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TENDENCIES AND CONSEQUENCES OF MIGRATION FROM UKRAINE

The article devotes to the topic of migration from Ukraine. Currently the massive flow of emigrants from Ukraine can be observed, which was caused by the Russian aggression. Definitely, it will influence the Ukrainian economy. In the article the tendencies of emigration from Ukraine since the year 2000 and the current flow and problems are analyzed. The main consequences of emigration in the current conditions are evaluated. It is mentioned that the influence of migration can have a long-lasting effect on the economy of the country. It is obvious that it is important to return people to Ukraine and to take special measures on the governmental and municipal levels. The methodology of econometric analysis is used to analyze the influence of factors on the migration in the country in the pre-war period. It is obvious that the main reason for emigration nowadays is the war in the country, and the decision of people to return will be influenced by the safety in the country, social conditions and the state of economy. It is crucial to define the economic factors, which will influence the decision of people for migration or returning to Ukraine. It is noted that employment and income, economic growth and perspectives of reconstruction and development of the country are important.

Keywords: migration, emigration, war in Ukraine, reconstruction of economy.

JEL classification: F66, J61

Introduction and research problem. Migration is an inevitable process of the global economy, different factors including economic, political, demographical, ecological force people to migrate. Russian aggression influenced the massive migration of the Ukrainian population, which already has a big impact on the national economy and economies of host countries. At the same time, the decision of people to return will be influenced by the safety, social infrastructure and economic conditions in the country. It is important to analyze factors, which usually influence the decision of people to migrate to prevent the wave of economic emigration from Ukraine, influenced by war, and to find the solutions for their returning back.

Recent publications analysis. Nowadays the tendencies of migration from Ukraine and its impact on economies of countries attract the interest of researchers. Massive migration of Ukrainians to Poland influences the economy of the country, and requires special actions of the state authorities and public institutions in Poland (Duszczyk & Kaczmarczyk, 2022). The structure of migrants (mostly women, children and elderly) makes it difficult to enter the labour market (Habarta, 2022). Though, H. Brücker, L. Goßner, A. Hauptmann, P. Jaschke et al. (2022) analyzed the possible influence on migration on Germany and highlights the better fit

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of Ukrainian migrants to the labor market compared to other foreign nationalities. Different aspects of migration from Ukraine are analyzed by the International Labor Organization. Ukrainian scientists as well research consequences of migration for the Ukrainian economy. A. Gaidutskyi (2022) reveals the importance of business activity and government programs to return migrants to the country.

Unsolved parts of the problem. The current state and consequences of migration need particular attention as their influence on the economy will be significant and long-lasting, and this problem needs further research.

Research goal and questions. The purpose of the article is to analyze the tendencies of migration from Ukraine, to evaluate the current state of migration, and to indicate the influence of migration on the economy of the country. It was important to build the model of factors, which influenced the desire of people to migrate, which can be used for research in preventing a possible wave of economic migration and to indicate which economic indicators may influence the decision of people to return.

Main findings. European Commission define migration as "movement of a person either across an international border (international migration), or within a state (internal migration) for more than one year irrespective of the causes, voluntary or



Fig. 1. Amount of emigrants from Ukraine in 2002–2021 years *Source:* made by authors based on data (State Statistics Service of Ukraine, 2021)

involuntary, and the means, regular or irregular, used to migrate" (European Commission, 2021). OECD gives a shorter definition of process of migration "Migration refers to all movements of people into (immigration) or out (emigration) of a specific country or countries" (IOM, 2020).

According to Figure 1 emigration in Ukraine has a certain cyclical nature, which is associated with economic events in the country and the world.

The global economic crisis led to an increase in the number of people who decided to leave the country in 2010 (with a delay of 1–2 years). The decline of migrants after 2013 was not due to a decrease in the popularity of migration, but occupation of regions, which led to a decrease in the number of people in Ukraine and stopped the registration of migrants in these areas. In May 2017, an agreement on visa-free travel between Ukraine and the EU was signed, the migration flow has increased. Since the beginning of the 2020 pandemic, movement between countries has been subject to certain restrictions, which has reduced the number of emigrants.

The majority of Ukrainian migrants were between the ages of 15 and 34, due to the fact that the younger generation is more open to travel and more willing to work and live abroad than the older age group.

The main factor in migration from Ukraine for years remained economic. The country borders on countries with wages ranging from 3.5 (Poland) to 5.5 (Germany) times higher, which caused migration to these countries, as well as Czech Republic, Hungary.

Poland was the main destination of labor migration for years. The country is close in culture and language to Ukraine, there is a developed network of transport links, the cost of living is about the same, and wages are 3–3.5 times higher (IOM, 2021). The Polish government promoted Ukrainian labor migration, as there is a shortage of workers in the local labor market.

