

4. Establishment of a Sharia Council at the center of Islamic civilization.

In contrast to the norm of profit-interest rate in the Islamic economy, a more efficient and rational mechanism of resource allocation is a system that counteracts many negative trends of the modern economy (monopolization, the sharp gap between rich and poor, financial crises, etc.). It also deserves serious study.

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DISTRIBUTION OF DISTRICTS AND CITIES OF THE REPUBLIC OF UZBEKISTAN BY LEVEL OF DEVELOPMENT

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Abstract: The socio-economic development of the districts and cities included in primary administrative-territorial units of the Republic of Uzbekistan was evaluated on the basis of the results of the evaluation using the composite index based on the optimal combination of socio-economic indicators selected by the method of the principal component analysis (PCA) and the second administrative territorial units were distributed according to the levels of socio-economic development.

Keywords: socio-economic development; Principal component analysis (PCA), Composite Index.

JEL classification: C01, R12, R58

INTRODUCTION

To ensure the effectiveness of regional policy and the rapid socio-economic development of the regions, first of all, it is necessary to assess the current socio-economic situation in the regions.

Targeted use of political and financial means provided by the state for socio-economic development of the regions and in order to achieve their goals, they must study the situation in the region in detail, identify resources and reserves in the region, and, most importantly, have reliable information about the development opportunities and prospects of the region. Assessing the development potential of the regions means identifying a system of appropriate indicators and assessing the current state of socio-economic development in the region using the identified indicators. This task requires qualified statistical analysis.

The chief present-day problem of socio-economic development, in geographical-economic terms, is growing spatial inequality when viewed in a regional approach. In the recent years regional disparities have become of great interest to geographical and economic sciences, as manifested by a fast-growing number of publications on the subject.

MATERIALS AND METHOD OF ANALYSIS

200 districts and cities of 14 primary administrative-territorial units of the Republic of Uzbekistan (Republic of Karakalpakstan, 12 regions, Tashkent city) were analyzed using Principle Component Analysis (PCA) based on eleven economic and six social indicators, extracted from the database of the State Committee of the Republic of Uzbekistan on Statistics for 2017-2018.

Principal component analysis (PCA) is a mathematical procedure that uses an orthogonal transformation to convert a set of observations of possibly correlated variables into a set of values of linearly uncorrelated variables called principal components (Davis, 1986)

The following formula was used to calculate the composition index according to the main components and component index value:

Composite index = principal components variance contribution rate* principal component coefficients.

Through the cumulative normal distribution, the composite indices are normalised by values from 0 to 1 each.

Based on the Jenks method, inter-district differences were divided into four categories of regions – low developed, medium developed, high developed, and very high developed regions.

The level of development of Uzbekistan in terms of socio-economic development was assessed using the composite index method. A high value of the composite index represents a high level of development and a low

value represents a low level of development. The calculation process was performed in a special statistical analysis program SPSS.

RESULTS AND ANALYSIS

In order to verify the adequacy of data for a factorial analysis (specially PCA), the Barlett's test of sphericity (to test the null hypothesis that the variables in the correlation matrix of the population are uncorrelated), and the indicator MSA (MeAndijan State University named after Z.M.Boburre of Sampling Adequacy) of Kaiser-Meyer-Olkin (to evaluate in which degree each variable may be predicted by all the other variables) were used. The results obtained by data processing with SPSS are presented in Table 1.

The significance level associated to Barlett's test of sphericity, *Sig* 0.000, is smaller than 0.05 (conventional value), which means the null hypothesis of variables' uncorrelation is rejected.

Therefore one can conclude that the considered variables are adequate for a PCA. The value of the indicator MSA of KMO (0.73), greater than 0.5, also indicate the suitability of the considered data for factor analysis (Richarme, 2001).

Table 1. KMO and Bartlett's Test		
Kaiser-Meyer-Olkin MeAndijan State University named after Z.M.Boburre of Sampling Adequacy		0,73
Barlett's test of sphericity	Approx. Chi-Square	1824,2
	Df.	136
	Sig.	0,0

Source: Author's calculations

Note that, since Tahskent city-the capital of Uzbekistan presents very different characteristics of economic development compared to other administrative-territorial units, it requires an individual analysis of these features, and it is not included in further analysis.

