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ASSESSMENT OF INTERREGIONAL DISPROPORTIONS IN HUMAN DEVELOPMENT IN UKRAINE

The article provides a comprehensive assessment of regional disproportions in human development. The simultaneous existence of the tendencies to convergence and divergence of regions by individual aspects is revealed. The presence of a weak connection between the indicators of regional human and economic development is proved. Directions of aligning asymmetries and reducing disproportions in human development of regions are proposed.

Keywords: human development; interregional disproportions; convergence; divergence; regional policy.

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ОЦІНЮВАННЯ МІЖРЕГІОНАЛЬНИХ ДИСПРОПОРЦІЙ ЛЮДСЬКОГО РОЗВИТКУ В УКРАЇНІ

У статті проведено комплексне оцінювання міжрегіональних диспропорцій людського розвитку. Виявлено одночасне існування тенденцій до конвергенції та дивергенції регіонів за його окремими аспектами. Встановлено наявність слабого зв'язку між показниками регіонального людського та економічного розвитку. Запропоновано напрями вирівнювання асиметрій та зменшення диспропорцій людського розвитку регіонів.

Ключові слова: людський розвиток; міжрегіональні диспропорції; конвергенція; дивергенція; регіональна політика.

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ОЦЕНКА МЕЖРЕГИОНАЛЬНЫХ ДИСПРОПОРЦИЙ ЧЕЛОВЕЧЕСКОГО РАЗВИТИЯ В УКРАИНЕ

В статье осуществлена комплексная оценка межрегиональных диспропорций человеческого развития. Выявлено одновременное существование тенденций к конвергенции и дивергенции регионов по отдельным аспектам. Установлено наличие слабой связи между показателями регионального человеческого и экономического развития. Предложены направления выравнивания асимметрий и уменьшения диспропорций в человеческом развитии регионов.

Ключевые слова: человеческое развитие; межрегиональные диспропорции; конвергенция; дивергенция; региональная политика.

Problem statement. Increasing social orientation of economies in developed countries and simultaneously growing inequality in living standards in developing ones made the problem of human development a priority one. Human development is the main goal and the key criterion of social progress and economic potential for any country. According to the principles of forming an effective socioeconomic strategy the leading role is given to solving this particular problem. Therefore, economy modernization in our country and complicated transformation processes occurring under the conditions of asymmetric regional development demand the formation of mechanisms of economic and social development in Ukraine on the principles of human development. Increasing research relevance of this problem in the regional context is caused by the aggravating problems of regional development, deepening imbalances and contradictions observed recently in Ukraine. Comprehensive analy-

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sis and detection of imbalances in the development of regional economic systems would allow taking into consideration differences and regional peculiarities when developing a strategy for human development in Ukraine, as well as solving the problem of mitigating and aligning spatial disparities in quality level and living conditions.

Recent research and publications analysis. Human development is a relatively new area in economics. Despite this, today there are many achievements already. A significant contribution to studying the theoretical and practical aspects of human development belongs to the following Ukrainian scientists. T.V. Pospelova (2011) considers the theoretical and practical problems of public administration of human development under conditions of Ukrainian society transformation. Financial aspects of human development are considered by L.I. Beztil'sna (2010). Regional development through human development was studied by E.M. Libanova et al. (2012) who developed key theoretical and methodological approaches to measuring regional human development, estimating human development trends in Ukrainian regions. An overview of regional human and social development is given in the study of O.F. Novikova et al. (2010). Theoretical approaches to the concept of human development are further deepened by O.A. Grishnova (2006), its place and role in the system of regional social and economic policy priorities are defined.

Unresolved issues. This issues of human development have been considered mainly in terms of interregional differences, while processes of deepening or reducing disproportions, differentiation and asymmetries of regional human development need additional studies which can become the basis for improvement of regional policies in this area.

The aim of this research is to identify trends and disproportions in human development of Ukrainian regions, as well as its relationship to the differences in economic development of regions.

