“Determinants of migration motives as a precondition for the migration flows formation”

AUTHORS	Kateryna Shymanska Mykola Kurylo https://orcid.org/0000-0003-1496-134X Oleksandra Karmaza https://orcid.org/0000-0003-4895-5220 Gennady Timchenko

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Kateryna Shymanska, Ph.D. in Economics, Assistant Professor of the Department of International Economics, Zhytomyr State Technological University, Zhytomyr, Ukraine.

Mykola Kurylo, Doctor of Law, Sumy National Agrarian University, Sumy, Ukraine.

Oleksandra Karmaza, Doctor of Law, Associate Professor, University of Modern Knowledge, Kyiv, Ukraine.

Gennady Timchenko, Doctor of Law, V. M. Koretsky Institute of State and Law of National Academy of Sciences of Ukraine, Kyiv, Ukraine.

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Kateryna Shymanska (Ukraine), **Mykola Kurylo** (Ukraine), **Oleksandra Karmaza** (Ukraine), **Gennady Timchenko** (Ukraine)

DETERMINANTS OF MIGRATION MOTIVES AS A PRECONDITION FOR THE MIGRATION FLOWS FORMATION

Abstract

The processes of international migration in recent years concern a large number of people due to many military conflicts intensification, borders liberalization, internationalization of education, etc. Migration motives are believed to consist of economic, socio-demographic, political and security, language-cultural and ecological and natural determinants. Reviewing migration motives and migration flows dependence on the respective determinants for Ukraine provided an opportunity to form a set of parameters to study empirically migration motivation for leaving abroad.

The article researches and generalizes the questionnaire results on migration motivation of individuals. The general results of respondents' views on their potential migration format are highlighted. The respondents' individual assessment of the reasoned determinants in relation to their influence on the motivating people to migrate abroad is analyzed. To confirm the results, the indicators of the individual determinants importance are presented. It is determined that the prevailing determinants of migration belong to the group of economic and political-security ones, in particular, low wages, high level of corruption in the country, high unemployment, corrupt and ineffective judicial protection system, state participation in armed conflicts and post-conflict state of the country, high level of inflation, high level of labor income taxation, the complexity of opening and closing a business.

Keywords demography, migration flows, migration motives, migration determinants, Ukraine

JEL Classification F22, J61, J28, J31

INTRODUCTION

Modern migration processes are highly dynamic. Intensification of international labor migration and the country's integration into the world community creates preconditions for its participation in international migration processes.

However, demographic problems, increasing public expenditures, increasing the burden on social systems and political and security threats are often caused by emigration of the labor pool, young professionals, and mass immigration from other countries.

In addition, migratory flows intensification changes the structure of labor supply, in particular at its educational and professional level, and determines the level of average wages in the regions most involved in migration processes.

Effective solution of the migration processes asymmetry and the formation of an optimal individual migration policy of the migration pair countries, taking into account the regional context, is possible provided that the determinants of migration and the levers of influence are taken into account.

There are significant variations in the approaches used to identify determinants of migration, however, the conclusions of migration research tend to explain migration movements by maximizing revenues, and therefore, OECD countries, as the main destination countries, are recognized the centers of migration attraction as the main destination countries.

Note that modern theories of international migration mainly explain the formation and vectors of migration flows through the economic factors effect (macroeconomic theories (analyze and explain the patterns of migration through the unemployment dynamics, inflation, GDP, wages in the country and population purchasing power)).

However, as the deeper analysis of trends in international migration shows, the differences in macroeconomic indicators of countries are not always correlated with their migratory attractiveness and migrants' migratory inclination. While determining the determinants totality and their impact on the migration motives formation, it is not possible to eliminate socio-demographic, ecological, natural and political-security, linguistic and cultural factors, as well as the role of migration networks, in particular, diasporas, whose influence has been formed for centuries.

In addition, there is a disregard for the institutional environment, formed under the influence of historical preconditions for geo-economical development, geopolitical ties and their genesis. It is special to every country and synergistically combined in the regional institutional environment formed during the regional integration processes. This necessitates allocating the determinants of migration motives.

1. THEORETICAL ANALYSIS

The current migration situation in Ukraine is a direct reflection of the country's socio-economic and political development. The main factors that affect the increase in the migration flow are: high inflation, as a result, a decrease in the monthly average wage, an increase in the number of unemployed, liberalization of visa procedures, and others. According to the Map of migrants flow from Ukraine (Figure 1) by Migration Policy Institute from 2000 to 2015, where the diameter of the circle above each country shows the total number of migrants from Ukraine to that country, so we see that the greatest number is noted in such countries as: Russian Federation, The United States and Kazakhstan (Migration Policy Institute tabulation of data from the United Nations, Department of Economic and Social Affairs, 2015). Here is the table of the main countries-recipients of Ukrainian migrants from 2000 to 2015 (Table 1).

Table 1. The main countries-recipients of Ukrainian migrants from 2000 to 2015

Country	The number of migrants from Ukraine, ths. people
Russian Federation	3270
The USA	346
Kazakhstan	338
Germany	261
Belarus	226
Italy	222
Poland	207

Frequently, the migration statistics differ in each country due to the absence of a single model for the calculation of migration flows. According to Raymer (2017) statistical modeling techniques for producing synthetic data provide more reliable information about migration flows.