Table 2 represented the varimax rotated factor structure and majority of the variables under study have been appropriately focused on the structure exposes by this factor matrix. Five factors meet not only the eigenvalue criterion, but also the variance proportion criterion. In social sciences, the lowest limit of acceptability is 60 percent of variance accounted by obtained factors (Hair, Anderson and Tahtam, 1987). This solution accounts for 71,6 percent of total variance.

Table 2. Rotated Component Matrix

Input Variables	Factors				
	1	2	3	4	5
Industrial products per capita (thousand soums)	0,091	0,779	-0,02	0,158	0,354
Agricultural, forestry and fishery products per capita (thousand soums)	0,115	0,221	0,072	0,92	0,02
Investments in fixed assets per capita (thousand soums)	-0,009	0,031	-0,058	0,953	0,03
Foreign investment and loans per capita (thousand soums)	0,272	0,435	0,078	0,083	0,709
Construction works per capita (thousand soums)	0,006	-0,06	0,103	0,016	0,821
Housing construction, sq.m. (per 1000 people)	0,683	0,509	0,042	0,085	0,064
Retail trade per capita (thousand soums)	0,731	0,318	0,044	0,079	0,044
Services per capita (thousand soums)	-0,209	-0,275	0,627	-0,066	0,336
Exports per capita (in US dollars)	0,036	0,736	-0,074	0,023	-0,182
Total number of operating enterprises and organizations, units	0,865	-0,073	-0,357	-0,04	-0,041
Total number of operating small enterprises and micro-firms, units	0,831	-0,132	-0,352	-0,043	-0,04
Enrollment of the population aged 3-6 in preschool education,%	0,448	0,619	0,181	0,164	0,026
Enrollment of students in one shift in secondary schools,%	-0,024	-0,107	0,869	-0,044	-0,012
Number of hospital beds (per 10,000 people)	0,817	0,134	0,014	0,032	0,11
Natural population growth rate, person	0,218	-0,358	-0,699	-0,103	-0,075
Unemployment rate,%	-0,477	-0,425	0,04	-0,219	-0,155

Number of people leaving the country for permanent residence, person	0,404	0,276	0,389	0,119	- 0,339
Eigenvalue	5,01	2,813	1,701	1,404	1,243
Proportion of Accounted Variance	29,469	16,548	10,008	8,262	7,311

Source: Author's calculations

A composition index was generated based on the optimal combination of indicators selected by PCA of 189 districts and cities(excluded 11 districts of Tashkent city). Using the natural intervals (Jenks) method, individual economic development, social development, and socio-economic development were divided into four development categories(Table 3).

Table 3. Distribution of districts and cities of the Republic of Uzbekistan by level of development (excluding districts of Tashkent city)

Development categories	Development type		
	Economic	Social	Socio-economic
Low	117	97	134
Medium	50	63	32
High	15	16	13
Very high	7	13	10

Source: Author's calculations

From the results of the analysis it can be concluded that out of 189 districts and cities of the Republic of Uzbekistan,according to the level of economic development, 7 regions are the most developed, 15 regions are highly developed, 50 regions are moderately developed and 117 regions are underdeveloped;

According to the level of social development, 13 regions are the most developed, 16 regions are highly developed, 63 regions are moderately developed and 97 regions are underdeveloped;

According to the level of socio-economic development, 10 regions are the most developed, 13 regions are highly developed, 32 regions are moderately developed and 134 regions are underdeveloped.

CONCLUSION

Socio-economic development is a multidimensional process that cannot be fully assessed by a single indicator. This requires the construction of a composite index of socio-economic development based on an optimal combination of different development indicators. The analysis used PCA method of multidimensional statistical analysis to analyze the socio-economic development of the regions as a whole. This compositional index

of socio-economic development can serve as an information system that monitors the pace of development of regions and the potential for the use of funds spent on the development of the region. In order for development potential to be continuously analyzed and compared in the decision-making process, these indices should be calculated on a regular basis over a set period of time.

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