

Comparative Analysis of the Quality of Working Life in Ukraine and in EU countries

Analiza porównawcza jakości życia zawodowego na Ukrainie i w krajach UE

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Abstract

The quality of working life is an influential factor in determining the direction of labor movement between countries and between corporations within a country. Countries that offer the best living conditions, financial state support, social integration programs, decent working conditions and wages have become the center of attraction for Ukrainian refugees after the beginning of Russia's full-scale invasion of Ukraine. The purpose of this study was to conduct a comparative analysis of the quality of working life in Ukraine and the European Union to assess the possibilities of returning refugees to Ukraine and attracting new labor from European countries during its recovery and implementation of steps towards sustainable development. A comparative analysis of key characteristics of the quality of working life shows that Ukraine is significantly inferior to EU countries. Macroeconomic conditions, employment rate and share of informal employment, income and wages, length of working week and annual guaranteed leave are key groups of indicators that require attention and direct or indirect influence to adjust them to the EU average. The article identifies the priority tasks for bridging the gap between the quality of working life in Ukraine and European countries, in particular by eliminating structural imbalances in the labor market.

Key words: quality of working life, comparative analysis, employment, digitalization, working conditions

Streszczenie

Jakość życia zawodowego jest czynnikiem wpływającym na kierunek przepływu siły roboczej pomiędzy krajami i pomiędzy korporacjami w danym kraju. Kraje oferujące najlepsze warunki życia, wsparcie finansowe państwa, programy integracji społecznej, godne warunki pracy i płace stały się centrum przyciągania ukraińskich uchodźców po rozpoczęciu rosyjskiej inwazji na Ukrainę na pełną skalę. Celem tego badania było przeprowadzenie analizy porównawczej jakości życia zawodowego na Ukrainie i w Unii Europejskiej w celu oceny możliwości powrotu uchodźców na Ukrainę i przyciągnięcia nowej siły roboczej z krajów europejskich w trakcie jej odbudowy i wdrażania kroków w kierunku zrównoważonego rozwoju. Analiza porównawcza kluczowych cech jakości życia zawodowego pokazuje, że Ukraina znacznie ustępuje krajom UE. Warunki makroekonomiczne, wskaźnik zatrudnienia i udział zatrudnienia nieformalnego, dochody i płace, długość tygodnia pracy i roczny urlop gwarantowany to kluczowe grupy wskaźników wymagające uwagi i bezpośredniego lub pośredniego wpływu, aby dostosować je do średniej UE. W artykule wskazano priorytetowe zadania mające na celu zmniejszenie luki w jakości życia zawodowego na Ukrainie i w krajach europejskich, w szczególności poprzez eliminację strukturalnych nierównowag na rynku pracy.

Słowa kluczowe: jakość życia zawodowego, analiza porównawcza, zatrudnienie, cyfryzacja, warunki pracy

1. Introduction

Given the fact that work is an integral part of human existence and that, according to rough estimates, the average person spends 8 to 12 years of their life at work, the question arises of how to assess this period of time and how it affects human life in general.

Ukraine has been fighting for its right to be a part of the European community in all spheres of life for a decade now, having set a course for the implementation of European integration processes. Accordingly, there is a need to compare the approaches to assessing the quality of working life implemented and used in domestic practice and in the EU countries.

Despite the fact that the concept of the quality of working life dates back to the 1970s of the twentieth century (Salo, 2021), in Ukraine the process of its implementation began only in the early 2000s. Instead, the European scientific community almost immediately drew attention to the newly formed concept, presenting its own vision of defining its components (Boisvert, 1977).

Special attention should be paid to the approaches to the interpretation of the concept of quality of working life, which were implemented within the framework of the International Labor Organization (Delamotte and Takezawa, 1984) (ILO), according to which *in its broadest and most abstract usage, the quality of working life refers to the totality of 'values', tangible and intangible, achieved by an employee during his or her life as an employee*. The ILO representatives at that time (1984) focused on 5 components of the quality of working life:

- 1) Safety issues: occupational health and safety (physical and psychological safety in the performance of their professional duties), working hours, economic security (including protection from dismissal for economic reasons);
- 2) Fairness to employees: to individuals and groups of employees;
- 3) Participation in decision-making: the role of employee representatives, collective bargaining, general meetings;
- 4) Content of work tasks: rethinking of modern approaches to scientific management, changes in the organization of work, socio-cultural issues of work organization;
- 5) Work in the context of the employees' life cycle: social responsibility of the organization, the chain *work-family-rest*, the relationship *work-social status*, career advancement against the background of *work-life* components.