Studies devoted to international migration emphasize the factors other than economic ones that give impetus to a person or group of individuals to decide on migration abroad, but the disparity

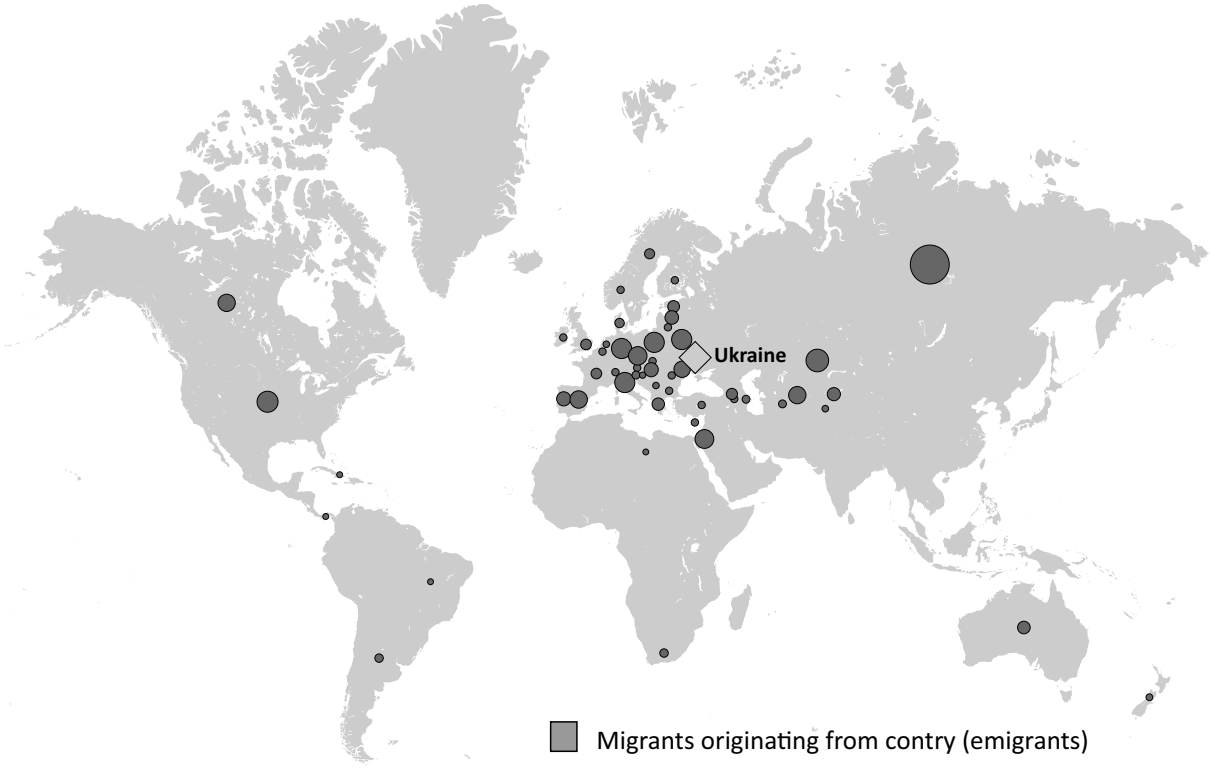

Figure 1. Map of migrants from Ukraine from 2000 to 2015

in understanding the composition of such factors and their impact on migration processes requires their justification and systematization. Factors of international migration can be grouped into six groups: economic, socio-demographic, politico-security, linguistic and cultural, ecological-natural and institutional.

In determining the basis for migration motivation of the population, not the notion of "factors" (economic, political, demographic, environmental, cultural, ethnic, legal, etc.) should be used, since "factor" is a combination of factors operating in the environment, and environment factors are extremely diverse by origin, character and intensity, but not all of them influence the migration motives formation, but the "determinant" concept (from Latin determinans – determinative).

The determinant should be understood as the dominant factor (interconnected set of factors). "Determinant of Migration Motives" is considered as the dominant factor (interconnected set of factors), which determines the migration motive formation and identifies the migratory tendency of a potential migrant (duration and distance of migration, lifestyle and employment in the country of destination, financial aspects of savings and remittances).

Determinant is:

- a *measurable* parameter in a particular measure when it comes to a phenomenon or circumstances that can be measured by indicators or a set of indices;

- *non-measurable* parameter if the circumstances, rules, norms, traditions, customs, relations, which form the general environment of the course of social phenomena or processes, are characterized (its assessment depends on the importance of the determinant on the personal level and, accordingly, the degree of the factor (factors) intensity perception.

The analysis of econometric models of the migration flow laws and the determining the factors taken into account (indicators-determinants) that were included in the calculation of indicators –

