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ECONOMIC INTEGRATION OF WAR VETERANS IN THE PERIOD OF DIGITALIZATION: ANALYSIS OF GOOGLE TRENDS DATA

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The process of mass return and adaptation of a significant number of military personnel to civilian life and their integration into the national economic system fundamentally shapes new paradigms, architecture, and challenges for modern states. The economic dimension of the reintegration of war veterans has long gone beyond the boundaries of a purely moral and ethical discourse or issues of social justice and compensatory policy. Today, this process is one of the most critical, strategic factors in ensuring long-term macroeconomic stability, labor market balance, and the preservation, reproduction, and effective distribution of the country's human capital.

Ineffective veteran policy threatens to increase structural unemployment, increase the fiscal burden on the budget, and reduce overall labor productivity. In contrast, successful reintegration and the stimulation of entrepreneurship enable veterans' unique leadership qualities and stress resistance to become a powerful driver of innovative development. However, the effectiveness of management decisions in this area is limited by the shortcomings of traditional monitoring (statistics, sociological surveys), the main one being a significant time lag. Due to long processing, information reaches departments with a delay of several months, turning into "historical". This leads to the effect of "catch-up regulation", when the state reacts to already transformed problems. In addition, classic surveys often suffer from respondent subjectivity and low audience coverage.

In the context of digitalization, there is a need to transition from reactive management models to proactive systems based on Big Data. Monitoring the digital activity of the population in real-time enables us to capture latent economic requests from combatants before they officially apply to the authorities, thereby reducing information asymmetry in the labor market. Although the general issues of veteran adaptation and the use of Internet analytics tools in macroeconomics are actively studied, the specifics of applying these methods to the veteran community remain practically unexplored. There is a scientific vacuum at the intersection of veteran economics and digital behavioral analytics, which shapes the study's scientific novelty. The new paradigm is to consider a veteran as an active subject in the digital market. Thus, the purpose of the study is to substantiate and assess veterans' economic interests using Google Trends analytics to optimize their labor-market adaptation programs.

The research used the analytical tools of the Google Trends platform [2]. The research methodology was based on the collection and normalization of data on the

relative popularity of search queries (Search Volume Index — SVI), measured on a scale from 0 to 100, where 100 indicates the highest level of popularity for a search term over a given period.

Analysis of foreign experience, scientific publications, programs of social support for veterans or participants of military operations (PMO), regulatory and legislative literature, publications of the Ministry of Veterans Affairs [1, 3-9] allowed us to form three key groups and identify markers for them on the Google Trends platform) that reflect the economic intentions of war veterans in table 1.

Table 1. Structure of search queries in Google Trends in the study of the economic needs of war veterans

Search query group name	Query tokens	Characteristics of the group
Employment and career	"Jobs for veterans", "vacancies in the Armed Forces of Ukraine", "online jobs for veterans"	Assesses veterans' intentions to actively integrate into the labor market through classic hiring, retraining, or transition to remote work formats. Reflects the dynamics of demand for civilian professions, the level of readiness to change skills, and the adaptation of human capital to modern digital working conditions.
Entrepreneurship and startups	"Grant for veterans", "Grant for own business", "Veteran Fund", "Grant Diia"	Determines the level of business (entrepreneurial) activity of the veteran community and their orientation towards self-employment. Records latent demand for start-up capital, government and international microgrants, and veterans' willingness to act as employers and create new small businesses.
Socio-economic support	"Veteran benefits", "Housing for PMO", "PMO benefits", "PMO benefits", "PMO payments".	Reflects the level of primary dependence of veterans on state social guarantees and material support. Assesses households' critical needs for minimizing costs (through benefits and housing programs) and records requests for financial assistance as a basic prerequisite for further stabilization of the individual's economic situation.

Among the search market settings presented in Table 1 were the study's geographical boundaries (Ukraine) and the time interval (the current month, i.e., May 2026). Fig. 1-8 shows the results of search queries for each group.

