COMPREHENSIVE RATING ASSESSMENT OF THE LEVEL OF SOCIAL SECURITY IN THE LABOR MARKET OF UKRAINE AND THE EU

[a]KSENIIA BONDAREVSKA, [b]VICTORIIA TARANENKO, [c]IRYNA TUBOLETS, [d]TETYANA KORIAHINA, [e]VITA CHERBA

[a-e]University of Customs and Finance, 2/4, Volodymyr Vernadskiy Str., 49000, Dnipro, Ukraine
email: [a]kseny-8888@i.ua, [b]vikitarik@gmail.com, [c]irina.tubolec@gmail.com, [d]koriagina1@i.ua, [e]1vita.cherba@gmail.com

Abstract: The article identifies the features of a comprehensive rating assessment of the level of social security in the labor market, which involves assessing employment security indicators and wage security indicators with the separation of indicators of incentive and disincentive effects and grouping on this basis (categorical and zonal) for assessment of objects. This approach allows assessing the level of social security in the labor market in the regional dimension, determining the region's affiliation to a specific category and threat zone and justifying a set of management measures differentiated by category of regions. The current trends in the development of European and national labor markets in the context of their impact on social security, a comprehensive rating assessment of social security in the labor market, which divided the regions of Ukraine into six zones (categories) depending on the highest, high, medium, below average, low or lowest rating factor, are revealed. In order to attract positive foreign experience in ensuring social security in the labor market, a comparative analysis of the labor market of Ukraine and the EU is carried out using the method of comprehensive rating assessment of employment security and wage security indicators. It is determined that, in order to improve the situation and neutralize regional disparities, it is necessary to form an effective state policy that takes into account not only direct but also indirect factors influencing the labor market, as well as improving employment and welfare of Ukraine

Keywords: Social security, Labor market, Social security in the labor market, Employment security, Salary security, Threats to social security on the labor market, Comprehensive rating assessment.

1 Introduction

Given the instability of the functioning and development of socio-economic relations, the problem of ensuring a high standard of living, neutralization of negative phenomena and threats in the social and labor sphere, raising social standards becomes especially relevant. The solution of labor market problems as one of the main mechanisms of effective reproduction and development of the country's labor resources deserves special attention. Unfortunately, the current state of the Ukrainian labor market is characterized by increasing crises, including high unemployment and shadow employment, increasing labor migration, in particular highly skilled labor, declining incomes and quality of life, the spread of poverty. An important role in ensuring social security and the appropriate level of development of the labor market of Ukraine in the integration process is played by the development of the European labor market, characterized by increasing migration trends through free movement of labor within the EU, expanding professional and academic mobility associated with integration processes in all spheres of economic activity. At the same time, there is a risk of rising unemployment and structural imbalances in the labor market due to the relocation of cheap labor from EU member states that have recently joined the community. According to Ukrainian researchers, the main trends in the EU labor market are: rising structural unemployment, especially among unskilled workers and young people; a significant influx of migrants across EU borders, which changes the model of reproduction of labor resources (while attracting highly qualified migrants and young people); overcoming discrimination and strengthening gender equality; increasing the mobility of labor resources within the EU; increasing the outflow of highly qualified professionals outside the EU and increasing dependence on the influx of such migrants from third countries; spreading the trend of mass retraining of specialists [1].

The overall impact of globalization on Ukraine's economy “is characterized by increased competition due to the liberalization of the government's protectionist policy towards domestic producers and the entry of foreign companies into the market”; in addition, “there are certain structural changes in the economy: changes in the share of different types of economic activity in GDP; redistribution of markets between domestic and foreign producers, which leads to the cessation of economic activity of uncompetitive enterprises, reducing wages in some sectors of the economy and increasing the number of laid off workers” [17]. All this, in turn, requires the formation of mechanisms for adapting the national economy and labor market to global realities.

In order to solve the existing problems, it is advisable to form an effective mechanism for social security in the labor market based on a comprehensive assessment of key indicators and continuous monitoring of social and labor relations in an unstable environment.

2 Materials and Method

Diagnosis of social security, as well as any other socio-economic phenomenon, is carried out according to the appropriate methodology, which is a set of techniques, methods of calculation, and rules of the study.

Among the scientific works of foreign researchers on the issues of labor market security and its evaluation, there are publications of A. Hijsen and B. Menigert, who believe that “labor market security covers those aspects of economic security that are associated with the risk of job loss and its consequences for workers and their families” [11]. According to researcher K. Crouch, in modern conditions it is advisable to consider the concept of flexible security, which takes into account the requirements of labor flexibility, as traditional measures to protect workers in the labor market prevent possible positive changes [6]. Foreign scientists T. Wilhagen and F. Tros consider it appropriate to assess: occupational safety related to staying at a particular workplace, as well as employment security, which refers to the reliability of permanent work, not necessarily in one position. Also, income security os considered (reliability of a constant flow of income, regardless of whether a person works or not), and “combined” security, i.e., the ability to achieve work-life balance [22, 23].

Analysis of the international practice of social security assessment, today, unfortunately, shows that there is no single comprehensive methodology for its analysis. At the same time, no less important global indicators are identified, which indicate the state of social security among other economic issues studied. The most indicative global indicators in the context of determining the state of social security are the Global Competitiveness Index, the Social Progress Index, the Human Development Index, and the Welfare Index.

According to the Global Competitiveness Index (GCI) used by the World Economic Forum (CEF) to rank countries, this index includes 113 components, summarized in 12 benchmarks that characterize the level of competitiveness of the participating countries. Among the identified evaluation parameters, there are the quality of institutions, infrastructure, macroeconomic stability, health care and primary education, higher education and training, efficiency of goods and services market, labor market efficiency, financial market development, level of technological development, domestic market size, competitiveness of companies and innovation potential [21]. Considering this methodology in the context of social security, one should note its importance in terms of diagnosing components of the labor market, development of education and health care, infrastructure and institutional support. Based on the key role of employment and wage security, which contributes to taking into account the social interests of citizens in the use of human resources and the formation of a decent level of welfare, it is advisable to consider in more detail a set of indicators reflecting labor market development.

An important global indicator that determines the state of social security at the international level is the Social Progress Index

(SPI), developed by professor of Harvard University M. Porter in 2013. This indicator determines the level of welfare of the population, the state of basic needs of people, as well as opportunities and prospects for human development in 149 countries (according to 2019). Based on the importance of social development of society and taking into account the social interests of the population, social progress has become an important task for countries, businesses, and society. The Social Progress Index assesses the effectiveness of countries in many aspects of social development, which provides an opportunity to study both absolute and relative indicators, improve public policy in the social sphere and identify priority action programs to improve social and economic indicators [24].

An important indicator of social security in the context of the protection of social interests of the population is the Human Development Index (HDI). This is the final indicator for assessing long-term progress in the three main areas of human development: long and healthy life, access to knowledge, and a decent standard of living [18].

