

ppi 201502ZU4645

Esta publicación científica en formato digital es continuidad de la revista impresa
ISSN-Versión Impresa 0798-1406 / ISSN-Versión on line 2542-3185 Depósito legal pp
197402ZU34

CUESTIONES POLÍTICAS

Instituto de Estudios Políticos y Derecho Público "Dr. Humberto J. La Roche"
de la Facultad de Ciencias Jurídicas y Políticas de la Universidad del Zulia
Maracaibo, Venezuela



Vol.41

Nº 79

Octubre

Diciembre

2023

Martial law and the digital labor market: The case of Ukraine

DOI: <https://doi.org/10.46398/cuestpol.4179.34>

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Abstract

The article is devoted to topical issues of the functioning of the labor market of Ukraine in the conditions of the war. The authors identify threats of digitalization of the market, as well as positive features of digital technologies. The main trends in the field of labor, which are characteristic of modern democratic countries, have been studied. Moreover, the optimal directions for the development of digital labor relations in the conditions of martial law are described and, at the same time, the possibilities of using digital technologies in the specified field are clarified. Finally, the expediency of developing mechanisms and tools for the implementation of an effective labor market management system that takes into account the issues of education, soft skills development and increasing the level of social protection and social security is emphasized. It is concluded that, in the experiences of formation of the global digital market of labor relations, the spread of new forms of work, organizational and legal methods and conditions for the use of intellectual labor is observed.

Keywords: digitalization of labor; labor market in the 21st century; labor force; atypical employment; unemployment.

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Ley marcial y mercado laboral digital: Caso Ucrania

Resumen

El artículo está dedicado a temas de actualidad del funcionamiento del mercado laboral de Ucrania en las condiciones propias de la guerra. Los autores identifican amenazas de digitalización del mercado, así como características positivas de las tecnologías digitales. Se han estudiado las principales tendencias en el campo del trabajo, que son características de los países democráticos modernos. Además, se describen las direcciones óptimas para el desarrollo de relaciones laborales digitales en las condiciones de la ley marcial y, al mismo tiempo, se aclaran las posibilidades de utilizar tecnologías digitales en el campo especificado. Finalmente, se enfatiza la conveniencia de desarrollar mecanismos y herramientas para la implementación de un sistema efectivo de gestión del mercado laboral que tenga en cuenta los temas de educación, desarrollo de habilidades blandas y aumento del nivel de protección y seguridad social. Se concluye que, en las experiencias de formación del mercado digital global de las relaciones laborales, se observa la propagación de nuevas formas de trabajo, métodos organizativos y jurídicos y condiciones para el uso del trabajo intelectual.

Palabras clave: digitalización del trabajo; mercado laboral en el siglo XXI; mano de obra; empleo atípico; paro.

Introduction

The labor market is the most important and complex institution of the market economy. Here, not only do the interests of employees and employers intersect, but also all socio-economic, political, demographic and other processes taking place in society are reflected. That is why the study of the regularities of the formation, development and functioning of this institution, the development of measures aimed at improving the system of its regulation, is an extremely important and urgent task of science and practice.

The transition to the digital economy will transform the social and labor sphere, the labor market and employment, the labor process and the nature of labor, the value of labor, the organization and management of labor, etc. Under the influence of the development of digital technologies, there is a spread of new forms of work, organizational and legal methods and conditions for the use of intellectual work, which are characterized by the transformation of the idea of the workplace in the usual understanding of this element of work organization; the absence or modification of one or more signs of classic labor relations; the possibility of using such a

work schedule that makes it possible to optimize the working time of the employee. These processes undoubtedly influence and determine the quality of working life of the employed population.

In recent years, the Ukrainian labor market has undergone significant changes. The COVID-19 pandemic and the full-scale war on the territory of Ukraine negatively affected the development of the labor market, which caused: an increase in the level of unemployment, hidden unemployment (leaves without salary), impoverishment of the population and the deterioration of the quality of human resources due to the loss of qualifications of a part of the workforce, a decrease in the economic activity of self-employed persons, the growth of the digital divide between remote workers, the drop in the level of social protection, and others. At the same time, the specified global changes in society became a catalyst for the acceleration of the digital transformation of the labor sphere and the spread of digital forms of employment.

Let's note that the labor market has come to belong to employers, and due to the drop in company revenues, many of them resorted to layoffs and salary cuts. In order to remain on the market, enterprises must significantly revise their expenses - in particular, on staff maintenance. Ways to optimize such costs are to transfer employees to part-time positions, reduce the length of working hours, or take vacations at one's own expense. Therefore, the primary task for every Ukrainian is to adapt to the new, difficult realities of today and to try as much as possible to make their profession their own business with an orientation to the global market (Mantur-Chubata & Vaganova, 2022, p. 81).

