

# Quality of life as the basis for achieving social welfare of the population

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**Abstract.** The paper discusses the concept and features of life quality as a socio-economic category. The main signs of quality of life of the population are shown. The analysis of different methodologies to measure indicators of life quality is given. It is shown that the most authoritative measure of the quality of life in the world is the "Human Development Index" (HDI). The main task of authorities at different levels to improve the quality of life of the population is described.

## 1. The concept of quality of life

The quality of life of the population is the degree of satisfaction of material, spiritual and social human needs. This concept is broader than financial security (standard of living) and an assessment of the human condition, and this estimate is based on one's own satisfaction of these conditions. Quality of life involves personal and national security, clean environment, economic and political freedom and many other conditions of human well-being that are difficult to measure.

When describing quality of life as a socio-economic category it is necessary to note some of its features.

1. Quality of life is a very broad concept, is multifaceted, covering all spheres of society.
2. Quality of life has two sides: objective and subjective. The objective assessment is based on science-based standards of the needs and interests of people, in terms that can objectively judge the degree of satisfaction of these needs and interests. However, the needs and interests of people are very individual, they exist only in the minds of people, their opinions and judgements. They are not captured by any statistical quantities and are a subjective assessment of satisfaction with the quality of life of the people themselves.
3. Quality of life includes other socio-economic categories in the qualitative aspect. For example, description of the quality of working life cannot be limited only to indicators of employment, unemployment, duration of the working day, week,

year, the level of occupational injuries. It is necessary to assess the extent consistent with the interests of workers, nature of work, its intensity, content, relationships within the team, etc.

The achievement of high quality of life of the population is a priority objective of the social market economy. According to sociologists of the Financial University under the Government of the Russian Federation, high quality of life involves [1,2]:

- sufficient length of healthy life, supported by good medical services and security;
- acceptable volume of consumption of goods and services, guaranteed access to material goods;
- satisfactory social relations, the absence of serious social conflicts and threats to the achieved level of well-being;
- family well-being;
- knowledge of the world and development – access to knowledge, education and cultural values that shape identity and ideas about the world;
- taking into account the views of the individual in solving social problems, participation in creating the common picture of the world and rules of human behavior;
- social belonging, full participation in public and cultural life in all its forms;
- access to a variety of information, including information about the state of affairs in society;
- comfortable working conditions, giving room for creativity and fulfilment, a relatively short working day, allocating enough free time for a person to engage in different activities.

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## 2. Measurement and evaluation of quality of life

Analysis of scientific papers over the last 20 years has shown that different communities use their own approaches to assessment of quality of life, and an accurate, clear and common approach does not exist.

1. In 2005 the Economist Intelligence group in the USA has developed a methodology to measure the quality of life index [3], thus linking the survey's results of subjective evaluation of life satisfaction to objective determinants of quality of life. The index has been calculated for 111 countries (table 1).

**Table 1.** The nine quality-of-life factors and the indicators used to represent these factors.

Quality-of-life factor	Indicators of quality of life
1. Material wellbeing	GDP per person, at PPP in \$
2. Health	Life expectancy at birth, years.
3. Political stability and security	Political stability and security ratings.
4. Family life	Divorce rate (per 1,000 population), converted into index of 1 (lowest divorce rates) to 5 (highest).
5. Community life	Dummy variable taking value 1 if country has either high rate of church attendance or trade-union membership; zero - otherwise
6. Climate and geography	Latitude to distinguish between warmer and colder climates.
7. Job security	Unemployment rate, %.
8. Political freedom	Average of indices of political and civil liberties. Scale of 1 (completely free) to 7 (unfree).
9. Gender equality	Ratio of average male and female earnings, latest available data

2. European scientists in October 2013 developed a method of measuring quality of life and evaluated it for Europe (table 2).

**Table 2.** Quality of life factors and their characteristics for the European countries.

Quality of life factors	Characteristic of quality of life factors in European countries
1. Material living conditions	The risk of poverty and social exclusion in southern and Eastern Europe is substantially higher than in Western and Northern

