

ENTREPRENEURIAL CHARACTERISTICS AS FACTORS OF HUMAN DEVELOPMENT

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ABSTRACT

In the course of substantiating and developing a scientific and methodological approach to assessing human development and entrepreneurial characteristics using the graphic analytic method for determining the integral indicator, the lags for each group of indicators and in the country as a whole have been calculated and recommendations on state regulation of human development based on a mental map have been made. The essence of the mental map reflects the orientation of the application of regulatory tools in accordance with the principles of the relationship of economic policy and state ideology, the balance between the desire for centralism and the use of the advantages of local initiative, the combination of national interests with the needs of territorial communities, science and the programmed effectiveness of decisions made. Specific principles of regulation such as compliance of impacts with existing business condition,; an organized integrated approach to solving pressing socio-economic problems, and the systematic nature of the measures used, taking into account the peculiarities of the internal and external environments have become the basis for creating recommendations on measures for organizational, legal, financial and tax, and monetary support.

Keywords: entrepreneurial characteristics, human development, quality of life, cluster analysis, cognitive map

JEL Classifications: M5, Q2

INTRODUCTION

Human development as an innovative concept of modern economic growth has firmly taken a dominant position in the scientific and economic tradition of our time. The benefits of accelerating socio-economic progress globally on this basis have long been established in the minds of mankind and have become the indisputable basis for strategic decisions in the field of sustainable development by international organizations, developed countries and their associations, large transnational corporations (TNCs), civil society, etc. Therefore, when solving planetary social, economic, and environmental problems, these subjects of the construction of a new world-order architecture rely primarily on the interests of man and future generations.

Along with this, the existence in the world of large social and natural spaces, powerful spheres of human activity (international politics, economics and finance, safety and ecology, culture and education) that are of global importance, forms a vital public order to determine

the future system of regulation of these processes by the forces of scientific political and economic thought of the present.

The need for the general improvement of this relationship of the noosphere, stratification, and updating of the existing multilevel system of institutes of global, international, supranational, and regional regulation constitutes the subject field of the category of international regulation as opposed to global human development management.

The aim of the study is to solve an important scientific and applied problem of developing a methodology for state regulation of human development to accelerate it on the basis of the latest methods and models that contribute to ensuring the proper quality of life of the population.

REVIEW OF PREVIOUS STUDIES

However, today there is no clear understanding of the essence of global governance either in the scientific and expert society or among the figures of international associations and state leaders. In scientific use, at the stage of theoretical discourse, several interpretations of this category revolve.

First, the most common is the definition of global governance (management, leadership), which implies, first of all, the existence of power actions aimed at managing global processes by entities that do not have sufficient legitimate grounds for this (Drobyazko, S., et al. (2019 a), Drobyazko, S., et al. (2019 b); Skrypnyk, M. (2019 a,b)).

These are international non-governmental organizations, various public movements, corporate associations, foundations, and associations that protect recognized humanistic values (Biggeri, M., & Mauro, V. (2018)).

Secondly, it is very relevant to look at the essence of the term global governance as a global government (management), which implies the presence of a clear legitimate basis, which is fixed by the current regulatory framework and is based on financial and economic ones (Arabsalmani, M., et al. (2017)), political and legal, informational, organizational (Greiman, AK, Rosoff, JS, & Prasad, SM (2017)), and military-technical capabilities of the leading actors of the modern world (Sayed, H., Hamed, R., Hosny, SH, & Abdelhamid, AH (2018)) with the inevitable transformation towards a multipolar architecture of the world order.

Thirdly, the term global administration (board, administration) is used to indicate the type of political activity aimed at developing and implementing the most general strategic decisions to maintain or transform the parameters of the world order with large-scale social impact of the elements of the global “triad” - large states, transnational corporations, and influential international organizations (global financial centers) (Hilorme, T., et al. (2019 a), Hilorme, T., et al. (2019 b)).

METHODOLOGY

In the research process, general scientific and special methods of scientific knowledge have been used, namely: critical analysis, scientific abstraction and generalization of scientific experience from modern theoretical studies; analysis and synthesis, induction and deduction, system analysis; classification-analytical and abstract-logical; statistical analysis (in the synthesis of trends, conditions, and characteristics of the formation of human development); correlation and regression analysis; cognitive modeling.

