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THE LABOR MARKET AS A COMPONENT OF THE ECONOMIC SECURITY SYSTEM OF UKRAINE

Purpose. Analysis of importance of the labor market (LM) as a component of economic security (ES) and establishing the specifics of the impact of the labor market on economic security in crisis conditions.

Methodology. The study used the following methods: comparative-statistical method – to assess the significance of influence of LM-indicators on ES; analysis and synthesis – to establish the need to reduce the time of ES-assessment; comparison – to identify the LM influence as a complex component of ES; critical analysis – to identify directions of change in the methodology of ES-assessment and establish that the value of the rate of change indicators should be significant for the level of ES.

Findings. Comparison of the rate of change in indicators of the ES-index and their importance provides the possibility of ranking threats according to the level of danger. New threats to ES, which are due to threats to LM, have been identified. The level of correlation of institutionally implemented indicators of LM with the level of ES is lower than the level of correlation of other indicators of LM, the correlation of which with other macroeconomic indicators at the same time is significant. The peculiarities and features of LM as a component of ES are determined.

Originality. It is indicated that the rate of change in the ES-index indicator forms a new type of ES-threat. It is indicated that changes in external influences have increased the complex significance of threats of LM for ES and determine the need to include this component in the calculation of the ES-index.

Practical value. The proposed approach creates the basis for relevant determination of the level of ES and for prompt directing of efforts and resources to eliminate serious threats of ES.

Keywords: *economic security, labor market, influencing factors, dynamics of influences*

Introduction. New external threats and internal challenges lead to significant changes and a set of significant factors affecting the country's economic security, and the relative importance of these factors, cause the emergence of new patterns between the components in the formation of the level of economic security.

These threats have not only a short-term impact, but also a long-term impact on the level of economic security. Thus, as a result of military operations, Ukraine loses not only the labor resources that are needed for the functioning of the country's economy today, but also the personnel potential of the following periods due to the death and migration of young people at an age less than working age.

Negative trends in the labor market, established in pre-war times, significantly intensified during the war, creating new risks for the country's economy. Thus, the lack of human resources determines the need for additional budget expenditures for strengthening the labor potential in key sectors, compensation payments to entrepreneurs and employees in case of temporary suspension of their activities due to military threats, etc., which affects the level of economic security of the country.

Today, as a result of disproportions in the regional staffing of economic activity, the following is observed: the process of forming permanent disparities in the placement of production resources; increasing the imbalance of production and sales of products; violation of mechanisms of economic activity, which should be taken into account in the Economic Security Index.

The formation of permanent structural unemployment creates a new type of long-term threat to economic security; a decrease in the quality of life of the working population demotivates its production activity, leads to a decrease in the quality

of labor resources, which directly worsens the macroeconomic indicators of the country.

Challenges due to the lack of labor resources, constant trends of decreasing the quality of personnel potential, deformation of the labor market require a detailed study for planning measures to stabilize the level of economic security.

Literature review. In the scientific literature, there is a difference of opinion regarding the components of economic security, although most scientists indicate the need to take into account not only economic but also related processes [1]. Such a difference of opinion is, in particular, a consequence of the fact that economic security is a complexly structured system of various elements, the interaction of which is difficult to formalize in a single model. At the same time, the trend of recognizing the labor market as a component of economic and social systems is spreading [2].

Also, in scientific works, there is a difference of opinion regarding the essence of the terminological definition of “labor market”. Scientists move away from understanding this concept only as a balance of labor supply and demand and the process of interaction between them. The concept of “labor market” began to be interpreted more widely in the scientific literature. Under this concept, it is proposed to understand market relations in the field of labor [2]. This became the basis for a broad interpretation of the concept of “labor market” in this study.

In some scientific works, it is indicated that there is a direct connection between the security of the labor market and the state of economic and, even, national security [3]. Moreover, specific factors affecting economic security are determined, in particular, shadow employment; large-scale population migration; imbalance of labor supply and demand [4]; decrease in the number of economically active population, which causes a decrease in added value; an increase in the level of unemployment, which, in addition to other negative effects on

the level of economic security, leads to a reduction in demand [5]. These factors undoubtedly affect the level of economic security and, therefore, they are indicators of the Economic Security Index, according to the Methodological recommendations of the relevant ministry [6]. At the same time, in scientific works, the indicated threats are often determined mainly qualitatively, based on expert assumptions, without a quantitatively proven assessment of the impact of labor market risks on the level of economic security.