The formation of digital competences in the professions of the future under the conditions of digital transformation is an extremely urgent issue. That is why, in order to ensure the sustainable development of working conditions, it is important to find out the trends of the state of the workforce in Ukraine, scientific analysis of existing forms of employment and mechanisms for ensuring the quality of legal relations in the field of working life in order to develop directions for the regulation of these labor relations.

1. Methodology of the study

The research used general scientific methods, including methods of analysis and synthesis, induction and deduction, with the aim of clarifying the demand for modern professions and general characteristics of types of work. The method of scientific description made it possible to outline the main characteristic features of labor market models depending on the ratio of factors. The methods of scientific generalization used in the course of the

study contributed to the determination of the features of the use of artificial intelligence in labor relations.

In addition, when revealing the economic essence and conceptual concepts of the labor market in the conditions of digital transformation, a structural-systemic approach, as well as an approach of methodical-consequential connections, were used. When researching the ways of development of the labor market in Ukraine in the conditions of global digitization and martial law, the main scientific methods were causal, logical and functional connections and dependencies, as well as statistical. Also, in the part of the work where the socio-economic consequences of the digital transformation of the global labor market were studied and analyzed, the methods of statistical, logical and historical, quantitative-qualitative and comparative analysis were used.

2. Analysis of recent research

Despite significant creative progress in the study of labor market issues and ensuring the labor potential of organizations, the issues of qualitative transformational changes in the social and labor sphere in the conditions of a military conflict due to their specificity have not received adequate coverage in the works of modern scientists. Currently, the issue of choosing the optimal directions for the development of digital labor relations in the conditions of martial law remains unsolved, additional analysis is needed to find out the possibility of using digital technologies in the specified field.

Thus, the question of the transformation of the quality of working life in the conditions of martial law actualizes the need to conduct a study of the socio-economic consequences caused by the digital transformation of the global labor market, taking into account modern trends in the field of labor relations and employment.

3. Results and discussion

First of all, let's clarify what is meant by «digitalization», since it is based on this that we can analyze the economic and managerial legal relations between digital technologies themselves, as well as within and through them. Digitization is a qualitatively new type of information and telecommunication technologies that cover and change all spheres of modern industrial and social life, a method of bringing any kind of information into digital form (Kupryna & Khazanova, 2016, p. 259), certain transformational processes, the use of digital technologies for optimizing and automating business, increasing the level of productivity and increasing the quality of communication with consumers (Hrybinenko, 2018, p. 35).

Another important issue is the process of «transformation». One of the areas affected by digitization, technology and transformation is «work». Labor can no longer be regarded only as a factor in industrial relations or as a subject of interest peculiar only to political economists; it should also be understood as a larger category for analyzing many different aspects of everyday life. With the impact of digitization on work, a new concept of «digital work» has appeared.

Innovation and agile development require a completely different approach than traditional application development. New digital labor markets are proving to be flexible, cost-effective and cost-effective for independent contractors and their clients. At the same time, the modern labor market offers an attractive alternative to regular employment. However, such flexibility is often accompanied by unstable working conditions and undermines hard-won legal and social standards of quality work.

Labor market dynamics is an extremely complex field that depends on many factors that influence outcomes, making it difficult to pinpoint cause and effect and predict outcomes. The task of assisting employees in using the opportunities of automation should be implemented both at the state level and in the private sector. The government should provide policies, incentives and programs to increase and reskill the workforce. At the same time, the private sector should invest more in training.

It should be emphasized that, as of today, work has a more intellectual character and is less and less associated with the performance of labor functions according to various processes in various industries. Artificial intelligence is the basis of the digital transformation of the economy and the driving force behind important developments in the field of technology and business. A positive consequence of its application in management is the improvement of the quality of management decisions, the speed of regulation.

Among the negative consequences, it is worth mentioning the unemployment of intellectual workers, psychological problems of people due to the fact that machines make decisions, the possibility of man-machine conflicts. The digital economy, creating new business models, sets the direction for the transformation of traditional sectors of the economy, which occurs in two ways: optimization and digitization of existing business processes and the creation of new business models (Yershova & Bazan, 2021, p. 49) using artificial intelligence. It is artificial intelligence that makes it possible to use computers to simulate the intelligent human process in order to solve tasks and make management decisions.