It is noteworthy that the analysis of the quality of working life at the ILO level, both at the end of the twentieth and at the beginning of the twenty-first century (Gospel, 2003), was carried out in most cases by using qualitative research tools - the results of sociological surveys and expert opinions.

2. Literature Review

Today, a large number of both foreign (including European) and Ukrainian scholars are concerned with the problems of quality of working life. But, first of all, it is worth noting that a number of terms related to the concept of *quality of working life* are used in scientific publications of European researchers (Stefana et al., 2021; Ripka et al., 2024): quality of work; quality of working life; quality of employment, in particular in the context of achieving Sustainable Development Goal: Decent Work and Economic Growth. Most authors who introduce these terms to characterize the quality of working life rely on six macro-groups of initial indicators:

- Control: the degree of freedom of human labor activity and independence in organizing the intensity of work-load;
- Economic factors: the level of wages or remuneration for work performed, the degree of participation in the organization's profits;
- Ergonomics and safety: the level of arrangement and comfort of the workplace, compliance with labor safety conditions;
- Level of complexity: requirements for qualifications, the ability of a person to apply and develop their skills and abilities;
- Social factors: the nature of a person's relationships with colleagues, management and subordinates, decision-making procedures in the organization, the level of satisfaction from the performance of professional duties;
- Work-life balance: availability of paid vacations, care for the employee's family members, level of loyalty to personal problems.

To quantify the quality of working life, most researchers use indicators of control, economic factors, and the level of complexity. Social factors and indicators of work-life balance are much less commonly used for analysis; only about a third of researchers (including Addabbo T. (Addabbo et al., 2007), Crespo N. (Crespo et al., 2017), Muñoz de Bustillo R. (Muñoz de Bustillo et al., 2011), Jones W. (Jones et al., 2014), Paugam S. (Paugam et al., 2008), Simões N. (Simões et al., 2015) propose to use all 6 macro-groups of indicators on the basis of which integral indices are calculated (their names also vary), which are formed by aggregating the values of indicators for individual macro-groups, and the aggregation tools also vary. The results of the calculations can also be radically

different depending on the approach proposed by the authors: measurement on a 100-point scale; use of a scale with positive and negative values; additional qualitative characterization of the quantitative results. Analysis of existing approaches (Stefana et al., 2021), that have been proposed over the past twenty years for implementation in order to assess the quality of working life, shows that:

a) a significant proportion of studies have been conducted on the basis of data from a single country (or group of countries); and in some cases, the range is narrowed to the analysis of data on employed workers in a particular field of activity or for certain age groups of the employed population. This approach makes it impossible to use the proposed methodologies as a unified tool for assessing the quality of working life at the level of all EU countries;

b) most studies have been conducted in Western or Central Europe, while Eastern Europe remains out of the focus of researchers, and this part of the EU requires more efforts to assess the quality of working life, as some research results indicate low labor productivity (Simões et al., 2015); ILO experts noted this problem back in 2003 (Gospel, 2003), but almost 20 years later the situation has not changed.

Among Ukrainian scholars, issues related to the definition of the concept and assessment of the quality of working life have been addressed since the early 2000s by such scholars as Shaulska L. (Shaulska, 2005), Kolot A. (Kolot, 2009), Amosha O., Novikova O., Shamileva L., Khandii O. (Novikova et al., 2020), Pankova O., Azmuk N., Kasperovych O. (Novikova et al., 2021). The Ukrainian scientific community covers the issue of quality of working life in the context of ILO approaches, taking into account international experience, while developing its own approaches for analysis and evaluation, but most publications are theoretical analyses of stages or attempts to qualitatively assess the state of quality of working life in the country, based on the results of sociological surveys or individual statistics.