The use of expert opinions regarding the level of influence of individual factors that determine the state of the labor market on the level of economic security can also be attributed to the qualitative analysis of the problem. In particular, the qualification component of the labor market in the system of economic security [7], the unemployment rate [8], etc., are distinguished. The use of such an assessment method based on individual indicators makes it impossible to comprehensively assess the security of the labor market at the level of economic security, and reduces the level of relevance of the analysis and forecast.

A qualitative approach can reduce the relevance of the analysis also due to leaving out of consideration the factors that reduce and even eliminate threats to the state of the labor market, because they are not chosen to assess the level of economic security. In particular, rightly pointing out the threat to economic security of the reduction of business activity of a number of enterprises as a result of military actions and, accordingly, the growing threat of job losses [4], the impact of this factor on the employment level of the population should be carried out in conjunction with the assessment of the rate of loss of labor resources by the country. This confirms the thesis about the need for comprehensive consideration of threats to the state of the labor market and the level of economic security. In contrast to the approach of assessing these threats based on individual indicators of the state of the labor market, combining them into a separate component will increase the relevance of considering their impact on the level of economic security.

Also, the disadvantage of a qualitative analysis of the connection between the state of the labor market and the state of economic security is that it leaves out of consideration the quantitative assessment of the impact of threats caused by changes in the state of the labor market.

The war has led to drastic changes and, accordingly, the fixed values of the weight coefficients of the specified indicators determined by the Methodological recommendations [6] should be changed. Moreover, due to dynamic changes in threats and main influencing factors, these weighting factors should be regularly reviewed.

In scientific studies, to assess the significance of the impact of labor market risks on the level of economic security, it is also proposed to use indicative indicators that indirectly testify to the threats of the labor market to economic security, for example, the Indicator of the comparative solvency of the population [9], which indirectly indicates an inadequate level of remuneration, unemployment rate, external migration, etc. [9]. This approach is a variation of the method for assessing the impact of labor market risks on the level of economic security based on individual indicators, which, as stated above, leads to a decrease in the level of relevance of the conclusions regarding this impact.

Increasingly, scientists are looking for ways to improve the institutionally established method for assessing the economic security index, in particular, by proposing a modified method of the main components of the specified index [10], or by developing alternative approaches to assessing the level of economic security introduced by the adoption of Methodological recommendations of the relevant ministry [6].

For this, in particular, mathematical methods are used, for example, the method of graph theory and modeling using IDEFO [11] or the formation of an integral indicator of economic security based on the assessment and minimization of risk factors [12]. But the application of the specified methods

should be preceded by a reasonable selection of influencing factors, an assessment of their weight, and, in the absence of a complex approach, the necessity of which is indicated above, consideration of the mutual reinforcement of the selected factors, which will make it possible to objectively formalize the connections on the graph. At the same time, scientists often do not pay attention to these areas of research, which reduces the level of relevance of their use.

Some scientists also claim the presence of the opposite direction of the security relationship – economic risks are considered as components of the security of the labor market, in particular, with regard to labor migration [13] or from the point of view of stabilizing the youth labor market [14].

This makes it necessary to study the growing importance of the labor market as a component of economic security and establish the specifics of the impact of the labor market on economic security in crisis conditions using an objective assessment of labor market indicators.

The purpose of the article is to study the growing importance of the labor market as a component of economic security and to establish the specifics of the impact of the labor market on economic security in crisis conditions.

The objectives of the article are to conduct comparative statistical studies and establish correlations between the main parameters of the labor market and the index of economic security and other macroeconomic indicators; determining the directions of influence of labor market indicators on the state of economic security; establishing the compliance of the Methodological recommendations of the relevant ministry [6] with modern challenges to economic security.

Methods. To assess the significance of the influence of indicators and components on the level of economic security, a comparative statistical method was used, in particular correlation analysis and the application of the Pearson correlation coefficient. To assess the mutual influence of indicators for a correlation coefficient value greater than 0.8, an F-test was conducted, which confirmed the fulfillment of the null hypothesis in these cases.