Modern industrial enterprises of any level and profile of economic activity are faced with the task of ensuring continuous training and

intellectual adaptation of their personnel, which is initiated by differences in the functioning of social environments of developers of technical means and their users based on artificial intelligence models (Oliinyk & Krupska, 2022, p. 2). Digitalization of the economy ensures fundamental transformations in all spheres of human activity. The technologies used in the transformation process are the engine of the development of new industries and contribute to the solution of society's problems. Under the influence of digitalization, the labor market, the spheres of health care and education, and social society are also changing. New business models are client-oriented, that is, their structure is based on the client's needs (Yershova & Bazan, 2021, p. 48).

In today's conditions of martial law, the remote work of employees is more relevant than ever, which in turn lays the foundations for the emergence of freelancing and the development of gigonomics. The essence of these phenomena is a radical change in the labor market, its transition from the presence of jobs with permanent employment at one employer to temporary projects from different companies at one independent employee.

As stated in the work «Ukraine 2030E – a country with a developed digital economy» (Ukraine 2030E, 2019), depending on the age of Ukrainians, the level of penetration of digital skills and competencies in 2030 is expected to be from 80% to 99%. It is planned to increase the number of students (by 15 times) and graduates of higher education (by 10 times) in Science, Technology, Engineering and Mathematics (STEM) specialties. We believe that such dynamics will accelerate the development of Work 4.0.

The effects of the recession and the rise of automation due to the corona crisis have increased inequality in the labor market. Low-wage workers, women and young employees were the most affected by it. As a result of the double whammy of the Fourth Industrial Revolution, Covid-19 and martial law, digitization has taken a big step forward, making the transition to remote work and e-commerce.

Therefore, in the future, the employer and the employee will be increasingly interested in remote work. The possibility of not being tied to a specific place will come to the fore. It is necessary to take into account the influence of the environment on the formation of the personality of young people, as well as to use the advantages of «digital people».

This is necessary in order to help them cope with emerging problems and acquire new competencies, actively participate in their lives. Therefore, the labor market will take on new forms and will be filled with new requests from the employer. The success of organizations and companies in the future will largely depend on how quickly and effectively employers establish contact with new employees.

In conclusion, it is worth noting that under the conditions of rapid, multi-vector changes in the markets of goods and services, the growth of competition between subjects of economic activity, the urgent need to perform urgent work, atypical in terms of its content, which goes beyond the usual algorithms, template operations, etc., there is an urgent need to change the personnel policy of organizations and the formation of Work 4.0. (Kraus *et al.*, 2022, p. 28).

New forms of work are organizational and legal methods and conditions for the use of intellectual work, which are characterized by the absence or modification of one or more features of classic labor relations, namely: the appearance of special labor contracts, according to which the method of performance of labor relations established in labor legal relations, is unfulfilled; changes in the employment of employees, flexible legal regulation of digitized relations in the labor sphere; transformation of the idea of the workplace in the usual understanding of this element of work organization; the possibility of using such a work schedule that makes it possible to optimize working time.

Coworking centers organize work in a common workspace and provide a flexible work schedule. At the same time, such centers take into account that employees have different opportunities to use their time for work. The rising cost of real estate in big cities has made individual rentals economically unfeasible for start-up entrepreneurs and freelancers. Unlike telecenters, coworking centers have become a sustainable form of self-organization based on mutual assistance and exchange of experience between representatives of various professions. Coworking spaces are generally attractive to mobile professionals, independent contractors, or frequent travelers. Coworking is considered as a product of the digitalization of the economy and the global labor market. It promotes the growing role of the creative class and the technical intelligentsia, reinforcing the trend towards outsourcing.

Outsourcing is a form of borrowed labor, which involves the transfer of certain types and functions of production business activity from one company to another on the basis of a contract. Companies that provide personnel outsourcing services are approached when it is necessary to select personnel for a short-term or one-time project, for seasonal work, or when there is no possibility to expand the staff of the client company. There are manufacturing outsourcing (production of products or their components), IT outsourcing (development, implementation and support of information systems), outsourcing of knowledge management (analytical processing of data, formation and management of knowledge bases) (Novak & Overkovsky, 2022, p. 3).

Crowdsourcing is a form of borrowed labor, which involves the involvement of intellectual e-workers external to the company through the mediation of information technologies for the effective and efficient

solution of tasks faced by business, the state, and society in general. In order to obtain the required number of talented employees, companies are increasingly attracting employees in such a way as the «smart» crowd of the Millennium generation (Millennials), which is characterized by a high level of intellectual development, possessing skills in the field of information and communication technologies. Such employees are especially valuable for corporations, because they are the ones who are able to generate new ideas, create innovations, and improve existing types of products.