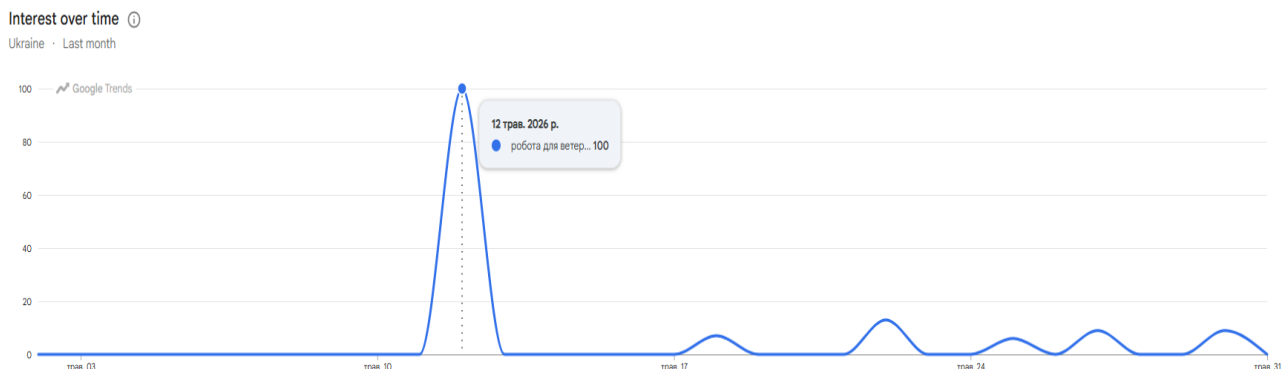


Figure 1. Result of the query "Job for veterans"

Source of the figure: author's development.

Analyzing the metrics (Fig. 1), we can conclude that interest in this issue in the digital space has a clearly pronounced, discrete, and impulsive nature. For most of the analyzed period, the dynamics of search activity for the marker "Work for veterans" are consistently low, indicating a latent demand or a shift in the audience's attention to other information search channels. However, as shown in the graph, on May 12, 2026, an anomalous, rapid surge in search activity was recorded, with the relative popularity index reaching its historical maximum of 100 SVI points. Such a surge is due to the holding of large-scale all-Ukrainian fairs and the promulgation of new legislative initiatives to expand veterans' economic rights.

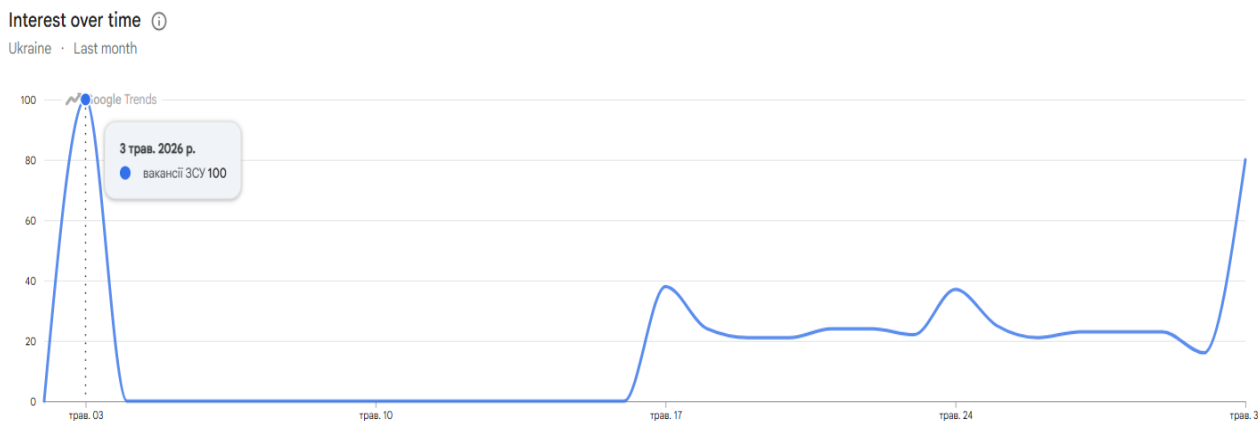


Figure 2. Result of the query "Vacancies of the Armed Forces of Ukraine"

Source of the figure: author's development.