Key research findings. Human development is defined as the growth of human capabilities, provided by political freedom, human rights, public respect to all individuals and healthy environment (Grishnova, 2006). The main dimensions of human development, as defined by the UNDP, are material wealth, level of education and health which allow having a decent living. In order to reflect this status in dynamics such an indicator as human development index (HDI) is used. Since 1990 Report on human development is annually published, and since 1992 national reports on human development have been also prepared. In 2013 Ukraine was ranked 83rd among 187 countries and territories thus getting to the category of countries with high human development but there is a tendency to lower its level (as compared to the previous year the result has deteriorated by 5 positions) (UNDP in Ukraine, 2014). The general decline in living standards is accompanied by problems with social environment, health, reduction in quality and accessibility of educational and medical services. These negative trends are reinforced by disproportionality of social and economic development of certain parts of the country. Consequently, the level of human development in Ukraine significantly varies within regions as demonstrated by the results of annual monitoring carried out by specialists of the Institute of Demography and Social Studies (Figure 1).

The results of the summarizing analysis indicate the presence of differences. The scope of variation (calculated as the difference between the highest index for

Kharkivska oblast³ – 4.210 – and the minimum one for Zhytomyrska oblast – 3.499) is 18.8% of the average value in Ukraine (3.776). Considering that one of the priority goals of contemporary regional policy in our country is to ensure the unity of the national territory and flattening the asymmetries in regional development, there is a need for assessment of interregional disproportionalities in human development.

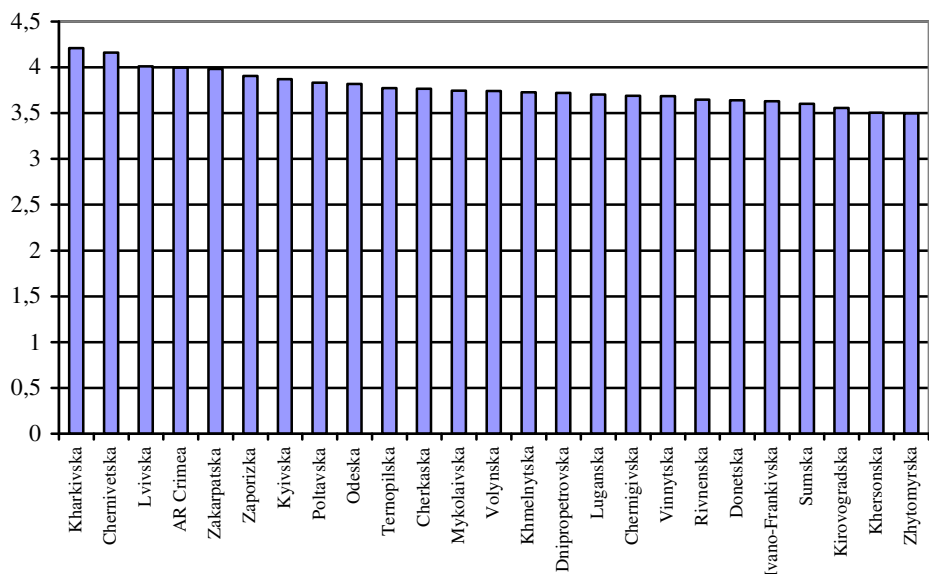


Figure 1. Human Development Indices by the regions of Ukraine, 2013
(Integrated Regional Human Development Index, 2013)

Ukrainian legislation (20.05.2009, # 476) provides the formal methodology for assessing the disproportions in regional development which includes two methods: determining the differences between the most affluent and the most problematic regions (the scope of regional disproportions) and evaluation of a deviation range of the values of indicators in regions with respect to their average value (using the coefficient of variation). However, studies show (Bevz, 2014) that such analysis does not give full assessment of the differentiation level as the first indicator does not give the characteristics of developing regions regarding a region-leader and the most troubled region; and the second indicator does not provide objective information about what caused changes in the level of interregional disproportions in dynamics – improvement of the situation in troubled regions or its deterioration in regions-leaders. Taking this into account, we consider it necessary to analyze more the full system of indicators including the coefficients of dispersion, asymmetry and variation. Studying the dynamics of these indicators will determine what kind of regional human development we observe: asymmetric, harmonious or neutral. Thus, asymmetric (disharmonious) type is the kind of regional development for a certain period in which regions that have comparative advantage in one or another indicator at the beginning of the period, further increase it and regions with a relative lag decrease it. In contrast,