Data for correlation analysis using information sources: the State Employment Service of Ukraine [15], the website of the Ministry of Finance [16], the European Business Association [17], the Institute of Economic Research and Political Consultations [18], the State Statistics Service of Ukraine [19], and calculations index of economic security given in the article by Yakymchuk, et al. [20] are presented in the Table.

By using the method of critical analysis, it was established that the significant rate of change in the main indicators is one of the peculiarities of assessing the state of economic security in war conditions.

In some periods, the values of economic security indicators changed several times in a very short time. For example, the unemployment rate: in 2022, it was seven times as high as the reference rate approved in the Methodological Recommendations [6], which is 5 %, and four times as high as the critical value, which is 9 %.

A mathematical representation of a change in an indicator can be its first derivative in time. In this case, a sign of the need to implement urgent management actions to neutralize threats can be the second derivative, which allows identifying the acceleration of changes in the components and indicators of the economic security index, which significantly increases the risks.

$$\frac{d^2y}{d\Delta t^2} > 0,$$

where y is an indicator of a component or a component of the economic security index; Δt is a time interval during which the specified indicators or components are determined.

With the further use of the method of analysis and synthesis, it was established that in order to achieve the effectiveness of the implementation of the specified management actions, it is necessary to reduce the specified time interval from a year,

Input data for comparative statistical analysis

Year	Index of economic security	Number of unemployed, thousand people	Number of population, thousand people	Real wage index, %	Employed population, thousand people	Real wage index, %	GDP, billion UAH	Average monthly salary, UAH	Labor productivity GDP per 1 worker thousand hryvnias
2010	47.0	452.1	45,795.9	110.5	19,180.2	110.5	1,079.346	2,250	56.274
2011	50.0	505.3	45,644.4	111.0	19,231.1	111.0	1,299.991	2,648	67.598
2012	47.6	467.7	45,560.3	111.0	19,261.4	111.0	1,404.669	3,041	72.926
2013	47.6	487.6	45,439.8	106.8	19,314.2	106.8	1,465.198	3,282	75.861
2014	45.9	458.6	42,953.9	86.5	18,073.3	86.5	1,586.915	3,480	87.804
2015	44.0	461.1	42,774.6	90.1	16,443.2	90.1	1,988.544	4,195	120.934
2016	48.0	407.2	42,603.9	106.5	16,276.9	106.5	2,383.182	5,183	146.415
2017	48.0	352.5	42,403.0	118.9	16,156.4	118.9	2,908.233	7,104	180.005
2018	49.0	341.7	42,177.6	109.7	16,360.9	109.7	3,558.706	8,865	217.513
2019	49.0	338.2	41,922.7	111.4	16,578.3	111.4	3,974.564	10,497	239.745
2020	48.0	459.2	41,629.9	110.2	15,915.3	110.2	3,503.407	11,591	220.128
2021	47.0	295.0	41,208.1	112.0	15,610.0	112.0	2,878.565	14,014	184.405
2022	47.2	186.5	41,167.3	82.5	12,147.0	82.5	2,014.996	14,847	165.884
2023	48.9	96.1	28,000.0	20.3	9,250.0	–	2,113.700	17,442	228.5081

adopted according to the Methodological recommendations [6] to a quarter and even a month. This makes it possible to conduct a more prompt assessment of the economic security index in conditions of dynamic changes in the level of threats, and, accordingly, dynamic changes in indicators.

This is confirmed, in particular, by the data of the State Statistics Service investigated by the authors (Fig. 1) regarding the number of the employed population for the time period 2010–2023.

As it can be seen from Fig. 1, the period of 2010–2023 can be divided into two relatively stable sub-periods – 2010–2014 and 2015–2021, the transition between which was rapid and had signs of crisis, and the sub-period of a rapid decrease in the number of working people in 2022–2023, which can be characterized as catastrophic because in a short time the number of workers decreased by 69 %. The trend equations of these periods are presented in Fig. 1:

- for the years 2010–2014

$$y = -488.73x + 20,294;$$

- for the years 2015–2021

$$y = -100.03x + 17,092;$$

- for the years 2022–2023

$$y = -3,180x + 53,631.$$

A sign of the transition from one subperiod to another is a change in the slope ratio of the trend of this subperiod, which can be identified with the first derivative in time. The slope ratios of the trends of the specified subperiods, respectively, are -488.73 ; -100.03 and $-3,180$ (Fig. 1). The increase in the slope ratio trend in 2022 is more than 30 times relative to the previous sub period of time and is an indicator of the significance of the threat of this crisis.

