Analysis of the current state and influence on the quality of life of the Republic of Kazakhstan

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Abstract: The research paper describes the structure of the quality of life. Impartial indicators are formed and analysis of the quality of life of Kazakhstan is carried out. The influence of economic factors on the quality of life of Kazakhstan is studied.

Keywords: quality of life, population, needs, income, poverty, life expectancy.

1. Introduction

In the current economic management conditions, quality of life is the basis of socio-economic development of the Republic of Kazakhstan and the impact on the factors determining it are the development priorities. Thus, the determination of these factors is a complex system process.

2. Material and Methods

Investigation of issues of life quality is carried out by the following scholars: S. Annand [11], R. Barro [12], A.L. Vasiliev [2], J. Galbraith [3], V.K. Zhanataeva [4], J. Klugman [14], F. Rodriguez [14], T.S. Streletskaya [9] and others. Today, however, the unresolved problems remain: lack of standardized components and indicators of quality of life and the factors that affect it.

Accordingly, the objectives of the paper are the following: to form the objective indicators and evaluate the quality of life of the population of the Republic of Kazakhstan and to study the influence of socio-economic factors on the quality of life of the population.

3. Results

At present, there is no clear definition of Quality of Life and its components, and various scientists form different interpretations of it. J. Galbraith applied the term Quality of Life in 1957 in the scientific paper Affluent Society (Galbraith, 1979). According to Vasiliev A.L., Quality of Life is the level of development and degree of satisfaction of the whole complex of needs and interests of the people and reflects the comprehensive well-being of the population [2]. According to Streletskaya T.S., Quality of Life is a set of social values characterizing the activities, structure, needs and conditions of human life [9].

A variety of approaches to the interpretation of the Quality of Life leads to significant differentiation in indexes and indicators to estimate it. At the interstate level, within UN Development Programs (UNDP) the aggregate indicator Human Development Index, HDI was formed reflecting life interval, including life expectancy at birth, adult education, GDP per capita (U.S. $) [15].

To analyze the current state of the quality of life of the Republic of Kazakhstan we will use international as well as the proposed indicators.

In 2012 the Republic of Kazakhstan occupied 69th place on the Human Development Index among 187 countries of the world, having the annual rating of the country deteriorated to 1 position and reached 0,754 in the high human development category, see Fig. 1 [13]. Analyzing the individual structural indicators of index, one can specify that the average annual income per capita in Kazakhstan amounted to 10,451 U.S. dollars, the average duration of adult education is 10.4 years, while life expectancy at birth is 64.7 years [13].
The quality of life of the population of the Republic of Kazakhstan is formed through the complex of conditions of life of the population of the state and is defined by meeting the needs of the population in accordance with the socially indispensable requirements. It is influenced both by objective (income, housing, education) and subjective factors (subjective evaluation of quality of life by citizens, their satisfaction with certain parameters). Subjective factors determining the quality of life lie in the plane of motives and depend on the level of needs of the individual and subjective evaluations.

We propose to evaluate the quality of life through the degree of satisfaction of needs of the population, according to three components: a decent life of the population (financial position), a healthy life and comfort and provision of social services to the population (see Fig. 2). On this basis the index of quality of life $R_{kl}$ (Rate the quality of life) will be calculated by formula 1:

$$R_{kl} = 1 - \frac{(Id + Izk + Is)}{3} \quad [1]$$

where $Id$ – income index; $Izk$ – index of healthy and comfort life; $Is$ – index of provision of social services to the population.

Analyzing the level of income of citizens of the Republic, we see that the nominal income of the population are growing at 205.1% with an overall change in the inflation index for 2008-2012 to 55.7% [5] (Table 1).

There is an increase in the proportion of people with incomes above the subsistence level to 96.3% in 2012, which forecast indicator is going to approach to 100% in 2014 [5]. The proportion of people whose income reaches the cost of the basket of goods is reduced to its lowest level 0.2% in 2012 [5], and the Gini coefficient approaches in variable rate to the absolute equality of incomes of the population of the Republic of Kazakhstan, see Fig. 3.

Analyzing the health and comfort of living, we witness the deterioration of life expectancy of the Republic to 64.7 years, while the sickness rate in the country is reducing in general. Low life expectancy of citizens is affected significantly by the work in difficult conditions (77.1% in 2012). The average level of housing of citizens is 18.7 sq.m. per citizen and only 86.5% of the housing stock is provided with gas [10] (see Table. 2).

