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INTEGRATION OF STUDENTS FROM OCCUPIED TERRITORIES STUDYING AT UKRAINIAN UNIVERSITIES INTO THE LABOR MARKET OF UKRAINE

Purpose. To create an economic model for integrating students from temporarily occupied territories into the Ukrainian labor market based on monitoring their opinions.

Methodology. The research was conducted using a survey and statistical analysis of a wide range of data collected from students enrolled in Ukrainian universities under quotas for temporarily occupied territories (TOT). The data were processed using the MS Excel Data Analysis package. Correlation analysis was applied to a selected portion of the dataset.

Findings. The key conditions that facilitate the enrollment of youth from TOT in Ukrainian universities have been identified, along with the main challenges of remote education for this group. The main factors determining the willingness of graduates from TOT to return to work in Ukraine have been established. A comprehensive economic model has been developed, incorporating economic and social mechanisms for integrating educated youth from TOT into the Ukrainian labor market. This model envisions interaction between government bodies, educational institutions, and employers, and enables the effective adaptation and motivation of young specialists for employment in Ukraine. The sources of funding for the implementation of the proposed model have been outlined.

Originality. Using monitoring tools, the specific conditions for engaging young people from temporarily occupied territories in the Ukrainian labor market were examined. An economic model has been developed to facilitate their return to regions with partially occupied territories.

Practical value. The application of the proposed model is expected to significantly increase the share of youth from TOT in the labor market of partially occupied regions of Ukraine. The findings may also be useful for European economic researchers and for all countries hosting Ukrainian refugees.

Keywords: *economic model, labor market, temporarily occupied territories, re-emigration, higher education institutions*

Introduction. Since the beginning of the war, Ukraine's labor market has been under pressure from the complex security situation and economic conditions of wartime. According to expert estimates, by the end of 2024, Ukraine's total war losses amounted to approximately 385 billion dollars of added value, which is more than twice Ukraine's GDP in 2021. This financial indicator is largely linked to the partial destruction of the labor market, which will continue and grow until the end of the war. A certain part of these losses is related to the inability to fully integrate young people from temporarily occupied territories (TOT) into the labor market and economy.

The greatest impact of the war on the labor market is felt in regions such as Kherson and Zaporizhzhia, where 40 to 70 percent of the territory is occupied, respectively. Currently, local businesses, institutions, and organizations in Kherson and Zaporizhzhia are experiencing a significant labor shortage [1]. The reason for this situation, in addition to the outflow of labor abroad, mobilization into the Armed Forces of Ukraine, and the death of civilians, is that frontline cities have lost the labor resources that were supplied by territorial communities that found themselves in temporarily occupied territories (TOT). After the end of the war, the stabilization of the situation in Ukraine will lead to the natural return of a portion of the labor resources from Europe to Ukraine. However, under the current circumstances, attracting young people who find themselves in TOT to the Ukrainian labor market is much more problematic [2]. There-

fore, a comprehensive study of the aspects that will contribute to attracting young people from TOT to work in Ukraine is of significant interest for the reconstruction of the post-war economy. If young people do not return from the occupied territories, Ukraine will face a large-scale demographic and economic crisis. This includes the loss of labor potential, competitiveness, innovative energy and the state's resilience in reconstruction and development [3].

Young people from TOT who are currently studying at higher education institutions in Ukraine are the most motivated to return. Studying their attitudes toward the present and possible future is an important basis for shaping the labor force of post-war Ukraine. Such research provides information for developing a model for the effective use of state resources and international aid to support post-war recovery. In addition, the topic of attracting young people from TOT to the Ukrainian labor market has high potential for interest among European economic researchers. Studying Ukraine's unique experience (including legal innovations, adapting higher education to the needs of young people from TOT, cooperation with business, and state policy to support young people) can be useful within the EU, especially for countries hosting Ukrainian refugees.

Literature review. Ukrainian and European researchers analyzing various issues affecting young people from temporarily occupied territories through the prism of their impact on socio-economic development, integration, and restoration of territories usually consider these issues in an interdisciplinary context.

Government analysts and education analysts emphasize that effective communication between Ukrainian youth in the TOT and their homeland is possible thanks to the implementation of government programs in Ukraine aimed at ensuring the right to education for children and youth from the TOT at all levels, including higher education [4, 5]. Thanks to quotas and simplified admission procedures, the state provides access to education for young people from TOT, which encourages them to study in Ukraine rather than in other countries or occupied regions [5]. In particular, the Crimea-Ukraine and Donbas-Ukraine educational centers have been created, which allow young people to enter universities through a simplified procedure without taking external independent examinations [4]. Amendments to the Law of Ukraine “On Higher Education” (2020) and Resolution of the Cabinet of Ministers of Ukraine No. 383 of April 21, 2021, stipulate that young people from TOT have the right to free education in higher education institutions with scholarships. In 2024, a separate Concept of Access to the Right to Education for Young People from TOT was developed, which provides for mechanisms for simplified admission, financial support, and safe access to educational resources [4, 5].