The subsequent use of the comparison method made it possible to confirm that the danger is determined not only by the absolute value of the indicators of the economic security index, but also by the speed of their change. For example, the speed of

the decrease in the number of working people $\left(\frac{dy}{d\Delta t}\right)$ and the

lack of prerequisites for the stabilization of this decrease reduces the possibility of the country adapting to the threat, which itself is a factor of increasing the level of danger for the economy and determines the predicted increase in the threat to the level of economic security in the following periods of time.

Failure to take into account the speed of the decrease in the number of employees leads to the failure to perceive this factor as a significant urgent threat to economic security and, accordingly, may result in the timely failure of institutional structures to take the necessary management measures to stabilize the process of reducing labor resources and neutralize this threat. Correlation of the rate of change in the indicators and their importance to determine the level of economic security makes it possible to rank threats by the level of danger and, accordingly, more effectively allocate efforts and resources to neutralize them.

The comparison method is also used to identify the growing influence of the labor market, as a complex process, on the main economic indicators and, accordingly, the need to take into account this influence as a component of the economic security index.

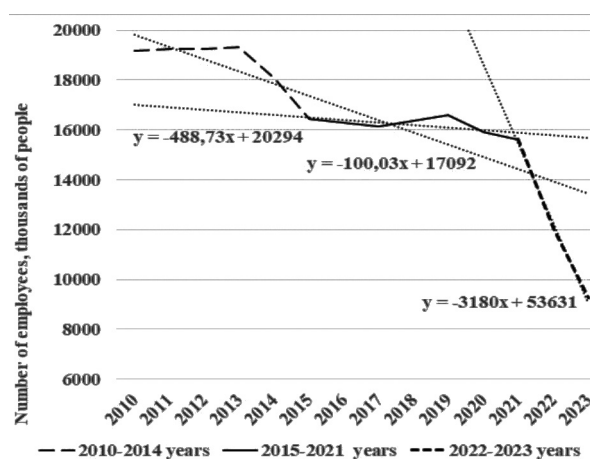


Fig. 1. Employed population, thousands of people

The application of the critical analysis method made it possible to point out directions for changes in the Methodological Recommendations [6] for the purpose of a more relevant assessment of the level of economic security.

Results. Military risks significantly increased threats to the state of economic security, changed the importance of the main components of the economic security index, which leads to the need for constant revision of the specified weight due to the variability of external and internal influences, as well as the inclusion of new components in the consideration to take into account their complex, integral effect on the level of the economic security index [16].

For example, the level and pace of the increase in the threat to the economic security of the country due to the decrease in the number of employees and, as a result, the formation of an imbalance in the labor market, is demonstrated by the trend presented in Fig. 1. If at the time of implementation of the Methodological Recommendations in 2013 [6], the number of employees was 16.34 million people, then in 2023 this number decreased to 9.25 million people. Obviously, this should have led to an increase in the importance of this indicator in the specified Methodological Recommendations.

At the same time, significant changes in the number of employees in a fairly short period of time should have influenced to a greater extent the need to change the specified methodology for assessing economic security (Fig. 1). Neither the labor market nor the country's economy as a whole is capable of properly adapting to such rapid changes. This leads to the appearance of new significant threats to the country's economic security and, accordingly, requires a change in approaches to their consideration.

Significant population losses as a result of hostilities and external migration (Table, item 4) will result in the short-term degradation of human capital, which will directly cause a decrease in economic security. Significant regional disparities in the labor market are also a threat to economic security. Thus, according to the results of data analysis [3], in Kyiv there are 22.8 times as many job offers as in Rivne, and 2.7 times as many as in Lviv region.

This is not only evidence of different rates of regional recovery, but also an indicator of the difference in the level of business activity in the regions, which should also be taken into account when calculating the level of economic security.

According to the European Business Association, today more than 75 % of companies and enterprises experience a lack of labor resources, and for 11 % of the specified subjects of economic activity, the lack of personnel is so great that it forces them to abandon business development [17].

According to the Institute of Economic Research and Political Consultations [18], there is a significant difference in the Employee Turnover Index for skilled and unskilled workers (Fig. 2). There is also a difference in the rate of change in the specified index in the period from the second quarter of 2022 to the first quarter of 2024.

