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DRIVERS OF REPRODUCTION OF HUMAN RESOURCES OF UKRAINE REGIONS IN THE CONDITIONS OF WAR AND POST-WAR RECOVERY

Abstract

The article is devoted to a comprehensive analysis of institutional, economic and social drivers of the reproduction of human resources of the regions of Ukraine in the conditions of war and future post-war reconstruction. The key factors that form the capabilities of regions to preserve, develop and return labor resources are identified. The role of institutional drivers that ensure regulatory stability, transparency of management processes, effectiveness of personnel policy and the ability of institutions to adapt to crisis conditions. It is emphasized that organizational and legal prerequisites form the foundation for the reproduction of the personnel potential of the region, because they determine the basic rules for the functioning of the personnel management system. The presence of an effective regulatory framework acts as an important stimulator of these processes, ensuring their stability, consistency and predictability, which is critically important during martial law. Economic drivers, including investment activity, entrepreneurship development, infrastructure modernization and innovative transformations, which create the basis for quality jobs and stimulate professional self-realization of the population, are analyzed. Social drivers are considered as the foundation of a humanitarian environment that ensures quality of life, social security, access to education, integration of internally displaced persons (IDPs) and the formation of social cohesion of communities.

The interdependence of three groups of drivers and their synergistic influence on the processes of reproduction of human capital is demonstrated. It is emphasized that institutional efficiency stimulates economic development, economic growth improves social conditions, and social stability, in turn, strengthens institutional resilience. The conclusions on the complex nature of the reproduction of human resources are summarized and the prospects for further research are identified, including the development of integrated methods for assessing drivers, modeling regional development scenarios and improving personnel policy tools in the context of war and post-war transformations.

Keywords: human resources potential of the region, public administration, strategy, drivers of reproduction of human resources, conditions of martial law.

Problem statement. The full-scale war in Ukraine has caused unprecedented demographic, socio-economic and institutional changes that have significantly transformed the human resources of the regions. Massive internal and external migration, temporary or long-term loss of labor resources, destruction of education and employment infrastructure, as well as the growing need for highly qualified specialists for the defense, recovery and critical infrastructure sectors create a complex problem of the formation and reproduction of human Capital. Under these conditions, traditional mechanisms for the development of labor resources are insufficient, and regions face significant asmetries in access to personnel, resources and opportunities for their recovery.

Post-war recovery will require not only the reconstruction of physical assets, but also the intensification of the processes of return, retraining and effective involvement of human potential. Therefore, the identification of key drivers that can ensure sustainable and dynamic reproduction of the human resources potential of the regions is of particular relevance. It is about identifying factors that contribute to the stabilization of labor resources, their adaptation to new

conditions, the development of competencies, the revival of the educational and innovative environment, the formation of safe and attractive living and working conditions.

At the same time, there is a lack of systematic studies in the Ukrainian scientific and practical plane that would comprehensively analyze these drivers in the context of military turbulence and strategic planning of post-war recovery. This complicates the development of effective regional policies aimed at preserving and developing human resources. Thus, a scientific problem arises – identifying and evaluating the key drivers of reproducing the human resources of Ukraine's regions in the conditions of war and future reconstruction, which is necessary for the formation of effective management decisions and ensuring the long-term sustainability of regional development.

Analysis of recent research and publications. The drivers of the reproduction of Ukraine's human resources in the conditions of war are considered in the works of such scientists as I. Kramar, K. Baranov, V. Gapon, V. Potyuk [1], V. Savchenko [2], K. Khaustova [3], V. Kudeli, V. Yakovenko [4], L. Chernyshova [5] and others. However, this problem requires further research, given the uncertainty potential of spatio-temporal challenges.

The purpose of the study is to analyze the drivers of reproduction of Ukraine's human resources in the conditions of war and post-war recovery.

Presentation of the main material. Organizational and legal prerequisites form the foundation for the reproduction of the personnel potential of the region, because they determine the basic rules for the functioning of the personnel management system. The presence of an effective regulatory framework acts as an important stimulator of these processes, ensuring their stability, consistency and predictability, which is critically important during martial law.

In the conditions of war and general socio-economic turbulence, it is institutional factors that play a leading role in ensuring the proper reproduction of

the human resources of the regions. They form a regulatory environment, guarantee transparency, accountability and legitimacy of personnel procedures.

The institutional capacity of state authorities and local self-government bodies directly determines the quality of personnel management and the effectiveness of the implementation of strategic directions of regional development. At the same time, the system of professional training and retraining of personnel is a key mechanism for adapting employees to new conditions associated with digital transformation, security risks and other wartime challenges.

A separate driver is ensuring transparency and effective anti-corruption practices that strengthen citizens' trust in the authorities and minimize the possibility of abuse in the field of personnel policy. An important component is also the implementation of international and European standards in the field of personnel management, which contributes to increasing the competitiveness of human capital in the regions and supports the European integration course of Ukraine.

