STATISTICAL ANALYSIS OF THE POPULATION'S STANDARD OF LIVING IN THE REPUBLIC OF UZBEKISTAN

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ABSTRACT

This article is devoted to the statistical analysis of the population's standard of living in the Republic of Uzbekistan. It examines indicators of the population's standard of living in the republic for the period from 2018 to 2024, which, from the author's perspective, provide a complete picture of the dynamics of this category. The article also presents the author's approach to calculating a composite indicator characterizing the population's provision with household appliances and automobiles.

Keywords: Standard of living of the population, statistical indicators, population income and expenditure, housing conditions, provision of household appliances and automobiles.

INTRODUCTION

Improving the standard of living is an important task for any state. This direction requires a comprehensive approach, including economic development, support for the social sphere, investments in healthcare and education, as well as environmental protection measures.

Economic literature lacks a single, universally accepted definition of the category "population's standard of living," which makes the question of the set of indicators necessary for its full statistical assessment debatable.

Research on key social aspects — improving the level and quality of life, poverty reduction, growth of population income, ensuring employment, improving working conditions and safety, as well as issues of social protection for low-income and disabled citizens — has been widely reflected in the works of domestic and foreign researchers, including A. Maslow, I. Kuznetsova, D. V. Zerkalov, D. N. Shilovtsev, S. V. Soboleva, A. V. Vakhobov, H. P. Abulkosimov, L. Maksakova, T. S. Rasulov, and others.

MATERIALS AND METHODS

One of the most common approaches is to interpret the standard of living as a set of goods and services at the disposal of an individual, family, or social group. In this case, the key indicator of the standard of living is traditionally the income of households, which determines their ability to purchase goods, services, and various types of assets. Income is directed both to current consumption and to the formation of savings, which can serve as a source of future expenses or be used to acquire property and financial assets (housing, land plots, etc.), also influencing the standard of living.

Indirect characteristics of the standard of living are indicators such as birth and death rates, life expectancy, net migration, number of marriages and divorces, and other demographic parameters.

The structure of the quality of life is typically considered in several areas:

• Population income and expenditure (level, structure, dynamics);

• Demographic characteristics (gender-age and professional-qualification composition, workforce reproduction);

• Population health (life expectancy, mortality rate, morbidity indicators);

• Quality of nutrition (regularity, rationality, energy value, food safety);

• Education and culture (level and duration of education, access to cultural and educational institutions);

• Employment and working conditions (scale of employment, nature of work, its intensity, working hours, injury rate);

• Housing conditions (area and amenities of housing, infrastructure of settlements);

• Rest and leisure activity (availability of opportunities for rest, sports, cultural leisure);

• Social security (system of guarantees for old age, disability, temporary incapacity for work);

• Social stability (citizen participation in socio-political life, level of the shadow economy, crime dynamics);

• Ecological state of the environment (air, water, soil quality; investments in environmental protection and rational nature management);

• Human rights and security (conditions for the realization of fundamental rights, protection from emergencies, epidemics, ensuring public safety).

RESULTS

The Republic of Uzbekistan has always actively pursued work to improve the population's standard of living, increase its income, and enhance the quality of education and healthcare.

The poverty rate in Uzbekistan at the end of 2024, according to international standards, decreased from 11% to 8.9%. It amounted to about 3.3 million people and decreased by 719 thousand people compared to 2023. According to the Ministry of Employment and Poverty Reduction, this result was determined based on a study conducted jointly with the World Bank.

In particular, the greatest reduction in poverty took place:

• In Bukhara Region — from 11.8 percent to 8.7 percent;

• In Samarkand Region — from 10.5% to 7.5%

• In Namangan Region — from 10.4% to 7.6%.;

• In the Republic of Karakalpakstan — from 13.6% to 10.8%.

The measures taken to ensure population employment, attract entrepreneurship, and increase the efficiency of land use allocated for household plots and agriculture in 2024 made a significant contribution to reducing the poverty rate in the country.