This indicates both the greater need of the labor market for qualified personnel and the lack of incentives for them. The lack of incentives, the increase in the variability of the place of work also leads to an increase in the external migration of experienced workers [20, 21]. This creates a new threat to economic security associated with the loss of the quality of human resources. First of all, it will affect labor productivity and, as a result, lead to an imbalance of macroeconomic reproductive proportions.

At the same time, as it can be seen from Fig. 2, a new trend is evident during the specified period – the value of the Employee turnover index of unskilled workers began to catch up with the value of the specified indicator for skilled workers. This is indicated by the fact that the slope ratio of the trend of the Employee turnover index of unskilled workers is 1.72 times as great as the slope ratio of the trend of the Employee turnover index of skilled workers (Fig. 2).

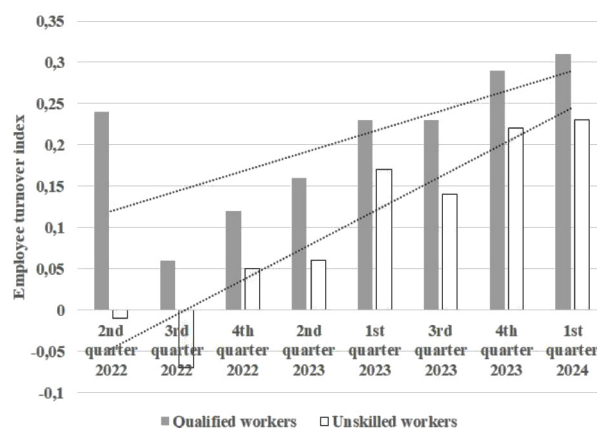


Fig. 2. Employee turnover index

This is evidence of the increase in turnover not only of highly qualified personnel, but also of unqualified workers, which in particular indicates not only a shortage of personnel of various qualification levels, but also a projected shortage of unqualified personnel with appropriate skills and work experience, as they are able to find another place of work, to meet the requirements of another employer.

This poses a threat to macroeconomic indicators of labor productivity, volumes of production and provision of services, etc.

At the same time, this is a confirmation of a significant level of dynamism in the change in the main indicators of the labor market – sometimes, even, for changes in the vector of their action to the opposite, which is evidenced by the changes in the trend of Employee turnover index for unskilled labor in the period of the 2nd–3rd quarters of 2022–2020 and subsequent periods (Fig. 2), and, accordingly, changes in the vector of their influence on the level of economic security.

The labor market according to the indicators “Index of the number of new vacancies” (Fig. 3) and “Index of the number of submitted new resumes” (Fig. 4) which were calculated relative to the indicator of the year 2021, based on the results of the authors’ study of the data of specialized sites for searching for employees and job search – work.ua, Rabota.ua, Djin-ni.co underwent significant changes in the short period of 2022–2024.

The level of the specified changes is confirmed by comparing the linear trend equations of the Indices of the number of new vacancies for the specified years.

This is how the equation of the trend of the specified indicator for the first half of 2022 looks like

$$y = -0.5244x + 23,859.$$

The trend equation for 2023 looks like this

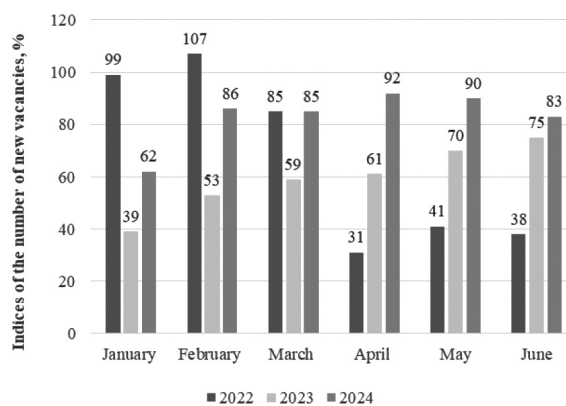


Fig. 3. Index of the number of new vacancies (%), relative to taking the average value of 2021 as 100 %

$$y = 0.1168x - 5,217.4.$$

Trend equation for 2024 is

$$y = 0.2196x - 9,902.5.$$

A comparison of trends indicates that after a significant decrease in the value of the index of the number of new vacancies in 2022 and its rapid growth in 2023 as a result of the resumption of activities of relocated enterprises, the growth of the specified index slowed down a little in 2024, but the value of the index almost reached the level of the last month before the full-scale invasion (Fig. 3).