RESULTS AND DISCUSSIONS

The problem of regionalization of the countries of the world is still very urgent due to the lack of consensus on the system of the main signs of determining the composition of certain regions. However, the peculiarities of the human development of individual regions make it possible to more thoroughly study the prevailing trends of this process, improve the leading strategies for changing priorities in the formation of human capital, and respond promptly to the transformation of the world order in the context of globalization. Therefore, the study selected the region of Eastern Europe and Central Asia (CECA), which, by definition. Therefore, the region of Eastern Europe and Central Asia (CECA) has been selected for the study, which, by definition, IIASA (International Institute for Applied Systems Analysis) that is located in Vienna, is formed from three subregions. These are, firstly, the countries of the European part of the former USSR: Russia, Ukraine, and Belarus. Secondly, these are the countries of Eastern Europe that were part of the group of socialist states in the era of the existence of the world socialist system. Thirdly, these are the countries of Central Asia in the post-Soviet space.

Thus, using the logic of the economic development of the above countries, regional characteristics of the quality of life of the population in post-Soviet states, including Lithuania, Latvia, Estonia, Kazakhstan, Moldova, Belarus, Ukraine, Georgia, Tajikistan, Turkmenistan, Uzbekistan, Kyrgyzstan, Armenia, Azerbaijan, and Russia, have been diagnosed.

To identify cluster countries, it is advisable to use the squared Euclidean distance as a metric. In addition, since the values of the indicators differ significantly both in absolute terms and in dimension, the data were standardized.

According to the obtained values of the coefficients during the agglomeration procedure, it should be noted that the largest jump in the values took place at the 14th step when the coefficient jumped from a value of 1.538 to 2.852 (Table 1).

Table 1
Agglomeration procedure for cluster analysis (author's calculations)

| Stage | Cluster merged with | | Coefficient | Stage of the first appearance of the cluster | | Next stage |
|-------|---------------------|-----------|-------------|--|-----------|------------|
| | Cluster 1 | Cluster 2 | | Cluster 1 | Cluster 2 | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 8 | 9 | 0,018 | 0 | 0 | 2 |
| 2 | 4 | 8 | 0,151 | 0 | 1 | 10 |
| 3 | 13 | 15 | 0,194 | 0 | 0 | 4 |
| 4 | 7 | 13 | 0,402 | 0 | 3 | 8 |
| 5 | 6 | 10 | 0,619 | 0 | 0 | 10 |
| 6 | 5 | 12 | 0,691 | 0 | 0 | 11 |
| 7 | 3 | 14 | 0,789 | 0 | 0 | 12 |
| 8 | 1 | 7 | 0,817 | 0 | 4 | 9 |
| 9 | 1 | 2 | 0,970 | 8 | 0 | 11 |
| 10 | 4 | 6 | 1,026 | 2 | 5 | 12 |
| 11 | 1 | 5 | 1,288 | 9 | 6 | 13 |
| 12 | 3 | 4 | 1,424 | 7 | 10 | 13 |
| 13 | 1 | 3 | 1,538 | 11 | 12 | 14 |
| 14 | 1 | 11 | 2,852 | 13 | 0 | 0 |

That is, the optimal number of clusters is 2 (15-13). At the same time, the clustering by the scalable distance using the method of intergroup communication leads to the formation of a dendrogram of the distribution of countries being investigated, which is presented in Figure 1.

It should be noted that the value of indicators in Russia differs significantly from other countries. For example, the per capita GNI in Russia is one of the highest for selected countries. In 2012, it was 10 times higher than the per capita GNI in Tajikistan and Uzbekistan, 6 times higher than the GNI of Moldova and Uzbekistan, 4 times higher than the GNI of Georgia and Ukraine.

In addition, the value of the Russian GNI slightly exceeds the GNI of Lithuania and Latvia. This level of the indicator was achieved due to the volume of exports, which allows the country to have significant gross savings.

The economic development of Russia is also characterized by the fact that the government of the country almost does not use external borrowing but has the opportunity to invest in its own economy. In addition, per capita healthcare spending amounts to \$806.70, which is not inferior to similar spending in the Baltic countries. The unemployment rate in Russia, when compared with the selected countries, tends to decrease, and today it is lower than the unemployment rate in the Baltic countries.

According to the results obtained, all countries - former republics of the USSR in terms of standards of living can be conditionally divided into two main groups - countries with average and low standards of living. Only Russia can be classified as a country with a high standard of living.