Analyzing the data presented in Fig. 2, we can conclude that the dynamics of Interest in military vacancies has a two-phase structure, with pronounced activity peaks at the beginning and end of the studied month. The first, most powerful surge in search activity occurred on May 3, 2026, when the "Vacancies of the Armed Forces of Ukraine" marker reached a maximum value of 100 points on the SVI scale. Such an isolated extremum indicates a sharp reaction from users to a large-scale information event — for example, updating the conditions for recruiting, opening large specialized

training centers, or providing active media support for specific defense projects. However, this surge was exceptionally short-term, and within a few days, the graph dropped to zero indicators. The second phase of the graph begins after May 17, when interest is restored, and it enters a stable horizontal plateau at 20–40 SVI points, with minor fluctuations around the median. This plateau indicates the formation of a permanent, underlying demand in the labor market from individuals who deliberately consider the security and defense sector a priority for employment or career advancement. The sharp upward trend deviation at the end of May 2026 further confirms that demand remains open and has the potential for new cyclical growth.

For predictive management of veteran policy, this behavior of the graph demonstrates that classic recruiting and civilian employment in the military sector are consistently competing with each other, requiring flexible information tools from state bodies.

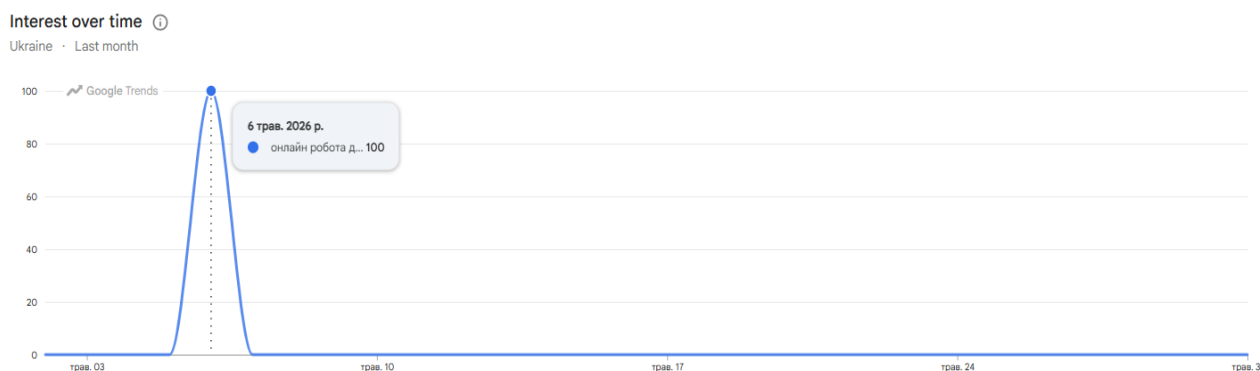


Figure 3. Result of the query "Online work for veterans"

Source of the figure: author's development.

According to the results of the query in Fig. 3, the demand for remote employment among the veteran community is point- and concentrated. A powerful surge of interest was recorded on May 6, 2026, when the marker “Online work for veterans” instantly reached a maximum value of 100 SVI points. Such dynamics indicate an instant mobilization of digital search in response to the appearance of a targeted offer - for example, the announcement of free IT courses for PMO or the opening of specialized online grant programs. However, the complete fading of the trend on other days of the month indicates a shortage of stable remote work offers on the market, which requires expanding permanent digital career opportunities for combatants. Thus, analyzing the dynamics of search queries in the “Entrepreneurship and Startups” group, we can conclude that veterans’ interest in self-employment exhibits a clear cyclical and pragmatic pattern. The trajectories of the studied markers exhibit synchronous pulse bursts that coincide with announcements of the opening of new grant programs or the submission deadlines for business plans to specialized funds. Such digital behavior indicates a high readiness of combatants to transition to entrepreneurship. However, this process is highly dependent on external non-repayable financing and requires continuous state support for startup initiatives.