Table 2. The analysis of individual determinants of migration motives formation

Determinant	Index behavior		The author of the model considering the determinant
	Determinant	Indicator	
Economic determinants			
Median of family income	↑	↑	Cebula R. J., Duquette C. M., & Mixon F. G. (2013), Cebula R., & Clark, J. (2014)
GDP per capita (PPP)	↑	↑	Vavreshchuk N. G. (2007)
Average monthly salary of employees	↑	↑	Lapshyna I. A. (2002)
Accommodation costs	↑	↓	Cebula R., Foley M., & Hall J. (2012), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Employment rate	↑	↑	Lapshyna I.A. (2002), Cebula R., & Clark J. (2014).
Level of tax burden per capita	↑	↓	Cebula R. J., Duquette C. M., & Mixon F. G. (2013)
Rate of personal income tax	↑	↓	Cebula R., Foley M., & Hall J. (2012), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Rate of property tax	↑	↓	Cebula R., Foley M., & Hall J. (2012), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Individual income per capita	↑	↑	Cebula R., Foley M., & Hall J. (2012), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Unemployment rate	↑	↓	Vavreshchuk N.G. (2007), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Costs per pupil of junior and high school	↑	↑	Cebula R., Nair-Reichert U., & Coombs C. (2013)
Index of Economic Freedom	↑	↑	Cebula R. J., Duquette C. M., & Mixon F. G. (2013)
Number of industrial enterprises	↑	↑	Lapshyna I. A. (2002)
Loans to business entities	↑	↑	Lapshyna I. A. (2002)
Export	↑	↑	Lapshyna I. A. (2002)
Number of small enterprises	↑	↑	Lapshyna I. A. (2002)
Number of redundant employees	↑	↑	Lapshyna I. A. (2002)
Deposits of the population	↑	↑	Lapshyna I. A. (2002)
Consumption expenditure per inhabitant	↑	↑	Lapshyna I. A. (2002)
Socio-demographic determinants			
Density of population	↑	↓	Cebula R., Foley M., & Hall J. (2012)
Number of physicians per capita	↑	↑	Lapshyna I. A. (2002)
Population size of national migrants	↑	↑	Vavreshchuk N. G. (2007), Cebula R. J., Duquette C. M., & Mixon F. G. (2013)
Population	↑	↓	Lapshyna I. A. (2002), Cebula R. J., Duquette C. M., & Mixon F. G. (2013)
Volume of labor force	↑		Lapshyna I. A. (2002)
Population below the poverty line	↑	↓	Cebula R., Nair-Reichert U., & Coombs C. (2013)
The number of deceased per 100 thousand permanent residents	↑	↑	Lapshyna I. A. (2002)
Infant mortality rate	↑	↑	Lapshyna I. A. (2002)
Environmental determinants			
Average daytime temperature in January	↑	↑	Cebula R. J., Duquette C. M., & Mixon F. G. (2013), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Volume of toxic chemical waste per capita	↑	↓	Cebula R., Foley M., & Hall J. (2012), Cebula R., Nair-Reichert U., & Coombs C. (2013)
Number of parks available	↑	↑	Cebula R., Foley M., & Hall J. (2012)
Average number of cold days	↑	↓	Cebula R., Nair-Reichert U., & Coombs C. (2013)
Institutional environment determinants			
Neighborhood countries	stochastic variable		Vavreshchuk N. G. (2007)
EU membership	stochastic variable		Vavreshchuk N. G. (2007)
The existence of an agreement between the migration pair countries on mutual employment	stochastic variable		Vavreshchuk N. G. (2007)
The degree of procedures complexity for hiring a foreign employee in the recipient country	ranked dependent variable		Vavreshchuk N. G. (2007)
The ratio of shadow economy to official economy in the recipient country	ranked dependent variable		Vavreshchuk N. G. (2007)

pure migration (migration increase) or emigration, allowed to structure and systematize conclusions about the resulting indicator with the factor intensity increase (Table 2).

Analyzing the existing theories of international migration provides grounds for theoretical provisions explaining the migration processes laws based on the institutional approach. Within the framework of this study, a broad understanding of the institutional approach and, in this aspect, the approach defined in the theory of social capital (D. Massey, D. Massey) is most justified by taking into account: 1) conjunctural features of country of origin and destination country development; 2) formal (government policies) and informal institutions (social structures) operations; 3) the mental level of international migration development (the formation of internal motives of persons potentially mobile, who take into account all external factors when deciding on external migration).

This suggests that the development of migration processes is under the decisive influence of the existing formal and informal state, public and commercial institutions, rules, regulations and traditions of their functioning, their interconnection, which determines the nature and parameters of the migration processes environment and determines the need to define a separate group of determinants – institutional.

Overall, migration data are incomplete and may differ between countries, as there is no concrete model for analyzing all determinants and statistical figures, information that is available is sometimes controversial. Also, the problem is that there are no strict requirements for countries to provide internationally reliable and comparable data, some countries don't have specific data collection systems. In that aspect, a model that was elaborated by Integrated Modelling of European Migration and was considered in a study by Raymer, Wiśniowski, Forster, Smith, Peter, Bijak (2013). This model include expert information and measures of uncertainty. This is done to eliminate the shortcomings of information about immigration and emigration. This model can be used for harmonization country-to-country migration data, true flows consist of flows reported by sending country and flows reported by receiving country. Definitions of duration and coverage, accuracy of data collection influence these indicators. Undercounts of migration flows are minimal in this model.

The foregoing gives grounds for combining economic, socio-demographic, politico-security, linguistic-cultural and ecological-natural factors with institutional ones and creating a group of determinants of the formation of migratory motivation of a potential migrant (Table 3).

The economic factors take into account numerous macroeconomic, financial (including fiscal), infrastructure factors (infrastructure development, deployment of productive forces), while institutional ones in this case are a set of formal institutions (government bodies), a system of law and corresponding policies of the state, aimed at establishing the modes and conditions of investment, the taxation system, and the management of the money supply.