One of the global indices that takes into account the criteria of social development and social security is the Welfare Index - an indicator calculated annually by the British Legatum Institute; it includes indicators of security, personal freedom, governance, social capital, investment environment, business environment, access to markets and infrastructure, quality of economy, living conditions, health, education, environment [22]. We agree with the opinion of such scientists as S. Kozlovsky, L. Nikolenko, O. Peresada, O. Pokhilyuk, O. Yatchuk, N. Bolgarova, O. Kulganik, on the need for a comprehensive approach to assessing the level of welfare of countries. Thus, in order to assess the country's well-being, it is advisable to use indicators that characterize economic and social development, including the Economic Freedom Index (IEF), Global Peace Index (GPI), Democracy Index (DI), Corruption Perceptions Index (CPI), Human Development Index HDI), Welfare Index (PI), Global Competitiveness Index (GCI), subsistence level (LW) and standard of living (WI) [15].

In addition to the above indicators, which make it possible to diagnose the social sphere and make appropriate international comparisons, the definition of methods for assessing the level of social security in the labor market as an important component of the security mechanism is particularly relevant. Experts of the International Labor Organization have determined their own methodology for calculating the Labor Market Safety Index (LMSI). In a relevant study conducted in 2004 among 94 countries, the leading positions were occupied by the economically developed countries of Western Europe, Canada, and Japan [11].

The methodology for assessing labor market security using the Labor Market Welfare Index, proposed by the Center for the Study of Living Standards in Canada, is noteworthy. The characteristics of this technique are described in detail in the monograph of Hetman “Innovative mechanism of labor market regulation”. Thus, the ILMW contains the following 4 components: Labor Market Income (LMI), which includes wages per employee (LCPW) and hourly wages (LCPH); human capital (HC) with a component - secondary education (EA); Labor Market Equality (LME), which includes hourly wage inequality (HWI) and falling low-wage employment (LWE); labor market security (LMS), which includes the risk of unemployment (RU), health risks from employment (RH), the risk of poverty in retirement (RPR) [12]. The above methodology provides an opportunity to comprehensively identify risks and threats to the development of the labor market, but requires adaptation to the practice of application in Ukraine, based on available information and diagnostic needs.

Of particular importance in modern conditions is the development of such methods of social security assessment, which allow identifying major threats and their severity, comparing the dynamics of integrated indices with the corresponding thresholds and, on this basis, conducting a scenario analysis of social security trends in the future. Various author's approaches provide performance of the specified tasks. In particular, Grishnova and Kharazishvili developed a structure and list of indicators taking into account three components of social security, including: living standards, demographic component, and quality of life [14]. At the same time, the standard of living is the most influential factor in regulating social security, on which other indicators depend - the demographic component and quality of life.

In Ukrainian practice, the Methodology for calculating the level of economic security of Ukraine is used, which, among other important groups of indicators, includes social security indicators. This methodology was first approved by the Ministry of Economic Development and Trade of Ukraine in 2007 (Order No. 60 of March 2, 2007) (On approval of the Methodology for calculating the level of economic security of Ukraine, 2007). In 2013, the order of the Ministry of Economic Development and Trade of Ukraine approved a new version of the Guidelines for calculating the level of economic security of Ukraine (order No. 1277 of 29.10.2013), which defined 9 components of economic security (industrial, demographic, energy, foreign economic, investment-innovative, macroeconomic, food, social, financial) [19]. The range of values of indicators is much wider than in the previous version of the Methodology, as it varies by 6 levels: optimal, satisfactory, unsatisfactory, dangerous, critical, absolutely dangerous. In our opinion, the relevant list of evaluation indicators does not fully satisfy the need to identify key problems of the labor market, in particular in the context of its social security.

At the same time, the topical issue today is the formation of methods for assessing social security in the labor market, taking into account the regional peculiarities of the development of relevant components, which may reflect the level of employment security and wage security. Thus, the aim of the study is to conduct a comprehensive rating assessment of the level of social security in the labor market of Ukraine and the EU.

3 Results and Discussion

In order to analyze the level of social security in the labor market of Ukraine and the EU, we offer an author's approach to conducting a comprehensive rating assessment [5].

The main differences of this technique are:

1) Emphasis on indicators that reflect security threats and risks.
2) Versatility and flexibility of the methodology, which allows to vary (change) the indicators included in it, in accordance with the purpose and objectives of the assessment.

Thus, in the framework of a comprehensive rating assessment, it is advisable to determine the characteristics of the labor market regarding its main indicators, which have both positive and negative impact on the level of social security in the labor market. It is also advisible to conduct assessment of “problematic” indicators both in the field of employment security and in the field of wage security, as well as to determine the place of each region of Ukraine in the overall rating and assigning it to the appropriate zone (category). Our proposed procedure for conducting a comprehensive rating assessment includes six stages. First, key indicators are selected and divided into stimulants (indicators that have a positive impact on the level of social security in the labor market) and disincentives (indicators that have a negative impact, respectively). Then, the necessary statistical information is collected and the numerical values of the indicators are determined, after which the reference values for each indicator are selected. An important stage of the assessment is the standardization of indicators, which is the calculation of the ratio of actual regional indicators to the reference. This procedure is carried out in order to comply with the requirement of uniformity of measurement of the studied data set. That is why it is mandatory to take into account the results of standardization when calculating the rating, according

to which the ranking of regions and determining the place of each of them in the national ranking is carried out [3, 4].

We consider it appropriate to select 6 key indicators of labor market efficiency, including employment security indicators (i.e., those that provide information on the level of supply and demand of labor and reflect the phenomena of employment and unemployment) and indicators of wage security (they provide information on the state and problems in the field of payment of wages, which is the price of labor in the labor market). In addition, all 6 indicators are divided into indicators whose high values have a positive impact on the level of social security in the labor market (stimulants) and indicators whose high values have a negative impact (disincentives).

Therefore, a comprehensive rating assessment will be based on the following indicators: employment rate, % (stimulant in the field of employment security); unemployment rate, % (disincentive in the field of employment security); average number of employees, persons (stimulant in the field of employment security); average monthly nominal salary, UAH (payroll incentive); real wage index, % (incentive in the field of wage security); the ratio of the average monthly nominal wage and the subsistence level per able-bodied person, times (stimulant in the field of wage security). Thus, the analysis offers three indicators in the areas of employment security and wage security with a focus on stimulus indicators.

In order to comprehensively study the state of social security in the labor market in the regions of Ukraine, we consider it appropriate to conduct research over several years to study the dynamics of improvement / deterioration of the situation.

The relevant indicators selected for preliminary analysis and rating are shown in Tables 1 and 2.
Taking into account the main indicators, their reference values were selected, which are the largest (maximum) value for each stimulant indicator, and the smallest (minimum) value for the disincentive indicator.