At the same time, in the period from February 2023 (Fig. 4), there is a process of reducing the submission of new resumes, reducing the ratio of the number of submitted resumes to the number of vacancies, which indicates a change in the trend of the labor market and, accordingly, this feature significantly affects the level of economic security, as it indicates, in particular, a decrease in the country's labor potential, a narrowing of the possibilities of increasing production, and, in turn, that will lead to a decrease in the country's GDP.

A certain stabilization of the indicators "Index of the number of new vacancies" (Fig. 3) and "Index of the number of submitted new resumes" (Fig. 4) in 2024 could indicate the stabilization of supply and demand in the labor market, if not a hidden influence on these indicators of the growing level of shadowing of the economy and, in particular, the labor market during this period.

Shadowing of the economy, the level of informal employment is both an indicator of the state of economic security, and a factor of influence on its level, a multiplier of the increase in economic, social and political threats.

Informal employment leads to the avoidance of taxation of significant volumes of economic activity, an increase in the shadow circulation of money, an increase in the shortage of personnel for the legal economy, a decrease in the general level of labor productivity, which, accordingly, creates threats to economic security.

A significant threat of informal employment is that it leads to a significant level of uncertainty of the main parameters of the labor market and, accordingly, their impact on the main components of the economic security index. This, in turn, leads to a decrease in the relevance of risks to economic security and a decrease in the effectiveness of management measures to neutralize threats. Different methods are used to estimate informal employment, but the fact that informal employment has significant sectoral and regional disparities makes the analysis of labor market indicators much more difficult. Therefore, it is proposed to use a wide range of direct and indirect indicators of the labor market on large data sets and to analytically identify regional and sectoral disparities between them, caused by the informal employment of the population.

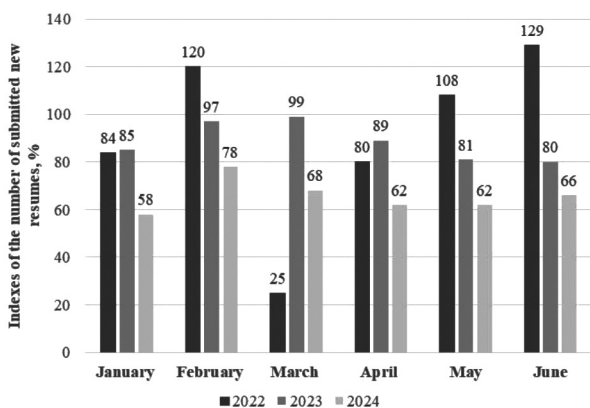


Fig. 4. Indexes of the number of submitted new resumes (%), relative to the acceptance of the average value of 2021 as 100 %

The need to take into account the shadowing of the labor market on the indicators "Number of employed population", "Index of the number of new vacancies", "Index of the number of submitted new resumes", etc. is a confirmation of the formation of multi-faceted coherence of labor market indicators and, accordingly, the need to take them into account under a comprehensive approach in the implementation of the security component of labor market when calculating the economic security index.

In order to increase the relevance of the assessment of threats to economic security, it is proposed to distinguish the concepts of "informal employment" and "shadow employment" in the legal field and to differentiate between the collection and publication of data based on these indicators.

Also, in the period after the beginning of the full-scale aggression, new factors appeared to increase the shadowing of the economy, in particular, as a means of reducing the tax burden, employers avoiding payments to injured workers for increasing the risks of damage to enterprises by rocket-bomb attacks, the use of shadow employment by workers as a means of avoiding mobilization, etc.

As it can be seen from Fig. 5 according to the data of the State Employment Service of Ukraine [15] and the State Statistics Service of Ukraine [19], it was during the period of escalation of the military confrontation that the trend of the level of informal employment as a percentage of the total number of employed people changed to the opposite sign – the period of reduction of the indicated indicator, which began in 2014 year, changed for its growth.

The indicator of the need to change the Methodological recommendations [6] is also the fact that the correlation of some parameters proposed in the recommendations with the economic security index is lower than the value of the correlation coefficient with other characteristics of the labor market that are not included in the specified Methodological recommendations.