Slav'yuk, Shkvarchuk, Kondrat (2017) analyzed the financial market imbalance and its influence on a macroeconomic situation. A deterioration in the macroeconomic situation in the country, a decline in GDP growth, a decrease in the average wage, increase of inflation - all this have an effect on migration flows.

An example of the institutional component of economic factors may be the pension system, insurance, as the quality of these spheres is determined by the economic situation in the country. The Ukrainian pension system doesn't correspond to the modern requirements of society and can be one of the main factor for migration among the elderly population of Ukraine (Berezina, 2017).

Socio-demographic factors include the sex-age structure, the educational structure of the population, institutional and infrastructure factors – the development of the education system, health care, social insurance and the effectiveness of the relevant authorities and other formal and informal institutions, as well as a system of law and relevant policies of the state, aimed at development of education and health care, pension policy, policy of support of vulnerable groups of population and prevention of discrimination.

Political and security factors consist of features of the current public administration system, the level of democratization and maturity of civil society, and institutional factors in this case are represented by a set of formal institutions (authorities), a system of rules of law and an existing system of civil rights and freedoms protection. In addition, the same category of factors includes the risks of military conflicts, the formation of reactionary political movements (those that involve intolerance to certain layers and categories of the population).

Linguistic and cultural factors include factors of language, ethnic, cultural, religious environment, which are formed in the state as a whole or in its separate regions. In this case, the functioning of both formal (state linguistic and cultural policy, religious and cultural organizations) and informal (ethnic groups and informal education, diaspora, religious denominations, speakers of language and culture) institutions should also be taken into consideration.

This category should also include the relevant rules of law and the existing system of protection against ethnic, racial, linguistic and religious discrimination

Ecological and natural factors include, on the one hand, relatively well-established factors of natural resource potential (these factors in the short term are relatively independent of anthropogenic impact), and, on the other hand, – factors of the state of the environment, which determines the quality of air, access to the clean water and environmentally friendly and safe food.

Table 3. Determinants of migration motives formation

Group		Determinants	Determinant constituents
Institutional factors	Economic	Determinants of employment (E1)	unemployment rate (E1.1); structure of labor's demand (E1.2); wage level (E1.3.); The level of taxation of labor income (E1.4)
		Determinants of doing business (E2)	ease of setting up and closing down a business (E2.1); the level of taxation of business income (E2.2)
		Determinants for the preservation of property (E3)	inflation rate (E3.1); forms of savings (E3.2); reliability of the banking system (E3.3); the level of taxation of property (E3.4)
		Infrastructure determinants (E4)	access to communication facilities (E4.1); the development and diversity of transport links (E4.2); road development (E4.3)
		Determinants of protection of economic rights (E5)	labor rights protection system (E5.1); system of shareholders' rights protection (E5.2); system for appealing decisions of tax authorities (E5.3)
	Socio-demographic	Demographic determinants (S1)	population density (S1.1); sex and age structure of the population (S1.2)
		Determinants of access to public goods (S2)	development of the social insurance system (S2.1); development of the education system (S2.2 development of health care system (S2.3)
		Determinants of protection of sociodemographic rights (S3)	the system of protection of the rights of people with disabilities (C3.1); system of protection against gender discrimination (S3.2); quality control of goods and services (S3.3)
	Politico-security factors	Political and ideological determinants (P1)	political regime in the country (P1.1); the level of corruption in the country (P1.2); the presence of political movements that imply intolerance to certain categories of population (P1.3)
		Determinants of military and security (P2)	participation of the state in armed conflicts and the post-conflict state of the state territory (P2.1); compulsory military service requirements (P2.2)
		Determinants of protection of civil rights and freedoms (P3)	system of protection against terrorist threats (P3.1); system of protection against persecution for political reasons (P3.2); system of judicial protection (P3.3)
Institutional factors	Linguistic and cultural factors	Language and ethnic determinants (L1)	the presence of diasporas; the proximity of language and ethnic characteristics of the cultural environment; freedom to use minority languages; freedom for ethnic self-identification and self-expression
		Religious and cultural determinants (L2)	freedom of religion; development and distribution of religious organizations.
		Determinants of protection of civil rights and freedoms (L3)	system of protection against religious discrimination; system of protection of rights to ethnic expression; protection of minority language rights
	Ecological and natural factors	Natural and climatic determinants (N1)	natural conditions and availability of natural resources (N1.1); climatic conditions (N1.2); access to the use of natural resources (N1.3); risks of natural disasters and cataclysms (N1.4).
		Environmental determinants (N2)	the degree of environmental pollution (N2.1); access to clean water and eco-friendly food (N2.2).
		Determinants of protection of environmental rights (N3)	protection of the rights to a safe environment (N3.1); system of responsibility for environmental pollution (N3.2).