Among all the studies of recent years devoted to the assessment of the quality of working life, the combined methodology attracts attention (Novikova et al., 2021), based on the use of statistical and sociological measurement indicators. The uniqueness of the approach lies in the attempt to assess the quality of working life under the prism of the processes of digitalization of the economic sphere and their objective and subjective factors of influence. The authors of the methodology propose to divide the entire set of indicators into five components:

- 1) Conditions for the formation and maintenance of the quality of working life;
- 2) Labor market indicators;
- 3) Income and wages;
- 4) Working conditions and labor protection;
- 5) Self-assessment of the quality of working life.

Each component contains 4 to 11 primary indicators that act as a stimulant or de-stimulant. According to the results of the assessment, in accordance with the author's proposed methodology, as of 2019, the main *problem areas* were identified:

- Prevalence of partial and underemployment, which is an indicator of hidden unemployment;
- Inconsistency of documents on higher (professional) education with the place (position) of employment;
- An increase in the severity of injuries in the performance of professional duties while at work and the lack of measures to reduce this negative trend.

The positive dynamics of the integral indicator of the quality of working life recorded since 2016 (both under the influence of objective factors and subjective components) is due to a certain improvement of the economic situation in the country and intensification of the processes of establishing social and labor relations.

Unfortunately, the conditions of the full-scale invasion have led to the fact that it is not possible to collect a full set of primary indicators for reassessment:

- Due to the ongoing war, Ukraine still lacks a full range of accumulated official statistics on the number and level of employment in 2022;
- some subjective data cannot be updated due to the lack of updated data from sociological surveys that were the basis for calculating the integral index as of 2019.

3. Methodology

Given the above characteristics of the quality of working life in the EU and Ukraine, it is proposed to conduct a comparative analysis of certain primary indicators, taking into account certain limitations:

- The lack of a complete set of statistics for analysis in the context of a full-scale war in Ukraine;
- Mismatch of methods of data accumulation and calculation of statistical indicators in Ukraine and the EU;
- Differences in methods of analyzing and assessing the quality of working life.

A number of indicators characterizing various components of the quality of working life and presented in official statistical sources at the national level and at the level of EU countries were selected for analysis.

4. Results & Discussion

The indicators presented in Table 1 make it possible to compare the situation with regard to the quality of working life in 2020-2022 in Ukraine and in the EU countries. It should be noted that 2020-2021 were difficult for both the EU member states and Ukraine due to the pandemic and the economic crisis caused by it.

Table 1. Indicators of the quality of working life of the population of Ukraine and the EU, source: compiled by the authors based on data (Prasad, 2023; Vynokurov, 2022; Trading Economics, 2024; Ministry of Finance, 2024; World Bank, 2024; Karakuts, 2023)

Indicators	Ukraine			EU		
	2020	2021	2022	2020	2021	2022
Macroeconomic conditions for the formation of QWL						
Gross domestic product per capita, \$ PPP purchasing power parity	13,103	14,289	12,675	45,935	49,367	54,626
Labor productivity, GDP per person employed, \$ PPP	27,297	29,273	- (no data on the number of employees)	93,640	98,611	99,694
Employment						
Employment level, %	56,5%	55,7%	≈30,2%	71,7%	73,1%	74,6%
Unemployment level, %	9,9%	10,3%	21,1%	7,05%	7,00%	6,09%
Income and salaries						
Average monthly salary, USD	412,7	512,84	406,20	2100,34	2152,57	2154,93
Ratio of minimum to average wages	0,429	0,428	0,451	0,182	0,174	0,183

Key findings on selected primary indicators:

