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Demographic and Socioeconomic Effects of Strengthening External Migration Activity of the Population in Ukraine

Abstract. Introduction. Ukraine, as a donor of human resources, is a participant in numerous migration vectors (western and eastern ones), which are characterized by different levels of intensity of migration flows and the reasons for their formation. In the scientific discourse, there are no comprehensive studies of the impact of external migration activity of the population on the socio-demographic potential and the socioeconomic development of the country. There is a shortage of scientific researches on assessing the casualness of external migration and socioeconomic conditions. In the context of Ukraine's Euro-Atlantic integration, the EU countries, particularly Germany, are an attractive environment for employment, training, and personal growth of modern Ukrainian migrants.

The purpose is to analyse the socio-demographic and socioeconomic effects of external migration processes (in the case of the Ukrainian-German migration vector). The novelty is to assess the socio-demographic situation in Ukraine and Germany, as well as to identify and justify the casualness of migration processes and socioeconomic development of countries.

Results. It is proved that the potential of natural demographic reproduction in the EU countries is exhausted. Immigration is the main driver of the problem of demographic reproduction, and the liberal migration policy of some EU countries allows maintaining the positive trends of the population of natural reproduction. The macroeconomic situation in Ukraine and Germany for 2006-2018 is analysed, which allows identifying some gaps in the economic development of countries that have become the main factors in the formation of the Ukrainian-German migration vector.

Conclusions. A socio-demographic portrait of a Ukrainian migrant in Germany has been constructed. The gender and territorial authentic features of migration have been identified, which is a factor in optimizing the demographic structure of the German population, reducing the negative effects of the demographic crisis in the country.

Keywords: Ukrainian-German migration vector; socio-demographic effects; socioeconomic consequences; birth rate; demo reproduction; labour migrants.

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Демографічні та соціально-економічні ефекти посилення зовнішньої міграційної активності населення України

Анотація. Україна як донор людських ресурсів виступає учасником численних міграційних векторів (західних і східних), для яких характерні різні рівні інтенсивності міграційних потоків та причин формування. У науковому дискурсі відсутні комплексні дослідження впливу зовнішньої міграційної активності населення на соціально-демографічний потенціал та соціально-економічний розвиток країни. Простежується дефіцит наукових напрацювань щодо оцінювання казуальності зовнішньої міграції населення і соціально-економічної кон'юнктури. В умовах євроатлантичної інтеграції України особливо привабливим середовищем для працевлаштування, навчання та особистого зростання сучасних українських мігрантів є країни ЄС, зокрема Німеччина. Метою статті є аналіз соціально-демографічних і соціально-економічних ефектів зовнішніх міграційних процесів (на прикладі україно-німецького міграційного вектора). Новизна полягає в оцінюванні соціально-демографічної ситуації в Україні та Німеччині, виявленні та обґрунтуванні казуальності міграційних процесів та соціально-економічного розвитку країн. Доведено, що потенціал природного демографічного відтворення у країнах ЄС вичерпується. Імміграція виступає головним драйвером вирішення проблеми демографічного відтворення, а ліберальна міграційна політика окремих країн ЄС дозволяє зберегти позитивні тенденції населення природного відтворення населення. Проаналізовано

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макроекономічну ситуацію України та Німеччини за 2006-2018 рр., що дозволило виявити розриви в економічному розвитку країн, які стали основними факторами формування україно-німецького міграційного вектора. Побудовано соціально-демографічний портрет українського мігранта в Німеччині. Виявлено гендерні і територіальні автентичні риси міграції, яка виступає чинником оптимізації демографічної структури населення Німеччини, зменшення негативних наслідків демографічної кризи в країні.

Ключові слова: *україно-німецький міграційний вектор; соціально-демографічні ефекти; соціально-економічні наслідки; народжуваність; демографічне відтворення; трудові мігранти.*

Problem statement. Stable demographic reproduction of the population is a necessary condition for the socio-economic development in the country. Modern globalization processes have exacerbated socio-demographic disparities and disintegration due to declining birth rates, increasing the proportion of older people, and hence the ageing population. Decrease of aggregate labour market supply in economically developed countries, on the one hand, and exacerbation of socio-economic and political challenges in lower-income countries, on the other hand, have led to the increased external migration, the formation of new migration vectors directed to those countries where there is more efficient use of human potential.

Under the conditions of increasing migration activity, it is presented the redistribution of human resources in regional labour markets, optimization and balancing of socio-demographic processes in those countries where there is an increase in external migration activity. At the same time, the intensive migration processes could be inertial, and affect the socio-economic situation because of changes in the demographic reproduction of the population. The result is an increase in the load on the social protection system, including pensions, imbalances in the labour market and the growing labour crisis.