Figure 4. Result of the query "Grant for veterans"

Source of the figure: author's development.

Based on the data in Fig. 4, we conclude that there was no interest in targeted financing in the first half of May. However, after May 16, a phase of extremely high and pulsating search activity began. The highest extreme was recorded around May 17, reaching a historical maximum of 100 SVI points, after which the graph shows a series of repeated fluctuations, particularly at 88 points as of May 21. Such dynamics clearly reflect the pragmatic behavior of users who activate their digital searches when new waves of microcredit are announced, when applications are registered on the Diia portal, or when deadlines for submitting business plans approach. Systematic declines to zero between peaks indicate that veterans are seeking financial support discretely — strictly through specific state or international grant windows — underscoring the importance of stable, long-term funding for such programs.

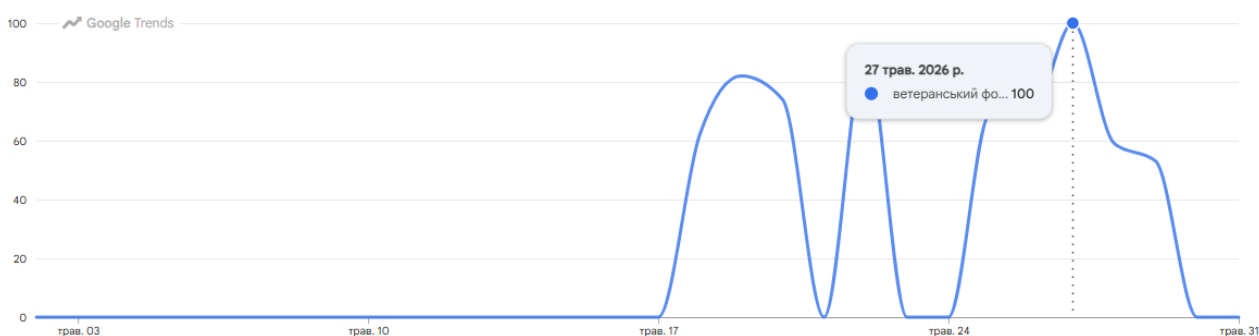


Figure 5. Result of the query "Veteran Fund"

Source of the figure: author's development.

The query data presented in Fig. 5 indicates that the dynamics of interest in institutional sources of support for veterans' businesses exhibit a pronounced multi-peak pattern in the second half of the month. The first wave of activity is recorded after May 17, with a rise to 80 SVI points, after which, following a short-term decline, the

trend accelerates rapidly upward. The search activity reached its peak of 100 points on May 27, 2026, reflecting the mobilization of the target audience on the eve of the completion of competitive selections or the announcement of new terms of project financing. The further smooth fading of the graph line indicates the gradual satisfaction of the primary information demand after the deadlines have passed, confirming the high operational dependence of veterans' digital behavior on the Ukrainian Veterans Fund's activities.

Thus, analyzing the dynamics of search queries for the "Entrepreneurship and Startups" group in May 2026, we can conclude that veterans' interest in self-employment has a clearly expressed impulsive, pragmatic, and coordinated nature. The trajectories of the studied markers demonstrate a complete lack of activity in the first half of the month, followed by an explosive, synchronous increase in demand after May 16–17, culminating in absolute maximums of 100 SVI points (May 27 for the Ukrainian Veterans Fund). Such digital behavior indicates a strong willingness among combatants to start their own businesses; however, this process is highly dependent on external financial incentives and requires the state to extend the terms of active funding windows to reduce the burden on applicants before the deadlines.