- 1) Ukraine's GDP per capita does not exceed one third of the similar figure in the EU (2020 - 0.285; 2021 - 0.289), and in 2022 it will be even lower - only 23.2% of its European counterpart. This *gap* is sustainable, and the sharp deterioration in 2022 is explained by the full-scale invasion of Ukraine by the aggressor country and the loss of a large number of industrial enterprises that generate GDP.
- 2) The situation is similar when comparing labor productivity: the value in Ukraine is less than a third of the EU's (2020 - 0.294; 2021 - 0.297), but it is not possible to compare the situation in 2022, as this indicator is unrealistic for Ukraine due to the lack of official employment. As of the end of 2022, only data on 8.6 million employees were published, but this figure does not include the self-employed population. Of course, we can assume that the trend will continue and predict a decline in productivity, similar to the GDP dynamics, but this assumption is very subjective, as labor productivity is influenced by a large number of factors (job security, working conditions, migration of the working-age population), so an approximate estimate of the number of employed and labor productivity for 2022 in Ukraine (which no expert has yet made) is inappropriate.
- 3) The employment rate is another important indicator that distinguishes Ukraine from EU member states. In terms of this indicator, our country is not lagging behind as much as the first two, with a difference of about 25% (in 2020 - 0.788, in 2021 - 0.762 of the EU employment rate). However, this situation does not apply to 2022: first, we can again talk about the lack of official data on employment (the value given is a rough estimate of the ILO (Vynokurov, 2022)); second, the difference between the estimated employment rate in Ukraine and the EU as of 2022 is about 60% (0.405).
- 4) The unemployment rate is a powerful indicator that acts as a discourager in the process of QOL formation. Comparing the situation in Ukraine and the EU countries during the analyzed period, we can record a significant excess of the national unemployment rate by 40% in 2020, 47% in 2021, and 246% in 2022. It is clear that this situation is due to the recovery of the European economy and the creation of new jobs after the end of the pandemic against the backdrop of the war in Ukraine.
- 5) The indicators of informal employment deserve special attention (they are not presented in Table 2). In Ukraine, this figure fluctuates at 20% (in 2020 - 20.7%; in 2021 - 19.3%; at the beginning of 2023 - according to experts, 20.0%, but for 2022, against the background of 30.2% employment, it does not reflect the real situation). Official figures on the level of informal employment in the EU are not publicly available, but according to global analytics (United Nations, 2023), for European countries, this figure is approximately 13% and 12% in 2021 and 2022, respectively. This means that the level of informal employment in Ukraine is 60% higher than the European figures; in 2022, this difference was probably even greater.
- 6) The next group of indicators that can be compared in the context of QOL analysis is the average monthly wage. Here, too, it is necessary to emphasize Ukraine's significant lagging behind the EU. The average salary level at domestic enterprises is about 4.5 times lower than in the EU (5 times in 2020, 4 times in 2021, 5.3 times in 2022). The level of average wages is a stimulant, but against the background of such comparisons, it

is difficult to consider it as a positive factor for the formation of an adequate quality of working life for the domestic employed population.

- 7) An additional confirmation of the previous thesis is the ratio of minimum to average wages. It is impossible to compare these indicators in the EU and Ukraine in a completely objective manner: each country has its own minimum wage. Nevertheless, even under such conditions, we can conclude that the level of well-being of employed people in our country is much lower, as the resulting index is on average 2.3 times higher than the same indicator in the EU.

For an objective comparative analysis of the primary indicators, there is a lack of information on occupational safety and people's self-assessment of their own situation with regard to employment in the context of the current situation.

To analyze the situation with occupational safety, the number of accidents at work is a more or less realistic indicator, but it is hardly possible to compare them in the context of the results for Ukraine and the EU countries due to differences in the calculation methodology:

- In Ukraine, the number of accidents per 100 thousand employees was 42 in 2020 and 79 in 2021 (Ukrainian government portal, 2022);
- In the EU, this indicator is much higher: in 2020 - 1436 and in 2021 - 1490 (Eurostat, 2024).

It is also necessary to take into account the time lag in Eurostat's coverage of statistics (currently, only 2021 data is available). In Ukraine, statistics on accidents have already been published (4877 cases in 2022, which is significantly less compared to 12315 cases in 2021), but it is impossible to recalculate it per 100 thousand employed people in the absence of the latest number of employed people.