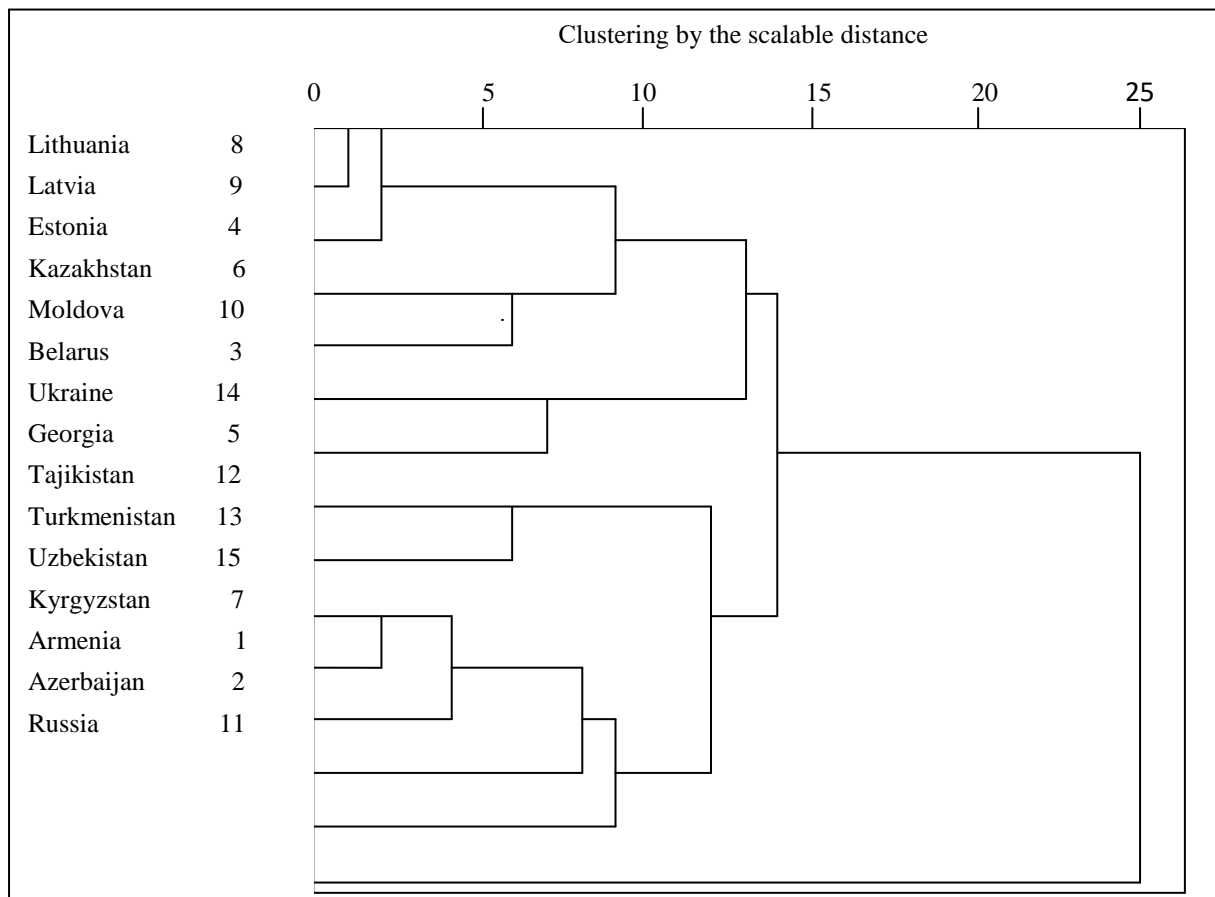


Figure 1
Dendrogram of the distribution of post-Soviet states by the standard of living in 2018
 (created by the author)

The group of countries with an average standard of living includes Lithuania, Latvia, Estonia, Kazakhstan, Moldova, Belarus, and Ukraine. The social situation of these countries

is characterized by the fact that the level of public spending on education is the highest, and it ranges from 16.27% (Estonia) to 21.96% (Moldova). In addition, per capita healthcare spending is high, ranging from \$223.04 (Ukraine) to \$986.86 (Estonia).

Along with this, the level of life expectancy for countries of a certain group is also quite high, that is, it varies from 68.6 (Moldova) to 76.1 (Estonia) years. The mortality rate for this category of countries of children under 5 years old varies from 4.0 (Estonia) to 20.2 (Kazakhstan) children per 1 live-birth.