Table 1: Summary data on employment security indicators in 2018

Regions	Occupation rate, %	Average number of employees, thousand people	Unemployment rate, %
Ukraine	57.1	7662	8.8
Vinnytsia	56.8	266	9.9
Volyn	49.5	170	11.4
Dnipropetrovsk	58.6	775	8.0
Donetsk	50.0	382	14.0
Zhytomyr	57.5	207	10.4
Transcarpathian	54.5	162	10.0
Zaporizhya	56.7	367	9.9
Ivano-Frankivsk	55.6	191	7.8
Kyiv	58.5	354	6.3
Kyrovograd	54.5	176	11.6
Luhansk	56.9	112	15.1
Lviv	56.8	474	6.9
Mykolayiv	58.1	193	9.6
Odessa	57.2	422	6.4
Poltava	55.1	301	11.2
Rivne	56.8	175	9.7
Sumy	58.4	202	8.7
Ternopil	52.7	147	10.4
Kharkiv	61.4	562	5.3*
Kherson	57.5	158	10.3
Khmelnytsky	55.9	204	8.4
Cherkasy	57.7	217	9.6
Chernivtsi	57.2	115	7.9
Chernihiv	57.3	184	10.6
City of Kyiv	62.6*	1149*	6.2

* reference values of indicators
Source: Economic Activity of the Population of Ukraine, 2019; Labor of Ukraine, 2019

Therefore, we can conclude that the highest rates (reference values) belong to the following regions: by employment level - Kyiv (62.6%); by the average number of employees - Kyiv (1149 people); by unemployment rate - Kharkiv region (5.3%).

According to labor security indicators, the highest (reference) values of indicators in 2018 were observed in the following regions: according to the real wage index - Poltava region (115.9%); on the average monthly salary - the city of Kyiv (UAH 13,542), on the ratio of the average monthly salary and the subsistence level per able-bodied person - the city of Kyiv (7.4 times).

Table 2: Summary data on wage security indicators in 2018

Regions	Real wage index, %	Average monthly salary, UAH	The ratio of average monthly wages and subsistence level per 1 able-bodied person, times
Ukraine	112.5	8865	4.8
Vinnytsia	115.5	7801	4.2
Volyn	112.7	7324	4.0
Dnipropetrovsk	115.8	8862	4.8
Donetsk	110.2	9686	5.3
Zhytomyr	114.5	7372	4.0
Transcarpathian	112.5	8070	4.4
Zaporizhya	114.8	8726	4.7
Ivano-Frankivsk	112.5	7551	4.1
Kyiv	113.8	9097	4.9
Kyrovograd	112.5	7191	3.9
Luhansk	111.9	7365	4.0
Lviv	112.7	8001	4.3
Mykolayiv	110.3	8160	4.4
Odessa	110.5	8011	4.4
Poltava	115.9*	8375	4.5
Rivne	111.6	7469	4.1
Sumy	110.6	7324	4.0
Ternopil	113.7	6969	3.8
Kharkiv	110.1	7657	4.2
Kherson	109.5	7058	3.8
Khmelnytsky	111.8	7346	4.0
Cherkasy	111.4	7478	4.1
Chernivtsi	112.7	6991	3.8
Chernihiv	111.7	6995	3.8
City of Kyiv	110.2	13542*	7.4*

* reference values of indicators
Source: Economic Activity of the Population of Ukraine, 2019; Labor of Ukraine, 2019

Relevant data were used as a basis for further standardization and calculation of the rating by the formula:

$$Ri = \sqrt[n]{\sum_{i=1}^{n}(1-Xij)^2} = \sqrt{(1-X1j)^2+(1-X2j)^2+(1-X3j)^2+...+(1-Xnj)^2} \quad (1)$$

where Ri is the rating for the i-th region;

Xij - standardized j-indicators for the i-th region.

It should be noted that the region whose value Ri is the minimum has the highest rating, i.e, the regions are ranked in descending order of rating. The results of the rating are shown in Figure 1.

According to the results of the rating, the highest positions (first place) in the ranking in 2018 belonged to Kyiv, with a significant gap from other regions, due to high performance on almost all indicators of social security in the labor market, except the real wage index. High positions (respectively second and third place) were occupied by Dnipropetrovsk and Kharkiv regions, proving the close digital values of the overall rating. Among the positive factors of social security in the labor market in Dnipropetrovsk region, it is worth noting a fairly high among other regions index of real wages (115.8%), average monthly wages (8862 UAH), the average number of employees (775 thousand people), employment rate (58.6%). Positive factors in the development of the labor market of Kharkiv region indicate

the lowest unemployment rate in the country (5.3%) and high employment (61.4%). Most of the stimulus indicators studied in the above-mentioned regions exceed the average level in Ukraine, while the disincentive indicator - the unemployment rate - is much lower than the national average.

Thus, we can conclude that there are favorable factors for the development of the labor market and its social security in industrialized regions, which accumulate financial and labor resources, have significant potential for attracting investment and are leaders in filling the country's budget. The leadership of Kyiv in the overall ranking can be explained by a number of positive features, including a high level of wages, growing demand for labor (in particular, high skills), high level of technological equipment of workplaces, availability of wide opportunities for realization of labor potential and development of labor resources. Namely this list of factors attracts labor from all regions of Ukraine. At the same time, the high cost of living in the capital somewhat neutralizes the positive value of the high average monthly wage, which is reflected in the real wage index, that is lower than the national average.

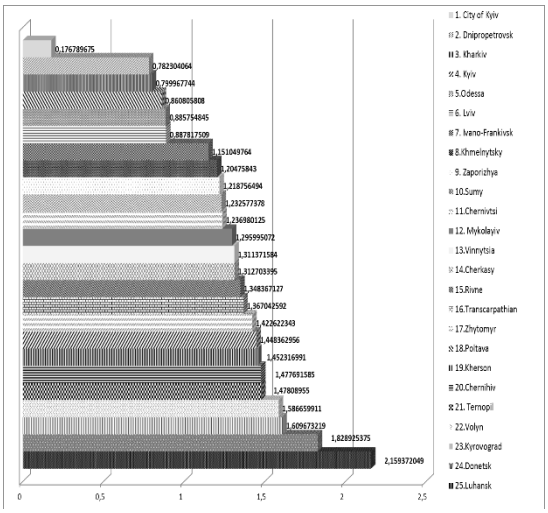

Figure 1. Results of the rating assessment of the level of social security in the labor market of Ukraine in 2018

Source: author's development

In the last places of the rating in 2018, there were Luhansk and Donetsk regions (25th and 24th place respectively). Among the negative factors that indicate a low level of social security in the labor market, one should note the critical level of unemployment, which is the highest in the country (in Lugansk region - 15.1%; in Donetsk region - 14%), low employment (56.9% and 50% respectively). In this case, the extremely negative impact of the military conflict in the east of the country (from which Luhansk and Donetsk oblasts suffered the most) on the labor market is quite clear.

In order to study in more detail the regional features of the labor market, we consider it appropriate to divide the regions of Ukraine into categories (zones) based on the results of the rating assessment. Researchers I.O. Tsymbalyuk and O.V. Uniga propose to determine the optimal number of groups at approximately equal intervals using the formula of the American scientist Sturgess:

$$m = 1 + 3{,}332 \lg n \qquad (2)$$

where m is the number of intervals; n is the volume of the population.