³ Oblast – an administrative unit in Ukraine, roughly equals to region.

the symmetrical (balanced) kind is the type of regional development in which the gap in regional indicators is reduced. According to the neutral type of development the ratio of regional indicators remains unchanged during the period (Lavrovskiy, 2000).

This analysis leads us to the conclusion that human development indicators in the regions of Ukraine during 2005–2013 had a low levels of dispersion, differentiation and asymmetry but they tend to increase (Table 1).

Table 1. Dynamics of interregional differences in human development of Ukraine by years

Indicators	2005	2010	2011	2012	2013	Absolute growth, 2013 to 2005
Maximum value	3.722	3.851	3.957	4.149	4.210	0.488
Minimum value	3.236	3.337	3.356	3.540	3.499	0.263
Average value	3.502	3.630	3.671	3.794	3.777	0.275
Variation scope	0.486	0.514	0.601	0.609	0.711	0.225
Scope of regional disproportions	1.15	1.15	1.18	1.17	1.20	0.05
Average linear deviation	0.11	0.12	0.12	0.14	0.14	0.03
Average quadratic deviation	0.14	0.14	0.15	0.16	0.18	0.04
Dispersion	0.019	0.021	0.021	0.027	0.033	0.014
Coefficient of oscillation, %	13.88	14.16	16.36	16.06	18.82	4.94
Coefficient of variation, %	3.9	3.99	3.98	4.3	4.82	0.92
Coefficient of asymmetry	-0.31	0.44	0.44	0.37	0.7	1.01
Excess	-0.88	-0.8	-0.66	-0.68	-0.06	0.82

Source: calculated using the data from: Integrated Regional Human Development Index, 2013; Regional Human Development, 2013.

A positive thing here is a negligible change of variation coefficient which determines the uneven distribution of values of the human development index. The calculated value of the coefficient indicates that HDI ranges between 3.9–4.8% in relation to the average index in Ukraine. As the value of coefficient during the whole studied period is less than 33%, the set is homogeneous but the variation is weak. Dynamics of other indicators of the variation is characterized by similar trends: the average linear deviation shows how much individual values of the indicator deviate on average from the average one; average quadratic deviation and dispersion which assess latitude of scattering data relative to the average value; coefficient of oscillation is determined by the ratio of variation scope to the average value of the index. Dynamics of asymmetry coefficient indicates that the asymmetry of distribution is not significant because the indicator does not gain values of more than 3 but there is tendency to its deepening. Negative value of the excess indicator during the whole studied period means that in total there is no so-called "core".

Despite the above characteristics we cannot assert uniquely the lack of differentiation because increasing variation scope of 1.5 times is found. It is due to the increase in the maximum value of Human Development Index more rapidly than the increase in the minimum indicator during the studied period. In 2005 exceeding the first indicator over the latter one as shown by scope indicator of regional disproportions was 15%, in 2013 it was 20%. Thus, differences between regions are growing, there is a gradual deepening of regional stratification, namely regional human development can be considered asymmetric.

It should be noted that most regions are characterized by lower value of Human Development Index than the average one for Ukraine and this trend deepens (Figure 2).