As a result, in 2024, the population's real income increased by 10.7%, reaching an average of 2.1 million soum per capita per month; in 2023, this figure was 1.7 million soum.
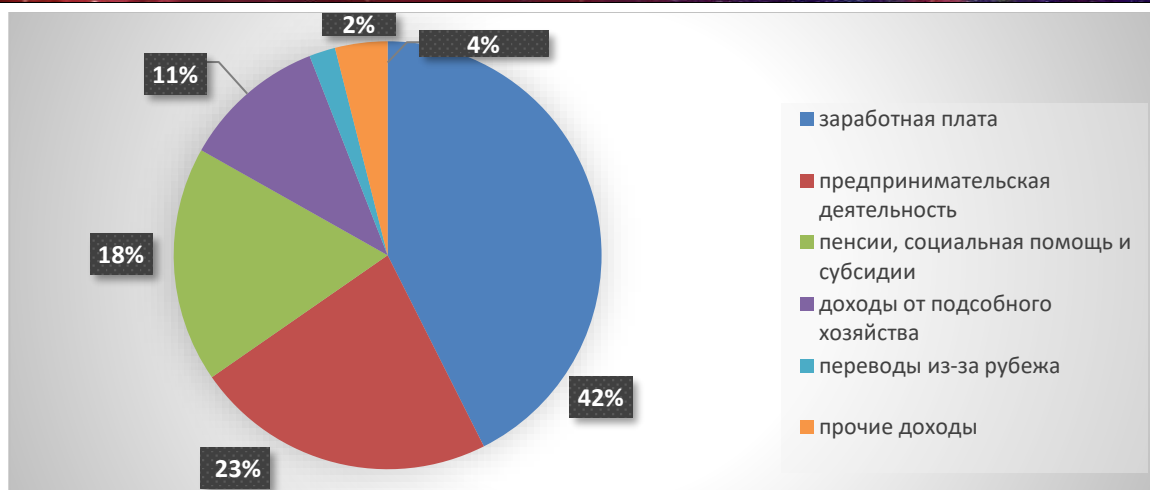
Fig. 1. Structure of the Population's Income in the Republic of Uzbekistan in 2024.

In particular, the composition of the population's income in the Republic of Uzbekistan in 2024 included: wages, income from entrepreneurial activity, pensions, social benefits, state subsidies, income from agriculture and subsidiary farming, remittances from abroad, other income (Fig. 1.):

As can be seen from the figure, the main part of the population's income, more than 42%, comes from wages. The share of income from the population's entrepreneurial activity is also high (23% of total income) and pensions, social assistance, and state subsidies (18% of total income). The smallest share of the population's income, only 2%, is occupied by remittances from abroad.

The main indicators, in our opinion, characterizing the population's standard of living in the Republic of Uzbekistan for the period from 2018 to 2024 are presented in Table 1.

Table 1 Dynamics of Change in Indicators of the Population's Standard of Living in the Republic of Uzbekistan for the Period from 2018 to 2024.

No.	Indicator	Unit	2018	2019	2020	2021	2022	2023	2024
1	Real GDP per capita	USD	1,589.1	1,668.5	1,759.0	1,993.3	2,275.9	2,495.6	3,092.0
2	GDP per capita growth rate	%	103.7	104.0	100.1	105.3	103.5	103.8	104.4
3	Inflation (CPI)	%	114.3	115.2	111.1	110.0	112.8	108.8	109.8
4	Real gross income per capita	thousand UZS	7,763.0	9,506.0	10,734.3	13,416.8	15,948.3	18,201.2	21,948.9
5	Poverty rate	%	11.4	11.0	11.5	17.0	14.1	11.0	8.9
6	Gini coefficient	ratio	0.262	0.262	0.276	0.273	0.283	0.288	0.286
7	Average monthly nominal accrued wage	thousand UZS	1,822.2	2,324.6	2,673.3	3,214.8	3,892.4	4,561.4	5,357.2
8	Average old-age pension	UZS	628,172	720,164	833,303	936,743	1,045,326	1,245,300	1,431,300
9	Unemployment rate	%	9.3	9.0	10.5	9.6	8.9	6.8	5.5
10	Employment rate	%	67.4	68.1	66.0	67.0	67.2	67.9	68.3
11	Life expectancy at birth	years	74.6	75.1	73.4	73.8	74.3	74.7	74.7
12	Number of physicians	persons	89,776	91,932	93,337	95,587	100,524	105,723	105,845
13	Share of food expenditures in total consumer expenditures	%	48.0	45.8	46.3	57.6	57.3	55.5	57.5
14	Housing provision	m² per capita	15.8	16.0	16.0	18.2	18.5	19.0	19.0
15	Share of population with access to drinking water services	%	86.4	86.6	87.9	94.7	97.8	98.7	99.0