The width of the interval h is determined by the formula:

$$h = (x\max - x\min) / m \qquad (3)$$

where xmax, xmin - the largest and smallest values of the feature in the aggregate [23]

In determining the number of groups, the basic requirements for their formation were met, in particular, the need for qualitative homogeneity of certain groups and a relatively large number of units in each group. Thus, 6 groups were obtained ($m = 1 + 3.332 \lg 25 = 5.65 = 6$), the value of the interval was calculated ($h = (2.159-0.177) / 6 = 0.33$), and the categories (zones) to which the regions belong were defined according to their level of social security in the labor market:

- The first group with values of rating coefficients from 0.177 to 0.507 (category No. 1: regions with the highest level of social security in the labor market; the zone of the lowest level of threats);
- The second group with values of rating coefficients from 0.507 to 0.838 (category No. 2: regions with a high level of social security in the labor market; low-risk zone);
- The third group with values of rating coefficients from 0.838 to 1.168 (category No. 3: regions with an average level of social security in the labor market; zone of medium level of threats);
- The fourth group with values of rating coefficients from 1.168 to 1.499 (category No. 4: regions with a level of social security in the labor market below average; threat zone with a level above average);
- The fifth group with values of rating coefficients from 1.499 to 1.829 (category No. 5: regions with a low level of social security in the labor market, a zone of high level of threats);
- The sixth group with values of rating coefficients from 1.829 to 2.159 (category No. 6: regions with the lowest level of social security in the labor market, the zone of the highest level of threats).

According to the proposed distribution, in 2018, the category No. 1, which includes regions with the highest level of social security in the labor market, belongs only to Kyiv, in particular due to a significant gap with other regions in almost all studied indicators. Category No. 2 includes industrialized regions with a high level of social security in the labor market and low levels of threats - Dnipropetrovsk and Kharkiv regions (respectively 2nd and 3rd place in the ranking). The category of regions with an average level of labor market development and ensuring its social security (category No. 3) includes Kyiv, Odesa, Lviv, and Ivano-Frankivsk regions (respectively 4, 5, 6, and 7 place in the ranking). Category No. 4, which includes regions with a level of social security that is below average, has 14 oblasts (Khmelnytsky, Zaporizhia, Sumy, Chernivtsi, Mykolaiv, Vinnytsia, Cherkasy, Rivne, Zakarpattia, Zhytomyr, Poltava, Kherson, Chernihiv, Chernihiv, Ternopil), i.e., most of the regions of Ukraine. Volyn, Kirovohrad, and Donetsk oblasts have a low level of social security in the labor market and category No.5 respectively, with low values of the main indicators of employment security and wage security (respectively 22, 23, and 24 place in the ranking). Category No. 6, which reflects the regions with the lowest level of social security in the labor market and the highest level of threats, includes Luhansk region (25th place in the ranking).

In order to conduct a comparative analysis of the results of the rating assessment of the Ukraine' regions by the level of social security in the labor market, the statistics of 2018 and statistics of 2013 were selected, characterized by relative stability of the economic situation period of 2014. The corresponding values of stimulant indicators and disincentive indicators with the characteristics of their standards are given in Tables 3 and 4.

Table 3: Summary data on employment security indicators in 2013

Regions	Occupation rate, %	Average number of employees, thousand people	Unemployment rate, %
Ukraine	*60.3*	*10164*	*7.2*
Vinnytsia	59.6	300	8.4
Volyn	59.7	181	7.8
Dnipropetrovsk	62.1	904	6.5
Donetsk	60.3	1097	7.8
Zhytomyr	59.9	238	9.3
Transcarpathian	58.6	183	7.8
Zaporizhya	61.3	423	6.6
Ivano-Frankivsk	55.4	213	7.2
Kyiv	59.5	369	6.1
Kyrovograd	59.5	197	7.9
Luhansk	59.4	503	6.2
Lviv	58.8	516	7.1
Mykolayiv	60.6	229	7.4
Odessa	59.6	489	5.3
Poltava	59.4	365	8.2
Rivne	59.6	200	9.4
Sumy	60.1	241	7.7
Ternopil	56.2	172	9.4
Kharkiv	61.5	625	6.4
Kherson	59.6	185	8.5
Khmelnytsky	59.7	232	8.0
Cherkasy	59.9	247	8.9
Chernivtsi	58.7	130	7.4
Chernihiv	60.6	213	9.3
City of Kyiv	64.9*	1267*	5.2*

* reference values of indicators
Source*:* Economic Activity of the Population of Ukraine, 2014; Labor of Ukraine, 2014

According to statistical information in 2013, the leadership in all identified indicators of employment security, namely the employment rate, unemployment rate, and average number of employees, belongs to the city of Kyiv.
Regarding labor security indicators in 2013, the reference values belong to the following regions: according to the real wage index - Rivne region (111.5%), according to the average monthly wage - Kyiv (UAH 5007), according to the ratio of average monthly wages and subsistence level per able-bodied person - Kyiv (4.2 times).

Table 4: Summary data on wage security indicators in 2013

Regions	Real wage index, %	Average monthly salary, UAH	The ratio of average monthly wages and subsistence level per 1 able-bodied person, times
Ukraine	*108.2*	*3265*	*2.8*
Vinnytsia	110.0	2651	2.2
Volyn	111.0	2580	2.2
Dnipropetrovsk	106.7	3336	2.8
Donetsk	106.3	3755	3.2
Zhytomyr	109.6	2561	2.2
Transcarpathian	109.4	2553	2.2
Zaporizhya	108.1	3142	2.7
Ivano-Frankivsk	106.6	2679	2.3
Kyiv	107.2	3351	2.8
Kyrovograd	109.0	2608	2.2
Luhansk	107.6	3337	2.8
Lviv	109.2	2789	2.4
Mykolayiv	109.8	3094	2.6
Odessa	109.3	2947	2.3
Poltava	106.1	2988	2.5
Rivne	111.5*	2844	2.4
Sumy	109.5	2702	2.3
Ternopil	109.3	2359	2.0
Kharkiv	109.3	2975	2.5
Kherson	109.4	2464	2.1
Khmelnytsky	109.6	2641	2.2
Cherkasy	107.9	2682	2.3
Chernivtsi	108.0	2484	2.1
Chernihiv	110.0	2504	2.1
City of Kyiv	107.8	5007*	4.2*

* reference values of indicators
Source*:* Labor of Ukraine, 2019

The results of the rating assessment of the level of social security in the labor market for 2013 are shown in Figure 2.