	European countries. Income inequality is also less prevalent in Central Europe, Scandinavia and Benelux than in southern and Eastern Europe and the Baltic States. Almost throughout Europe, however, income inequality decreases in older age groups, while the risk of severe material deprivation is sharply reduced for those who seek a higher education.
2. Productive or main activity	Unemployment and a long term unemployment level The number of people living in households with very low work intensity, or in involuntary part-time employment Health and safety at work The average number of usual hours worked per week at main job or the percentage of employees working more than the threshold level, ILO / OECD 49 hours, The average number of employees working at inconvenient hours Satisfaction during the trip to work
3. Health	Health is a multifaceted concept, and there is no single indicator that could adequately assess it at the level of the whole country. Smoking and obesity are among the major causes of premature death and are considered as the main threats to public and individual health. More than half the population are overweight or obese. By the term "overweight" we mean a person with a body mass index (BMI) equal to or greater than 25 but less than 30. People who are considered obese have a BMI equal to or greater than 30. Malta is the most serious case. Greece tops the list for smoking: 32.7% of its population smoke, and then Bulgaria (30,0%) and Latvia (28.8 per cent)
4. Education	In the EU in 2011 over one fifth (23.7 per cent) of the working age population have higher education, while nearly half (46.6 per cent) had secondary education. Young Europeans are better educated than older age groups. The gender gap in higher education has not only disappeared, but also changed: the share of women with higher education is higher than share of men in almost all countries. While the share of university graduates is almost identical among men and women aged between 45 and 54, in the age group of 25-34 years women clearly outnumber men among university graduates.
5. Leisure and social interactions	People at risk of poverty spent less time than the general population, engaged in expensive leisure activities, such as trips to the cinema, attending live performances, visiting cultural sites and attending sports events.
6. Economic and physical safety	Economic vulnerability is less common in Northern and Western European countries, especially in Sweden, the Netherlands, Austria, Luxembourg and Denmark. Countries which economic vulnerability is

	higher than the average one for the EU are only Italy and Ireland. At the end of 2011, economic vulnerability in Greece and Portugal was lower than the EU average, and lower than in countries such as Germany and the UK, but it has increased significantly since the beginning of the crisis. Physical security refers to the defense at any situation which puts the physical safety of a person in danger, such as crimes, accidents or natural disasters. Murders are the reason only for a small percentage of all deaths, but their impact on the emotional life of people is very different from the effect of deaths related to the disease.
7. Governance and basic rights	Active citizenship is more common in Northern Europe than in the rest of the continent. Women are underrepresented in politics and managerial positions at different levels of governance in Europe. Throughout the EU, less than 3.0% of women were involved in activities associated with political parties or trade unions. For men, it was almost twice as high.
8. Natural and living environment	Environmental conditions affect human health and welfare, both directly, e.g. through pollution, and indirectly, e.g. through adverse effects on ecosystems, biodiversity or even as natural disasters and industrial accidents. People increasingly value their rights to have access to environmental resources and services.
9. Overall experience of life	Europeans, as a rule, are quite satisfied with life overall, reporting an average of 7.1 out of 10.0, while in all but two countries average levels were more than 6. High levels of satisfaction with life in general correlate with a high level of sense of purpose. The effect of income on life satisfaction tends to be more significant. Other demographic and socio-economic factors such as age, the level of education, a type of household and the employment status also play an important role. Satisfaction with life of middle-aged people is constantly lower than in case of younger and older persons, with the exception of some countries in Eastern Europe. On the other hand, the educational level has a positive effect on life satisfaction, as well as the presence of the family, with children or without.

B E I N G	<b>Physical Being</b>	Being physically able to get around. My nutrition and the food I eat.
	<b>Psychological Being</b>	Being free of worry and stress. The mood I am usually in.
	<b>Spiritual Being</b>	Having hope for the future. My own ideas of right and wrong.
B E L O N G I N G	<b>Physical Belonging</b>	The house or apartment I live in. The neighbourhood I live in.
	<b>Social Belonging</b>	Being close to people in my family. Having a spouse or special person.
	<b>Community Belonging</b>	Being able to get professional services (medical, social, etc.) Having enough money.
B E C O M I N G	<b>Practical Becoming</b>	Doing things around my house. Working at a job or going to school.
	<b>Leisure Becoming</b>	Outdoor activities (walks, cycling, etc.) Indoor activities (TV, cycling, etc.)
	<b>Growth Becoming</b>	Improving my physical health and fitness. Being able to cope with changes in my life.

3. A research unit at the University of Toronto in Canada presented their research of the main factors of quality of life, dividing them into three groups: status, membership, development, evaluating physical, psychological and spiritual state of a person (table 3).