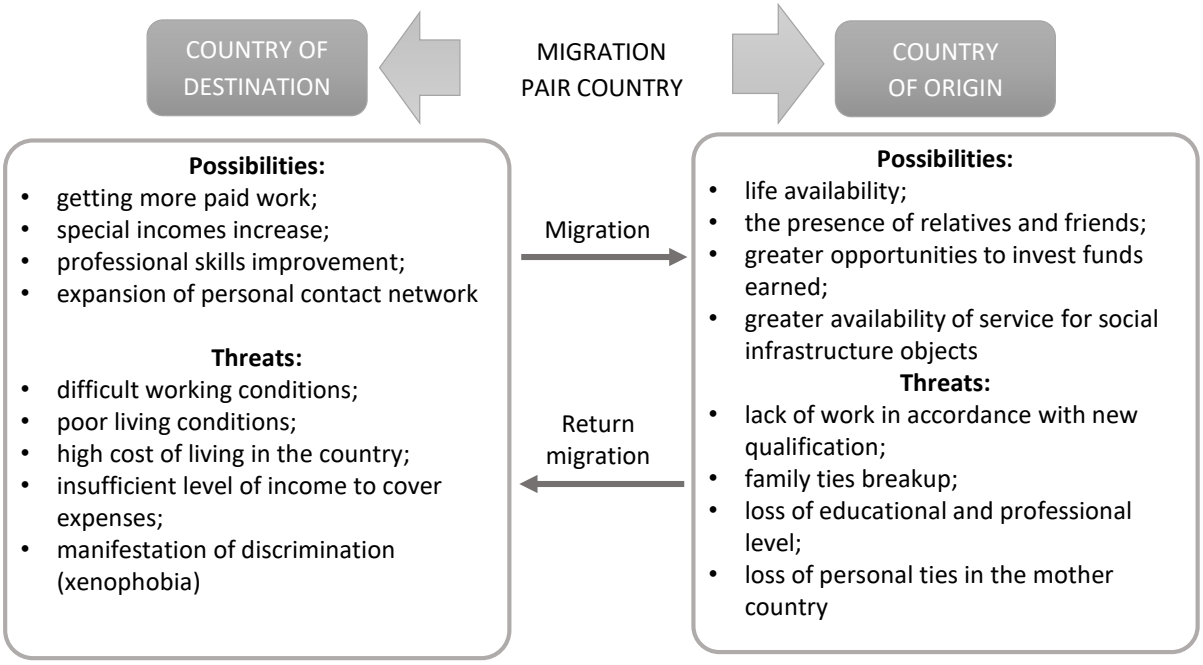

Figure 2. Personal "pulling-pushing" factors of migration motives and motives of return home formation

As an example, due to climate changes in Nigeria, there is a conflict between native communities and migrants farmers that are searching for grazing lands. Amusan, Abegunde, Akinyemi (2017) define that a resettlement in this country causes contestations in order to get access to natural resources. Also in this category, it is advisable to include migration after climate disasters, which has a non-permanent effect, but nevertheless affects migration data. The interconnection of climate change, natural disasters and migration was considered by Mbaye (2017).

Institutional factors are represented by a system of environmental legislation, state environmental policy and existing mechanisms for protecting the rights of the population to a safe and healthy life and health environment.

Bakre, Dorasamy (2017) studied in detail the combination of institutional and ecological factors in Machibini, South Africa. In this region, migration of population is explained by water shortages and poor governmental support.

The value of the determinant – the parameter – in the destination country and country of origin that form the migration pair determines the migrant's tendency to choose the destination country.

The determinant intensity can be demonstrated on a minimum to the maximum value scale, which is estimated by the individual migrants or potential migrants. Thus, the determinants set and their intensity that form an individual' migration motives can be called the personal factors of "pulling-pushing" of the migration motive formation and the motive for returning to their homeland (their structure is shown in Figure 2).

Simpson (2017) highlights that governments should better understand what forces influence on migrants decisions (e.g. economic conditions or socio-demographic factors), that will help policymakers set policy to target (or reduce) certain types of migrants.

Given the developed system of determinants of the migration motives formation for further research to analyze the international migration economic environment within individual regional migration associations, it is expedient to study a number of indicators and indicators for formulating the causal links of human resources international migration.

2. EMPIRICAL ANALYSIS

The foregoing identifies the appropriateness of determining the non-correlation patterns of the migration flows dependence on macroeconomic indicators, namely aggregating the assessing the focus groups of individual determinants action.

The hypothesis of the study, however, is the assumption that economic determinants (usually measurable ones) that act on the decision of individuals to decide on migration abroad act simultaneously with other (socio-demographic, politico-security, linguistic-ethnic and ecological and natural sciences) determinants, which are mostly not can be measured in specific measures.

To achieve the study purpose, a questionnaire entitled "A Questionnaire on the Preconditions for Migration Abroad" was developed, which was designed to collect empirical material on the individual assessments by respondents of various determinants importance.

The survey was aimed at analyzing the prevailing influence of individual determinants in the personal migration motive formation and identifying the main trends in respondents' views on migration abroad issues.

The questionnaire consisted of 26 questions (including 5 questions with the scale of migration determinants assessment) and is divided into four blocks: 1) information about the respondent (his demographic and social characteristics, as well as the degree of deprivation of his household); 2) ine formation on migration intentions and the likely migration format; 3) information on the factors that may cause migration abroad; 4) information on the possibilities of integration in the country of potential migration.

Respondents were asked to evaluate on the 5-point scale the importance of 41 determinants to shape their personal inclination to migrate abroad

Respondents filled the questionnaire online without fixing the filling time in order to facilitate processing the questions by respondents and making them a weighted choice of the most appropriate option.

The analysis of the individual respondents' assessment of various determinants impact on the formation of their personal migration motives was based on providing them with the number of points from 0 to 100 (where the score "1" (the lowest significance) corresponds to 0 points, "2" – 25 points, "3" – 50 points, "4" – 75 points, "5" – 100 points).