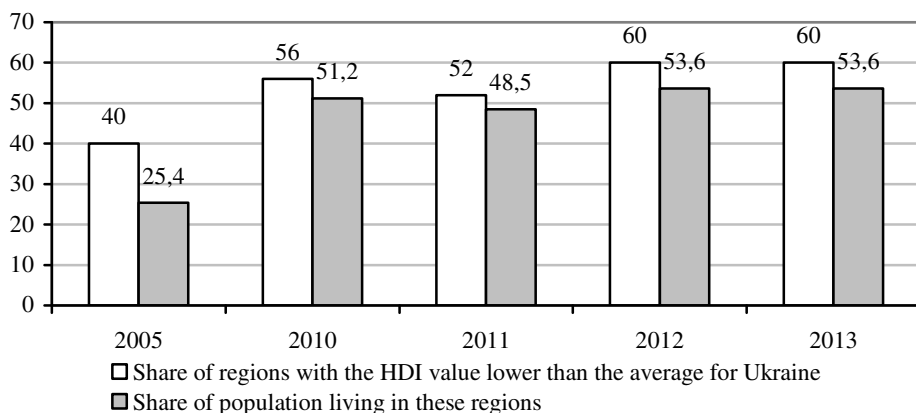


Figure 2. Dynamics of negative deviation of human development level by regions from the average value in Ukraine, %, calculated according to the data from (Integrated Regional Human Development Index, 2013; Regional Human Development, 2013)

During 2005–2013 the population living in these regions increased more than twice, its share in 2010 and last two years exceeded 50%. Regions that during the studied period were included into the category of regions with consistently low value of the index are Volynska, Kirovogradska, Luganska, Zhytomyrska, Ivano-Frankivska and Chernigivska oblasts.

In our opinion, specification of regional Human Development Index will have the analytical value which is an integral indicator in some aspects. National methods of measuring regional human development (13.06.2012, # 123-m) provide the analysis of 6 blocks of indicators: "Comfortable life", "Population reproduction", "Social environment", "Welfare", "Decent work" and "Education". Dynamics of the situation in Ukraine according to these parameters shows that during the analyzed period some progress took place in all aspects except decent work and social environment (Figure 3).

The best situation is observed in such aspects of human development as education and population reproduction. Social environment has the worst indicators among all parameters. The most progress has been achieved during the analyzed period in the welfare aspect – the growth of the corresponding indicator was 30%.

Studying the differences of regions in the context of these partial indices give us the idea on what has the greatest impact on increasing the disproportions in human development. Analysis of variation coefficients in dynamics provides insight into the convergence (acquiring the same features) or divergence (widening gap between the levels of development) of regions that happens during the analyzed period for some features of human development (Figure 4).

The analysis results show minor differences between Ukrainian regions by the levels of education and reproduction (the variation indicator coefficient by data of 2013 has the value below 5%). As for social environment there are significant interre-

gional differences (the coefficient value is more than 20%). The analysis of dynamics of variation coefficients leads us to concluding that strengthening regional divergence is due to strengthening regional differentiation by welfare aspect (coefficient of variation increased by 4.1%). For other parameters of human development during the studied period there is a decrease in heterogeneity that in the overall result allows slightly neutralizing the tendency to stratification.