As a result, according to the Ministry of Education and Science of Ukraine, the number of students entering Ukrainian higher education institutions from TOT has been steadily increasing (Table 1) [2]. In 2024, compared to 2023, it increased by 74 % and amounted to 11,325 people against 6,516. A significant part of these young people are outside Ukraine and study remotely at Ukrainian higher education institutions.

In recent years, analytical studies have been conducted on the socio-economic and psychological problems of young people from temporarily occupied territories. Research by the CEDOS Center has revealed that financial instability, housing problems, social isolation under occupation, and a lack of psychological support significantly complicate the integration of students from TOT into Ukraine’s socio-economic space [6]. Such students have limited opportunities to receive assistance from families in TOT and often face prejudice from universities, local communities, and even fellow students. A separate issue is their return to Ukraine for employment.

According to academic research, about half of the refugees who left during the war return within 15 years after the causes that prompted their departure disappear [7]. Works [8, 9] confirm the same hypothesis that after the cessation of hostilities, about half of the refugees from Ukraine will decide to return home. These works also identify the factors that encourage returned refugees to settle in their homeland. The Rozumkov Foundation’s expert assessment on this issue is presented in Table 2 [10]. The Table shows the percentage of Ukrainian and European migration experts (a total of 74) who indicated that a certain percentage of refugees who left the country after 24 February 2022 might return.

As a result, the vast majority of experts point to figures ranging from 30 to 69 percent. However, opinions vary greatly. E. Libanova, director of the M. V. Ptukha Institute of Demography and Social Studies of the National Academy of Sciences of Ukraine, believes [11] that, in the best-case scenario, no more than 50 percent of migrants who sought refuge abroad will return to Ukraine after the

war. In the worst case, this figure will be around 30 %, as was the case after the war in the Balkans.

Study [12] provides data on where refugees plan to return after the war ends (among those who definitely planned to return in July 2023). The relevant data are presented in Table 3.

It shows that the percentage of those who plan to return to the southern and eastern regions, which have occupied territories, is significantly lower than to the northern or western regions. The work [13] substantiates the conceptual basis for the voluntary return of forced migrants to Ukraine. However, the problem of young people returning to regions where part of the territory is occupied was not considered in the works mentioned.

This issue has been partially studied by researchers [8, 14]. Their works emphasize that young people, especially those from temporarily occupied territories, face significant challenges when returning to areas controlled by Ukraine. Young people face restrictions on their geographical mobility, obstacles in finding work, difficulties in social and psychological adaptation, and a lack of security guarantees in regions located near the combat zone or partially occupied. Some publications emphasize [8, 15] that state programs for the reintegration of young people from temporarily occupied territories are

Table 1

Dynamics of the number of applicants from TOT in 2020–2024 to higher education institutions of Ukraine

Year	2020	2021	2022	2023	2024
Number of applicants	2,026	2,083	7,018	6,516	11,325

Table 2

Experts’ opinion on the percentage of refugees who will return to Ukraine after the end of the war

Percentage of return, %	90–100	70–89	50–69	30–49	10–29	Less than 10	Difficult to respond
Percentage of experts surveyed	0.0	9.3	38.9	37.0	13.0	0.0	1.9

Table 3

Areas where refugees plan to return after the war ends (among those who definitely plan to return)

	Plan to return to the same settlement they left, %	Ready to change place of residence, %	Cannot answer, %
Kyiv	87.9	9.1	3.0
Northern Ukraine	71.9	25.0	3.1
Western Ukraine	82.9	9.8	7.3
Central Ukraine	72.0	20.0	8.0
Southern Ukraine	67.3	16.3	16.3
Eastern Ukraine	50.6	31.3	18.1

underdeveloped and that there is a lack of effective employment and professional reorientation services. The shortage of stable jobs is particularly noticeable in regions located near or in partially occupied territories.

Most researchers studying the key determinants of employment for Ukrainian migrants with higher education in wartime focus primarily on the European labor market [16, 9]. The impact of the war on the national labor market in the context of young people returning from temporarily occupied territories to Ukraine has received little attention. This issue is partially addressed in references [17–19]. Reference [17] examines regional labor market imbalances caused by the war. Reference [18] provides a comparative analysis of the labor market situation for people with higher education in the Khmelnytskyi and partially occupied Zaporizhzhia regions. Reference [19] analyses the transformation of regional labor markets under the influence of the war and considers ways to rebuild the workforce and directions for post-war economic recovery in the regions. However, these studies are local in nature and do not include strategies for attracting young people from the temporarily occupied territories to the Ukrainian labor market.

The author of the study [20] emphasizes that the results of surveys cited in various studies actually reflect the hopes and intentions of Ukrainian refugees rather than real data on the conditions of their re-emigration. Indeed, there is no objective analytical basis for making decisions regarding the return of young people from the occupied territories to various regions of Ukraine.