If the respondent gave the same number of points to several determinants, in order to further rank the determinants, we proceeded from the assumption that they are equivalent to the individual respondent.

On the basis of analytical processing of the number of points given to each factor, ranks are assigned – the serial numbers, which determine the places of each determinant in the aggregate determined by a particular determinants respondent.

In particular, the rank of each j-th determinant corresponds to the number of natural series 1, 2, 3 ... n, where n is the number of determinants. However, based on the possibility of respondents assessing the significance of different determinants in the same way, they are assigned standardized ranks – the fraction of the division of the sum of places occupied by determinants of equal rank into the total number of such equally valued determinants.

For further analysis, the letter designations for the analysis objects and to further construct the matrix of the points obtained by the determinants were introduced:

- m is the number of respondents participated in the survey;
- 1, 2, 3 ... m, are the order numbers of respondents;
- n – the number of determinants being investigated and offered to respondents to assess their impact on the personal migration motives formation;
- 1, 2, 3 ... n, – the order numbers of the determinants under study;

- m_j – the number of respondents who rated j-th determinant;
- $m_{100\,j}$ – the number of respondents with the highest possible estimates (100 points) for the j determinant.

Based on the results of the individual assessments generalization, a matrix of points was constructed, where $c_{i,j}$ is the estimation of the relative weight (in balls) value of the given by the i-th respondent to the j determinant. While processing individual estimates, the matrix of points is transformed into a matrix of ranks, where $R_{i,j}$ is the rank of the j determinant by the i-th respondent.

In general, in analyzing the results of the questionnaire on the determinants importance on the migration motivation formation, a number of indicators were used to assess each determinant's importance:

1) the average value of the estimator in points;
2) the sum of the ranks assigned by the respondents to the j-th determinant;
3) the average rank for each determinant;
4) the frequency of the maximum possible estimates (100 points) given by the respondents to each determinant;
5) the average weight of each determinant (normalized estimate).

3. DATA DESCRIPTION AND RESULTS

Let's consider the above mentioned indicators.

1) The average value of the determinant's estimation in points. This uses the formula:

$$M_j = \frac{\sum_{i=1}^{m} c_{i,j}}{m_j}. \quad (1)$$

In particular, the indicator $\left(M_j\right)$ is defined as the arithmetic mean of the respondents' assessment of the j determinant and can range from 0 to 100 based on the respondents' individual assessment of the determinant importance to form their personal migration motivation.

In this regard, the determinant's importance is higher, the greater the value of M_j. According to this indicator, determinants are identified that have the highest mean value. These include: low and/or unsatisfactory wages (76.984); high level of corruption in the country (74.603); a corrupt and/or ineffective system of judicial protection (71.825); high unemployment rate (67.857); participation of the state in armed conflicts and the post-conflict state of the country's territory (67.857).

2) The sum of ranks assigned by respondents to the j-th determinant. According to the results of constructing a matrix of individual ranks, the sum of ranks for j-th determinant is determined by the formula:

$$S_j = \sum_{i=1}^{m} R_{i,j.} \quad (2)$$

In particular, in this case, the sum of ranks allowed identifying determinants with the smallest sum of ranks, which indicates the greatest importance of such determinants.

3) Average rank for each determinant. This indicator is calculated based on the sum of the ranks for the j-th determinant by the formula:

$$\overline{S}_j = \frac{\sum_{i=1}^{m} R_{i,j}}{m} = \frac{S_j}{m}. \quad (3)$$

In particular, based on the results of this indicator calculation and the sum of the ranks, the determinants were selected, which are characterized by the lowest values of the sum of rank and average rank. These include: low and/or poor wages (10.5); high level of corruption in the country (12.4); corrupt and/or ineffective judicial protection system (13.2); high unemployment rate (13.9); high inflation (14.4).

4) Frequency of the maximum possible marks (100 points) given by the respondents to each determinant. Such indicator is calculated by the formula:

$$K_{100\,j} = \frac{m_{100\,j}}{m_j}. \quad (4)$$

Table 4. Summary of indicators of respondents' assessing the determinants influence on their migration motivation