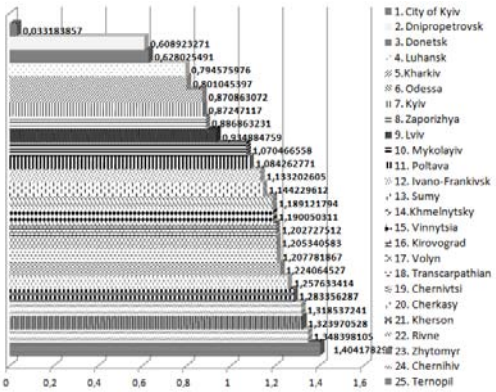

Figure 2. Results of the rating assessment of the level of social security in the labor market of Ukraine in 2013

Source: author's development

The leader in the level of social security in the labor market in 2013, as in 2018, was the city of Kyiv with correspondingly high values for most indicators of both employment security and wage security. The second position in the ranking of 2013, as in 2018, was occupied by Dnipropetrovsk region. Respectively, the third and fourth places belong to Donetsk and Luhansk oblasts, which in 2013 had a favorable situation for the development of the labor market and ensuring its social security, which was expressed in high average monthly wages, as well as the ratio of average monthly wages and subsistence level per able-bodied person. The presence of great industrial potential contributed to the creation of new and development of existing production facilities, which provided the creation of additional jobs. Unfortunately, all this has been lost due to the military conflict, and the regions are currently in crisis.

Regarding the last positions in the ranking, in 2013 they belonged to Ternopil, Chernihiv, and Zhytomyr regions (25th, 24th, and 23rd place respectively). Thus, Ternopil region showed the lowest among all regions average monthly wage and its ratio to the subsistence level, the lowest value of the average number of employees and the highest unemployment rate in the country. The employment rate was also below the Ukrainian average. The situation in Chernihiv and Zhytomyr oblasts does not differ significantly with low average monthly wages and its ratio to the subsistence level, high unemployment and low average number of employees.

According to the results of the rating assessment of the level of social security in the labor market, all regions of Ukraine were also divided into 6 categories (zones), with an interval of 0.23 (h = (1,.404 - 0.033) / 6 = 0.23):

- Category No. 1 with values of rating coefficients from 0.033 to 0.262 (regions with the highest level of social security in the labor market; the zone of the lowest level of threats);
- Category No. 2 with values of rating coefficients from 0.262 to 0.490 (regions with a high level of social security in the labor market; low-risk zone);
- Category No. 3 with values of rating coefficients from 0.490 to 0.719 (regions with an average level of social

security in the labor market; zone of medium level of threats);
- Category No. 4 with values of rating coefficients from 0.719 to 0.947 (regions with a level of social security in the labor market below average; threat zone with a level above average);
- Category No. 5 with values of rating coefficients from 0.947 to 1.176 (regions with a low level of social security in the labor market, a zone of high level of threats);
- Category No. 6 with values of rating coefficients from 1.176 to 1.404 (regions with the lowest level of social security in the labor market, the zone of the highest level of threats).

According to the rating and the results obtained, the city of Kyiv belonged to category No. 1 in 2013, which, similarly to 2018, has the highest level of social security in the labor market with the highest values of indicators among all surveyed regions. Unfortunately, in 2013, no region was included in category No. 2, which indicates the absence of regions with a high level of labor market development and the appropriate level of social security in it. Among the regions with the average level of the studied indicators (category No. 3), there were Dnipropetrovsk and Donetsk regions, which in 2013 occupied the second and third place of the overall rating, respectively. Regions with a below-average level of social security in the labor market (category No. 4) included Luhansk, Kharkiv, Kyiv, Zaporizhia, Odesa, and Lviv regions. Regarding the regions with a low level of the studied phenomenon, they include Mykolaiv, Poltava, Ivano-Frankivsk, and Sumy regions (category No. 5). The regions with the lowest level of social security in the labor market (category No.6) included 12 regions of Ukraine: Khmelnytsky, Vinnytsia, Kirovohrad, Volyn, Zakarpattia, Chernivtsi, Cherkasy, Kherson, Rivne, Zhytomyr, Chernihiv, Ternopil regions.

Changes in the ratings and corresponding positions of the regions that took place in 2018 compared to 2013 are shown in Table 5.

Table 5: The results of a comprehensive rating assessment of the level of social security in the labor market of Ukraine

Categories of regions by level of social security in the labor market	2013	2018
Category No. 1: regions with the highest level of social security in the labor market; the zone of the lowest level of threats	City of Kyiv (1)*	City of Kyiv (1)*
Category No. 2: regions with a high level of social security in the labor market; low threat zone	-	Dnipropetrovsk (2), Kharkiv (3)
Category No. 3: regions with an average level of social security in the labor market; zone of medium level of threats	Dnepropetrovsk (2), Donetsk (3)	Odessa (5), Kyiv (4), Lviv (6), Ivano-Frankivsk (7)
Category No. 4: regions with a lower level of social security in the labor market; threat zone with a level above average	Luhansk (4), Kharkiv (5), Odessa (6), Kyiv (7), Zaporizhia (8), Lviv (9)	Zaporizhia (9), Mykolaiv (12), Poltava (18), Sumy (10), Khmelnytsky (8), Vinnytsia (13), Zakarpattia (16), Chernivtsi (11), Cherkasy (14), Kherson (19), Rivne (15), Zhytomyr (17), Chernihiv (20), Ternopil (21)
Category No. 5: regions with a low level of social security in the labor market, a zone of high threat	Mykolaiv (10), Poltava (11), Ivano-Frankivsk (12), Sumy (13)	Donetsk (24), Kirovohrad (23), Volyn (22)
Category No. 6: regions with the lowest level of social security in the labor market, the zone of the highest level of threats	Khmelnytsky (14), Vinnytsia (15), Kirovohrad (16), Volyn (17), Zakarpattia (18), Chernivtsi (19), Cherkasy (20), Kherson (21), Rivne (22), Zhytomyr (23)), Chernihiv (24), Ternopil (25)	Luhansk (25)

** the position of the region in the rating is indicated in parentheses*

Source*:* author's development

As a result, the leading position of the city of Kyiv remained unchanged in terms of most indicators of labor market development, belonging to the first category. Significant deterioration of the situation in the field of social security in the labor market can be observed in Donetsk and Luhansk oblasts, which changed their position in the ranking by two positions and moved to the categories with the lower and lowest levels of the studied indicators. The positions of Dnipropetrovsk, Kharkiv, Odesa, Kyiv, and Lviv oblasts have slightly improved, and in 2018 they moved to the category of regions with a high level of social security in the labor market. The transition to a higher category was observed in almost all regions of Ukraine, except Zaporizhia oblast and regions of military conflict. At the same time, it should be noted that the results of this comparison do not indicate an overall improvement in the labor market in 2018 due to unresolved issues of employment and wages, economic and political instability, hostilities in the east. The level of economic activity and employment of the population during the study period (2006-2018) reached its maximum value in 2013 (65% and 58.9%, respectively, in 2013, 62.6% and 57.1%, respectively, in 2018). Despite the improvement of the positions of some regions, there is an urgent need to restore the vital functions and potential of Donetsk and Luhansk regions, which in the future will have significant opportunities to create new jobs and improve employment.

Thus, the state of social security in the labor market of Ukraine in terms of regions is not satisfactory. The main problems that need to be addressed as a matter of priority are, first of all, ensuring decent wages by aligning nominal wages with their real indicators, as well as reducing unemployment, which will be possible not only by creating additional jobs in the regions, raising economic activity, the use of innovative forms of employment, but also by eliminating structural imbalances in the labor market.