A few more markers of working conditions:

1) length of the working week:

- in Ukraine, this indicator is normalized and until 2022 was a maximum of 40 hours/week, now due to martial law, this indicator can be a maximum of 60 hours/week (applied to the needs of employees of critical infrastructure enterprises) (Kyrylchuk, 2023);
- in the EU (EU Monitor, 2023) the length of the working week is also standardized and, according to the decision of the European Parliament, is a maximum of 48 hours/week;

2) duration of vacation:

- in Ukraine - a minimum of 24 calendar days per year (Ministry of Justice, 2024);
- in the EU - at least four weeks (EU Monitor, 2023) per year;

3) the level of digitalization of labor activity (Dembitskyi et al., 2023):

- in Ukraine: 90% use computer devices; 80% work with large-format Internet; 17% use smart devices and smart technologies; 12% use artificial intelligence;
- in the EU: 73% use computer devices; 55% work with the broadband Internet; 11% use smart devices and smart technologies; 5% use artificial intelligence.

The presented figures on the level of digitalization of labor activity are based on the results of sociological surveys. A full comparison of the situation in this area in Ukraine and the EU will be possible only after the calculation of the Digital Economy and Society Index, which has been calculated for the countries of the European community since 2014 (European Commission, 2022).

The Digital Economy and Society Index (DESI) is a composite index that summarizes relevant indicators of digital performance and tracks the evolution of EU Member States in the field of digital competitiveness. In focus:

connectivity: the degree of access to broadband Internet and the quality of its service;

human capital: the level of digital skills of the population, as well as investments in digital education;

internet use: the prevalence of using the Internet for various purposes, such as studying, working, and communicating;

digital integration: the use of digital technologies in business and public services;

digital public services: the availability and quality of digital public services.

Each component of the index is scored on a 100-point scale, and the overall index is calculated as the arithmetic mean of these five indicators. The key elements of the DESI are in line with the EU's digital goals: secure and resilient digital infrastructure, digital skills, and digitalization of business and public services. Ukraine is just introducing this index, and a methodology for data collection and calculation is still to be developed.

At the same time, according to the results of 2022, the IT industry provided revenues to the Ukrainian economy in the amount of \$7.35 billion or 4.5% of GDP (Krupianyuk, 2023).

The number of companies and enterprises in Ukraine that provide digital services is about 8.2 thousand, with 5 thousand of them looking for new employees, and about 1.5 thousand companies are tech startups.

Based on the results of the monitoring of the level of digitalization of labor activity, it can be argued that Ukraine is not lagging behind, and in some respects is even ahead of the EU countries. The process of further digitalization of labor activity is inevitable and therefore requires careful analysis (Table 2).

Table 2. Advantages and disadvantages of digitalization of economic processes in the context of assessing the quality of working life (current trends in Ukraine and the EU), source: (Chupryna and Bobozhko, 2023; Novikova et al., 2021; Simutina and Shumyla, 2023)

Advantages	Disadvantages
1	2
Macro level	
Increase in labor productivity. Reducing the time to perform certain actions, operations, processes. Saving resources for the implementation of individual business processes. Simplification of communication processes. Increasing the level of accessibility and transparency of information Globalization of the labor market. Emergence of new professions and generations of new jobs.	Inconsistency of the level of digital literacy with the requirements of the employer (within the scope of their professional activity) Lack of a perfect legislative framework that regulates labor relations and ensures their quality in the context of the digitalization of the economy Significant capital expenditures for the formation of a high-quality information infrastructure Deepening social disparities due to the lack of equal access to appropriate technologies and digital education International labor migration
Personal level	
The ability to work remotely. Increasing the level of adaptability in unforeseen circumstances. Expansion of employment opportunities Expanding opportunities for professional self-realization in certain areas of economic activity.	Violation of the balance between working time and personal life Social exclusion, high level of psychological stress Increased risks of discrimination on various grounds (age, gender)

It should be noted that the advantages and disadvantages presented in Table 2 have different degrees of manifestation in Ukraine and the EU. Thus, in addressing one of the most important problems of the digitalization of working life - legislative unregulation - the EU countries are one step ahead, while Ukraine is actually at the beginning of this path.