Thus, the correlation coefficient of the economic security index (item 2 of the Table) and the labor productivity indicator (item 10 of the Table) is 0.315, the economic security index and the labor productivity index are 0.389, the correlation coefficient of the average monthly salary and the economic security index is 0.329, with the total number of population -0.177 and, for example, the correlation coefficient of the economic security index with the rate of change in real wages – that is, the ratio of the indicator for the year to the previous year is 0.797.

At the same time, the value of the correlation coefficient of the indicated indicators with the country's GDP is significantly higher. For comparison, the correlation coefficient of GDP with the indicator: labor productivity is 0.893; the average monthly salary is 0.543; the labor productivity index is 0.604.

The indicated inconsistency in the values of the correlation coefficient of the specified parameters with such an indi-

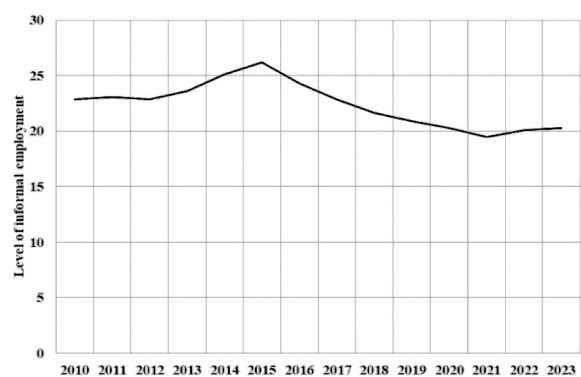


Fig. 5. The level of informal employment, percentage of the total number of the employed

cator as the GDP level, which is definitely indicative of economic security, indicates not only the shortcomings in determining the weighting coefficients of the influence of the indicators, but also the importance of those parameters of the labor market for economic security that were not taken into account in Methodical recommendations [6].

This is also indicated by a significant difference in the value of the correlation coefficients of the economic security index and such related parameters as the number of employed population (0.466), the number of the unemployed – 0.558, and the level of informal employment – 0.718.

The level of correlation of the index of economic security and, for example, the labor force turnover rate by reception (0.547) is also significant. The fact that the correlation of the economic security index and the labor force turnover ratio is higher than the seemingly related indicators, in particular, the number of the employed population and the average monthly wage is indicative, since the labor turnover factor indicates the “quality” of jobs where wages are only one of the components for evaluating the level of the specified quality.

Thus, the labor market as a complex concept that includes market relations in the field of labor, according to its main peculiarities and characteristics, should be interpreted as a significant component of economic security.

These peculiarities and characteristics include:

- the magnitude and dynamics of changes in the main parameters of the labor market, which determines the need for the prompt application of management measures of institutional structures to eliminate the consequences of the negative impact of the specified parameters on the level of economic security;

- the nature of the impact, which combines factors of both indirect and immediate, direct action on the level of economic security;

- the functionality of influence, which has both a regulatory focus on the level of economic security, and requires appropriate measures of institutional regulation to neutralize threats to economic security;

- directionality of influence, which can have both negative and positive consequences for economic security;

- the connection of labor market indicators, which determines the complex nature of the impact;

- structuredness and differentiation of influence according to regional and branch differences.

At the same time, in particular, it should be taken into account that the use of values averaged over a year in the case of dynamic changes in indicators does not allow the relevant determination of change trends, and, accordingly, distorts the assessment of the risk of economic security, which, in turn, leads to a decrease in the effectiveness of management measures.

The above confirms the thesis about the need to change the methodological recommendations of the relevant ministry regarding the definition of the economic security index [6], first of all; the introduction of a new component of the specified index - labor market security, as well as taking into account the dynamics of the impact of threats and reducing the evaluation period of the economic security index.

Conclusions. The conducted research established that:

1. The significant dynamism of threats makes it necessary when assessing the level of economic security to take into account not only the absolute value of indicators, but also the speed of their change.

2. The speed of change in the indicators reduces the possibility of adaptation to the threat, which itself is a factor of increasing the level of danger for the economy and determines the predicted increase in the threat in the following periods of time. Using the example of not taking into account the rate of change in the indicators of the decrease in the number of employees, it is indicated that this will lead to the non-perception of this factor as a threat to economic security.