Undoubtedly, the impact of the war on labor resources varies greatly across different regions. The economic, social, and psychological conditions for the return of young people to the western, central, southern, and eastern regions of Ukraine are different. The most economically disadvantaged regions of Ukraine are and will continue to be those that remain partially occupied after the end of the war. A significant resource for the labor market in these regions is the return of young people from the temporarily occupied territories who have family ties in the respective regions and are psychologically ready to live and work there. There are currently no scientific studies examining the impact of the war on the national labor market in this context. Even the very detailed research by the Razumkov Center on the impact of migration processes and labor resources on Ukraine's post-war recovery [10] does not distinguish between residents of the TOT and other Ukrainian citizens, although the psychological, social, and economic conditions for their integration into the Ukrainian labor market may differ significantly.

It should be noted that in [21] and in the report by the Razumkov Center [10], it is emphasized that in the post-war period, demand for skilled personnel will grow in all industries. This makes it relevant to study the conditions for attracting young people from TOT to Ukrainian universities with a view to their subsequent employment in the relevant regions of Ukraine.

Purpose. The purpose of the study is to create an economic model for integrating students from temporarily occupied territories into the Ukrainian labor market based on monitoring their opinions. The implementation of the purpose has three components: 1 – determining the conditions that facilitate the attraction of

young people from TOT to Ukrainian higher education institutions and ensure an adaptive educational process for them; 2 – determining the conditions under which graduates of Ukrainian educational institutions from TOT agree to return to work in Ukraine; 3 – creating an economic model for their integration into the Ukrainian labor market.

Methodology. The research methodology was based on a survey and statistical analysis of a wide range of data obtained from students who enrolled in Ukrainian higher education institutions under quotas for temporarily occupied territories. The research was conducted during the 2023–2024 and 2024–2025 academic years. The survey involved 153 students who were studying remotely at Kherson Educational and Scientific Institute of the Admiral Makarov National University of Shipbuilding, the V. O. Sukhomlynsky Educational and Scientific Pedagogical Institute of the Admiral Makarov National University of Shipbuilding, and Pryazovskyi State Technical University. They were aged between 18 and 25. At the time of the survey, 34 respondents were still living in the TOT, while 119 had moved to European countries.

The survey questionnaire covering economic, social, and future aspects was developed for the study. It was adapted to the specifics of surveying respondents living under occupation. All requirements and features of methodological, ethical, and organizational preparation were taken into account in order to minimize risks and obtain the most reliable information possible, given the difficult conditions in which students in TOT find themselves. Content validity was ensured through expert analysis of the questions and their correction based on the professional assessment of three psychology specialists, which guaranteed the relevance of the test material to the research topic.

The survey questionnaire consisted of two groups of questions. The first group of questions was aimed at identifying the reasons why students chose to enroll in Ukrainian higher education institutions and their level of satisfaction with their studies. The second group of questions was aimed at identifying the conditions for attracting respondents to Ukraine in general, the regions of departure, in particular, with employment in their chosen specialty.

Within the scope of the study, statistical data processing was performed using the Ms Excel “Data Analysis” package. Correlation analysis was applied when processing a certain part of the data. The corresponding methodology was described in detail in [22].

Findings. *Identifying conditions that encourage young people from TOT to enroll in Ukrainian universities and ensure an adaptive educational process for them.* Educating young people from temporarily occupied territories at Ukrainian universities is the first important step towards ensuring their integration into the Ukrainian labor market. Most young people who have left the TOT do not travel further to Ukraine, but seek refuge in Europe with their families. They have already lost their homes in their native region, and the only effective link that strengthens their connection with their homeland is distance learning at a Ukrainian higher education institution. The study of the conditions conducive to such learning yielded the following results. The pie chart in

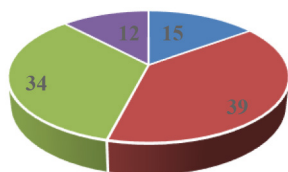


Fig. 1. Percentage priority in response to the question “Why did you enroll in a higher education institution in Ukraine?”:

39 % – listened to the advice of others (family members); 34 % – wanted to, but did not have the opportunity to enroll in a higher education institution in Europe; 15 % – awareness of national identity as a Ukrainian (I want to have a Ukrainian diploma); 12 % – other reasons

Fig. 1 shows the percentage of respondents who cited a specific reason for enrolling in Ukrainian higher education institutions.

It is indicative that for the largest percentage of students (39 %), the main factor was the opinion and influence of their immediate environment (family, close friends, etc.). In other words, the Ukrainian community in the TOT continues to associate the future of its youth with Ukraine to a large extent. Moreover, this connection is more pragmatic than patriotic: only 15 percent of respondents cited national self-identification as the main reason for enrolling. The second most influential factor (34 %) is the lack of resources to enroll in a European higher education institution.

It should also be noted that almost 80 % of respondents answered “yes” to the question “Did the simplified admission procedure influence your decision to enroll in a higher education institution in Ukraine?”.