Determinant code	Sum of ranks (S_j)	Average rank $(\overline{S}_j)$	Average value in points $(\overline{M}_j)$	Frequency of maximum possible estimates $(K_{100\,j})$	Average weight (normalized estimate) (W_j)
E1.3	664.5	10.5	76.984	0.492	0.043
P1.2	780	12.4	74.603	0.508	0.040
E1.1	877	13.9	67.857	0.317	0.037
P3.3	831	13.2	71.825	0.476	0.037
P2.1	922.5	14.6	67.857	0.429	0.035
E3.1	906	14.4	63.889	0.286	0.033
E1.4	995	15.8	61.905	0.238	0.032
E2.1	1081	17.2	58.333	0.238	0.031
N2.1	1085.5	17.2	59.127	0.286	0.030
N2.2	1051.5	16.7	60.317	0.254	0.030
E2.2	1180	18.7	55.556	0.175	0.029
S2.3	1076	17.1	59.921	0.254	0.029
E1.2	1316	20.9	50.397	0.143	0.028
S3.3	1108.5	17.6	58.730	0.270	0.028
P3.1	1113	17.7	58.730	0.317	0.028
E3.4	1272.5	20.2	51.190	0.111	0.025
E4.2	1206	19.1	52.778	0.159	0.025
E3.2	1286.5	20.4	50.397	0.190	0.024
P1.1	1283	20.4	50.000	0.143	0.024
P1.3	1248	19.8	52.381	0.175	0.024
E3.3	1292.5	20.5	48.810	0.159	0.023
E5.3	1326	21.0	49.206	0.190	0.023
S2.2	1352.5	21.5	47.619	0.111	0.023
S3.1	1483	23.5	44.841	0.143	0.021
P2.2	1417	22.5	46.032	0.206	0.021
P3.2	1419	22.5	44.444	0.143	0.020
E5.1	1585	25.2	39.683	0.095	0.018
S2.1	1576	25.0	40.873	0.095	0.018
L2	1515.5	24.1	41.667	0.175	0.018
E5.2	1633	25.9	38.492	0.095	0.017
S1.2	1648	26.2	35.714	0.063	0.017
S3.2	1598	25.4	38.095	0.063	0.017
N1.1	1541	24.5	39.683	0.095	0.017
E4.2	1630	25.9	36.508	0.095	0.016
L1	1647,5	26.2	37.698	0.143	0.016
L3	1602	25.4	38.492	0.159	0.016
N1.4	1648	26.2	34.921	0.111	0.016
N1.3	1734,5	27.5	33.730	0.063	0.015
E4.1	1712,5	27.2	31.746	0.095	0.014
S1.1	1814	28.8	28.571	0.063	0.013
N1.2	1784,5	28.3	30.159	0.095	0.013

According to this indicator results, the determinants were identified, which received the highest possible estimates (100 points) from respondents.

These include: high level of corruption in the country (0.508); low and/or unsatisfactory wage level (0.492); corrupt and/or ineffective judicial protection system (0.476); state involvement in armed conflicts and post-conflict state of the country (0.429); high unemployment rate (0.317); the existence of terrorist threats and/or their low level of protection (0.317).

5) Average weight of each determinant (normalm ized estimate). In accordance with the methodology, the average weight of each determinant (normalized estimate) is calculated by the formula

$$W_j = \frac{\sum_{i=1}^{m} W_{i,j}}{\sum_{j=1}^{n}\sum_{i=1}^{m} W_{i,j}};\ W_{i,j} = \frac{c_{i,j}}{\sum_{j=1}^{n} c_{i,j}}, \qquad (5)$$

where $W_{i,j}$ is the weight (normalized estimate) given by the respondent to the j-th determinant; W_j is the total weight given by respondents to the j-th determinant.

According to the results of normalized estimation determination, a matrix of the relative value of determinants is compiled (Table 4).

This makes it possible to identify the prevailing determinants, which are defined to have the most significant impact on the migration motivation formation. In particular, the determinants characterized by the highest average weight (normalized estimate) should be as follows (according to loss in value by respondents): 1) low and / or unsatisfactory wages; 2) high level of corruption in the country; 3) high unemployment; 4) a corrupt and / or ineffective judicial protection system; 5) participation of the state in armed conflicts and the post-conflict state of the country's territory; 6) high inflation; 7) high and/or burdensome labor income taxation; 8) the complexity of setting up and closing down a business.

Thus, according to the study results, the main determinants of the migratory motivation formation from the respondents speak for economic and political-security determinants prevailing.

In this regard, we consider it expedient to draw attention to the exceptional importance of state migration policy development in terms of regulating emigration flows on the basis of planning the risks of specified determinants change. This means the need to review the risks identified and used by the State Migration Service of Ukraine.

CONCLUSION

Based on the analysis of existing determinants of migration flows formation, the following conclusions are formulated:

1. The economic, socio-demographic, politico-security, linguistic-cultural and environmental and natural determinants of migration motives are determined by combining the relevant environment factors with the institutional factors, based on the expediency of using the institutional approach in the study of international migration.

2. The system of indicators and information sources is described, the use of which is useful for assessing the causal relationships of the above-mentioned determinants to the migration flows formation in countries and regions.

3. Survey results were analyzed by considering the indicators of the individual determinants importance for the respondents as to forming motives for migration abroad.

4. According to the response handling results, it has been empirically proven that the prevailing determinants of migration belong to the groups of economic and political-security ones, in particular (in order of decreasing the normalized valuation): low wages, high level of corruption in the country, high unemployment, corrupt and ineffective system judicial protection, state participation in armed conflicts and post-conflict state of the country, high inflation, high level of labor income taxation, complexity of setting up and closing down a business.

In general, the study made it possible to confirm the hypothesis that, in addition to economic determinants, individual decision-making migration decisions have a significant political and security impact, and therefore it is inappropriate to assess the correlation between migration flows and changes in mac-

roeconomic indicators as the process of migration motivation formation is subjective and takes place at the personal level and, therefore, allows us to view the general influence of external factors on the formation of an environment conducive to the migration motives.

In addition, such analysis should be carried out in the regional, age and gender sectors to identify the potentially dangerous intensity of the factors (determinants) for the relevant population groups, taking into account sectoral features.