Inflation rates decreased from 114.3% in 2018 to 109.8% in 2024. The poverty rate decreased from 11.4% to 8.9% over the same period. The highest value of this indicator — 17.0% — was observed in 2021, which is associated with post-COVID consequences when a significant part of the population temporarily lost sources of employment.

Real total income per capita increased by 2.82 times: from 7763.0 thousand soum in 2018 to 21,948.9 thousand soum in 2024.

According to the Statistics Committee of the Republic of Uzbekistan, the Gini coefficient in 2018–2024 fluctuated in the range of 0.262–0.288, which indicates stability in the level of income differentiation within acceptable limits.

The average monthly nominal accrued wage during the study period increased almost threefold — from 1822.2 thousand soum in 2018 to 5357.2 thousand soum in 2024 (an increase of 2.94 times). A similar positive dynamic is observed in the size of old-age pensions: this indicator increased from 628,172 soum to 1,431,300 soum, or by 2.28 times.

The unemployment rate also shows a steady downward trend: from 9.3% in 2018, it decreased to 5.5% in 2024, that is, by more than one and a half times.

The employment rate of the population of the republic in the period under review is approximately at the same level of 66% - 68%. The lowest employment rate — 66% — occurred in 2020, the COVID year.

The share of food expenditures in the population's consumer spending increased during the period under review from 48% in 2018 to 57.5% in 2024, which is not entirely favorable, as the share of food expenditures in the population's consumer spending should not exceed 50%.

The indicator of average housing provision for the population of the Republic of Uzbekistan in terms of living area (m²) per person smoothly increased from 2018 to 2024 from 15.8 to 19 m² per person, which is the result of the state's active housing policy.

Another significant indicator characterizing the standard of living of the population of the republic, in our opinion, should be an integrated indicator of the population's provision with household appliances and automobiles per 100 households, the calculation methodology for which is proposed by the author.

Based on collected information on changes in indicators of the population's provision with automobiles, televisions, refrigerators, and other types of equipment for the period from 2010 to 2024, the shares of provision with household appliances and automobiles were calculated using the formula:

$$\mathrm{d}i = \frac{\text{Number of this type of household appliance}}{\text{per 100 households}} \quad (1)$$

The next stage of calculation is the calculation of the average share of provision of the population of the Republic of Uzbekistan with household appliances and automobiles (see Table 2) using the formula:

$$\mathrm{d}_{o6} = \frac{d1 + d2 + d3 + d4 + d5 + d6 + d7 + d8}{8} \quad (2)$$

where,

d_1 - share of automobiles per 100 households;
d_2 - share of vacuum cleaners per 100 households;
d_3 - share of personal computers per 100 households;
d_4 - share of washing machines per 100 households;

d_5 - share of televisions per 100 households;

d_6 - share of refrigerators and freezers per 100 households;

d_7 - share of air conditioners per 100 households;

d_8 - share of mobile phones per 100 households with 4 members.

Table 2. Dynamics of Provision of the Population with Household Appliances and Automobiles for the Period from 2010 to 2024 (per 100 households).