According to the ILO's Global Youth Employment Trends 2022 report, achieving universal broadband coverage by 2030 could lead to a net increase in employment of 24 million new jobs worldwide, of which 6.4 million would be held by young people. At the same time, governments around the world are seeking to update public policies to address gaps in worker protection and the business environment across sectors (ILO, 2024).

The main efforts in public policy should be directed in the following areas:

Digital integration: equal access to technology for all segments of the population and in any location.

Infrastructure: universal, affordable, and high-quality high-speed (or broadband) access to the Internet, with reliable power supply.

Policies, regulations and international labor standards: Issues related to relevant employment areas and skills are often absent from regulations related to the digital economy. The exponential growth of the digitalization of economies demonstrates the lag in employment policy development and the lack of relevant regulations, which will be a key challenge in the coming years.

Digital labor platforms: Workers are increasingly using platforms to find employment and generate income. The growth of the platform economy and platform work thus represents an opportunity for job creation and more flexible organization of production processes, but also a challenge in terms of fair competition between businesses and achieving employment and social protection for workers that is in line with decent work standards and international labor standards.

Digital skills: Digital transformation means that a significant share of jobs will be automated, new jobs will be created and existing jobs will be changed (due to changes in tasks). Assessment of digital skills will facilitate their classification and allow employers, together with educational institutions, to assess the level of competence and qualifications required for different professions to perform specific tasks.

Digital SMEs and entrepreneurs: In many countries, small businesses and independent workers are the main job creators. Digitalization can help businesses become more productive, access new markets, and hire more people. Various tools, such as digital payments and e-commerce, can reduce transaction costs and bring services to hard-to-reach areas and to specific populations.

8) Conclusions

Differences in methodology and the impossibility of accumulating data in Ukraine in the first year of the full-scale invasion do not allow for a full comparison of the situation with regard to the quality of working life today, but the following patterns are clearly visible:

- 1) Ukraine is far behind the EU countries in terms of macroeconomic indicators of QOL, employment and income; the primary problem is employment, which needs to be increased by creating favorable conditions at

the state level for creating new jobs and eliminating existing structural imbalances between supply and demand in the national labor market;

- 2) a group of indicators that are indicators of the balance between work and private life (length of working week, length of vacation) also require more attention - the EU offers better conditions, while in Ukraine, due to the war, these indicators have undergone negative changes (in the direction of increasing working hours, reducing the number of holidays, etc;)
- 3) according to survey data, the level of digitalization of labor in Ukraine is slightly higher than in Europe, but the quality of the legal framework governing labor relations is still inferior to EU countries, which negatively affects QOL.

Thus, the quality of working life is an important component of the European employment strategy aimed at creating decent jobs and ensuring decent work for all, achieving sustainable, inclusive, sustainable economic growth, and full and productive employment. The stage of Ukraine's recovery after the end of martial law will be associated with the struggle to return the labor force that went abroad in search of safety in 2022-2024 and had the time and opportunity to join the European labor market. Raising the quality of working life in Ukraine to the normative/average statistical indicator in the EU will be the key to the return of most able-bodied migrants home. Awareness and identification of areas for improving the quality of working life in Ukraine is an important step in the formation of a subsystem of social and labor development in the system of ensuring national sustainability.