Food quality and access to food are the highest. However, the food security situation in countries with an average standard of living is ambiguous since this group includes countries with high (3 - 8 calories per day for 1 person), middle (23 - 28 calories per day for 1 person), and low (179 calories per day for 1 person) food safety levels. In addition, Belarus, Kazakhstan, Lithuania, and Ukraine can be called countries with the high level of food security, Estonia and Latvia are the countries with the middle level, and Moldova is the country with the low level.

If the countries in the group are quite homogeneous by the level of social development, then the economic situation is characterized by significant differences. By the use of external borrowing, countries with the middle standard of living can be divided into countries that do not currently use IMF loans at the moment (Estonia, Lithuania, and Latvia) and countries that use (Belarus, Kazakhstan, Moldova, and Ukraine).

The identification of factors influencing the quality of life of the population of countries is a very important aspect of the analysis since the results allow making the right decision on the feasibility of developing certain areas that most influence the general standard of living of the population.

To assess the types of relationship, the correlation matrix has been constructed (Table 2).

Table 2
Correlation matrix of components and their elements (author's calculations)

| Indicator | Components | | | |
|---|------------|--------|--------|--------|
| | 1 | 2 | 3 | 4 |
| Use of IMF loan | 0,230 | -0,025 | -0,301 | 0,857 |
| Unemployment rate | -0,042 | 0,807 | -0,029 | -0,220 |
| Corporate tax rate | -0,121 | 0,462 | 0,342 | 0,645 |
| Level of government spending on education | 0,359 | -0,204 | -0,667 | 0,004 |
| Under-5 mortality rate | -0,862 | -0,384 | -0,033 | -0,117 |
| Level of spending on defense | -0,618 | -0,076 | 0,779 | 0,184 |
| Life expectancy at birth | 0,414 | 0,843 | 0,195 | -0,038 |
| Per capita healthcare spending | 0,786 | 0,226 | 0,278 | -0,349 |
| Gross savings | 0,422 | -0,607 | 0,577 | -0,067 |
| Export of goods and services | 0,521 | -0,579 | 0,546 | 0,031 |
| Depth of food shortages | -0,473 | -0,011 | -0,318 | -0,235 |
| Level of remuneration of employees | -0,468 | 0,376 | 0,542 | -0,117 |

The built-up correlation matrix showed the following types of relationships: significant relationship (the value of the correlation coefficient is above 0.80); moderate relationship (the value of the correlation coefficient is between 0.75 and 0.80); noticeable relationship (the value of the correlation coefficient is less than 0.75) (Figure 2).

The distribution of the relationships was depicted graphically using a cognitive map, which shows the direction of the relationship between the indicators: linear (+) or inverse (-) and the type of relationship (thickness of arrows).

The analysis of the calculated correlation matrix showed that in this case there was a relationship not only between the resultant and factorial attributes but also in the middle of the factorial set, indicating the presence of multicollinearity. Therefore, in this case, it is impossible to use a regression multifactor model to display the relationships since one of the conditions for its construction is violated, namely the lack of multicollinearity between factor indicators. Therefore, in this case, for an adequate selection of a model that can more accurately describe the relationship between indicators, it is advisable to use the principal component method.

The feasibility of the inclusion of three indicators in the first component “The level of state regulation of the medical industry” is justified: under 5 mortality rate, per capita healthcare spending, and life expectancy at birth. The second component, “The level of economic development of the country”, includes 2 indicators (gross savings, exports of goods and services), the third one, “The level of social status of the population” is an indicator of the unemployment rate of the population according to the national methodology, and the fourth one, “The level of state regulation of the sphere of education” is the level of government spending on education. The first component explains 27.24% of the total variance, the second component - 18.84%, the third - 12.53%, the fourth - 11.76%.