On February 24, 2022, the Russian Federation launched a full-scale invasion of the sovereign state of Ukraine that has influenced the migration of the Ukrainian population. During the period from February 24, 2022 to August 2, 2022, 10,321,348 people crossed the border, however, 4,257,925 citizens returned during this time. Of course, some of them are volunteers and cross the border many times. In general on the 2st of August 2022



Fig. 2. Ukrainian refugees recorded in the European countries, persons, 02.08.2022 *Source*: made by authors based on data (Operational data portal, 2022)

6,180,946 refugees were registered in Europe, 3,766,794 of them registered for temporary protection. Most refugees have registered in Poland (Figure 2). And Poland also registered the highest number of border crossings – 5084448 persons.

Before the war, there was a significant flow of migrants to Poland, so they maintained a certain connection with the local population, there is the similarity of languages. There is also a tendency for individuals to migrate to countries that are close to their homeland. Neighboring countries have similar cultures and ways of life, which facilitates their integration.

Since the beginning of the war, the Polish government has shown the greatest support for Ukrainian refugees. It provided free ride for Ukrainians on any transport, a wide network of volunteer assistance at the border and in the cities, free housing, food, and a monthly social assistance of PLN 300. Also, a Ukrainian can get a Polish identification code – PESEL, which gives the right to free medicine, education for school-age children, stay in Poland for more than 3 months and more. Due to these factors, most Ukrainians chose Poland for migration.

Furthermore, during the last months of the war in Ukraine happening the forced evacuation of Ukrainian civilians from the occupied territories to the Russian Federation – people are being evacuated from Ukraine against their will, taking away all communications and settling in a refugee camp with appalling conditions. The return of these citizens to their homes should be handled by the Ukrainian government and international organizations.

It is obvious that such a high level of migration from Ukraine will have a number of negative effects on the economy. Among them we consider will be the following:

1. Loss of specialists and brain drain

We consider this effect to be one of the most important. There is a great danger of losing highskilled specialists and also a young generation. Students are usually more adaptable to changes and due to the war many young people are entering foreign universities; a lot of them study on Erasmus programs. There is also a danger of migration of IT specialists, medical workers, scientists. Through the Health Immigration Effect (it affirms that migration is hard in physical and psychological way processes, so only individuals with better health conditions are able to migrate), the "mind and physical strength" of a home country migrates to another country, which weakens its employment potential.

2. Decrease of the budget income and consumption on the Ukrainian market

It is understandable that the decrease of the working population will influence the tax income of the budget.

3. Outflow of currency abroad

Ukrainian are spending their savings abroad and that influences their financial stability. In May 2022 it was recorded that Ukrainians spent 2 billion dollars abroad per month (Forbes, 2022).

4. Salmon effect and Convergence theory

"The salmon effect describes the possible trend of migrants returning to their country of origin when they are gravely ill" (Namer & Razum, 2018). Thus, the country of origin sends healthy and strong migrants to another country, but people with health problems and lower work capacity return.

In all the processes should be searched some positive aspects for the economy, we can define the following:

1. Saving the lives of many citizens.

In the conditions of war, the most important is saving the lives of people, of children. We believe that in the future they will return home.

2. Relocation of part of the economically active population abroad due to lack of jobs in Ukraine.

Surplus of labor in the local market creates competition, lower wages and raises unemployment. This surplus can migrate to a country, which will stabilize the situation on the domestic market, give jobs for individuals, and who will bring personal income in the form of remittances home. According to the evaluation in May 2022 of the International Labor Organization 4.8 million jobs were lost in Ukraine (ILO, 2022).

3. Brain gain

Temporary migration supports the process of sharing knowledge between countries. Migrants who come back to their home country bring with them new knowledge, innovations, technologies, ideas, which they got during the experience of migration.

4. Remittances

For many developing countries, remittances are an important part of income for GDP. They can also be a source of foreign currency for a country that supports the economy and the national currency. Sending migrants remittances to the family improves the well-being of the people, as well as increases consumption and business activity.

Figure 3 shows that the share of remittances in Ukraine's GDP has been growing since 1998 and is becoming more significant.

As the National Bank of Ukraine reported in May 2022 remittances reached the pre-war level. That is also an indicator that Ukrainians are getting employed abroad (National Bank of Ukraine, 2022, p. 25).



Fig. 3. Personal remittances, received (US\$ and % of GDP) Source: made by author based on data (WorldBank, 2022)

In the current conditions remittances are very important for the Ukrainian economy. At the same time, it is worth noting that in the long-term perspective the high dependence on remittances can make a country's economy vulnerable.