References

1. ADDABBO T., FACCHINETTI G., MASTROLEO G., SOLINAS G., 2007, A fuzzy way to measure quality of work in a multidimensional perspective, *Advances in Information Processing and Protection*, eds. Pejaš J., Saeed K., Springer: 13-23.
2. BOISVERT M., 1977, La qualité de vie au travail, *École des Hautes Études Commerciales*, 30(2): 155-160.
3. CHUPRYNA M., BOBOZHKO YE., 2023, Advantages and disadvantages of digitization of business processes of the enterprise, *Materials of the 4th International Scientific and Practical Conference Business, Innovations, Management: Problems and Prospects. Section 1. Trends in business and management development*: 82-83, <http://confmanagement.kpi.ua/proc/article/view/279870> (30.03.2024).
4. CRESPO N., SIMOES N., PINTO J. C., 2017, Determinant factors of job quality in Europe, *Argumenta Oeconomica*, 1(38): 15-40.
5. DELAMOTTE Y., TAKEZAWA S., 1984, *Quality of working life in international perspective*, International Labour Office, Geneva: 98, https://www.ilo.org/public/libdoc/ilo/1984/84B09_81_engl.pdf (30.03.2024).
6. DEMBITSKYI S., ZLOBINA O., KOSTENKO N., 2023, Ukrainian society in the conditions of war, *Year 2023: Collective monograph*, eds. Holovakhy Ye., Makeieva S., Instytut sotsiologii NAN Ukrainy, Kyiv.
7. EUROPEAN COMMISSION, 2022, *Digital Economy and Society Index, 2022: overall progress but digital skills, SMEs and 5G networks lag behind*, <https://digital-strategy.ec.europa.eu/en/news/digital-economy-and-society-index-2022-overall-progress-digital-skills-smes-and-5g-networks-lag> (10.03.2024).
8. EUROSTAT, 2024, *Accidents at work statistics*, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Accidents_at_work_statistics (30.03.2024).
9. EU MONITOR, 2023, *How the EU improves workers' rights and working conditions*, <https://www.eumonitor.eu/9353000/1j9vvik7m1c3gyxp/vkyhnfcctny2?ctx=vk4jic6t1dxz> (10.03.2024).
10. GOSPEL H., 2003, *Quality of working life: A review on changes in work organization, conditions of employment and work-life arrangements*, International Labor office, Geneva.
11. INTERNATIONAL LABOUR ORGANIZATION, 2022, *Digitalization and employment policies*, https://www.ilo.org/global/topics/employment-promotion/epaf/design-lab/WCMS_854791/lang--en/index.htm (25.03.2024).
12. JONES W., HASLAM R., HASLAM C., 2014, Measuring job quality: A study with bus drivers, *Applied Ergonomics*, 45(6): 1641-1648.
13. KARAKUTS A., 2023, Labor force in Ukraine: how does the war affect the future?, *Economic truth*, <https://www.epravda.com.ua/columns/2023/06/8/700951/> (24.03.2024).
14. KOLOT A.M. (ed.), 2009, Labor economics and social and labor relations, Kyiv, KNEU: 711 p.
15. KRUPIANYK A., 2023, Digital economy of Ukraine: main factors of development, *Vox Ukraine*, <https://voxukraine.org/tsyfrova-ekonomika-ukrayiny-osnovni-factory-rozvytku> (30.03.2024).
16. KYRYLCHUK M., 2023, Working time norm of 60 hours per week: when it is allowed during martial law. *Liga law*, https://buh.ligazakon.net/news/221312_norma-robochogo-chasu-60-godin-na-tizhden-koli-dopuskatsya-v-perod-von-nogo-stanu (10.03.2024).
17. MINISTRY OF FINANCE, 2024, *Gross domestic product (GDP) in Ukraine 2024*, <https://index.minfin.com.ua/ua/economy/gdp/> (24.03.2024).
18. MINISTRY OF JUSTICE, *Annual vacations, procedure and conditions of their granting*, https://minjust.gov.ua/mstr_6906 (25.03.2024).
19. MUÑOZ DE BUSTILLO R., FERNÁNDEZ-MACÍAS E., ANTÓN J. I., ESTEVE F., 2011, *Measuring More Than Money: The Social Economics of Job Quality*, Edward Elgar Publishing, <https://econpapers.repec.org/bookchap/elgeebook/14072.htm> (30.03.2024).
20. NOVIKOVA O. F., AMOSHA O.I., SHAMILEVA L.L., PANKOVA O.V., KHANDII O.O., KASPEROVYCH O.YU. et al., 2020, *Social and labor factors of sustainable economic growth: possibilities and mechanisms of activation*, monograph, NAN Ukrainy, In-t ekonomiky prom-sti, Kyiv.