Given the number of crisis phenomena in the labor market of Ukraine, as well as the European vector of modern integration processes, it is advisable to conduct a rating assessment of key indicators of employment and wage security in the European Union. In order to obtain comparative results, the labor market of 28 EU countries and Ukraine was chosen as an object of evaluation. Taking into account the peculiarities of statistical reporting in EU countries and the principle of determining key indicators for analyzing the state of social security in the labor market, 3 indicators were selected: employment (% of the population aged 15 and older for the EU, aged 15-70 for Ukraine); unemployment rate (in % to the economically active population aged 15-74 for the EU, aged 15-70 for Ukraine); the amount of the average monthly net salary (employee's remuneration received on the day of payment, euros), i.e., the amount of salary minus mandatory tax deductions, which reflects the actual earnings of the employee. Thus, the level of employment is a stimulus indicator in the field of employment security; the unemployment rate is an indicator-disincentive in the field of employment security; the average monthly net salary is a stimulus indicator in the field of wage security.

Statistical data and their reference values, selected for a comprehensive rating assessment of the level of social security in the labor market of Ukraine and the EU in 2018, are shown in Table 6.

The highest level of employment among the surveyed countries in 2018, which was selected as a reference value, was observed in Sweden (61.9%). The Netherlands (61.8%), the United Kingdom (60.6%), and Estonia (60.4%) also have close high values of the analyzed indicator (more than 60%). Critically low employment rates (less than 50%) were observed in the labor market of Greece (41.9%), Italy (44.6%), Croatia (46.9%), and Spain (49.1%). The reference value of the unemployment rate in 2018 belongs to the Czech Republic (2.2%).

Table 6: Summary data on employment and wage security indicators in Ukraine and the EU in 2018

Regions	Occupation rate, %	Average number of employees, thousand people	Unemployment rate, %
Ukraine	*57.1*	*8.8*	*212.80*
Austria	58.4	4.9	1535.68
Belgium	51.0	6.0	1618.83
Bulgary	52.4	5.2	233.81
Greece	41.9	19.3	739.25
Denmark	59.4	5,0	1642.03
Estonia	60.4	5.4	616.08
Ireland	58.6	5.8	1736.45
Spain	49.1	15.3	1031.39
Italy	44.6	10.6	1084.78
Cyprus	57.2	8.4	893.88
Latvia	56.9	7.4	388.83
Lithuania	57.8	6.2	405.63
Luxemburg	56.5	5.4	2084.70*
Malta	57.3	3.7	842.84
Netherlands	61.8	3.8	1813.46
Germany	59.2	3.4	1455.07
Poland	54.2	3.9	407.11
Portugal	55.0	7.0	683.41
Romania	52.7	4.2	288.21
Slovakia	55.9	6.5	424.24
Slovenia	55.8	5.1	620.48
The United Kingdom	60.6	4.0	1584.07
Hungary	54.6	3.7	357.79
Finland	55.1	7.4	1522.08
France	50.7	9.1	1276.01
Croatia	46.9	8.5	440.11
Czech Republic	59.2	2.2*	510.90
Sweden	61.9*	6.3	1448.27

* reference values of indicators

Source*:* Economic Activity of the Population of Ukraine, 2019; Annual net earnings. Eurostat, 2018

Low unemployment was observed in the labor market of Germany (3.4%), Malta (3.7%), Hungary (3.7%), the Netherlands (3.8%), and Poland (3.9%). The countries of Eastern Europe, which are on the list of countries with the lowest unemployment rates, have partially managed to overcome the crisis in the labor market, which was particularly acute at the beginning of their membership in the EU. Critically high unemployment rates in 2018 were observed in Greece (19.3%), Spain (15.3%), and Italy (10.6%), which requires urgent action by governments to address the problem and prevent a deepening crisis.

The largest (reference) average monthly net salary was paid to employees in Luxembourg (€ 2084.70). High net wages were also found in the labor market of highly developed European countries such as the Netherlands, Ireland, Denmark, the United Kingdom, Germany, Sweden, Belgium, Finland, and Austria, which creates favorable conditions for wage security in these countries. Ukraine has the lowest level of wages among the surveyed countries (212.80 euros). Bulgaria, Romania, Hungary, Latvia, Slovakia, Croatia, Poland, and Lithuania are also characterized by low average monthly net wages. A common feature of the labor market of these countries is the presence of unresolved issues in the field of wage security, which is reflected in the lowest level of wages in the EU. This, in turn, leads to significant migratory movements to more developed European countries in search of decent-paying jobs.

All the above trends are reflected in the results of the rating assessment of the level of social security in the labor market of Ukraine and the European Union (Fig. 3).

According to the results of the rating assessment, the leading positions in 2018 were shown by Germany by a significant margin, which was due to high values of employment (59.2%) and the average monthly net salary (1455.07 euros), as well as low unemployment (3.4%). The Netherlands and the Czech Republic were also among the top three. The Dutch labor market was characterized by positive values of all studied indicators of both employment and wage security. At the same time, the Czech labor market had a low average monthly net wage (€ 510.90) compared to highly developed EU countries, which is offset by the lowest EU (reference) unemployment rate (2.2%) and a fairly high level of employment (59.2%).

Among the outsiders of the ranking, there were Greece, Spain, and Italy (29th, 28th, 27th place respectively). The main problem areas of these countries included high unemployment and low employment.

Ukraine ranked 25th, with a higher employment rate than the European average (57.1% in Ukraine; 54.1% in the EU), and the highest average European unemployment rate (8.8% in Ukraine; 6.8% in the EU), as well as the lowest average monthly net wage (€ 212.80) among the countries studied. All this indicates the presence of problematic phenomena in the labor market of Ukraine both in the field of employment security and in the field of labor security.

For the rating grouping of countries, 6 groups were obtained according to the Sturgess formula ($m = 1 + 3.332 \lg 29 = 5.87 = 6$), and the value of the interval ($h = (7.806-0.625) / 6 = 1,20$) was calculated. According to certain groups of countries, the relevant categories and zones of social security in the labor market were identified:

- Category No. 1 takes into account the values of rating coefficients from 0.625 to 1.822 (countries with the highest level of social security in the labor market, which are in the zone of the lowest level of threats);
- Category No. 2 with values of rating coefficients from 1.822 to 3.019 (countries with a high level of social security in the labor market, which are included in the zone of low level of threats);
- Category No. 3 with values of rating coefficients from 3.019 to 4.216 (countries with an average level of social security in the labor market, which are in the zone of medium level of threats);
- Category No. 4 with values of rating coefficients from 4.216 to 5.412 (countries with a level of social security in the labor market below the average, which are in the threat zone with a level above the average);
- Category No. 5 with values of rating coefficients from 5.412 to 6.609 (countries with a low level of social security in the labor market, which are included in the zone of high level of threats);
- Category No. 6 with values of rating coefficients from 6.609 to 7.806 (countries with the lowest level of social security in the labor market, which are in the zone of the highest level of threats).