Provision of social services in the state is at quite high level, in particular, educational institutions are available to the majority of citizens: for those living in cities by 91.3%, and for villagers by 54.6%; cultural and health care institutions are also available [10], see Table 3.
**Fig. 2 - The System of Evaluation of Quality of Life**

**Table 1 - Indicators of the Quality of Life for 2005-2012 (decent life)**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Growth rate 2012/2007%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of population living on less than a subsistence wage</td>
<td>12,7</td>
<td>12,1</td>
<td>8,2</td>
<td>6,5</td>
<td>5,3</td>
<td>3,7</td>
<td>29,1</td>
</tr>
<tr>
<td>Percentage of population with income less than a basket of goods</td>
<td>1,4</td>
<td>1,2</td>
<td>0,6</td>
<td>0,4</td>
<td>0,5</td>
<td>0,2</td>
<td>14,3</td>
</tr>
<tr>
<td>The depth of poverty</td>
<td>2,4</td>
<td>2,3</td>
<td>1,3</td>
<td>1,1</td>
<td>0,9</td>
<td>0,5</td>
<td>20,8</td>
</tr>
<tr>
<td>The unemployment rate</td>
<td>7,3</td>
<td>6,6</td>
<td>6,6</td>
<td>5,8</td>
<td>5,4</td>
<td>5,3</td>
<td>72,6</td>
</tr>
<tr>
<td>The Gini coefficient</td>
<td>0,309</td>
<td>0,288</td>
<td>0,267</td>
<td>0,278</td>
<td>0,289</td>
<td>0,284</td>
<td>91,9</td>
</tr>
<tr>
<td>Nominal income per capita, mln.tenge</td>
<td>25226</td>
<td>32984</td>
<td>34282</td>
<td>38779</td>
<td>45936</td>
<td>51755,1</td>
<td>205,1</td>
</tr>
<tr>
<td>The index of real income, %</td>
<td>118,9</td>
<td>111,8</td>
<td>96,9</td>
<td>105,6</td>
<td>109,4</td>
<td>107,2</td>
<td>90,1</td>
</tr>
</tbody>
</table>

* Own development of the author

**Table 2 - Indicators of the Quality of Life for 2007-2012 (healthy life and comfort)**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Growth rate 2012/2007%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy, years</td>
<td>-</td>
<td>-</td>
<td>68,33</td>
<td>68,41</td>
<td>69,01</td>
<td>64,7</td>
<td>-</td>
</tr>
<tr>
<td>Sickness rate, %</td>
<td>58,9</td>
<td>58,6</td>
<td>59,8</td>
<td>58,5</td>
<td>56,5</td>
<td>56,8</td>
<td>96,4</td>
</tr>
<tr>
<td>The unit weight of people working in difficult conditions, %</td>
<td>79,2</td>
<td>78,1</td>
<td>77,2</td>
<td>78,0</td>
<td>77,2</td>
<td>77,1</td>
<td>97,3</td>
</tr>
<tr>
<td>The share of poor-quality drinking water, %</td>
<td>1,8</td>
<td>1,7</td>
<td>1,7</td>
<td>2,4</td>
<td>1,7</td>
<td>1,7</td>
<td>94,4</td>
</tr>
</tbody>
</table>

* Composed and summarized by the author based on [5].

* Composed and summarized by the author based on (7, 6)
Table 3 - Indicators of the Quality of Life for 2007-2012 (provision of social services) *

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Growth rate 2012/2007%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total share of education availability for the population aged 6-24 years, %</td>
<td>76,4</td>
<td>77,3</td>
<td>75,4</td>
<td>74,9</td>
<td>72,9</td>
<td>73,6</td>
<td>96,3</td>
</tr>
<tr>
<td>Availability of cultural institutions, %</td>
<td>76,0</td>
<td>76,1</td>
<td>75,8</td>
<td>76,1</td>
<td>76,3</td>
<td>76,5</td>
<td>100,6</td>
</tr>
</tbody>
</table>

* - Composed and summarized by the author based on [10]

![Graph of Gini coefficient]

* - Composed and summarized by the author based on (5)

FIG. 3 - Forecast of the Gini Coefficient, % *

On the basis of existing indicators we can determine the aggregate index of the quality of life of the population of the Republic of Kazakhstan (Table 4).