Year	Share of cars	Share of vacuum cleaners	Share of personal computers	Share of washing machines	Share of televisions	Share of refrigerators and freezers	Share of air conditioners	Share of mobile phones	Average ownership rate of cars and household appliances
2010	0.21	0.37	0.12	0.75	1.32	0.99	0.19	0.36	0.54
2011	0.24	0.38	0.16	0.77	1.33	1.00	0.20	0.39	0.56
2012	0.27	0.45	0.22	0.78	1.36	1.00	0.27	0.47	0.60
2013	0.35	0.51	0.32	0.78	1.46	1.00	0.29	0.53	0.66
2014	0.41	0.51	0.37	0.78	1.51	1.01	0.30	0.57	0.68
2015	0.42	0.53	0.47	0.79	1.52	1.01	0.32	0.59	0.70
2016	0.43	0.54	0.49	0.80	1.53	1.02	0.34	0.62	0.72
2017	0.44	0.54	0.50	0.80	1.54	1.01	0.34	0.64	0.73
2018	0.44	0.55	0.52	0.81	1.55	1.03	0.35	0.66	0.74
2019	0.47	0.58	0.55	0.89	1.60	1.06	0.39	0.71	0.78
2020	0.49	0.60	0.60	0.90	1.62	1.07	0.40	0.72	0.80
2021	0.53	0.64	0.63	0.94	1.70	1.14	0.43	0.77	0.85
2022	0.55	0.69	0.64	0.95	1.71	1.15	0.45	0.77	0.86
2023	0.57	0.71	0.66	0.96	1.76	1.18	0.47	0.87	0.89
2024	0.58	0.82	0.73	1.01	1.77	1.21	0.56	0.89	0.95

Comparative analysis of the provision of the population of the Republic of Uzbekistan with household appliances and automobiles for the period from 2010 to 2024 per 100 households, presented in Table 3, showed that from 2010 to 2024, there is a significant increase in the provision of the population of the Republic of Uzbekistan with automobiles and household appliances.

In particular, the provision of the population of the republic with automobiles per 100 households in 2015 compared to the 2010 level increased by 100% (200%-100%), in 2020 compared to the 2010 level by 133% (233%-100%), in 2023 the increase was 171% (271%-100%), and in 2024 the increase was 176% (276%-100%).

The provision of the population with vacuum cleaners per 100 households increased during the analyzed period by 43% in 2015 compared to the 2010 level, by 92% in 2023 compared to the 2010 level, and by 122% in 2024 compared to the 2010 level. The provision of the population with personal computers per 100 households increased during the analyzed period by 3.9 times in 2015 compared to the 2010 level, by 5 times in 2020 compared to the 2010 level, and by 6 times in 2024 compared to 2010.
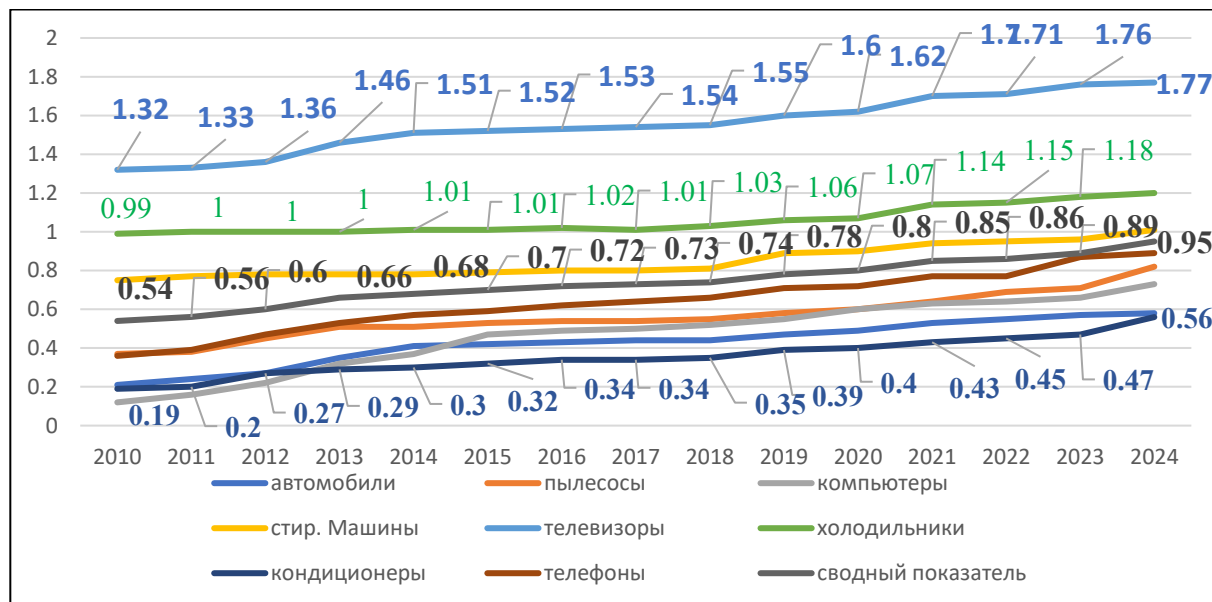
The provision of the population of the republic with air conditioners per 100 households in 2015 compared to the 2010 level increased by 68%, in 2020 compared to the 2010 level by 110%, and in 2024 the increase was 195% compared to the 2010 level.