Analysis of recent researches and publications. The research of the casualness of the development of migration systems and socio-demographic processes are not common in scientific publications. The modern migrant scholars are focused on the issues of labour migration, forced internal migration, as well as various forms of employment of emigrants. The most significant contribution to the study of the causal relationship between population migration and socio-economic development of the country was made by scientists in Ptukha Institute of Demography and Social Research of the National Academy of Sciences of Ukraine under the supervision of E. Libanova [1; 2].

The issues of economic security in the context of growing intellectual migration are widely developed in researches by O. Malinovska's [3; 4] and S. Vovkanych, V. Bidak [5]. O. Ovchinnikova is engaged in research of regional migration of the population in Ukraine [6], and the problems of remigration are studied by M. Romanyuk [7]. At the same time, the regional features of external labour migration from Ukraine, modelling its causes and consequences within different migration systems were studied by scientists of Dolishniy Institute of Regional Research of the National Academy of Sciences of Ukraine [8; 9; 10].

The problems of employment, increasing unemployment, regulation of the labour market in the period of intensification of migration processes are accompanied by increased scientific activity. P. de Beer and T. Schils are supporters of a liberal approach to regulating migration in order to avoid imbalances in the labour market [11], although A. Downes emphasizes the importance of active management of the process of balancing aggregate supply and demand in the labour market to reduce external migration activity of the population [12]. A. Elbadawy, based on the analysis of the determinants of migration intentions of young people, has found that unemployment is not an important factor stimulating emigration [13]. A. David and M. Ali Marouani provide the results of several years' research on the labour market of emigrants, which shows that more than half of all emigrants in the world are unemployed [14].

The purpose of the article is to analyse the socio-demographic and socio-economic effects of external migration processes (the case of the Ukrainian-German migration vector).

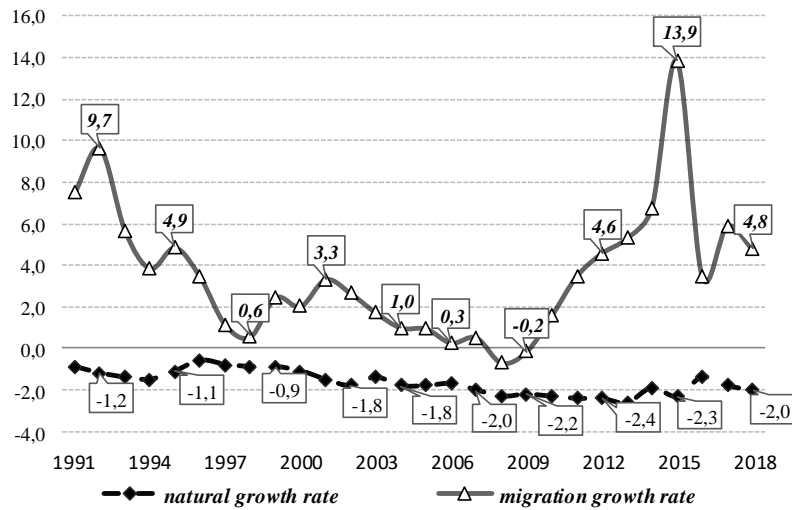
Research material. A significant indicator of population reproduction is its number, the analysis of its dynamics for 1991-2018 has shown a reduction in the population of Ukraine annually by an average of 266 thousand people due to the negative value of natural (-250 thousand people) and migration growth (-16 thousand people). In Germany during 1991-2018, the population decline was 130 thousand people per year due to low values of natural reproduction. However, there was an increase in population due to mechanical movement by an average of 290 thousand people per year. Migration in Germany is a factor in stimulating, revitalizing the demographic reproduction of the population, and optimizing the demographic structure of the population, as well as minimizing the negative effects of the demographic crisis on the labour market. The population of Germany during the study period increased by 2.7 million people or 3.1 per cent in 2018, and in Ukraine, by contrast, decreased by about 9.4 million people or 18 per cent.