REFERENCES

1. Amusan, L., Abegunde, O., Akinyemi, T. E. (2017) Climate change, pastoral migration, resource governance and security: the Grazing Bill solution to farmer-herder conflict in Nigeria. *Environmental Economics, 8*(3), 35-45. http://dx.doi.org/10.21511/ee.08(3).2017.04
2. Bakre, O., Dorasamy, N. (2017). Driving urban-rural migration through investment in water resource management in subsistence farming: the case of Machibini. *Environmental Economics, 8*(1), 66-74. http://dx.doi.org/10.21511/ee.08(1).2017.07
3. Beaman, L. A. (2011). Social networks and the dynamics of labour market outcomes: Evidence from refugees resettled in the US. *The Review of Economic Studies, 79*(1), 128-161. Retrieved from http://faculty.wcas.northwestern.edu/~lab823/beaman_ethnicnetworks.pdf
4. Berezina, S. (2017). Perspectives of accumulation of funds in the accumulative pension insurance system of Ukraine. *Investment Management and Financial Innovations, 14*(2), 128-138. http://dx.doi.org/10.21511/imfi.14(2).2017.12
5. Cebula, R. J., Duquette, C. M., & Mixon, F. G. (2013). Factors influencing the state-level settlement pattern of the undocumented immigrant population in the United States. *Atlantic Economic Journal, 41*(3), 203-213. Retrieved from http://mpra.ub.uni-muenchen.de/49442/
6. Cebula, R. J., Nair-Reichert, U., & Coombs, C. K. (2014). Total state in-migration rates and public policy in the United States: a comparative analysis of the Great Recession and the pre-and post-Great Recession years. *Regional Studies, Regional Science, 1*(1), 102-115. Retrieved from http://mpra.ub.uni-muenchen.de/56484/
7. Cebula, R., & Clark, J. (2014). *Economic Freedom, Regulatory Quality, Taxation, and Living Standards.* Retrieved from http://mpra.ub.uni-muenchen.de/58108/
8. Cebula, R., Foley, M., & Hall, J. (2012). *The Impact of Economic Freedom and Total Freedom on Gross State In-Migration: An Exploratory Study of the Great Recession Experience.* Retrieved from http://mpra.ub.uni-muenchen.de/55270/
9. Cebula, R., Nair-Reichert, U., & Coombs, C. (2013). *Gross In-Migration and Public Policy in the US during the Great Recession: An Exploratory Empirical Analysis,* 2008–2009. Retrieved from http://mpra.ub.uni-muenchen.de/55449/
10. Hugo, G. (2005). The new international migration in Asia: challenges for population research. *Asian Population Studies, 1*(1), 93-120. Retrieved from http://www.tandfonline.com/doi/full/10.1080/17441730500125953?scroll=top&needAccess=trueme
11. Lapshyna, I. A. (2002). *The International Labor Migration: Ukrainian Aspect* (on the Materials of West Regions of Ukraine) (Doctoral dissertation, Ternopil Academy of National Economy).
12. Massey, D. S. (2015). A missing element in migration theories. *Migration letters: an international journal of migration studies, 12*(3), 279. Retrieved from http://www.tplondon.com/journal/index.php/ml/article/viewFile/568/411
13. Mbaye, L. *Climate change, natural disasters, and migration*. IZA World of Labor 2017: 346 http://dx.doi.org/10.15185/izawol.346
14. Migration Policy Institute tabulation of data from the United Nations, Department of Economic and Social Affairs (2015), "Trends in International Migrant Stock: Migrants by Destination and Origin," United Nations database, POP/DB/MIG/Stock/Rev.2015. Retrieved from:http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml
15. Munshi, K. (2003). Networks in the modern economy: Mexican migrants in the US labor market. *The Quarterly Journal of Economics, 118*(2), 549-599. Retrieved from http://web.mit.edu/14.75J/www/mex5.pdf
16. Raymer, J. *Measuring flows of international migration*. IZA World of Labor 2017: 354 http://dx.doi.org/10.15185/izawol.354
17. Raymer, J., Wiśniowski, A., Forster, J. J., Smith, Peter W. F., Bijak, J. (2013) Integrated Modeling of European Migration. *Journal of the American Statistical Association, 108*(503). http://dx.doi.org/10.1080/01621459.2013.789435
18. Simpson, N. *Demographic and economic determinants of migration*. IZA World of Labor 2017: 373. http://dx.doi.org/10.15185/izawol.373
19. Slav'yuk, R., Shkvarchuk, L., Kondrat, I. (2017). Financial market imbalance: reasons and peculiarities of occurrence in Ukraine.

Investment Management and Financial Innovations, 14(1-1), 227-235. http://dx.doi.org/10.21511/imfi.14(1-1).2017.09

20. The Fund For Peace (2017). Fragile States Index http://fundforpeace.org/fsi/data/
21. The Heritage Foundation (2017). Index of Economic Freedom. Retrieved from http://www.heritage.org/index/visualize
22. United Nations database (2008). International Migrant Stock: The 2008 Revision. Retrieved from https://esa.un.org/migration/p2k0data.asp
23. United Nations Development Programme (2017). Human Development Data Retrieved from http://hdr.undp.org/en/data#
24. United Nations Population Division (2017). Labor force, total. Retrieved from http://data.worldbank.org/indicator/SL.TLF.TOTL.IN
25. Vavryshchuk N. (2007). I*nternational Labour Migration in the Context of the Enlargement of the European Union* (Doctoral dissertation, Institute of World Economy and International Relations, the National Academy of Sciences of Ukraine).
26. World Bank (2017). International migrant stock (% of population). Retrieved from http://data.worldbank.org/indicator/SM.POP.TOTL.ZS
27. World Bank (2017). Net migration. http://data.worldbank.org/indicator/SM.POP.NETM