Institutional support for the development and management of human resources covers the activities of the system of institutions, regulatory documents, strategic programs and policies aimed at supporting, updating and increasing human resources at the regional level. In the conditions of war, the priorities are the preservation of existing labor resources, the integration of internally displaced persons into new labor markets, as well as the creation of preconditions for the return of Ukrainian labor migrants.

An important role belongs to local self-government bodies, which act as key executors of institutional instruments, since it is at the local level that the socio-economic adaptation of employees, the organization of professional retraining programs, and the development of entrepreneurial activity take place. Educational and professional institutions form the basis for personnel renewal, providing a prompt response to structural changes in the demand for skilled labor [4].

In the post-war period, the emphasis shifts to increasing the competitiveness of regions through the effective use and expansion of human resources. This provides for the implementation of comprehensive state and regional employment programs, the creation of conditions for the return of specialists from abroad, and the formation of personnel reserves necessary for the reconstruction of critical infrastructure. Inter-institutional cooperation is of particular importance – coordination of efforts of central and local authorities, the public sector, business and international organizations to ensure coordinated and effective personnel recovery.

Economic factors play a decisive role in the formation and reproduction of the human resources of the regions, especially in the context of military challenges and future post-war recovery. They provide a financial, investment and institutional framework that determines the capabilities of regions to attract, retain and develop labor resources. A set of economic drivers forms an environment in which the reproduction of human capital becomes not only possible, but also effective and sustainable [5].

One of the key drivers is investment activity, which stimulates the development of production and service industries, the restoration of infrastructure and the modernization of economic processes. Attracting private, public and international investments intensifies the creation of new jobs, promotes the return of labor migrants and creates a demand for skilled labor. It is investments that provide the basis for structural changes in the labor market and the growth of economic attractiveness of regions.

An equally important factor is the competitive level of wages and working conditions, which directly affects the motivation of employees to stay in the region. Increasing incomes, developing social packages, introducing professional growth programs and improving employment conditions reduce the scale of forced migration and stimulate the return of Ukrainians temporarily abroad. Economic

motivation becomes the basis for the stabilization of labor resources in the long term.

An important economic driver is the creation of a favorable business climate and the development of entrepreneurship, which ensures the dynamic renewal of the labor market. Tax support instruments, digitalization of administrative services, grant and incubation programs for small and medium-sized businesses contribute to the formation of new economic niches. During the war, entrepreneurship becomes an important channel for employment of internally displaced persons and a tool for leveling regional disparities.

The development of the innovative economy and high-tech sectors has a significant impact on the reproduction of human resources. The expansion of the IT industry, digital services, green energy, and the military-industrial complex creates a demand for a highly skilled workforce and stimulates the development of new competencies. Innovative sectors provide higher labor productivity, increase the level of earnings and create attractive opportunities for professional self-realization of young people.

Investments in human capital, which include the development of educational infrastructure, retraining and advanced training systems, dual education and vocational training programs, are of particular importance. In the context of military transformations, such investments ensure the adaptation of employees to changes in the structure of demand for labor, contribute to social stabilization and form the basis for the restoration of economic activity in the regions.

The restoration and development of regional infrastructure – transport, social, communal and digital – creates the necessary conditions for improving the quality of the living environment and maintaining the mobility of the workforce. Regions with developed infrastructure are more attractive for investment and for living, which directly affects the ability to attract and retain personnel [3].

A significant stimulating factor is state support and financial decentralization, which allow regions to implement their own employment programs, create business support mechanisms, and form personnel reserves for the reconstruction of critical infrastructure. Increasing the financial autonomy of communities strengthens their ability to influence the local labor market and contributes to the formation of an effective personnel policy.

The final but no less important driver is the economic stability and resilience of the region. The predictability of budget policy, the availability of credit resources, the low level of shadowing and support for strategic industries form the confidence of business and the population, reduce risks for employers and employees. An economically stable region has a greater potential for the reproduction of human resources and ensuring their effective use.

Thus, economic drivers constitute a complex of interrelated factors that determine the capabilities of the regions of Ukraine to form a sustainable and competitive human resources potential. Their effective implementation in the war and post-war periods is a prerequisite for socio-economic stability, labor productivity growth and acceleration of post-war recovery.

Social factors form a humanitarian environment in which human resources are reproduced, determining the quality of life of the population, the level of social integration and the possibility of access to basic and professional services. In wartime, the role of social drivers is especially growing, as they provide support to the population, reduce the scale of socio-economic losses, and contribute to the stabilization of regional communities. In the post-war period, it is social factors that have the potential to become the foundation for the return of people, the restoration of labor activity and the strengthening of social cohesion [2].

One of the key drivers is the quality and accessibility of social infrastructure, in particular educational institutions, healthcare, social protection, cultural and sports facilities. A developed social infrastructure creates conditions for a

comfortable life, forms a positive environment for the upbringing and development of children, and provides access to professional and medical care. This directly affects the decision of young people and families to stay in the region or return after being forcibly displaced.

An important social driver is the level of social security and psychological support of the population. In the context of war, support programs for veterans, internally displaced persons, families of military personnel and other vulnerable groups are of particular importance. Access to psychological rehabilitation, social guarantees, and high-quality social support services helps restore working capacity and reduces barriers to returning to the labor market.