The results of the analysis (Fig. 1) has revealed that the problems of depopulation processes in Ukraine are much greater than in Germany. The intensity of population reduction in Ukraine due to a negative increase in the rate of natural reproduction is 4 times higher than in Germany. The age structure of the population of both countries has undergone significant deformation; there has been a significant increase in the share of the elderly population. The analysis of the growth rate of the certain age groups in the total population during 1991-2018 (1991 year is baseline) demonstrated that the specific weight of people

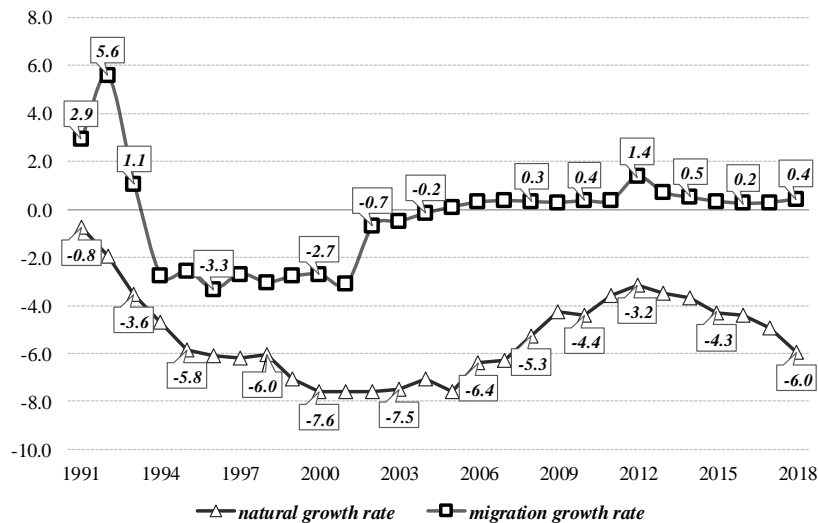
over the age of 70 increased by about 60 per cent in Germany and by 40 per cent in Ukraine, while reducing the share of children by 20 per cent and 30 per cent, respectively [15; 16].

The results of the analysis confirm the thesis that the potential of natural demographic reproduction and preservation of the indigenous population is exhausted. This means that the further preservation of existing trends of natural reproduction at high levels of life quality and

economic development, security, social security in the country in the future will not be able to solve the problem of population preservation, structural age deformation, population ageing and labour shortages. In Germany, immigration is the main driver of the problem of demographic reproduction. The liberal migration policy during the end of the XX century – the beginning of the XXI century allowed to keep the population in the country unchanged.



a) Germany



b) Ukraine

Figure 1 – Coefficients of natural and migration movement of the population in Germany and Ukraine, 1991-2018, %

Source: created by the authors based on data [17; 18]

The German migration system is one of the most powerful in Europe in terms of the intensity of immigration flows. According to the official statistics from the German statistical office, in 2018 every fifth inhabitant of this country had the status of a migrant. With a population of 83 million, Germany received about 9.6 million foreigners and another 11.2 million people

received German citizenship. In 2015, the balance of migration growth was 1139.4 thousand people, which indicated the high migration attractiveness of the country. The results of the calculations have shown that 25 per cent of men and 20 per cent of women aged 18-40 are citizens of another state. Among the population over the age of 70, the number of foreigners is relatively small.

The number of children under the age of 14 has increased by an average of 11 per cent due to migration processes, women of fertile age are by 19 per cent; economically active people are by 16 per cent. However, the number of people older than economically active has increased by only 3 per cent. Immigration flows of able-bodied people of reproductive age have contributed to the process of rejuvenation of the age structure of the German population, increasing the labour and demographic potential in the country.

Immigration increase of 1 per cent of the population in Germany has led to GDP growth by 1.2-1.5 per cent during 1991-2018. Without immigration processes in 1991-2018, the reduction of the country's population would be 18.6 million or 23 per cent, which made it impossible for Germany's economic growth. This confirms the author's thesis about the high dependence of socio-economic development of Germany on migratory population growth.

The analysis of the values of macroeconomic indicators of Ukraine and Germany for 2006-2018 has allowed identifying gaps in the economic development of countries that have become the main factors in the development of the Ukrainian-German migration system. In Germany, in 2006-2018, there was a 40 per cent increase in GDP per capita (from 29 thousand Euro to 40 thousand Euro), a threefold decrease in unemployment (from 9.5 per cent to 3.4 per cent), a slow rise in the consumer price index by 20 per cent, an increase in the average wage by 34 per cent (from 1604 Euro to 2157 Euro).

The dynamics of change of the main indicators of socio-economic development of Ukraine for 2006-2018 had a different trend. The GDP per capita was 2.6 thousand Euro in 2018, which is 15-19 times less than in Germany, devaluation of the national currency significantly, accelerated the growth of the consumer price index. Thus, during the study period in Ukraine, prices increased by more than 400 per cent and in Germany only by 20 per cent.

