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REGIONAL ASSESSMENT OF HUMAN CAPITAL IN THE REPUBLIC OF UZBEKISTAN

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ABSTRACT

This article discusses approaches to the assessment of human capital. Drawing on international research experience, a standard international assessment methodology, and regional statistical data, a methodology for assessing human capital of the Republic of Uzbekistan at the regional level is proposed. Based on the author's methodology, the human capital of the regions of the Republic of Uzbekistan is evaluated.

KEYWORDS

human capital, human capital index, education, healthcare, standard of living

Introduction

In recent years, the development of human capital has been identified as one of the priority directions of state policy in Uzbekistan. In particular, the New Uzbekistan Development Strategy for 2022–2026 sets important objectives aimed at expanding the quality and coverage of education, improving the healthcare system, ensuring employment, and enhancing human dignity. Moreover, decisions adopted by the Cabinet of Ministers of the Republic of Uzbekistan on the integrated socio-economic development of regions, poverty reduction, and the effective use of labor resources are strengthening the institutional foundations of human capital development.

The competitiveness of a region depends on a number of factors, including its economic and geographical location, the level of infrastructure development, and the degree of development of human capital among its residents. The level of human capital development influences the scientific, technical, and innovative advancement of the region. Regions with a high level of human capital

development build an optimal institutional framework, which, together with a high-quality labor force and efficient use of fixed capital, drives accelerated economic growth.

LITERATURE REVIEW AND METHODS

In the 1960s, human capital theory was developed by Gary Becker and Theodore Schultz as an independent economic strand of development theory. The application of economic principles to issues of healthcare, education, and migration served as the basis of the theory.

In his research, Theodore Schultz emphasized that the speed of economic recovery (after war or crisis) is related to the health and education of the population. As an example, he examined the rapid post-World War II recovery of the economies of West Germany and Japan, compared to the slower recovery of the United Kingdom. Schultz demonstrated that education — that is, being educated — makes people's labor more productive, and that a higher level of healthcare protects investments in education and increases productive capacity. In his view, human capital possesses the essential characteristics of productivity and yield: it can be accumulated and reproduced.

Among Uzbek economists who have conducted research on human capital development, Doctor of Economic Sciences K. Kh. Abdurakhmonov analyzed changes in human capital indicators at both the macro and micro levels. He substantiated the correct definition of priority directions, strategy, and implementation mechanisms of scientific-industrial policy for the effective development of Uzbekistan.

The research of Candidate of Economic Sciences G. Z. Ubaydullayev, devoted to identifying the development of socio-economic relations characterizing the interdependence of human capital as an innovative factor of socio-economic development, focuses on the concepts and strategies of socio-economic development aimed at developing human capital in Uzbekistan.

RESULTS AND DISCUSSION

Within the framework of the sustainable development concept, the United Nations and the World Bank employ the Human Development Index as a tool for assessing the living standards of world regions and countries. In 2010, the assessment methodology underwent significant revision, and additional indicators were identified:

– Multidimensional Poverty Index;
– Gender Inequality Index.

Taking into account international research experience, a unified international assessment methodology, and the availability of statistical indicators of the Republic of Uzbekistan at the regional level, the following methodological tools are proposed for assessing human capital across the regions of the Republic of Uzbekistan.

The author's assessment methodology, based on a set of indicators characterizing living standards, demography, the labor market, education, healthcare, and informatization, makes it possible to determine the conditions and parameters of human capital development for each region, to compare them with one another, and to identify the problems and weaknesses of specific regions.

One of the criteria for selecting indicators is their public availability, as well as the presentation of indicator values in the official statistics of the Republic of Uzbekistan broken down by region.

The methodology does not include indicators characterizing budget expenditures on social sectors, as these indicators, while important, are not publicly available for all regions.

It is proposed to assess the overall index of regional human capital development based on 15 indicators.

Table 1 Indicators for Assessing Human Capital Across Regions of the Republic of Uzbekistan[1]

№	Indicators	Characteristics
1.	Total income of the regional population, thousand soums	Absolute indicator. Characterizes the total monetary and in-kind income of the regional population from all sources, including free or concessional services provided from social funds
2.	Birth rate per 1,000 population of the region, ppm	Relative indicator. Calculated as the annual number of births per 1,000 inhabitants of the region
3.	Mortality rate per 1,000 population of the region, ppm	Relative indicator. Calculated as the annual number of deaths per 1,000 inhabitants of the region
4.	Share of in-migrants in the total population per year, persons	Relative indicator. Calculated as the ratio of the number of persons who arrived in the region per year to the total regional population
5.	Share of out-migrants in the total population per year, persons	Relative indicator. Calculated as the ratio of the number of persons who left the region per year to the total regional population
6.	Population density of the region, persons/km²	Relative indicator. Characterizes the number of inhabitants per 1 km² of the region's territory
7.	Employment rate in the region, %	Relative indicator. Calculated as the ratio of employed population to the working-age population of the region
8.	Unemployment rate in the region, %	Relative indicator. Calculated as the ratio of unemployed persons to the economically active population of the region
9.	Share of economically active population in total population per year, persons	Relative indicator. Calculated as the ratio of the regional population engaged in production of goods and services to the total regional population
10.	Economic activity rate of the regional population, %	Relative indicator. Calculated as the ratio of the economically active population to the working-age population of the region
11.	Share of labor resources in total population per year, persons	Relative indicator. Calculated as the ratio of the working-age population plus persons working beyond retirement age to the total regional population
12.	Number of educational institutions in the region per 10,000 inhabitants	Relative indicator. Calculated as the ratio of the number of educational institutions to the regional population, multiplied by 10,000
13.	Coverage of children aged 3–6 by pre-school educational institutions, %	Relative indicator. Calculated as the ratio of children attending pre-school organizations to the total number of children aged 3–6, adjusted for the corresponding age cohort enrolled in general education institutions in the region

The “total per capita income” indicator allows assessment of the welfare level of the regional population.