The level of social cohesion and trust in communities has a significant impact on the reproduction of human resources. Strong horizontal ties, the activity of the public sector, the presence of volunteer and local initiatives increase the adaptability of the population, contribute to the integration of new residents, in particular IDPs, and ensure the stability of the social environment. Socially cohesive communities are more attractive to live and work in, which reduces the migration outflow of labor.

An important factor is the availability of quality education and educational opportunities throughout life. A developed education system, including preschool, general, vocational and higher, provides training for future specialists and supports the development of competencies in the able-bodied population. Lifelong learning, participation in retraining programs, refresher courses, and educational projects strengthen the population’s ability to adapt to structural changes in the labor market.

A special role in post-war recovery is played by the quality of housing and social and living conditions, including the availability of housing for IDPs and families who have lost their homes. Providing safe, accessible, and comfortable living conditions is a powerful incentive for people to return to their communities

and resume work activity. State programs of mortgages, housing certificates and reconstruction of destroyed buildings form the basis for stabilizing the demographic situation.

A separate social driver is social mobility and equal access to social opportunities. Removing barriers to the employment of women, persons with disabilities, youth, and the elderly, as well as ensuring the inclusiveness of social services, creates conditions for the full use of the region's labor potential. Expanding opportunities for social mobility contributes to employment growth and improved socio-economic prospects of the population.

An important social factor is the cultural and value motivation of the population, which includes a sense of belonging to the community, pride in the place of residence, preservation of cultural identity and civic activity. These aspects strengthen people's willingness to participate in the reconstruction of territories and stay in the region even under risks and challenges.

Thus, social drivers constitute a complex of factors that form a favorable humanitarian environment for the preservation, attraction and development of human resources. Their strengthening is a prerequisite for the sustainable reproduction of the human resources of the regions and ensuring social stability both in the war and post-war period.

Conclusions and prospects for further research. The study of institutional, economic and social drivers of the reproduction of human resources in the regions of Ukraine has shown that it is their interaction that forms the complex environment necessary for the effective renewal and use of human capital in the war and post-war periods.

Institutional drivers provide the regulatory, managerial and organizational conditions that determine the effectiveness of regional personnel policy. The institutional capacity of state authorities and local self-government, transparency of management processes, anti-corruption mechanisms, adaptability of the

vocational education system and integration of European standards create prerequisites for the stable functioning and restoration of human resources in the regions. In wartime, institutional factors become decisive, as they ensure regulatory stability and predictability of personnel processes.

Economic drivers form the material and financial basis for the reproduction of human resources, determine the level of employment, the quality of jobs and the competitiveness of regions. Investment activity, development of entrepreneurship, innovative sectors, financing of human capital and modernization of infrastructure provide the creation of new opportunities for the professional realization of the population. Economic stability and financial decentralization strengthen the ability of regions to implement their own personnel strategies and increase their adaptability to crisis conditions.

Social drivers determine the quality of life of the population, the level of social cohesion, access to education, healthcare, social services and living conditions. It is social factors that ensure the maintenance of the population in the regions, contribute to the return of migrants and internally displaced persons, and form a positive environment for professional activity. Developed social infrastructure, a high level of security, affordable housing and effective support systems for vulnerable groups strengthen the demographic and labor potential of the territories.

Thus, the complex influence of the three groups of drivers creates the basis for a stable and dynamic reproduction of the human resources potential of the regions of Ukraine. Their coordinated application is a key condition for post-war reconstruction, increasing the competitiveness of regions and ensuring the long-term socio-economic development of the state.

Prospects for scientific research in the field of reproduction of the human resources potential of the regions cover several key areas:

1. In-depth study of institutional mechanismsIt is promising to analyze the effectiveness of local human resources management policies, compare institutional models in different regions, study the impact of digitalization of public administration on personnel policy and institutional resilience during the war.

2. Assessment of the economic effectiveness of the use of various driversFurther study requires the impact of investment activities, the development of innovation sectors, infrastructure projects and financial incentives on the level of employment and the return of personnel to the regions. Modeling of economic scenarios for the restoration of labor potential in the post-war period is relevant.

3. Social aspects of mobility, population return and integration of IDPs. It is important to investigate social barriers and motivational factors influencing the decision to return labor migrants and internally displaced persons, as well as to assess the quality of social infrastructure as a factor in maintaining human capital. Special attention should be paid to the study of psychological rehabilitation and social cohesion of communities.

4. Development of integrated models for the reproduction of human resources. It is advisable to create comprehensive analytical models that combine institutional, economic and social aspects, taking into account regional characteristics, the degree of military influence and the potential for recovery.

5. Monitoring and forecasting trends in regional labor marketsFurther research should be aimed at forming a system for monitoring changes in the structure of the labor market, identifying scarce professions, identifying risks to the personnel security of regions and forecasting long-term trends.

Thus, the prospects for further research lie in a comprehensive deepening of theoretical and methodological approaches, an empirical assessment of the impact of drivers and the development of scientifically based recommendations for the formation of an effective regional personnel policy in the context of war and post-war development.

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