps in gross regional product per capita. In 2020, the highest GRP per capita was in Atyrau region – 11,883.2 thousand tenge. The lowest GRP per capita was in Turkestan region – 1,174.2 tenge. The gap between the highest GRP per capita and the lowest one was 10,709.0 thousand tenge. In 2010 it was 4,926.4 thousand tenge.

Thirdly, there are significant gaps in gross regional product per capita relative to gross domestic product per capita. The share of poor regions in the country has decreased from 4 region (Almaty, Zhambyl, Turkestan, Shymkent city) to 2 regions (Zhambyl, Turkestan), and the share of rich regions in the country has decreased from 4 (Atyrau, Mangystau, Almaty and Astana cities) to 3 regions (Atyrau, Almaty and Astana cities).

Thus, Kazakhstan has interregional differentiation of socio-economic development, that indicate the socio-economic inequality in the country. From 2010 to 2020the socio-economic inequality in Kazakhstan had intensified. Socio-economicinequality in Kazakhstani regions requires the development of regional policy in inclusive development and overcome socio-economic inequality.

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