To study issues related to the conditions of study at Ukrainian higher education institutions (Table 4), as well as some other issues, students were divided into two groups: *the first group* consisted of those who remained in the TOT after admission; *the second group* consisted of those who left the TOT for Europe. This division is related to social and economic differences in the living conditions of the two groups. The data presented in the table shows that those who have moved to Europe have higher educational standards. This is reflected in a lower percentage of satisfaction with learning conditions and less satisfaction with the duration of classes and consultations. The answers to other questions reflect the difference in the security conditions in which the students of the two groups find themselves. Living in the temporarily occupied territories reduces students’ opportunities to receive assistance, consultations, and take advantage of special educational initiatives. It should be noted that the vast majority of students in both groups work while studying, but the percentage of those who work in their field of study is very low. There are almost no such students in the temporarily occupied territories.

The problems of learning identified by students of both groups as the most important were considered separately. Four types of problems were identified: problems with the organization of the educational process at higher education institutions; difficulties in organizing classes on the part of the student; psychological problems; economic problems. The results are presented in the form of a diagram in Fig. 2.

Table 4

Percentage distribution of responses to questions related to the conditions of study at Ukrainian higher education institutions

Question	Percentage of positive responses	
	The first group	The second group
Are you generally satisfied with the learning conditions after admission?	92.8	79.7
Do you work while studying at a higher education institution?	81.1	84.9
If you work, is your job related to your field of study?	2.8	19.2
Are you satisfied with the timeliness of information about changes in the educational process?	67.5	86.4
Is there enough time allocated for online classes and consultations with teachers?	81.1	66.2
Have you ever received help or advice from the university administration on issues related to education, safety, or social support?	1.7	16.9
Do you use educational initiatives specifically for students from TOT (e.g., separate support platforms, additional consultations)?	2.8	32.7

It can be seen that among the problems of organizing the educational process in higher education institutions (marked as 1), the largest percentage of respondents point to the low quality of classes (34 %), insufficient time to acquire practical skills (28 %), and the lack of accessible teaching materials (17 %).

Among the difficulties in organizing classes on the part of the student (marked as 2), the most common are the inability to connect to classes at the scheduled time (83 %), poor internet connection (31 %), and the lack of a high-quality gadget (18 %).

Among psychological problems (marked as 3), students primarily point to the need for high self-discipline, the inability to effectively organize their learning process on their own – 31 %; the lack of personal contact be-

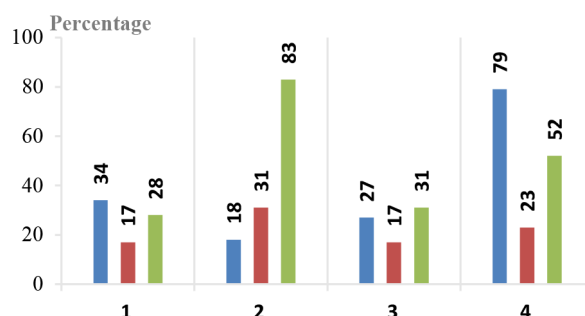


Fig. 2. Percentage of students who indicated the existence of certain types of problems while studying at Ukrainian higher education institutions:

1 – problems with the organization of the educational process at higher education institutions; 2 – difficulties in organizing classes on the part of the student; 3 – psychological problems; 4 – economic problems

tween teachers and students, teachers' lack of understanding of the students' situation – 27 %; the impossibility to communicate in person and spend time with fellow students – 17 %.

Among economic problems (marked as 4), the most significant ones are the need to work while studying – 79 %; the need to support family members in addition to oneself – 52 %; the lack of financial resources for educational equipment and the Internet – 23 %.

In general, the diagram shows that among all indicators for students, the biggest problem in learning is the inability to attend classes and communicate at the scheduled time (indicator – 83 %). This indicator corresponds to the high indicator of the problem “the need to work while studying” – 79 %. In addition, under the conditions of occupation, the internet does not always work and there are certain security conditions for participating in online classes.

The results indicate the need to create adaptive, flexible learning schedules. While the Ministry of Education and Science of Ukraine offers flexible learning models and individual support for schoolchildren from TOT, this is not provided for students from TOT who do not have stable internet access or are forced to work. It is clear that these forms of education require additional budgetary expenditures. However, the negative consequences of young people with TOT not returning to Ukraine are, in the long term, much greater. Research estimates [3] show that in the long term, Ukraine risks losing up to \$255 billion in lost GDP and productivity due to the displacement and emigration of young people of working age. The aging population will increase the burden on pensions, healthcare, and other social services. Therefore, funding special adaptive distance learning programs for young people with TOT is entirely justified, even if such groups are small and require additional organizational conditions [23]. Higher education for this contingent should be seen as a direct investment in Ukraine's recovery.