**Table 3.** Indicators of quality of the life research unit at the University of Toronto.

4. Belyaeva L. A., a doctor of sociology, a leading researcher of the Institute of philosophy of the Russian Academy of Sciences, proposed a system of subjective indicators of quality of life [3], summarized in 4 components:

1. the standard of living (welfare);
2. the quality of the social environment;
3. the quality of the natural environment;
4. social wellbeing of the population (table.4).

**Table 4.** Subjective indicators of quality of life.

Quality of life components	Private indexes
<b>I. Level of life (wellbeing)</b>	1. The index of material standard of living
	2. The index of satisfaction with housing
	3. The index of accessibility of medical care
	4. The index of availability of education
The overall index of living standards: the arithmetic average of the 4 partial indices	
<b>II. Quality of the nearest social environment</b>	1. The index of self-identification with the residents of their settlements
	2. The index of security from crime
	3. The index of security from poverty
	4. Index of protection against arbitrariness of officials
	5. Index of protection against an arbitrariness of law enforcement bodies
The overall index of the quality of the social environment: the arithmetic mean of 5 partial indices	
<b>III. Quality of ecology</b>	1. The index of security from environmental threats
	2. The index of air purity
	3. The index of water purity
The overall index of environmental quality: the arithmetic mean of 3 partial indices	
<b>IV. Social wellbeing</b>	1. The confidence in the future index
	2. The index of life satisfaction of the population
	3. The index of independence
The overall index of social optimism: the arithmetic mean of 3 partial indices	
The integral quality of life index: the arithmetic mean of the 4 total of indexes	

Thus, the concept of quality of life is different because of differences in cultural traditions of the people. However, despite many ideas of material and social comfort, we can find the common denominator: safety of life, health, material wellbeing, access to social activities, interesting work. People of different nationalities and races consider it a blessing everywhere regardless of personal characteristics and cultural traditions.

There is even an attempt to measure the quality of life through "The Happy Planet Index" or "International index of happiness", which was proposed in 2006 by the New Economics Foundation [7]. The authors of this index have tried to reflect the wealth of Nations not through GDP per capita or other economic indicators, but by using three indicators: subjective life satisfaction of the population, life expectancy and so-called "ecological footprint" - the environmental pollution. Leaders in quality of life from 155 countries were examined in 2012, according to Happy Planet Index the leaders are Costa Rica, Vietnam, Colombia, Belize and El Salvador, and the US is at the 105th place, Russia – at 122nd place, Luxembourg is at the 138th place. However, the most authoritative measure of the quality of life in the world is the "Human development Index"

(HDI) calculated by the UN [8]. The HDI is decomposed into three main components:

- income, access to a large volume of goods and services, it is estimated using GNI per capita population (in purchasing power parity (PPP) in USD).
- access to education, which is the key to identity formation and ensures a high labour productivity (thus high incomes), it is determined using the average number of years spent on education
- life expectancy – it depends on the level of security in the country and development health.

Depending on the index values, the countries are divided by the level of the development group with very high, high, medium and low human development. According to the latest data, Russia is at the 57th place in the list of 187 countries (8 in the group) and is classified as a country with a high level of human development (table.5.).

**Table 5.** The human development index (HDI) in some countries of the world (2014) submitted by the United Nations (UNDP).

Place	Country	HDI
1	Norway	0.944
2	Australia	0.933
3	Switzerland	0.917
4	Netherlands	0,915
5	United States of America	0,914
6	Germany	0,911
7	New Zealand	0,910
8	Canada	0,902
9	Singapore	0,901
10	Denmark	0,900
11	Ireland	0.899
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52	Montenegro	0,789
53	Belarus	0,786
54	Romania	0.785
55	Lebanon	0,784
56	Oman	0,783
<b>57</b>	<b>Russia</b>	<b>0,778</b>
58	Bulgaria	0,777
59	Barbados	0,776
...		
185	Central African Republic	0,341
186	Democratic Republic of the Congo	0,338
187	Niger	0.337

In Russian publications of the UN report, information on the human development index (HDI) of regions of the Russian Federation is traditionally provided (table 6). In this list Tomsk region is located at the 9<sup>th</sup> position, which indicates a high level of quality of life in our region.