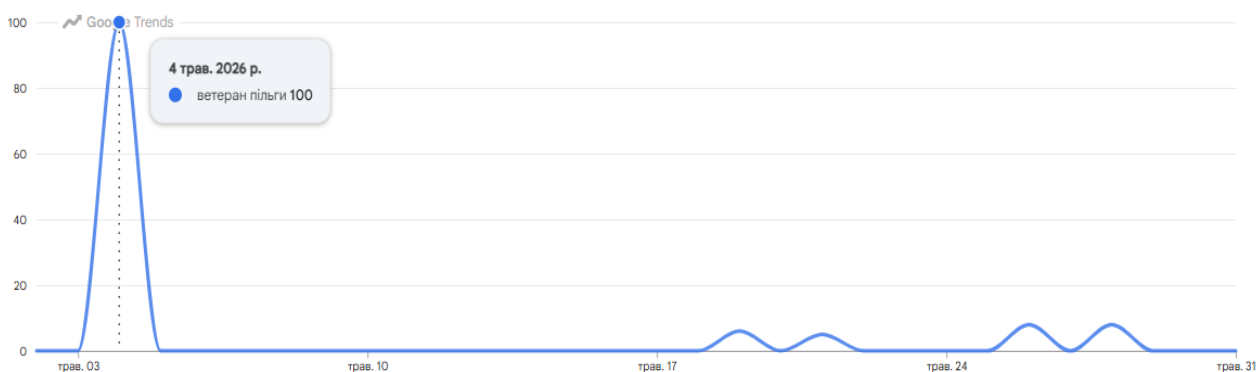


Figure 6. Result of the query "Veteran benefits"

Source of the figure: author's development.

According to the query “veteran benefits” (Fig. 6), we can conclude that the general interest in the social security system under the marker “Veteran benefits” shows an isolated, clearly expressed impulse at the beginning of the month. The search activity reached its absolute maximum of 100 points on the SVI scale on May 4, 2026, indicating an immediate reaction from users to a specific informational event or the beginning of the monthly cycle of accrual of social benefits. The subsequent rapid drop to zero and the preservation of minimal fluctuations in the second half of the month confirm that veterans quickly optimize their queries, moving from general formulations to more specific and practical markers of support.

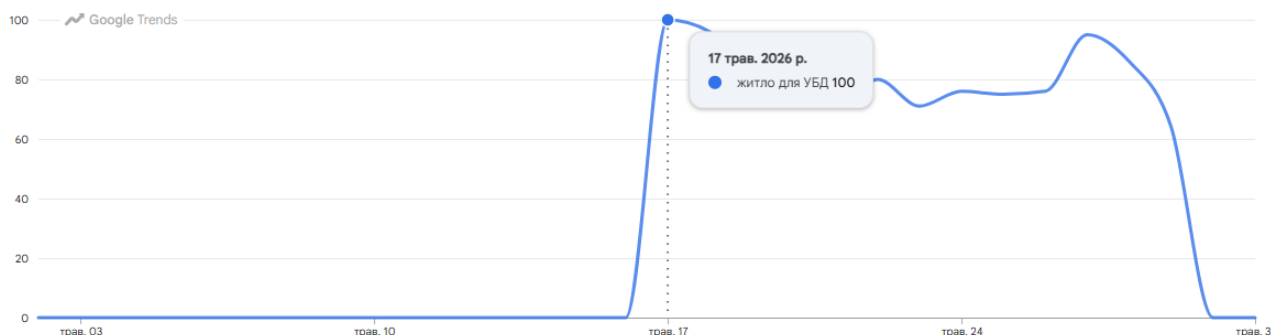
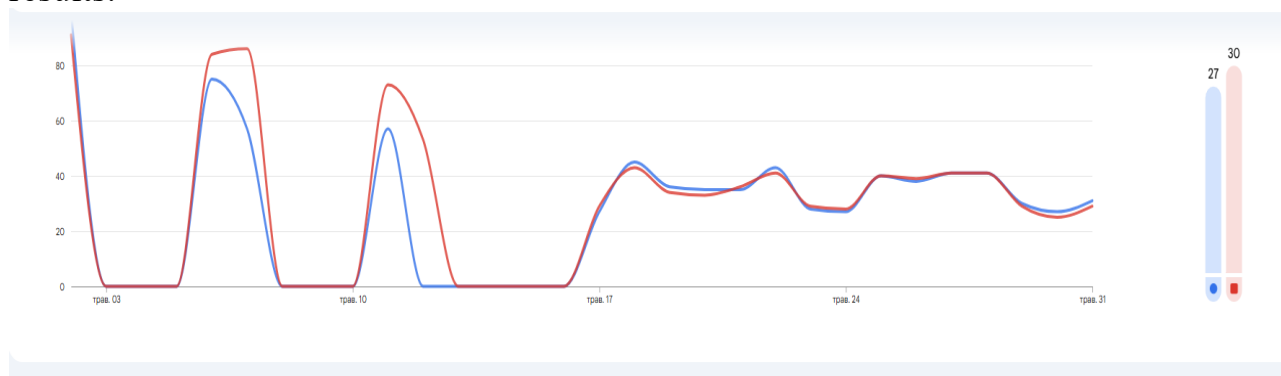