Determining the conditions under which graduates of Ukrainian educational institutions from TOT agree to return to work in Ukraine. The study identified security, economic, and socio-psychological components of return. About 29 % of respondents indicated security and the end of the war as the main conditions for returning to Ukraine. This coincides to some extent with the data of other researchers [24] (it should be noted that the possible mobilization of young people into the Ukrainian army was not considered as a factor of influence in this study). The factor of guaranteed employment and decent wages for young people from the TOT was the main one. Almost 64 % of respondents named it as the main condition for returning. This significantly exceeds the data from other surveys of Ukrainian migrants in Europe. According to them, only 30–32 % of respondents consider this to be the most important condition for returning [24]. And only 7 % of students identified homesickness and family, the desire to reunite with loved ones as the main factors for returning.

Since the economic factor of return proved to be the main one, it was studied in more detail. All respondents were asked to indicate the percentage (from 1 to 100) at which they assessed their willingness to return to Ukraine for work: indicator *V*. Similarly, on a 100-point

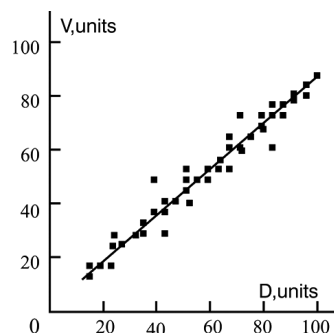


Fig. 3. Scatter plot and regression line showing the relationship between *V* and *D*

scale, respondents were asked to indicate the impact of each of the following factors on their return:

- A* – level of economic stability in Ukraine;
- B* – guaranteed employment;
- C* – opportunity to work in one's chosen profession;
- D* – high level of wages;
- E* – state payments to those who return;
- F* – preferential conditions for obtaining housing.

The results obtained were processed using correlation analysis. Analysis of the input data using scatter plots allowed us to establish a linear relationship between all existing indicators. An example of such a relationship between indicators *V* and *D* using a regression line is shown in Fig. 3.

However, pairwise correlation coefficients do not always accurately reflect the actual level of dependence, but only show the general relationship between two parameters [22]. Therefore, to more accurately determine the level of interdependence between parameters, partial correlation coefficients were found, which are shown in Table 5. At the intersection of identical factors, there is a unit. If there is no statistical dependence (the coefficient is lower than 0.35), then a dash is placed in the intersection cell. The established coefficients provide information about the degree of dependence for each pair of variables, which is not distorted by the cumulative influence of other parameters.

To examine the mutual statistical dependence of more than two parameters, the multiple linear regression method was used, where the *V* indicator was selected as the response: “willingness to return and work in Ukraine”. The factors were indicators *A*, *B*, *C*, *D*, *E*, and *F*. As a result of stepwise regression, significant variables were found that passed the test for statistical significance. A statistically significant dependence of the response *V*: “willingness to return and work in Ukraine” on factors *B*: “guaranteed employment”; *D*: “high salary”; *F*: “preferential conditions for obtaining housing”

Table 5

Matrix of partial correlation coefficients

The indicator	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>V</i>
<i>A</i>	1	–	–	–	–	–	–
<i>B</i>	–	1	–	0.73	–	–	0.71
<i>C</i>	–	–	1	–	–	–	–
<i>D</i>	–	0.73	–	1	–	–	0.84
<i>E</i>	–	–	–	–	1	–	–
<i>F</i>	–	–	–	–	–	1	0.55
<i>V</i>	–	0.71	–	0.84	–	0.55	1

was established. Other indicators were not statistically significant. The regression equation was recorded

$$V = 3.21 + 0.11B + 0.52D + 0.14F \text{ provided that } R^2 = 0.82.$$

The result obtained means that the specified parameters explain 82 % of the total variance of the V indicator. Only 18 % of the variance of the response is determined by factors not included in the model obtained.

The significance of the multiple coefficient of determination was assessed using Fisher's F -test. As a result, the error of statistical conclusions does not exceed 5 %.

Thus, for young people from TOT, the decision to return to work in Ukraine is determined by the availability of high-paying jobs and assistance in securing housing. The latter is understandable, since they have lost their own homes. All other factors had little influence on their decision. So, the issue whether the job will be exactly in the field of study, and even the economic stability of the state have not been a significant factor in the decision-making. It remains to be determined what level of salary is sufficient for young people to return to Ukraine.

During the survey, each respondent had to indicate the minimum amount of earnings in euros at which they would agree to return to work in Ukraine. The figure had to be a multiple of 500 euros. Based on the survey results, a diagram was constructed, shown in Fig. 4.

The diagram in Fig. 4 shows that more than sixty percent of all respondents indicated a minimum monthly income in the range of €2,500–3,500. Given that the average salary of around €3,000 per month currently exists in countries such as France, Italy, and Spain, and in Eastern Europe and the Baltic states it is significantly lower [25], in order to effectively attract young people to the Ukrainian labor market, hereafter it is necessary to focus on the average salary in the aforementioned Western European countries.

A key question in the study was whether students would agree, under the conditions discussed above, to return to work in the regions (oblasts) of Ukraine from which they had left the occupied part. The percentage of positive responses to this question for the two groups of respondents is shown in Table 6. The table also indicates the regions where students who are not ready to return to their previous place of residence plan to work.