One of the main indicators of migration in the country can be considered net migration, which shows the difference between the number of people who arrived in the country and the number of people who left it.

The net migration indicator reflects the difference between those who left the country and those who arrived. If its value is less than zero, more people leave the country than arrive, if the value is positive – the number of emigrants is less than immigrants.

For the study, 5 independent variables were selected, which have influence on the value of net migration in Ukraine, and the following hypotheses were put forward:

1. Unemployment rate (%). Rising unemployment creates the need to find work in places where there is a demand for labor, thus encouraging people to leave the country and move abroad, reducing the net migration in the country.

2. GDP growth (%). The result of GDP growth is the improvement of production in the country,

living standards and wages, thus encouraging people to stay, as well as attracting immigrants, so net migration is increasing.

3. Share of households with children under 18 (%). Having a child needs financial support for family members, so increasing the proportion of families with a child encourages people to find a higher-paying job in a country with a better standard of living, that increases the proportion of people leaving the country and lowers net migration.

4. Population with average total income per month below the subsistence level (million people). The low level of income in the country leads to a lack of funds for migration (because this process requires financial resources), so fewer individuals migrate abroad and stay at home, and as a result, net migration increases.

5. Average monthly salary in Europe (USD). The increase in wages in Europe (the main region for labor migration among Ukrainians) makes people want to work in higher-paying jobs, and therefore increases the flow of emigrants, which negatively affects the net migration in Ukraine.

The analysis used annual data for the period 2000–2021. The correlation test of the value of net migration in Ukraine with the above factors showed



Fig. 4. Net migration in Ukraine in 2000–2021 *Source:* made by author based on data (Macrotrends, 2021)

Dependent Vari	able: NET_MIGRATION_RATE		
Method: Least S	Squares		
Date: 06/06/22	Time: 21:39		
Sample: 2000 2021			
Included observations: 22			

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	-0.988697	0.333373	-2.965739	0.0251
UNEMPLOYMENT	-0.067474	0.055969	-1.205568	0.0334
GDP_GROWTH	0.005673	0.004911	1.155168	0.0119
FAMILIES_WITH_CHILDREN	-0.609764	0.081998	-7.436296	0.0003
LOG(POOR_POPULATION)	0.176794	0.019089	9.261315	0.0001
SALARY_EU	-0.000426	0.000155	-2.749396	0.0333
R-squared	0.997417	Mean dependent var		-0.598553
Adjusted R-squared	0.995264	S.D. dependent var		0.933312
S.E. of regression	0.064228	Akaike info criterion		-2.345913
Sum squared resid	0.024751	Schwarz criterion		-2.103460
Log likelihood	20.07548	Hannan-Quinn criter.		-2.435678
F-statistic	463.3496	Durbin-Watson stat		2.457031
Prob(F-statistic)	0.000000			

Fig. 5. Regression equation of dependence of the size of net migration in Ukraine *Source:* made by the authors on the basis of software EViews

that the indicator of net migration has a high correlation with all five factors, and also shows the absence of multicollinearity with other factors. The next step is to create a regression equation (Fig. 5)

According to the results of this regression equation, we can say that all variables have a p-value less than 0.05, the probability of error in rejecting the hypothesis of equality of zero variables is less than 5 %, so we reject these hypotheses, so these factors are significant. According to the adjusted coefficient of determination, the change in net migration in Ukraine by 99.5 % is explained by changes in unemployment, GDP growth, the share of households with children under 18, the population with average total monthly income below the subsistence level and average monthly salary in Europe.

The conducted tests (the normality of the distribution of Jarque–Bera, White heteroskedasticity test, LM-test Breusch–Godfrey) confirm the correctness of the model, so we obtain the following regression equation:

NET_MIGRATION_RATE = = -0.989 - 0.067 * UNEMPLOYMENT + + 0.005 * GDP_GROWTH - 0.61 * * FAMILIES_WITH_CHILDREN + 0.177 * * POOR_POPULATION - 0.0004 * SALARY_EU

The economic interpretation of the results of this study is as follows:

• In the absence of the influence of other factors, net migration in Ukraine will remain at the level of -0.989 million people.

• With zero value of all independent factors, net migration in Ukraine will remain at -0.089 million people.

• With an increase in unemployment by 1 %, the value of net migration in Ukraine decreases by 0.067 million people (the number of emigrants above immigrants increase).

• With an increase in GDP growth by 1 %, the value of net migration in Ukraine increases by 0.005 million people (the number of emigrants decrease).

• With the increase in the share of households with children under 18 by 1 %, the value of net migration in Ukraine decreases by 0.61 million people (the number of emigrants above immigrants grow).

• With the increase in the number of people with average total income per month below the subsistence level by 1 %, the value of net migration in Ukraine increases by 0.117 % (the number of emigrants above immigrants increase).