3. The dynamism of threats also leads to the need to reduce the assessment time interval for prompt detection of changes in indicator trends and timely management decisions regarding threat neutralization.

4. Correlation of the rate of change in the indicator and its importance to determine the level of economic security makes it possible to rank threats by the level of danger and, accordingly, more effectively allocate efforts and resources for their neutralization.

5. The growth of the employee turnover index, in terms of both highly qualified specialists and unskilled workers, poses a new threat to the labor market and the level of economic security of the country.

6. Accelerated increase in the Employee Turnover Index for unskilled personnel means that the labor market will experience a greater shortage of unskilled personnel with appropriate skills and work experience. This poses a threat to macroeconomic indicators of labor productivity, volumes of production and provision of services, etc.

7. During the period of escalation of the military confrontation, the trend of the level of informal employment as a percentage of the total number of employed people changed to the opposite sign – the period of reduction of the indicated indicator, which began in 2014, gave way to its increase. The reasons for the increase in the level of informal employment and the threats of this process to the level of economic security of the country are indicated.

8. Using the example of the hidden influence of shadowing of the labor market on the indicators “Number of employed population”, “Index of the number of new vacancies”, “Index of the number of submitted new resumes”, etc., the need to take into account the complex nature of threats to the labor market for the level of economic security, and, accordingly, the need to take into account the inclusion of the integral indicator “Labor market security” as a component in the calculation of the Economic Security Index is confirmed.

9. The level of correlation of some labor market indicators specified in the Methodological Recommendations [6] with the level of economic security is lower than the level of correlation of some other labor market indicators, the correlation of which with other macroeconomic indicators at the same time is significant. This indicates not only the shortcomings in determining the weighting coefficients of the influence of indicators, but also the importance of the parameters of the labor market for economic security, which was not taken into account in the Methodological recommendations.

10. It is indicated that the labor market as a complex concept which includes market relations in the field of labor, according to its main peculiarities and characteristics, should be interpreted as a significant component of economic security.

11. Peculiarities and characteristics of the labor market as a component of economic security are determined.

This became the basis that allowed indicating the direction of changes in the Methodological recommendations [6] for the purpose of a more relevant assessment of the level of economic security.

Further research in this direction will be aimed at forming a mathematical assessment of the influence of a wide range of labor market factors on the level of economic security, selecting the most significant of them and evaluating their weight, with the subsequent proposal of the indicated approach for operational correction of the economic security index assessment method.

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Ринок праці як складова системи економічної безпеки України

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Мета. Аналіз значущості ринку праці (РП) як складової економічної безпеки (ЕБ) і встановлення особливостей впливу ринку праці на економічну безпеку в умовах кризи.

Методика. У дослідженні використані методи: порівняльно-статистичний – для оцінювання значущості впливу індикаторів РП на ЕБ; аналізу й синтезу – для встановлення необхідності зменшення інтервалу часу оцінки ЕБ; порівняння – для виявлення впливу РП як комплексної складової ЕБ; критичного аналізу – для виявлення напрямів зміни методики оцінки ЕБ і встановлення, що значимою для рівня економічної безпеки має бути значення швидкості зміни індикаторів.

Результати. Співставлення швидкості зміни індикаторів Індексу ЕБ і їх вагомості надає можливість ранжування загроз за рівнем небезпеки. Визначені нові загрози ЕБ, що обумовлені загрозами для РП. Рівень кореляції інституційно впроваджених індикаторів РП із рівнем ЕБ є меншим за рівень кореляції інших індикаторів РП, кореляція яких з іншими макроекономічними показниками у той же час є значущою. Визначені особливості та ознаки ринку праці як складової ЕБ.

Наукова новизна. Вказано, що швидкість зміни індикаторів Індексу ЕБ формує новий тип пролонгованої загрози ЕБ. Указано, що зміни зовнішніх впливів посилюють комплексне значення загроз ринку праці для економічної безпеки та обумовлюють необхідність включення безпеки РП як складової в розрахунок Індексу економічної безпеки.

Практична значимість. Запропонований підхід створює підґрунтя для релевантного визначення рівня економічної безпеки та оперативного спрямування зусиль і ресурсів на усунення вагомих загроз економічній безпеці.

Ключові слова: економічна безпека, ринок праці, фактори впливу, динамічність впливів

The manuscript was submitted 25.03.24.