Table 3 Comparative Analysis of the Provision of the Population of the Republic of Uzbekistan with Household Appliances and Automobiles for the Period from 2010 to 2024 per 100 Households.

Indicator	2010 d	Δb	Tb, %	2015 d	Δb	Tb, %	2020 d	Δb	Tb, %	2023 d	Δb	Tb, %	2024 d	Δb	Tb, %
Cars	0.21	0.00	100	0.42	0.21	200	0.49	0.28	233	0.57	0.36	271	0.58	0.37	276
Vacuum cleaners	0.37	0.00	100	0.53	0.16	143	0.60	0.23	162	0.71	0.34	192	0.82	0.45	222
Personal computers	0.12	0.00	100	0.47	0.35	391	0.60	0.48	500	0.66	0.54	550	0.73	0.65	608
Washing machines	0.75	0.00	100	0.79	0.04	105	0.90	0.15	120	0.96	0.22	128	1.01	0.26	135
Televisions	1.32	0.00	100	1.52	0.20	115	1.62	0.30	123	1.76	0.44	133	1.77	0.45	134
Refrigerators	0.99	0.00	100	1.01	0.02	102	1.07	0.08	108	1.18	0.19	119	1.21	0.22	122
Air conditioners	0.19	0.00	100	0.32	0.13	168	0.40	0.21	210	0.47	0.28	247	0.56	0.37	295
Mobile phones (per 4 persons)	0.36	0.00	100	0.59	0.23	164	0.72	0.36	200	0.87	0.51	242	0.89	0.53	247
Average	**0.54**	**0.00**	**100**	**0.70**	**0.16**	**130**	**0.80**	**0.26**	**148**	**0.89**	**0.35**	**165**	**0.95**	**0.41**	**176**

The provision of the population with mobile phones per 100 households, consisting on average of 4 people, increased during the analyzed period by 64% in 2015 compared to the 2010 level, by 100% in 2020 compared to the 2010 level, and by 147% in 2024 compared to 2010.

There is a relatively insignificant increase during the period under review in the provision of the population with televisions, washing machines, and refrigerators. But this is due to the fact that already in 2010, the provision of the population with this household equipment was practically 100%. The provision of washing machines was 75% per 100 households, televisions 132% per 100 households, and refrigerators 99% per 100 households.

Fig. 2. Dynamics of Change in the Share of Household Appliances and Automobiles per 100 Households of the Republic for the Period from 2010 to 2024.

CONCLUSION

Analysis of the table and figure shows that from 2010 to 2024, the average composite indicator of the provision of the population of the Republic of Uzbekistan with household appliances and automobiles, proposed and calculated by the author, also had significant growth. In particular, in 2015 compared to the 2010 level, the growth of this indicator per 100 households of the republic was 30% compared to the 2010 level, in 2020 compared to the 2010 level, the growth

of this indicator per 100 households of the republic was 48% compared to the 2010 level, in 2023 it was 65% of the 2010 level. And in 2024, it was already 76% of the 2010 level.

Thus, it can be concluded that the provision of the population of the republic with automobiles and household appliances continuously increases from year to year, and consequently, the standard of living of our population is also growing.

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