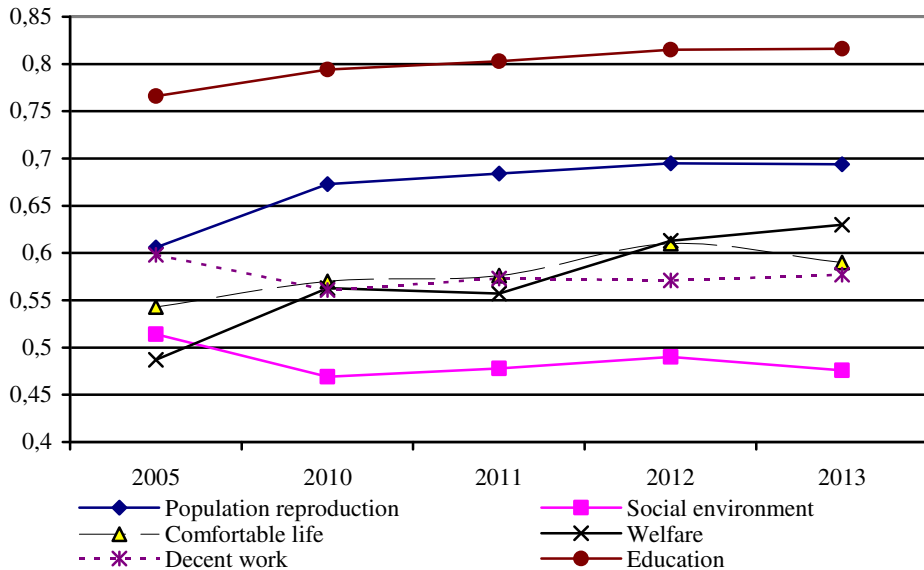


Figure 3. Dynamics of partial regional human development indices by years, designed according to the data from (Integrated Regional Human Development Index, 2013; Regional Human Development, 2013)

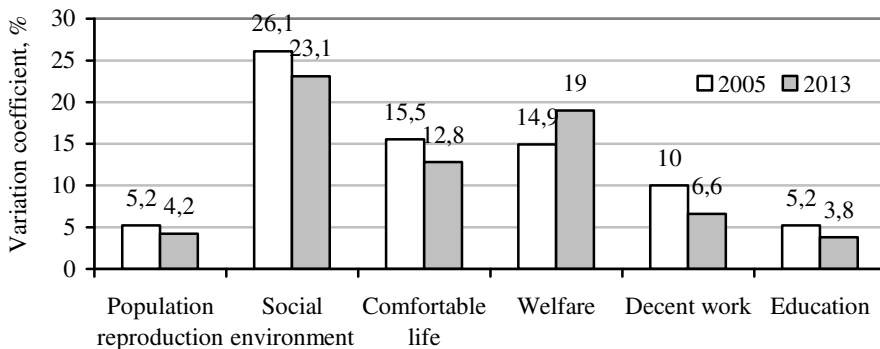


Figure 4. Dynamics of interregional variation of partial human development indices in some aspects, calculated and designed using the data from (Integrated Regional Human Development Index, 2013; Regional Human Development, 2013)

High differentiation of regions by the level of human development is the result of three main factors: objective differences in economic development and specialization of the economy; different quality of regional management and different degree of

adaptation to market conditions; preservation of tight financial centralization (Libanova et al., 2007). At the same time differentiation of the human development index and economic indicators vary considerably. The peculiarity of the economic model that emerged in Ukraine is that regions with the highest economic growth indicators do not reach the greatest progress in human development. This regularity was established after studying the interdependence of regional differentiation of Human Development Index and gross value added per capita. The last indicator was chosen for analysis due to the fact that the added value depends on economic growth, it forms the basis for national wealth; it is the basis for human development, enterprises, local communities and the state. Comparison of regional ratings by the level of Human Development Index and gross value added per 1 person showed significant differences (in Table 2 highlighted in grey are the cases where the difference in ratings is no more than two positions).

Table 2. Comparative evaluation of interregional differences in human development and gross value added per capita in Ukraine by years

Regions (oblasts)	2005		2010		2011		2012		2013	
	Rating by HDI	Rating by GVA per 1 person	Rating by HDI	Rating by GVA per 1 person	Rating by HDI	Rating by GVA per 1 person	Rating by HDI	Rating by GVA per 1 person	Rating by HDI	Rating by GVA per 1 person
AR Crimea	4	11	5	11	9	13	6	12	4	13
Vinnyska	11	19	20	18	19	17	21	17	18	17
Volynska	21	17	19	20	14	20	15	20	13	20
Dnipropetrovska	8	2	13	1	15	1	14	1	15	1
Donetska	14	1	21	2	18	2	12	3	20	4
Zhytomyrska	23	22	25	16	25	18	25	19	25	18
Zakarpatska	7	23	3	23	3	24	2	23	5	23
Zaporizka	17	4	10	7	6	7	5	6	6	7
Ivano-Frankivska	6	10	12	19	13	16	13	13	21	12
Kyivska	10	7	4	4	7	3	7	2	7	2
Kirovogradska	25	13	24	14	24	12	24	14	23	10
Luganska	22	9	18	9	20	9	11	11	16	15
Lvivska	3	12	7	12	4	11	4	9	3	11
Mykolaiivska	15	8	15	8	11	8	8	8	12	8
Odeska	12	6	8	6	10	6	10	7	9	6
Poltavska	1	3	9	3	5	4	9	4	8	3
Rivnenska	18	18	14	21	16	22	19	21	19	22
Sumska	19	14	16	13	21	14	23	16	22	14
Ternopil'ska	9	25	11	24	12	23	17	24	10	24
Kharkiv'ska	2	5	1	5	1	5	1	5	1	5
Kherson'ska	20	21	23	17	23	21	22	22	24	21
Khmelnyska	16	20	17	22	22	19	20	18	14	19
Cherkaska	13	15	6	10	8	10	16	10	11	9
Chernivetska	5	24	2	25	2	25	3	25	2	25
Chernigiv'ska	24	16	22	15	17	15	18	15	17	16