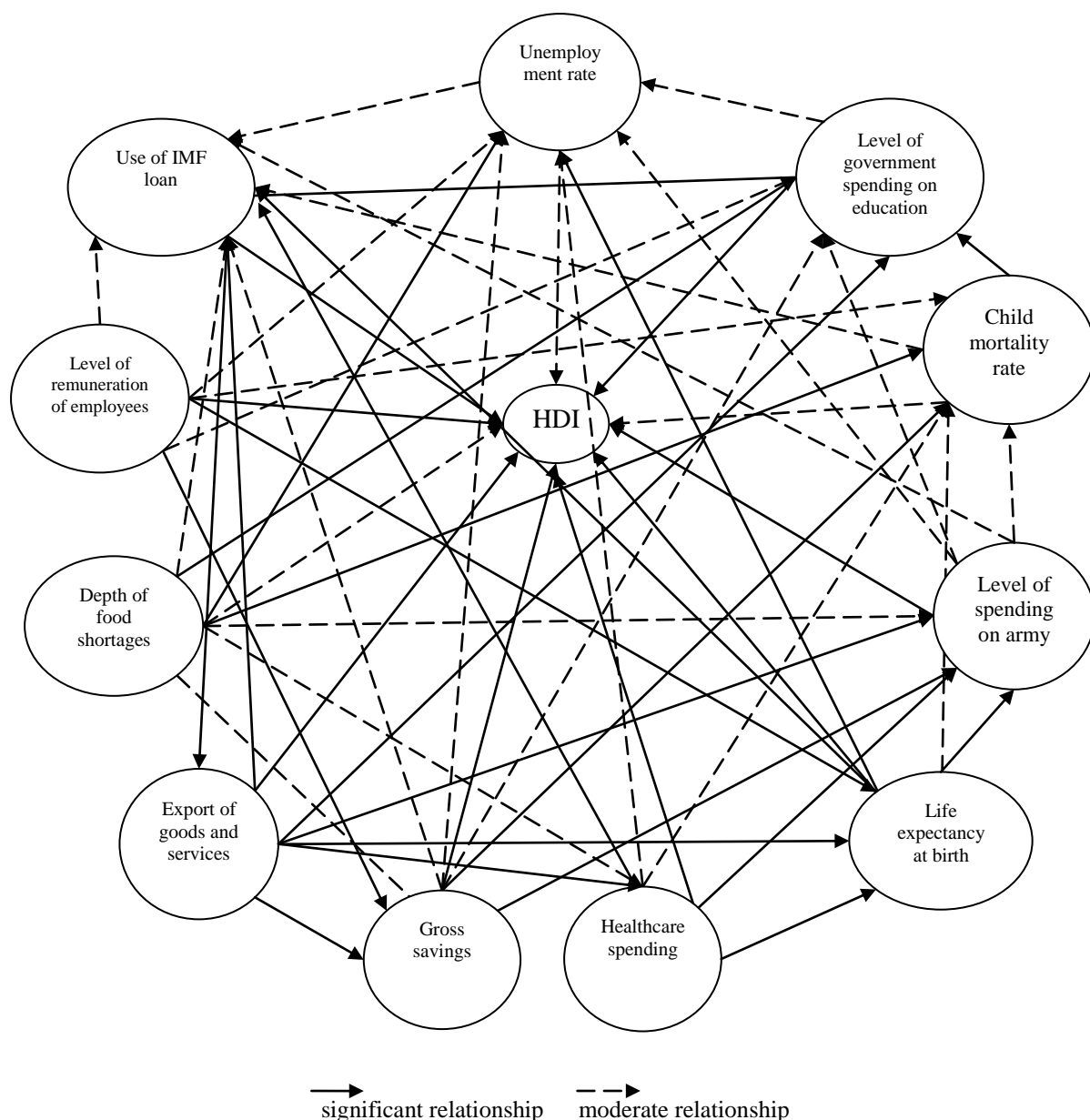


Figure 2
Cognitive map of the quality of life of the population of the countries (built by the author)
Notes: HDI – human development index

According to the Kaiser criterion, which says that it is advisable to choose those components whose eigenvalues exceed one. 5 components can be distinguished in this model since the eigenvalue for the first component is 3.54, for the second one, it is 2.45, for the third, it is 1.63, for the fourth, it is 1.53. The fifth and the following components are not suitable for this criterion since their eigenvalues are only 0.97.

Table 3
Full explained variance of the relationship model by data (author's calculations)

| Component | Initial eigenvalues | | | Sums of load squares | | |
|-----------|---------------------|---------------|--------------|----------------------|---------------|--------------|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 3,541 | 27,24 | 27,24 | 3,541 | 27,24 | 27,24 |
| 2 | 2,449 | 18,84 | 46,08 | 2,449 | 18,84 | 46,08 |
| 3 | 1,628 | 12,53 | 58,61 | 1,628 | 12,53 | 58,61 |

| | | | | | | |
|----|-------|-------|-------|-------|-------|-------|
| 4 | 1,528 | 11,76 | 70,37 | 1,528 | 11,76 | 70,37 |
| 5 | 0,99 | 8,12 | 78,49 | - | - | - |
| 6 | 0,969 | 7,45 | 85,94 | - | - | - |
| 7 | 0,865 | 6,66 | 92,6 | - | - | - |
| 8 | 0,530 | 4,08 | 96,68 | - | - | - |
| 9 | 0,252 | 1,94 | 98,62 | - | - | - |
| 10 | 0,130 | 1,002 | 99,62 | - | - | - |
| 11 | 0,044 | 0,34 | 99,96 | - | - | - |
| 12 | 0,002 | 0,02 | 99,98 | - | - | - |
| 13 | 0,002 | 0,02 | 100 | | | |