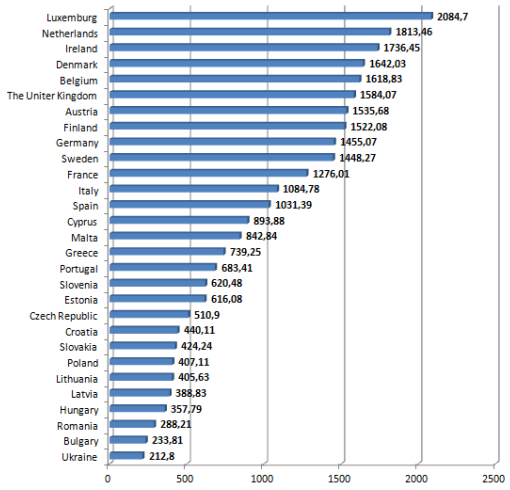

Figure 3. Results of the rating assessment of the level of social security in the labor market of Ukraine and the EU for 2018

Source*:* author's development

Thus, the group of countries with the highest level of social security in the labor market and the lowest threat zone includes a fairly wide list of countries: Germany, Netherlands, Czech Republic, United Kingdom, Malta, Hungary, Poland, Austria, Romania, Denmark, Luxembourg, Slovenia, Estonia, Bulgaria, Ireland, Belgium. As we can see, the category No. 1 includes not only the highly developed countries of Western Europe, which traditionally occupy high positions in world rankings, but also the countries of the former socialist camp. This is due to low unemployment rates in most Eastern European countries. At the same time, the need to increase the average monthly net salary (the amount taking into account the tax burden that workers receive) remains a pressing problem in the labor market of Romania, the Czech Republic, Hungary, Poland, Bulgaria, Slovenia, and Estonia.

Category No. 2 includes countries with a high level of social security in the labor market and a low level of threats, in particular: Sweden, Lithuania, Slovakia, Portugal, Finland, Latvia, Cyprus, Croatia.

In category No. 3, which reflects the average level of the studied phenomenon, there are Ukraine, France, and Italy. It should be noted that there are crises in the field of employment security in France and Italy: critical unemployment (respectively 9.1% and 10.6%) and low employment (50.7% and 44.6%), which is somewhat neutralized in the high rating indicator of the average monthly net salary (respectively 1276.01 euros and 1084.78 euros). Ukraine's labor market indicators, by contrast, show a critical state of wage security, with the lowest average monthly net wage of all countries surveyed (€ 212.80), while the employment security situation is slightly better, as evidenced by employment indicators and unemployment.

In 2018, according to the rating assessment, no country was included in the category No. 4 (group of countries with the level of social security in the labor market below average). While Spain showed a low level of research and entered the category No. 5, the Spanish labor market is characterized by significant problems in the field of employment security, including extremely high unemployment (15.3%) and low employment (49.1%).

Among the countries with the lowest level of social security in the labor market, there was Greece, which was included in the No. 6 category – it witnessed significant problems in both employment and wage security. In particular, there is a minimum employment rate among the surveyed countries (41.9%) and a maximum unemployment rate (19.3%) in this country. Adverse trends are exacerbated by the low average monthly net wage (€ 739.25).

4 Conclusion

The method of comprehensive rating assessment of the level of social security in the labor market is versatile and flexible, which allows for variation of indicators depending on the target of the assessment process, as well as the ability to identify threats and dangers in the labor market that affect social security. The results of the evaluation can be used to identify problematic aspects and threats that hinder the development of the labor market, as well as to further substantiate the strategic directions of social security in the labor market. These indicators can be used in the process of periodic monitoring of social security in the labor market, subject to the principles of representativeness, reliability, and information accessibility.

A comprehensive rating assessment of the level of social security in the EU labor market has shown the feasibility of applying the best practices of developed European countries in creating favorable conditions for employment and wage security in Ukraine. In particular, the introduction of key elements of the labor market development models of Germany and the Netherlands may be useful for Ukraine. In order to improve the situation in the field of employment and wages in Ukraine, as well as to neutralize the identified regional imbalances, it is necessary to form an effective state policy in the labor market, which will include such areas of development as: labor market and educational services; raising the level of youth employment, in particular by supporting enterprises that employ young people; development of self-employment and innovative forms of employment; reduction of the share of employment in the informal sector; increase real wages and ensure a high level of welfare. It is important to take into account the main components of social security in the labor market:

- employment security (through active employment policy; balancing the demand for and supply of labor; state support for entrepreneurship, in particular, through the use of tax instruments; stimulating youth employment through cooperation between the state, educational institutions, and business structures, etc.);
- wage security (improvement of the wage system taking into account the principle of fairness and the need to restore the basic functions of wages in a market economy; regulation of inflationary fluctuations; improving the legal framework on wages given the need to approximate it to European standards, etc.).

That is why a comprehensive state policy, which will take into account not only direct but also indirect factors of influence, will provide an opportunity to improve employment and living standards of Ukrainian citizens, which will indicate the formation of social security in the context of labor market development.

Literature:

1. Abrashka, O.V. (2011). The state and trends of the EU labor market: guidelines for innovative growth [Stan i tendentsii rozvytku rynku pratsi YeS: oriientyry dlia innovatsiinoho pidiomu]. Scientific Bulletin of Poltava University of Economics and Trade [Naukovyi visnyk Poltavskoho universytetu ekonomiky i torhivli], 5(50), 87-90. [in Ukrainian]
2. Annual net earning. *Eurostat*. https://appsso.eurostat.ec.eur opa.eu/nui/show.do?dataset=earn_nt_net&lang=en
3. Babenko, V., Pasmor, M., Pankova, J., Sidorov, M. (2017). The place and perspectives of Ukraine in international integration space. Problems and Perspectives in Management, 15(1), 80-92.
4. Babenko, V., Perepelytsia, A., & Sidorov, M. (2019). Cluster evaluation approach to informatization of countries under international globalization [KLASTERNYI PIDKHID DO OTSINKY RIVNIA INFORMATYZATSII KRAIN SVITU V UMOVAKH MIZHNARODNOI HLOBALIZATSII]. Energy Saving. Energy. Energy Audit [Enerhozberezhennia. Enerhetyka. Enerhoaudyt], 1(149), 70-79. [in Ukrainian]