The main pull-factor (attraction) of human resources to Germany is the polar values of wages, including minimum and average wages. In 2018, the minimum wage in Germany was 1,414 Euro (45.5 thousand UAH at the rate of the NBU), in Ukraine 115.8 Euro (3723 UAH). The average level of wages of the local population in Germany was 1604 Euro (10153 UAH at the NBU rate of 6.33 UAH/euro) in 2006 and 2157 Euro (about 70 thousand UAH) in 2018, in Ukraine 1041 UAH or 165 Euro and 8865 UAH in 2018 (Table 1).

The socio-demographic portrait of a Ukrainian migrant in Germany has authentic features. Thus, in 2018, 141 thousand Ukrainians and 182 thousand Germans of Ukrainian origin lived in Germany. In terms of gender, there is a predominance of women, especially of reproductive age, whose share in 2005-2018 increased from 60 per cent to 64 per cent, and the share of men decreased to 36 per cent. About 60 per cent of women and 50 per cent of men living in Germany are economically active people aged 25-54.

Table 1 Socio-economic conditions of the labour market in Ukraine and Germany, 2010-2018: a comparative analysis

Indicators	Years						2018/2010
	2010	2014	2015	2016	2017	2018	
Germany							
Average salary, EUR/month	1741	1929	1985	2030	2094	2157	1,24
Remuneration of migrants, EUR/month	1449	1484	1651	1676	1736	1813	1.20
Remuneration of Ukrainians, EUR/month	1232	1376	1420	1594	1660	1715	1.35
Unemployment rate, per cent	7.6	5	4.6	4.1	3.8	3.4	0.50
Minimum wage, EUR/month	-	-	1360.0	1360.0	1414.4	1414.4	-
Inflation rate, per cent	101.1	100.9	100.3	100.5	101.8	101.7	1.13
The ratio of the average wage to the wages of employed Ukrainians in Germany	1.41	1.40	1.40	1.27	1.26	1.26	-
Ukraine							
Average salary, EUR/month	213.6	221.4	173.1	183.2	236.8	275.8	1.11
Unemployment rate, per cent	8.8	9.7	9.5	9.7	9.9	9.1	1.03
Minimum wage, EUR/month	82.5	77.5	50	49	106.7	115.8	1.40
Inflation rate, per cent	109.1	124.9	143.3	112.4	113.7	109.8	2.87
Ukraine/Germany							
The ratio of wages of employees in Germany to the average wage of employees in Ukraine	8.2	8.7	11.5	11.1	8.8	7.8	-
The ratio of wages of employed Ukrainians in Germany to the average wage of employed in Ukraine	5.8	6.2	8.2	8.7	7.0	6.2	-
The ratio of unemployment in Ukraine to Germany	1.2	1.9	2.1	2.4	2.6	2.7	-
The ratio of the minimum wage in Germany and Ukraine	-	-	27.1	27.9	13.3	12.2	-

Source: created by the authors based on data [19; 20]

The gender and age structure of Ukrainian migrants in Germany has changed mainly under the influence of migration demographic processes towards its rejuvenation. Thus, in 2018, the number of people in all age groups increased; in particular, the largest increase of 8.7 thousand people occurred in the group of students and working age from 20 to 44 years.

Territorially, on January 1, 2019, the largest number of Ukrainians lived in the southern and eastern lands of Germany, namely in Berlin (324 people per 100 thousand population), Mecklenburg-Vorpommern (242 people), the city-states of Hamburg, Bremen and Bavaria (219, 213 and 206 people respectively). About 60 per cent of emigrants from Ukraine live in these territories. The least migratory lands are Thuringia and Schleswig-Holstein (108 and 121 people per 100,000 population, respectively). The number of the Ukrainian community in these regions is insignificant (0.1 per cent of the total population). It should be noted that the population density of Ukrainian women in all federal states is on average 75 per cent higher than men. For example, in Bavaria and Berlin there are 135 and 203 females from Ukraine, per 100 thousand population, 78 and 120 males, respectively [8].

The uneven living density of Ukrainians in terms of the federal states of Germany is explained by historical preconditions, as well as the formed network of the diaspora, the situation of regional labour markets in the recipient country. The development of the migration system depends on the employment conditions, and the process of population migration within the Ukrainian-German migration system is mainly labour. Therefore, the reduction of unemployment in some federal states of Germany and the growth of the labour crisis in some of its regions are among the main factors in the development of the migration system.

The development of the Ukrainian-German migration system has led to the emergence of socio-demographic, socio-economic, institutional, and political effects that have a positive and negative impact on the development

of the donor country and the recipient country. Thus, the socio-demographic consequences are manifested in the growth of the ethnic composition of the Ukrainian community in Germany (323 thousand people in 2018) with a relatively constant number of Germans in Ukraine and the rejuvenation of the age structure of the German population. The socio-economic effects are the improvement of emigrants (increase in the level of total income), increase in money transfers, etc.