It can be seen that about 20 percent of the students surveyed will not return to Ukraine under any circumstances. Among those who still remain in the TOT (first

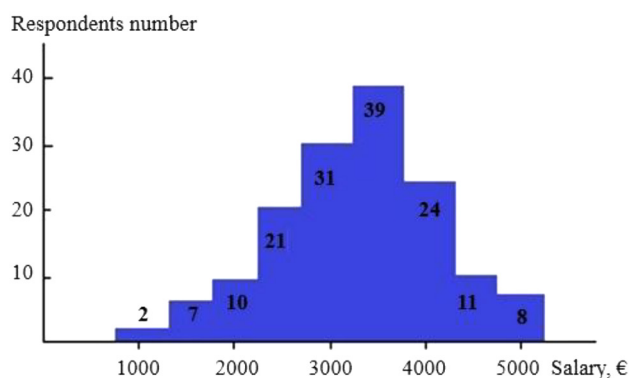


Fig. 4. Number of respondents who indicated a specific minimum monthly income

group), about 45 percent of respondents are ready to work in the same region of Ukraine where they lived before the war. In the second group, among those who left the TOT, about a third are willing to do so. Perhaps a certain socio-psychological factor plays a role in the first group, causing respondents to remain “attached” to the region during their studies, despite the occupation.

According to data from the Ministry of Education and Science of Ukraine, in 2023 and 2024 alone, nearly 18,000 applicants from the TOT enrolled in Ukrainian universities (6,516 and 11,275, respectively – Table 2). The trend of increasing numbers of applicants continued in 2025. Therefore, the return of at least some of these young people from TOT to the labor market in the partially occupied regions could have a significant impact on the future economic status of these territories.

The study found that specialties related to reconstruction and the public sector are more attractive to students who plan to return to their regions. Specialists in fields that are not in demand during and after the war (trade, transport, light industry) are less motivated to return.

Without a doubt, student motivation is connected to the current labor market demands in the regions that will undergo restoration in the future. Table 7 shows the distribution by field of study of students who agree to return to work in the region they left.

The analysis shows that representatives of educational specialties are most focused on returning. Given that the greatest shortage of teachers currently exists in the

Table 6

Percentage of respondents who agree to return to a specific region of Ukraine

Question	Percentage of positive responses	
	The first group	The second group
Do you plan to work in the region of Ukraine you left if economic conditions are favorable?	45.4	32.7
If you plan to work in another region, which one exactly?		
Kyiv or Kyiv region	29.7	30.1
Lviv or Lviv region	11.3	14.4
Kharkiv or Kharkiv region	1.5	1.2
Other city or other region	3.9	5.1
I will not return to Ukraine under any circumstances	19.1	20.5

Table 7

Percentage of students who agree to return to their previous region of residence, by field of study

Field of study	Percentage
Education	75.1
Engineering, manufacturing, and construction	52.2
Social sciences	34.7
Business, administration, and law	21.3
Information technology	11.6
Natural sciences, mathematics, and statistics	7.3

frontline and southeastern regions [26], this indicator is very important. Unfortunately, the table shows a significantly lower percentage of future engineers and only about ten percent of information technology specialists and scientists in natural and mathematical disciplines. The result is logically explained by the current realities of employment in war-affected regions. The situation is also influenced by the demand for certain specialists in European countries. This situation requires special incentives from the state. Ukraine's economic security, both during the long-term war and after its end, will depend significantly on the resilience of the socio-economic system, which is based on state support for regions that have partially lost their territories.

Creating an economic model for attracting young people from TOT to the Ukrainian labor market. The labor resources of regions are linked to a number of quantitative and qualitative characteristics, as well as to the process of labor migration. Fig. 5 shows the typical structure of labor resources with certain components that are directly relevant to the results of our study. First, let us consider the provision of each component of the *qualitative characteristics of labor resources*.

The necessary *educational level* of returnees to Ukraine from TOT must be guaranteed by state regulation and management of their education process.

Currently, there are about thirty higher education institutions or separate departments in Ukraine that have been relocated from occupied territories or combat zones [27]. These institutions mainly provide online educational services. Therefore, applicants from TOT most often enroll in these institutions (other higher education institutions have returned to offline or blended learning, which also requires students to be present in classrooms periodically). Due to the small number of displaced universities, the Ministry of Education and Science of Ukraine is able to cooperate effectively with them, monitor the level of education, and, if necessary, adjust their funding.

The same mechanism can be used to regulate *professional and qualification characteristics*, i.e., the distribution of students entering higher education institutions according to future professions, economic sectors, and

types of economic activity. Priority state support should be given to those specialties that are most in demand in regions with partially occupied territories. It is also necessary to introduce courses on the basics of entrepreneurship in higher education institutions. Courses should be tailored to the specific needs of these regions.

The necessary *socio-psychological characteristics* can be ensured through motivation during the training of students with TOT in Ukrainian higher education institutions, the provision of special conditions, and individual programs.