5. Bondarevska, K.V. (2019a). Assessment of the level of social security in the labor market of Ukraine and directions of its provision [Otsinka rivnia sotsialnoi bezpeky na rynku pratsi Ukrainy ta napriamy yii zabezpechennia]. Bulletin of Economic Science of Ukraine [Visnyk ekonomichnoi nauky Ukrainy], 2(37), 101–104 [in Ukrainian]
6. Bondarevska, K.V. (2019b). Social security in the labor market of Ukraine: assessment of its level and directions of provision [Sotsialna bezpeka na rynku pratsi Ukrainy: otsinka yii rivnia ta napriamy zabezpechennia]. New Economics: materials of the International Scientific Forum "New Economics-2019" [New Economics: materialy Mizhnarodnoho naukovoho forumu "New Economics-2019"] (Kyiv, November 14-15, 2019): in 2 volumes. Vol. 1: NAS of Ukraine, Institute of Industrial Economics, pp. 264-269 [in Ukrainian].
7. Bondarevska, K.V. (2021). Strategy for ensuring social security in the labor market of Ukraine [Stratehiia zabezpechennia sotsialnoi bezpeky na rynku pratsi Ukrainy]. Dissertation for the degree of Doctor of Economics [Dysertatsiia na zdobuttia nauk.stupenia d-ra ekon.nauk], Vinnytsia: Vasyl Stus DonNU. [in Ukrainian]
8. Crouch, C. (2010). Flexibility and security in the labour market: An analysis of the governance of inequality. ZAF, 43, 17–38. https://doi.org/10.1007/s12651-010-0031-9
9. Economic activity of the population of Ukraine 2018: statistical collection (2019). [Ekonomichna aktyvnist naselennia Ukrainy 2018: statystychnyi zbirnyk]. Kyiv: State Statistics Service of Ukraine. http://www.ukrstat.gov.ua [in Ukrainian]
10. Economic activity of the population of Ukraine 2013: Statistical collection (2014) [Ekonomichna aktyvnist naselennia Ukrainy 2013: statystychnyi zbirnyk]. Kyiv: State Statistics Service of Ukraine. http://www.ukrstat.gov.ua [in Ukrainian]
11. Economic security for a better world (2004). Geneva: International Labor Office. http://www.social-protection.org/gimi/gess/RessourcePDF.action;jsessionid=MHhmYlBVXwQh1wpyQG7QyjnPMJmXnbbhJzkJy3Y26v3LLQtpnGTY!1934813363?ressource.ressourceId=8670
12. Hetman, O.O. (2016). *Innovative mechanism of labor market regulation* [Innovatsiinyi mekhanizm rehuliuvannia rynku pratsi]. Dnepropetrovsk: UMSF [in Ukrainian].
13. Hijzen, A., & Menyhert, B. (2016). Measuring Labour Market Security and Assessing its Implications for Individual Well-Being. OECD: Social, Employment and Migration Working Papers. No. 175. OECD Publishing, Paris. https://www.oecd-ilibrary.org/docserver/5jm58qvzd6s4-en.pdf?expires=1582033692&id=id&accname=guest&checksum=6A7E7DA3E7903FA4B447A117CF3E5CA7
14. Kharazishvili, Y., Kwilinski, A., Grishnova, O., Dzwigol, H. (2020) Social Safety of Society for Developing Countries to Meet Sustainable Development Standards: Indicators, Level, Strategic Benchmarks (with Calculations Based on the Case Study of Ukraine). Sustainability, 12. 8953. https://doi.org/10.3390/su12218953
15. Kozlovskyi, S., Nikolenko, L., Peresada, O., Pokhyliuk, O., Yatchuk, O., Bolgarova, N., Kulhanik, O. (2020). Estimation level of public welfare on the basis of methods of intellectual analysis. Global Journal of Environmental Science and Management. https://www.gjesm.net/article_38259_b5e58d0c075bd7a9717cd6ab455f76b9.pdf
16. Labor of Ukraine in 2018: statistical collection (2019) [Pratsia Ukrainy u 2018 rotsi: statystychnyi zbirnyk]. Kyiv: State Statistics Service of Ukraine. http://www.ukrstat.gov.ua [in Ukrainian]
17. Labor of Ukraine in 2013: statistical collection (2014). [Pratsia Ukrainy u 2013 rotsi: statystychnyi zbirnyk]. Kyiv: State Statistics Committee of Ukraine. http://www.ukrstat.gov.ua [in Ukrainian]
18. On approval of the Methodology for calculating the level of economic security of Ukraine (2007) [Pro zatverdzhennia Metodyky rozrakhunku rivnia ekonomichnoi bezpeky Ukrainy], order of 02.03.2007 No. 60. https://zakon.rada.gov.ua/rada/show/ru/v0060665-07/ed20070302 [in Ukrainian]
19. On approval of Methodical recommendations for calculating the level of economic security of Ukraine (2013) [Pro zatverdzhennia Metodychnykh rekomendatsii shchodo rozrakhunku rivnia ekonomichnoi bezpeky Ukrainy], order of 29.10.2013 No. 1277. https://zakononline.com.ua/documentts/show/218014___218079 [in Ukrainian]
20. Ponomarenko, I.V., Vinnikova, I.I., & Grebnev, G.M. (2016). Features of the functioning of the labor market of Ukraine in terms of integration into the European Union [Osoblyvosti funktsionuvannia rynku pratsi Ukrainy v umovakh intehratsii do Yevropeiskoho Soiuzu]. http://ev.fmm.kpi.ua/article/view/81260 [in Ukrainian]
21. Report on the state of human development (2019). Inequality in human development in the 21st century. Analytical note on the countries presented in the Report on the State of Human Development for 2019 [Dopovid pro stan liudskoho rozvytku – 2019. Nerivnist u liudskomu rozvytku v 21 stolitti. Analitychna zapyska za krainamy, shcho predstavleni v Dopovidi pro stan liudskoho rozvytku za 2019 rik] https://www.undp.org/content/dam/ukraine/docs/Annual%20Reports/Ukraine-(ukr)-HDR-2019.pdf [in Ukrainian]
22. The Legatum Prosperity Index (2019) [pdf document].
23. Tsymbalyuk, I.O., & Uniga, O.V. (2017). Methodical approaches to assessing the development of the labor market in the border region [Metodychni pidkhody do otsiniuvannia rozvytku rynku pratsi prykordonnoho rehionu]. Black Sea Economic Studies [Prychornomorski ekonomichni studii], 18, 235-240. [in Ukrainian]
24. Varenyk, V.M. (2016). Analysis of methods for calculating the economic security of Ukraine [Analiz metodyk rozrakhunku ekonomichnoi bezpeky Ukrainy]. Academic review [Akademichnyi ohliad], 1(44). http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP_meta&C21COM=S&2_S21P03=FILA=&2_S21STR=ao_2016_1_9 [in Ukrainian]
25. Wilthagen, T. (2002). Managing social risks with transitional labour markets. In: Mosley, H., O'Reilly, J., Schömann, K. (eds.) Labour Markets, Gender and Institutional Change: Essays in Honour of Günther Schmid. Edward Elgar Publishing, pp. 264–289.
26. Wilthagen, T., & Tros F. (2004). The Concept of 'Flexicurity: a new approach to regulating employment and labour markets' in 'Flexicurity: Conceptual Issues and Political Implementation in Europe'. https://journals.sagepub.com/doi/10.1177/102425890401000204
27. 2019 SOCIAL PROGRESS INDEX: *Executive Summary*. https://www.socialprogress.org/static/9d3cd3204599ff2cdf87248edc2b1242/2019-social-progress-index-executive-summary-v2.0.pdf

Primary Paper Section: A

Secondary Paper Section: AE, AH