According to the scree criterion, based on a graphical analysis of the distribution of the eigenvalues of the isolated components, it is also possible to distinguish 4 components since the maximum decrease in eigenvalues occurs precisely on the fourth component (Figure 3).

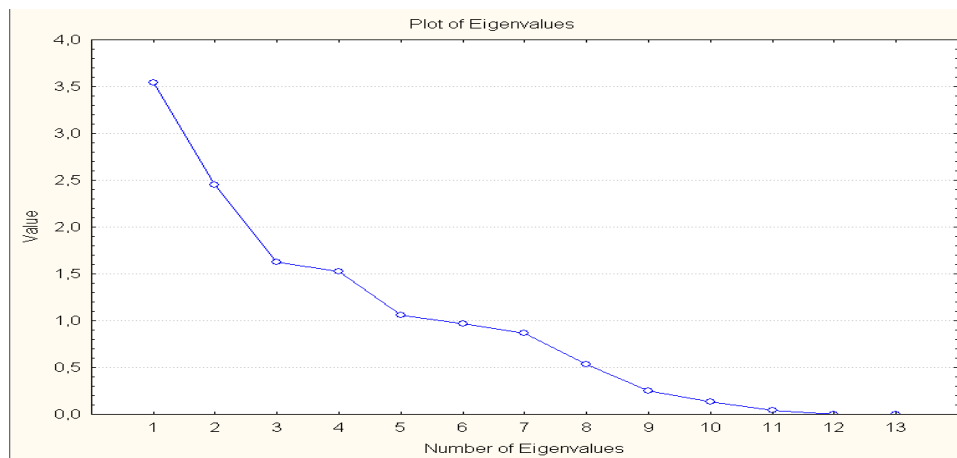


Figure 3
Schedule of distribution of eigenvalues of the component (built by the author)

A significant excess of the value of the intergroup variance over the residual indicates that the model was correctly performed. It also indicates a significant influence of the components obtained on the HDI.

Thus, under the results of the interpretation of the obtained parameters, it has been determined that the greatest influence on HDI has the first component, which requires increased attention in the organization of state regulation of the medical field, namely - optimization of the structure of financing of the healthcare system taking into account the policy of decentralization and introduction of insurance medicine.

RECOMMENDATIONS

In the prosperity index system, the most important is the use of comprehensive information on the social and economic life of the country. In addition, the choice of indicators is objective but not subjective. The use of the whole set of indices for human development at the global level allows for a thorough comparative analysis of the quality and standard of living of the population of the countries of the world and the regions, which gives grounds for the formation of a purposeful strategy for overcoming the civilizational problems of the present.

The results obtained are determined by the representativeness due to the application of the advantages of the median values in the calculations of parameters, where significant

cumulative deviations between the indicators are predictable, given the complex nature of social life.

The median values significantly increase the probative force and stability of the estimation of certain central tendencies, allow to give more convincing explanations and weighted interpretation of the obtained data, especially in conditions where a large number of observations are used, and their ranking may be distorted by anomalous deviations from the arithmetic mean values.

Thus, the study of socio-economic aspects of human development with the help of a sociological toolkit broadens the analytical framework for the ongoing adjustment of human development and its transformation into perspective.

CONCLUSIONS

Thus, the concept of human development not only places man at the center of the progress of civilization as the main goal of political, social, and economic processes but also forms as a world ideology of human development, where the recognition of the benefits of such transformations of society plays a major role. The relevance, insufficient study of the influence of civil society, and its opinion on the priorities of human development, theoretical and methodological substantiation of factors of growth of human potential put this problem in the category of priority in the structure of socio-economic research.

Therefore, the EECA post-Soviet countries' research on the level and quality of life is of great applied significance in the context of the way out of the global financial and economic crisis in order to maintain internal stability, minimize the explosive conflict-generating factors of building a new world order. The scientifically grounded division into two groups of middle and low-income countries creates a strong basis for developing national governments with promising programs for sustainable development, here human development is the main priority.

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