Ukrainian migrants in Germany in 2018 received income of 257 million Euro, while employed in Ukraine; their income would be 41 million Euro. In 2006-2018, because of employment, migrants in Germany received a total income of 1,882 million Euro, and in Ukraine, according to the author's calculations, their income would be 312 million Euro.

Due to significant gaps in economic development, Ukraine is a recipient country of cross-border transfers. According to the NBU for 2015-2017, Ukraine received about \$ 900 million from Germany [21]. The savings of German migrants of Ukrainian origin can be one of the tools for investing in the economic well-being of families and the development of human capital.

The dynamic development of the Ukrainian-German migration system contributes to the intellectualization of migration processes, the progress of human potential and the growing role of educational migration. The share of Ukrainian students in the overall structure of foreign students in Germany is 2.5%. In general, in the 2018-2019 academic year 9171 people from Ukraine studied full-time in the German Free Economic Zone; in the 2017-2018 academic year - 9388 people; in 2016-2017 academic year – 9638 people (Fig. 2). In terms of gender, there is a predominance of female students (2/3 of students from Ukraine). The most popular specialities among Ukrainian students in Germany in the 2018-2019 academic year are law, economics, and social sciences (38 per cent), technical sciences (25 per cent) and humanities (16 per cent).

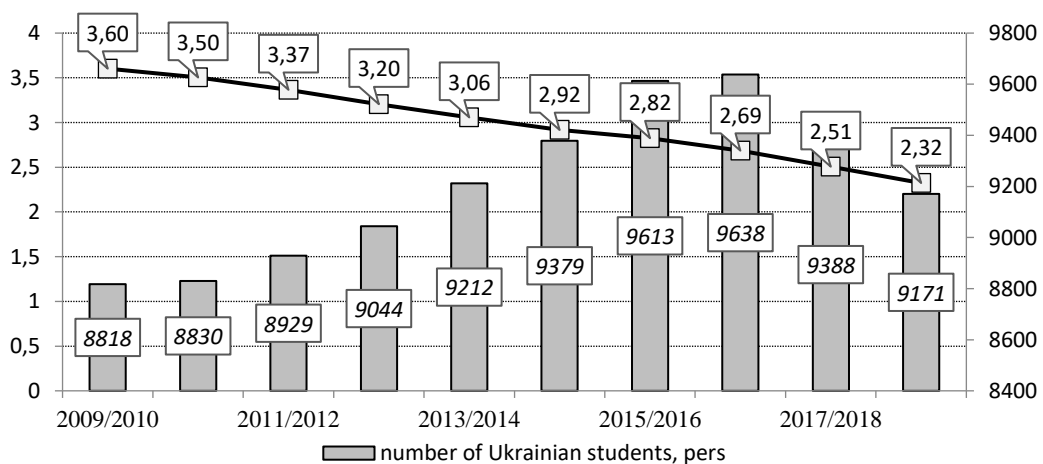


Figure 2 – The number of Ukrainian students and their share in the overall structure of foreign students in Germany, 2009-2019 academic year

Source: created by the authors based on data [22]

It is worth noting that Germany's migration policy, which is aimed at attracting foreign students, is based on the principles of equality and fairness, creating identical conditions for admission to free economic zones for German citizens and foreign citizens.

Conclusions. The external migration of the population of Ukraine is a driver of stimulating the demographic reproduction of individual EU countries, a factor in optimizing the demographic structure of the population, reducing the negative effects of the demographic crisis. Low values of birth rates, ageing of the local population, the transformation of the birth rate structure according to the age of a mother in the direction of its growth are the demographic consequences of the revival of migration activity of the population of Ukraine.

With the help of the constructed socio-demographic portrait of a Ukrainian migrant in the EU country, it was found that the rate of the female population of fertile age

is growing (from 60 per cent to 64 per cent), and the share of men has decreased to 36 per cent. Territorially, the centres of attraction of Ukrainian migrants are the southern and eastern federal states of Germany such as Mecklenburg-Vorpommern, Bavaria, the city-states of Berlin, Hamburg, and Bremen. The least attractive for immigrants from Ukraine are the lands of Thuringia and Schleswig-Holstein.

The analysis could serve as a basis for further research to identify the consequences of the formation of new migration systems with EU countries, especially Ukraine-Poland and Ukraine-Germany. Thus, the identified socio-economic consequences are as a basis for the formation of migration policy in the focus of minimizing risks and avoiding the negative effects of increasing income gaps in Ukraine and other highly developed countries, intensifying migration and the emergence of new migration vectors.

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