• With an increase in the average monthly wage in Europe by 1 euro, the value of net migration in Ukraine decreases by 0.0004 million people (the number of emigrants above immigrants grow).

Thus, according to the study, the net migration in Ukraine in the pre-war period was most positively affected by the number of people with average monthly income below the subsistence level, as decreasing personal income reduces the financial ability to migrate. Furthermore, net migration affects the level of GDP growth, which increases living standards in the country, and as a result, more citizens stay in Ukraine. On the other hand, the migration rate in Ukraine is negatively affected by unemployment (which causes people to look for work abroad, which increases immigration and reduces net migration), the share of households with children under 18 (the need to provide for the family encourages people to look for higher paid jobs abroad) and the average monthly wage in Europe (which is an attractive factor for Ukrainian emigrants and, as a result, reduces the rate of net migration in Ukraine).

The main problem of migration in Ukraine today is the return of people who left the country before and during the war. Most of the citizens who left the country during the war plan to return home. According to the data of Gradus research in first wave in May 73 % of Ukrainians wanted to return back home, 12 % wanted to stay in their new place of residence, the wave in June indicated that 65 % wanted return home, 8 % wanted to stay, for 25 % it was hard to answer about the decision (National Bank of Ukraine, 2022).

The cessation of hostilities by the Russian Federation was the main reason for the emigration of Ukrainians, so security will affect the decision to return home. In addition, some citizens have lost their homes in Ukraine, buildings were destroyed during the war, so the government needs to create an effective program to rebuild destroyed and damaged areas.

Of course, at the present time the main reason for migration is war and to return people back safety should be provided, but in the long-term perspective the economic factors are important in the decision of people to return or migrate. An important element is the decrease of unemployment rate and creation of job places. To our mind, small and medium sized enterprises can be one of the elements of job creation as far as they are more flexible. The further development of the IT sector can be important via special free training and courses, Ukraine has a great experience of digitalization of state services and a variety of foreign IT companies. The construction of buildings can also create jobs.

The salaries have dropped in all the sectors. It is obvious that this may influence the decision of people to return back. In this case further rebuilding of the economy and economic growth only can influence the future development.

It is necessary to solve Ukraine's difficult problems, such as corruption, reforms of courts. In the current conditions there is a high patriotism in the country and desire for changes. Receiving the status of candidacy was a very important step and required a lot of work and changes, but also there is a great possibility and desire of civil society to reform.

Conclusions and further research proposals. This research gives some perspectives which economic factors influenced the decision to migrate. Of course, the reason for migration in 2022 for Ukrainians is war, but the desire to return will influence the safety in the country, infrastructure and state of economy. The income of people, rate of unemployment, and economic growth will impact the returning of migrants. At the same time, worsening economic conditions may influence the further wave of migration. In the further research it is planned to analyze factors, which can influence the employment and income of people, negative and positive trends for further reconstruction.

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ТЕНДЕНЦІЇ ТА НАСЛІДКИ МІГРАЦІЇ З УКРАЇНИ

Статтю присвячено проблемам і сучасним тенденціям міграції з України. Нині відбувається масовий потік емігрантів з України, спричинений військовою агресією росії. У статті проаналізовано тенденції еміграції з України з 2000 року та хвилю еміграції з України, спричинену війною. Міграційні процеси негативно впливають на економіку України. Розглянуто основні можливі їх наслідки. Очевидною є необхідність повернення мігрантів і застосування спеціальних програм на державному та муніципальному рівнях. Для дослідження впливу економічних чинників на міграцію було використано інструментарій економетричного моделювання. Виявлено чинники, які впливали на рішення населення мігрувати і які, відповідно, можуть мати потенційний вплив на бажання повернутися. Очевидно, що основною причиною міграції на сьогодні є війна, і рішення про повернення додому люди прийматимуть з огляду на безпеку в країні, наявність соціальної інфраструктури, житла, стан економіки. Важливо визначити економічні чинники, які можуть вплинути на подальші рішення емігрувати чи повертатися додому. Наголошено, що економічні чинники можуть зумовити іншу хвилю економічної міграції, якій треба запобігти. Виявлено, що рівень безробіття, доходи населення, перспективи економічного зростання, відбудови економіки є важливими для повернення мігрантів.

Проведений аналіз може бути використаний для оцінювання сучасного стану міграційних процесів з України та визначення напрямів державної політики для повернення мігрантів. Подальші дослідження варто сконцентрувати на пошуку можливих галузей для створення робочих місць, на аналізі шляхів відновлення економіки країни та програм повернення мігрантів.

Ключові слова: міграція, еміграція, війна в Україні, відбудова економіки.

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