It is necessary to create a psychologically favorable atmosphere among the population of the regions for the return of young people. There is a possibility of psychological rejection of special subsidies for young people returning from TOT by other residents of the region. Our research has shown that state payments to young people planning to return are not a statistically significant motivating factor for them. Young people rely more on their own strengths and ability to earn money. Therefore, it is better to provide social financial support to the local economically vulnerable population. It is also necessary to conduct an information campaign to explain the importance of the return of young people from the temporarily occupied territories to the population of the partially occupied regions of Ukraine. It is necessary to constantly convey to all segments of the population that the future revival of each region is impossible without people who, due to certain circumstances, were forced to find themselves in the occupied territory.

Ensuring all *quantitative characteristics of labor resources* involves interrelated mechanisms. These include a set of management, forecasting, and regulation measures aimed at forming a sufficient number of workers in regions with temporarily occupied territories. State regulation of employment, labor market support and development programs, and a system of career guidance and labor resource accounting are key elements in ensuring the necessary quantitative characteristics of the workforce in the designated regions.

Since young people from the temporarily occupied territories are only a fraction of those who will return, actions are needed at the regional level to consolidate all labor resources. Changes are needed in the economic structure of the partially occupied regions to maximize employment for all segments of the local population.

The economic model for the return of young people from the occupied territories to the Ukrainian labor market must be adaptable to all the requirements considered in the study, have sustainable funding, be focused on the real needs of young people and the Ukrainian labor market, and necessarily have social support. In addition, the economic model should be comprehensive and multi-level, including state, educational, market, and social mechanisms aimed at removing barriers to the return and integration of young people from the occupied territories. Particular attention should be paid to financial incentives, access to education, the development of innovative industries, adaptation support, and the creation of a favorable environment for youth entrepreneurship and self-employment. The following components of the model are proposed.

1. Encouraging young people from TOT to enroll in higher education institutions in Ukraine. Ensuring the

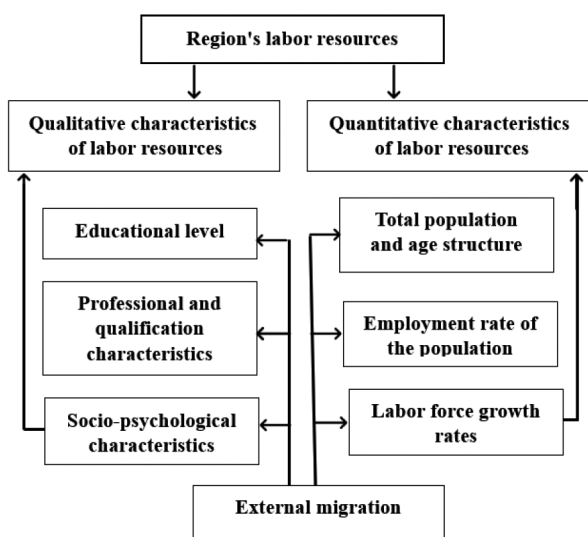


Fig. 5. Typical structure of labor resources

continued financial and legal basis for their enrollment at a level no lower than in 2024 and 2025. Providing extensive information support for enrollment through sources focused on people in TOT.

2. Creating adaptive learning conditions for young people from TOT in higher education institutions. Implementing programs with flexible study schedules and individual student mentoring by teachers.

3. Usage of flexible and adaptive tools to provide professional support to young specialists after graduation from higher education institutions and inform them about all professional opportunities in Ukraine. Applying artificial intelligence technologies to provide individualized support to students and help them adapt to dynamic changes in conditions and needs in the labor market.

4. Creation of special jobs for young people from TOT, especially in regions with partial occupation of territories. Compensation of salary costs or tax incentives for employers who hire young people from occupied territories. Special incentives from the state for specialists in the most sought-after professions in a particular region.

5. Ensuring that the salaries of young specialists who have returned to Ukraine from TOT are at a level corresponding to the average salary in countries such as Italy, Spain, and France. Providing subsidies to employers for a certain period of time to fulfill this condition.

6. Creating a favorable environment for youth entrepreneurship and self-employment, ensuring that young people acquire the relevant knowledge and skills while studying at higher education institutions.

7. Creating special programs and providing benefits for the purchase of housing, with an emphasis on regions with partially occupied territories. Providing vouchers for housing instead of what remains in the occupied territories.

8. Development of special programs with economic and informational components to eliminate antagonism between the interests of the local population in partially occupied regions and returning youth.

9. Involvement of partner countries, international financial organizations, interested foreign investors, Ukrainian foundations, and businesses in the implementation of all types of programs.

The issue of funding sources for the aforementioned socio-economic projects is indeed very problematic. Unfortunately, Ukraine does not have the necessary resources. The funds that individual European states or partner cities can offer to partially occupied regions are unlikely to be sufficient for their recovery. Therefore, it is now necessary for the Ukrainian government to actively appeal to international partners with a project to use frozen Russian assets not only for the needs of the war, but also for the restoration of the territories most affected by Russian aggression. It is these funds that should be used to solve the problem of returning labor resources from occupation to the Ukrainian labor market.