**Table 6.** The human development index in the regions of the Russian Federation, 2014.

THE REGION	THE INCOME INDEX	THE LONGEVITY INDEX	EDUCATIONAL INDEX	HDI	RATING PLACE
Russia	0.882	0.731	0.916	0.843	
Moscow	1.000	0.809	0.984	0.931	1
Saint-Petersburg	0.919	0.775	0.969	0.887	2
Tyumen region	1.000	0.745	0.916	0.887	3
Sakhalin region	1.043	0.667	0.903	0.871	4
Belgorod region	0.909	0.772	0.917	0.866	5
Tatarstan Republic	0.913	0.757	0.922	0.864	6
Krasnoyarsk Krai	0.935	0.713	0.915	0.854	7
Komi Republic	0.920	0.703	0.936	0.853	8
<b>Tomsk region</b>	<b>0.890</b>	<b>0.727</b>	<b>0.941</b>	<b>0.852</b>	<b>9</b>
The Sakha (Yakutia) Republic	0.912	0.696	0.924	0.844	10
Orenburg region	0.884	0.721	0.922	0.842	11
Sverdlovsk region	0.867	0.733	0.927	0.842	12

Omsk region	0.853	0.731	0.937	0.840	13
Kursk region	0.820	0.726	0.972	0.8	14
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Altay Republic	0.723	0.682	0.926	0.777	78
Chechen Republic	0.640	0.799	0.856	0.765	79
Tyva Republic	0.733	0.600	0.918	0.750	80

### 3. Improving quality of life

The task of improving the quality of life of the population is a nationwide challenge, solved only by joint efforts of all levels of government (Federal, regional, municipal) [5-13]. The priority of government is to consistently improve the quality of life of the population, reducing poverty, ensuring decent conditions for life and development of the welfare state. The main orientations of activity of the state and municipal authorities in improving the quality of life of the population include the following:

- the growth of living standards due to the positive dynamics of real incomes of the population and the decrease in the share of population with incomes below the subsistence level, and the decrease in the level of official unemployment;
- ensuring employment through activities aimed at promoting the employment of citizens who cannot find a suitable job and supporting entrepreneurial activity and initiative of the population;
- improving the quality and accessibility of social services: the development of an effective system of health, education and culture, formation of healthy lifestyle;
- providing citizens with affordable and comfortable housing: low-rise buildings, support for young families, affordable mortgage, support of young specialists, the resettlement of people from dilapidated housing stock, capital repairs of apartment buildings;
- security of residence by creating conditions of anti-terrorist protection and prevention of crimes, maintenance of ecological security.

Thus, the quality of life is determined by the life capabilities of society and the objective characteristics, which shows the quality of life in subjective satisfaction of the people themselves and their lives.

The most common and popular indicator and the indicator of quality of life and the level of development of countries is the Human Development Index (HDI),

which depends on three indicators: life expectancy, education and GDP per capita. Quality of life shows the impact of the lifestyle of the people. The level and conditions of life are structural components of quality of life. At the present stage our state has taken various measures to improve the quality of life of the population, which is already yielding some results in the form of welfare improvement and poverty reduction.

## References

1. A.N.Zubec, I.V.Tarba, *Finansy*, **12**, 68-70 (2013)
2. A.N.Zubec. *Istoki i istoria jekonomicheskogo rosta*. (Moskva, Jekonomika, 2014)
3. L.A. Beljaeva, *Sociolog. Issled.*, **1**, 33-42 (2009)
4. V.Bobkov, *Upravlenie socialnym razvitiem*, **6**, 44-50 (2009)
5. R.J. Lee, I.N. Sener, *Transport Policy*, **48**, 146-155 (2016)
6. I.Petrosillo, R.Costanza, R.Aretano, N. Zaccarelli, G.Zurlini, *Ecolog. Indicators*, **24**, 609-620 (2013)
7. P.Makai, W.B.F. Brouwer, M.A. Koopmanschap, E.A. Stolk, A.P. Nieboer, *Soc. Science & Medic.*, **102**, 83-93 (2014)
8. D.Giacalone, K.Wendin, S.Kremer, M.B. Frost, W.L.P. Bredie, V.Olsson, M.H. Otto, S.Skjoldborg, U.Lindberg, E.Risvik, *Food Quality and Preference*, **47**, Part B, 166-170 (2016)
9. R.Keles, *Social and Behavioral Sciences*, **35**, 23-32 (2012)
10. T.Rahman, R.C. Mittelhammer, P.R. Wandschneider, *J. of Socio-Econom.*, **40** (1), 43-52 (2011)
11. A. Cambir, V.Vasile, *Proc. Econom. and Fin.*, **32**, 932-939 (2015)
12. M.Fritz, M.Koch, *Ecolog. Econom.*, **108**, 191-199 (2014)
13. B. Bayulken, D.Huisingh, *J. of Cleaner Production*, **98**, 253-262 (2015)