Source: calculated according to the data from: Integrated Regional Human Development Index, 2013; Gross regional product, 2015.

Determination of dependence between these indicators was carried out using the nonparametric rank analysis method of coupling coefficients. Among these methods of assessment the largest distribution has Spearman rank coefficient (Fedulova, 2006) which involves the rating of studied parameters to determine connection consistency between them. The calculations show that rank correlation coefficients were respectively: in 2005 – 0.23; in 2010 – 0.12; in 2011 – 0.18; in 2012 – 0.37; in 2013 – 0.15 indicating the presence of weak coupling (the coefficient value is in the range of 0.1–0.3). Moderate connection between the analyzed indicators can only be seen in 2012 (the coefficient value – within 0.3–0.5). This indicates that the results of economic development in developed regions are not aimed at the development of human potential and this trend deepens (connection consistency decreases in dynamics). The greatest degree of influence in dynamics is observed for Zaporizka, Kyivska, Poltavska, Odeska and Kharkivska oblasts which occupy mostly high ratings (top 10 regions) by both human development and gross value added indicators. There are regions with lower HDI value than the average in Ukraine and have low rating on economic criteria, the closest connection between these indicators is recorded for Khersonska, Chernigivska and Rivnenska oblasts. We should pay attention to the following pattern: low mutual influence of investigated indicators is identified in economically developed regions – Dnipropetrovska, Donetsk oblasts which show low level of human development; instead Zakarpatska and Chernivetska oblasts that are considered to be depressed regions are the leaders by HDI ranking.

Conclusions and prospects for further research. Identified interregional disproportions in the level of human development take place because today's Ukrainian economy is not oriented on people and the results of economic development do not find expression in human development. That is why to some extent, despite the existing resource potential of the state, Ukraine worsens its position in Human Development Index. All of this points to the importance of implementing an effective mechanism for regional policy, considering all possible sources for the funding of regional programs. According to State Strategy on Regional Development for the period until 2020, approved by the Cabinet of Ministers of Ukraine in 2014, the following tasks are defined to reduce regional disproportions: ensuring the implementation of regional potential and increasing regional investment attractiveness; improving the quality of human development in Ukraine's regions; expansion of interregional cooperation. Within the limits of state regional policy implementation to ensure balanced human development it is necessary to develop and implement regional programs related to this field. They should be aimed at decentralizing taking into consideration the needs and peculiarities of regional development; improving interaction of the center and regions, including the mechanisms of intergovernmental fiscal relations and redistribution of financial resources; identifying the ways for alternative development for each region of the country based on demographic, economic, social and environmental factors. The main focus should be on identifying the most problematic aspects of human development in every region and searching for the instruments that will encourage the development of human potential, effectively using the opportunities in this area and providing decent life standards for all citizens, regardless their place of residence.

The basis for the development and implementation of these programs should be a further detailed research of the raised problem, in particular on the influence of factors in formation and deepening disproportions, identifying the priorities and targets of human development in particular regions and development of proposals on improving instruments and mechanisms of regional policy at the state level.

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