Discussions are already underway regarding the use of a portion of frozen Russian assets as a "reparations loan" to Ukraine [28]. However, the legal mechanisms for this project, as well as the details of its implementation, have not yet been developed. EU member states

have only just begun to work on creating the legal framework, guarantees, and mechanisms that will ensure the security and effectiveness of the relevant financing for Ukraine. These processes undoubtedly need to be intensified and accelerated.

In addition, grant programs from international organizations and foundations that support social, economic, and innovative initiatives, including sustainable development programs, can undoubtedly be used. Overall, funding should be based on a combination of international aid, grant mechanisms, state budget funds, and local resources.

The implementation of sound economic policies can significantly alleviate the problems that have arisen as a result of the war in the partially occupied regions of Ukraine. The regional labor market is largely dependent on the proper regulation of its processes. If we clearly understand the changes that are likely to occur as a result of the war, then measures need to be taken now to resolve the complex situations that are predicted, including the use of the labor resources of young people from the temporarily occupied territories.

Conclusions. As a result of the study aimed at monitoring the opinions of students from temporarily occupied territories and developing an economic model for their integration into the Ukrainian labor market, the following conclusions can be drawn.

1. *Key conditions conducive to attracting young people from TOT to Ukrainian higher education institutions and the main problems of distance learning for such young people have been identified.* It has been established that the most influential factors for admission to higher education institutions in Ukraine are the influence of young people's immediate environment (family, close friends, etc.), as well as the inability to enroll in an educational institution in Europe for certain reasons. It has been found that the biggest problem with distance learning for students from TOT is the inability to attend classes and communicate at the scheduled time. This is due to the need to work to support themselves and their families, as well as the security situation. Therefore, it is necessary to provide them with an adaptive educational process using flexible learning models and individual student mentoring by teachers.

2. *The main factors determining the willingness of graduates from TOT to return to work in Ukraine have been identified.* First of all, these are the availability of guaranteed employment with competitive salaries corresponding to the average salary level in Western European countries such as France, Italy, and Spain, as well as preferential conditions for obtaining housing. It has been shown that state payments to those who return do not significantly influence the decision to return to Ukraine. It has been found that representatives of educational specialties are most oriented towards returning, while future information technology specialists and scientists in natural and mathematical disciplines are the least oriented towards returning.

3. *A comprehensive economic model has been developed that includes economic and social mechanisms for attracting educated young people from TOT to the Ukrainian labor market.* This model provides for interaction between state bodies, educational institutions, and employers and allows for the effective adaptation and moti-

vation of young professionals to find employment in Ukraine.

To finance the socio-economic projects included in the model, international assistance and frozen Russian assets are expected to be used.

The use of the proposed model should significantly increase the percentage of young people from TOT in the labor market of the partially occupied regions of Ukraine. In the future, it would be advisable to build an econometric model that links the development prospects of different regions of Ukraine with the re-emigration of young people from both the occupied territories and abroad in general. This also opens up a wide field for research on the impact of war on the labor market in European countries and a comparative analysis of the effectiveness of educational and labor interventions in post-crisis conditions.

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Залучення студентів українських університетів з окупованих територій на ринок праці України

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Мета. На основі моніторингу позицій студентів із тимчасово-окупованих територій створити еко-

номічну модель для їхнього залучення на ринок праці України.

Методика. Методологія дослідження базувалася на опитуванні й статистичному аналізі широкого спектру даних, отриманих від студентів, що вступили до закладів вищої освіти України за квотами для тимчасово-окупованих територій (ТОТ). У межах дослідження використовувалася статистична обробка даних за допомогою пакету Ms Excel «Аналіз даних». При обробці певної частини даних застосовано кореляційний аналіз.

Результати. Визначені ключові умови, що сприяють залученню молоді із ТОТ до українських закладів вищої освіти й основні проблеми дистанційного навчання для такої молоді. Виявлені основні фактори, що визначають готовність випускників із ТОТ повернутися працювати в Україну. Розроблена комплексна економічна модель, що включає економічні й соціальні механізми залучення освіченої молоді із ТОТ на український ринок праці. Дана модель передбачає взаємодію між державними органами, закладами освіти й роботодавцями і до-

зволяє ефективно адаптувати та мотивувати молодих фахівців до працевлаштування в Україні. Показані джерела фінансування для реалізації запропонованої моделі.

Наукова новизна. За допомогою інструментів моніторингу вивчені специфічні умови залучення на український ринок праці молодих людей із тимчасово-окупованих територій. Створена економічна модель їх повернення до регіонів із частково окупованими територіями.

Практична значимість. Використання запропонованої моделі має значно підвищити відсоток молоді із ТОТ на ринку праці частково окупованих регіонів України. Отримані результати також можуть бути корисними для європейських економічних дослідників і для всіх країн, що приймають українських біженців.

Ключові слова: економічна модель, ринок праці, тимчасово окуповані території, рееміграція, заклади вищої освіти

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