In the conditions of digitalization of the economy, crowdsourcing is gradually and significantly changing, namely, it becomes a larger-scale, complex process and is used as an alternative to the traditional staffing of business processes of primary economic entities. The main reason for business use of crowdsourcing is the ability to provide quick access to intellectual labor resources regardless of the company's geographic location.

In our opinion, the successful adaptation of the labor market to digitalization processes involves a change in all components: employees, the state, companies, employees. At the state level, first of all, the education system should be developed, new teaching methods and tools, principles of continuous educational process should be introduced.

Significant decisions in this direction should include expanding the cooperation of employers with educational and research institutions, stimulating private sector investments in human resources. Companies should actively implement the principles of internal marketing to build employee loyalty and search for promising employees. At the same time, employees need to constantly acquire new knowledge, continue the learning process, acquire new experience and skills.

It is worth emphasizing that the current situation in Ukraine, provoked by the escalation of the war with the Russian Federation, has created uncertainty regarding the situation on the labor market. In particular, according to the National Bank of Ukraine, the unemployment rate due to the full-scale military invasion reached a maximum of 35% (Official website of the State Employment Center of Ukraine, 2023). However, due to the high level of migration of Ukrainians abroad and rapid mobilization, the level of unemployment was somewhat contained and evened out. The National Bank notes that without these two factors the situation would be much worse (Official website of the State Employment Center of Ukraine, 2023).

The National Bank of Ukraine predicts that «even after the end of active hostilities, unemployment will decrease slowly and remain at higher levels than before due to the long-term consequences of the war» (Official website of the State Employment Center of Ukraine, 2023). According to the State Employment Service of Ukraine, the number of vacancies in Ukraine

decreased 20 times compared to pre-war times (Official website of the State Employment Center of Ukraine, 2023).

In general, today the domestic labor market cooperates with sectors of the economy that provide the basic needs of the population in those territories where hostilities are not taking place – energy, logistics, medicine, and the food industry sector (Pyshchulina & Markevich, 2022).

According to the general context, as well as taking into account the local one, it is possible to make assumptions about which professions will be popular in the near future in Ukraine (Filatov, 2022): professional military, psychologists, in particular military, specialists in the field of medicine, construction and architecture, defense industry, energy, education, micro-enterprises of services for export.

Demand for some professions will appear for the first time, including those that will require conceptually new skills. Employers, when describing the offered vacancies, began to pay much more attention to the desired soft skills, compared to the pre-war period. Soft skills, which are not inherent in specific professions, are personal qualities that help to perform work efficiently and successfully build a future career (Berezovska, 2022). Many of the standard skills have changed their priority in connection with the events taking place in the country, it is not surprising, attentiveness, tact, stress resistance – all this acquires primary importance for employees. Among the new wishes in vacancies, employers began to note: flexibility, mobility, discipline, fairness, optimism, adaptability, friendliness, politeness and decency. The new realities of finding a job in wartime make adjustments to the desired skills and abilities.

Conclusions

Therefore, in the conditions of the formation of the global digital market of labor relations, the spread of new forms of work, organizational and legal methods and conditions for the use of intellectual work is observed. They are characterized by: the absence or modification of one or more features of classic labor relations, namely the appearance of special labor contracts, according to which the method of hiring employees changes and flexible legal regulation of digitized labor relations is implemented; transformation of the idea of the workplace in the usual understanding of this element of work organization; the possibility of using such a work schedule that makes it possible to optimize the working time of the employee.

Digital technologies are an important source of increasing labor productivity, they free people from repetitive tasks, provide round-the-clock availability, are convenient and useful, lead to the elimination of risky work

in dangerous situations, and eliminate the inefficiency of the work process. Among the threats of digitalization of the labor market should be attributed: the growth of unemployment among low-skilled workers; increase in the cost of skilled labor; blurring the boundaries between working time and rest; the risk of impact on the level of inflation; violation of the life balance of workers; increased labor migration; reduction of social protection, etc.

The importance of obtaining information about the transformational changes of the labor market in Ukraine in the war and post-war period is currently a difficult and extremely difficult task. Considering the high level of unemployment and the mobilization of a large part of the working population, the stabilization of the labor market is extremely important. It is necessary to develop mechanisms and tools for the implementation of an effective system of labor market management, which takes into account the issues of education, development of soft skills, and increasing the level of social protection and security.

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UNIVERSIDAD
DEL ZULIA

CUESTIONES POLÍTICAS

Vol.41 N° 79

*Esta revista fue editada en formato digital y publicada en octubre de 2023, por el **Fondo Editorial Serbiluz**, Universidad del Zulia. Maracaibo-Venezuela*

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