Figure 7. Result of the query "Housing for PMO"

Source of the figure: author's development.

The melons in Fig. 7 show that the demand for housing among the veteran community is protracted, capital, and critically high in the second half of the month. The complete lack of interest at the beginning of the period was replaced by a rapid vertical growth, which reached its absolute maximum of 100 SVI points on May 17, 2026. Unlike previous impulse markers, the "Housing for Veterans" graph formed a long-term high-density plateau in the range of 70–95 points, which indicates a deep, acute, and permanently unmet need for housing among combatants. Only at the end of the month was a rapid decline in the trend recorded, indicating the completion of the operational cycle (for example, the period of submitting documents for regional housing programs) and the transition of latent demand to the phase of waiting for results.



Common search queries

Figure 8. Result of the query "PMO benefits and PMO benefits"

Source of the figure: author's development.

Analyzing the data in Fig. 8, we conclude that the comparative monitoring of the synonymous markers "PMO benefits" (blue line) and "PMO benefits" (red line) demonstrates high synergy, identity, and stability in user behavior throughout the month. Both queries are cyclical, with two pronounced waves of hype demand in the first half of May and a further transition after the 17th into a long, stable plateau at 30–40 SVI points. The red line ("PMO benefits") systematically maintains a slight

quantitative dominance over the blue one, indicating a more stable linguistic habit among the audience in forming search queries, starting with the abbreviation definition of their status. The persistent presence of queries in the digital space confirms that the interest in reducing the daily financial cost of living is a basic monthly need for veteran households.

Analyzing the general dynamics of search activity in the "Socio-economic support" group, we can conclude that the architecture of the veteran community's social expectations is undergoing a significant internal transformation and optimization. Instead of vague formulations such as "Veteran benefits", which quickly fade away after the initial information impulses, users demonstrate a permanent and stable demand for practical tools of social protection. The formation of long-term, high-density plateaus in housing and benefits for combatants confirms the presence of acute, fundamental needs of combatant households, which require the state to provide targeted financing for specific programs rather than scattering budget resources.

All this indicates that modern veterans are not just looking for jobs to meet their basic needs, but are focused on high-paying, technology-driven sectors of the economy, which fully aligns with the name of the conference on new paradigms of interaction between technology and people. In addition, seasonality was revealed: interest in training increases sharply in September and January, which educational institutions and employment centers need to take into account when launching new retraining courses. The results confirm the hypothesis that Google Trends is a reliable tool for monitoring the economic climate among veterans. The advantage of this approach is the absence of a subjective factor, which is often present during interviews or when filling out official questionnaires, and which can hide their true intentions or lead them to answer "as expected."

Thus, based on the study's results, the economic reintegration of war veterans currently requires a transition to digital management paradigms based on Big Data. Using the Google Trends platform for analyzing veterans' economic integration is an effective tool for identifying current needs and reducing the time lag in the publication of official statistics. The digital footprints of war veterans reveal a high level of interest in developing their own businesses through the prism of entrepreneurship (government grants, microfinance) and in obtaining high-tech, in-demand education (in particular, in the IT sector). This indicates the high adaptability of veterans' human capital and their desire to act as active subjects in market relations, which, in turn, will positively affect the country's economic development.

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