Table 4 - Aggregate Index of the Quality of Life of the Population of the Republic of Kazakhstan for 2007-2012*

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Growth rate 2012/2007%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td>0,11</td>
<td>0,10</td>
<td>0,08</td>
<td>0,08</td>
<td>0,08</td>
<td>0,07</td>
<td>63,6</td>
</tr>
<tr>
<td>Izk</td>
<td>0,40</td>
<td>0,39</td>
<td>0,39</td>
<td>0,39</td>
<td>0,37</td>
<td>0,36</td>
<td>90,0</td>
</tr>
<tr>
<td>Is</td>
<td>0,24</td>
<td>0,23</td>
<td>0,24</td>
<td>0,24</td>
<td>0,25</td>
<td>0,25</td>
<td>104,1</td>
</tr>
<tr>
<td>Rkl</td>
<td>0,75</td>
<td>0,76</td>
<td>0,77</td>
<td>0,77</td>
<td>0,77</td>
<td>0,78</td>
<td>104,0</td>
</tr>
</tbody>
</table>

*authoring

Thus, the index of the quality of life of the population of the Republic according to the analyzed indicators is at a quite high level and increased over the years to 0.78. The quality of life of the population is affected by: the direct and indirect impact factors, economic, social, political, institutional, demographic and environmental factors.

We analyze the influence of the main socio-economic factors [6, 7, 8] on the quality of life of the population of the Republic of Kazakhstan with the help of correlated regression analysis carried out by the software Statistical 7.0 (p <0,05), see Table 5.
Table 5 - The Factors of Socio-economic Development Affecting Greatly the Quality of Life Index of the Republic of Kazakhstan*

<table>
<thead>
<tr>
<th>№</th>
<th>Factors</th>
<th>Correlation coefficient</th>
<th>Correlation equation</th>
<th>Factors</th>
<th>Correlation coefficient</th>
<th>Correlation equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Investment in fixed assets, billion tenge</td>
<td>0,98</td>
<td>( Y = 0,701+0,14 – 4*X )</td>
<td>Scope of services provided to the population, billion tenge</td>
<td>0,84</td>
<td>( Y = 0,738 + 0,21 – 3 * X )</td>
</tr>
<tr>
<td>2.</td>
<td>Estimation of nominal income of the population (in average of per capita per month), tenge</td>
<td>0,91</td>
<td>( Y = 0,729+0,98 - 6*X )</td>
<td>Consumer price index</td>
<td>-0,90</td>
<td>( Y = 0,977 – 0,019* X )</td>
</tr>
<tr>
<td>3.</td>
<td>Number of employed in the economy, thousand people</td>
<td>0,90</td>
<td>( Y = 0,531+0,29 – 4 * X )</td>
<td>Lending to the economy (end of period), billion tenge</td>
<td>0,76</td>
<td>( Y = 0,678 + 0,11 – 4 * X )</td>
</tr>
</tbody>
</table>

*authoring

So, the quality of life of citizens has a direct impact mostly on: the level of investment in the economy, nominal income, the number of employed people, the scope of public services and lending to the economy, and inverse impact on the consumer price index.

Analyzing the subjective factors of quality of life of the population of the Republic of Kazakhstan according to the results of the survey carried out by the Kazakh Statistics Agency [1], the population estimates the availability of higher education at 44.5%, 45.5% of the population consider it partially available, and 10.0% - not available. Availability of health care is estimated even higher - 45.9%. Availability of cultural welfare and activities is estimated by the citizens at 73.6%. Contentment of the population by environment is satisfactory, 52.6% of population say so [1]. Evaluating the subjective opinions of citizens of the Republic of Kazakhstan on the satisfaction of their life as a whole, 75.2% of respondents are satisfied with the quality of life, 14.2% are unhappy, others are undecided. The level of satisfaction with the quality of life of the rural population is higher than in urban areas. The most satisfied with the quality of life are citizens receiving income being enough to buy anything needed - 97.8%, slightly less satisfied with the quality of life are citizens whose income is enough for food, clothing and durable goods - 88.0%, significantly less satisfied with quality of life are citizens whose income is enough for food, but having difficulties with buying clothes and paying housing - 38.1% [1]. We conclude from the stated above that income and meeting the material needs of the population has a strong effect on the evaluation of the quality of their own lives.

4. Discussions

Given the results of the study, it can be argued that the determining factor in satisfaction of the population of the Republic of Kazakhstan is the factor of meeting their material needs through the revenue and determining factors affecting the quality of life of the population are the investments in the economy, nominal incomes, employment and the consumer price index. Analysis of the factors mentioned above in the territorial section of the Republic of Kazakhstan is the prospect of further research.

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