[1] Developed by the author.

Table 2 Total Per Capita Income of Regions of the Republic of Uzbekistan[2]

Region	Total per capita income, million soums (2024)	Rank
Republic of Karakalpakstan	20.7	13
Andijan	26.3	7
Bukhara	35.2	3
Jizzakh	25.0	6
Kashkadarya	23.0	10
Navoi	44.7	2
Namangan	21.3	12
Samarkand	26.0	8
Surkhandarya	22.6	11
Sirdarya	24.0	9
Tashkent Region	29.8	4
Fergana	24.6	14
Khorezm	31.1	5
Tashkent City	73.9	1

Tashkent City is the absolute leader by the "total per capita income" indicator, with a value more than twice the national average for the Republic of Uzbekistan. Khorezm Region ranks fifth among the regions by indicator value (above the national average). Surkhandarya, Namangan, Fergana regions, and the Republic of Karakalpakstan are the territories with the lowest per capita income.

[2] Population income data. Living standards. Open data. National Statistics Committee of the Republic of Uzbekistan, 2024. URL: https://stat.uz/ru/ofitsialnaya-statistika/national-accounts

Table 3 Demographic Indicators of Regions of the Republic of Uzbekistan[3]

	Birth rate per 1,000 pop., ‰	Rank	Mortality rate per 1,000 pop., ‰	Rank	In-migrants per year, persons	Rank	Out-migrants per year, persons	Rank	Pop. density, persons/km²	Rank
Republic of Karakalpakstan	20.8	13	4.5	7	11,826	4	18,588	4	11.5	13
Andijan	26.3	7	5.1	3	6,965	12	9,796	13	741.4	2
Bukhara	22.0	12	4.7	6	6,672	13	10,991	11	48.4	12
Jizzakh	29.0	2	4.2	9	8,993	10	11,484	9	66.5	11
Kashkadarya	28.8	3	4.4	8	11,580	5	20,726	3	116.7	10
Navoi	26.0	8	4.7	6	9,524	9	11,026	10	9.1	14
Namangan	27.6	5	4.7	6	3,142	14	5,953	14	385.4	4
Samarkand	27.7	4	4.7	6	9,591	8	17,636	6	235.4	6
Surkhandarya	29.9	1	4.7	6	11,911	3	17,699	5	133.4	9
Sirdarya	26.7	6	4.8	5	8,714	11	10,117	12	201.1	7
Tashkent Region	24.9	10	6.2	2	35,265	2	40,333	2	195.1	8
Fergana	25.7	9	4.8	5	10,857	6	14,868	7	565.1	3
Khorezm	22.3	11	5.0	4	9,855	7	12,202	8	312.9	5
Tashkent City	22.3	11	6.7	1	111,919	1	73,660	1	7,554.4	1

Tashkent City is the absolute leader by mortality rate, number of in-migrants and out-migrants per year, and population density. Tashkent Region occupies high positions by mortality rate and migration flows. The leaders in birth rate are Surkhandarya, Jizzakh, and Kashkadarya regions. The distribution of the population across regions of the Republic of Uzbekistan is determined by historical, climatic, and economic factors.

Tashkent City and Tashkent Region lead in employment and economic activity rates. Navoi, Andijan, and Jizzakh also exhibit high employment rates. The gap between regions in terms of employment is significant, amounting to approximately 20 percentage points. Khorezm Region falls among the territories with low employment, low economic activity, and limited labor resources.

Regions with the highest unemployment rates include Kashkadarya, Surkhandarya, Sirdarya, Jizzakh, Fergana regions, and the Republic of Karakalpakstan (above 10%). The difference between regional values across the Republic is relatively small, amounting to approximately 3 percentage points.

Based on the full set of indicators — characterizing human capital development and integrating budget expenditure data, living standards, demography, the labor market, education, healthcare, and regional informatization — a ranking is formed that determines the position of each region among all regions of the Republic of Uzbekistan (Table 4).

[3] Demography. Open data. National Statistics Committee of the Republic of Uzbekistan, 2024. URL: https://stat.uz/ru/ofitsialnaya-statistika/demography

Table 4 Ranking of Regions of the Republic of Uzbekistan by Human Capital Development[4]

Region	Rank	Sum of normalized indicator values
Tashkent City	1	12.31
Navoi Region	2	10.26
Sirdarya Region	3	9.74
Jizzakh Region	4	9.33
Namangan Region	5	9.26
Andijan Region	6	9.14
Bukhara Region	7	9.05
Tashkent Region	8	8.98
Khorezm Region	9	8.94
Fergana Region	10	8.91
Republic of Karakalpakstan	11	8.76
Samarkand Region	12	8.59
Surkhandarya Region	13	8.42
Kashkadarya Region	14	8.20

CONCLUSION

As shown by the data in Table 5, Tashkent City is the leading territory by human capital development. Navoi Region scores above average; Sirdarya, Jizzakh, and Namangan regions are at an average level; Andijan, Bukhara, Tashkent, and Khorezm regions are below average; Fergana, Samarkand, Surkhandarya regions and the Republic of Karakalpakstan occupy a low position; and Kashkadarya Region holds the lowest rank. Based on these findings, it is important to develop roadmaps for provinces with underdeveloped human capital and to elevate investment in human capital to a new level, drawing on the experience of developed countries. We consider it expedient to implement deep structural reforms in this field, as the country's progress and its accession to the ranks of developed nations depends directly on the accelerated development of human capital across all regions.

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[4] Compiled based on the author's calculations.

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