21. NOVIKOVA O., SHAMILEVA L., KHANDII O., 2021, Assessment of the quality of working life under the conditions of digitalization of the economy: state and development trends, *Journal of European Economy*, 20(3): 387-408.
22. NOVIKOVA O., PANKOVA O., AZMUK N., KASPEROVYCH O., 2021, Formation of a new quality of working life in Ukraine in conditions of digitalization of the economy: conceptualization of research, *Visnyk ekonomichnoi nauky Ukrainy*, 2: 204-212.
23. NOVIKOVA O., KHANDII O., SHAMILEVA L., 2021, Socio-Economic Risk Assessment and Peril Analysis in the Context of the COVID-19 Pandemic and Emergencies, *European Journal of Sustainable Development*, 10(1): 636-649, <https://doi.org/10.14207/ejsd.2021.v10n1p636>.
24. NOVIKOVA O., KHANDII O., SHAMILEVA L., 2021, Comparative Analysis of the Changes of Socioeconomic Risks Caused by the COVID-19 pandemic in Ukraine and the EU Countries, *European Journal of Sustainable Development*, 10(2): 147-158, <https://doi.org/10.14207/ejsd.2021.v10n2p147>.
25. PAUGAM S., ZHOU Y., 2008, *Job insecurity, Employment Regimes and the Quality of Work*, Oxford University Press: 179–204.
26. PRASAD A., 2023, The government predicts a drop in unemployment to 19% by the end of the year. In 2022, the indicator was 21.1%, *Forbes Ukraine*, <https://forbes.ua/news/uryad-prognozue-znizhennya-bezrobittya-do-19-do-kintsya-roku-14092023-15998> (14.09.2023)
27. RIPKA G., BIELOUSOV Y., MAZNEV I., 2024, Achieving Sustainable Development Goals in Conditions of Rational Expectations by Achieving a Balance of Interests of Education and Production in the Field of Light Industry During Troubled Times of Pandemic and War, *Problemy Ekorozwoju Problems of Sustainable Development*, 19(1): 232–250, <https://doi.org/10.35784/preko.5760>.
28. SALO YA. V., 2021, The influence of work motivation on the quality of working life, *Economy and Society*, 26, <https://doi.org/10.32782/2524-0072/2021-26-15>.
29. SHAULSKA L.V., 2005, *Strategy for the development of the labor potential of Ukraine*, NAN Ukrainy, In-t ekonomiky promyslovosti, Donetsk.
30. SIMÕES N., CRESPO N., PINTO J. C., 2015, Determinants of job quality – evidence for European country groups, *Acta Oeconomica*, 65(2): 299–323.
31. SIMUTINOI YA. V., SHUMYLA M.M. (eds), 2023, *Social and labor rights and challenges of digitization*, monograph, Nika-Tsentr, Kyiv, <https://ndipzir.org.ua/wp-content/uploads/2023/05/socjalno-trudovi-prava-i-vikliki-czifrovizacii.pdf> (20.03.2024).
32. STEFANA E., MARCIANO F., ROSSI D., COCCA P., TOMASONI G., 2021, Composite Indicators to Measure Quality of Working Life in Europe: A Systematic Review, Springer, <https://doi.org/10.1007/s11205-021-02688-6>.
33. TRADING ECONOMICS, 2024, *European Union GDP Per Capita*, <https://tradingeconomics.com/european-union/gdp-per-capita> (24.03.2024).
34. UKRAINIAN GOVERNMENT PORTAL, 2023, *The number of accidents in 2022 decreased by 2.5 times*, <https://www.kmu.gov.ua/news/kilkist-neshchasnykh-vypadkiv-u-2022-rotsi-zmenshylas-u-25-raza> (25.02.2023).
35. UNITED NATIONS, 2023, *The Sustainable Development Goals, 2023, Extended Report*, https://unstats.un.org/sdgs/report/2023/extended-report/Extended-Report_Goal-8.pdf (30.03.2024).
36. VYNOKUROV YA., 2022, Millions of Ukrainians lost their jobs because of the war. Where do they get money for living? *Ukrainian Pravda*, <https://www.epravda.com.ua/publications/2022/12/8/694732/> (4.03.2024).
37. WORLD BANK, 2024, *Open Data*, <https://data.worldbank.org/> (30.03.2024).