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PAPER

Impact of International Migration Flows on the European Union and Ukraine

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Abstract The paper presents the results of the research of the international migration process in the EU Member States that are destination countries for migrants from many countries including Ukrainians. The study discuses different approaches and methods analyzing migration process and comes to the point that econometric modeling based on panel data analysis is one of the most appropriate and useful tools in case of studying a group of countries, in this paper – the EU Member states. The article investigates economic and social factors that influence inward migration to the destination countries: Czech Republic, Hungary, Slovak Republic, Estonia, Italy, Spain, Germany, and Poland, which are deeply involved into migration process with the other European countries and non-EU countries, including Ukraine. It is revealed that immigration flows are highly dependent on GDP per capita and income level in the host countries. The results of the analysis have also shown that the role of migration flows in the socio-economic development of the EU and Ukraine is constantly increasing. This is due to both the quantitative increase in the number of recent immigrants in the EU countries and their percentage of total population, as well as to the growing influence of migrant activities on the socio-economic development of countries. At the same time, migrant remittances have a significant impact on economies of home countries. For instance, for Armenia, Bosnia and Herzegovina, Georgia, Moldova, Montenegro and Ukraine the migrant remittances inflows in 2019 exceeded 10% of national GDP.

Keywords: international migration, immigration flows, final consumption expenditure,

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1. Introduction

The migration process in European countries has played an important role in labor market development and socio-economic conditions since XVII-XVIII centuries. Over time, local labor markets became dependent on migrants inflows and outflows so deeply that nowadays it is impossible to imagine their functioning without migrant workers. The XX century was characterized by globalization process, economic growth, improving of leaving conditions, population ageing, decrease in fertility index, increase in demand for high- and low-skilled workers, and as a natural consequence Europe faced intensification of migration process. From the very beginning of the XXI century European Union has faced serious challenges connected with migration process: enlargement in 2004 when ten new member states joined EU (European Union, 2000-2009).

The third huge wave of changes was brought by financial and economic crisis of 2008, followed by rapid fluctuations in migrant flows and changes in migration policy of many countries.

The last but not the least challenge fell on migration crisis of 2015 when Europe faced 2.2 million people "illegally present" (European Parliament, 2019).

Ukraine is deeply involved into the migration process all over the globe and also with European countries. According to official data, in 2017 the number of Ukrainian migrants in the world was about 6 million people that represents about 2.2 per cent of all migrant stock in the world. Among them more than 20 per cent of Ukrainians lived in EU, which was about 1.2 million of migrants (The World Bank, 2019).

Ukraine, being one of the biggest countries in Eastern Europe, is deeply involved into the migration process. From the early 2000-s migration flows to EU countries have come through certain fluctuations from rapid growth to decrease in their numbers. Thus, the main factors of Ukrainian emigration to the European countries are: economic crisis of 2008, armed conflict since 2014, regional differences in economic development, providing a visa-free travel regime with EU, obstacles and controversial effects in providing structural and institutional reforms in social and economic sphere (such as pension reform and others), decline in economic growth during 2014-2016. In Ukraine GDP per capita decreased rapidly by 31.6% in 2015 and amounted to 2125 US dollars. The lowest and negative rate of GDP growth (since the global economic crisis of 2008-2009) was also observed in the same year -9.8. Trade of goods in % to GDP decreased in 2012 and stayed relatively stable in 2012-2018, but still didn't reach its point of 2011 level. A rapid inflation rise was shocking and real prices increased almost two-three times, having decreased real purchasing power for people in 2015. Nevertheless, due to implemented changes in macroeconomic policy and providing structural reforms (flexible exchange rate; stabilization of the banking sector – credit risk decline, refinancing rate discount; supporting business and organization interests,

etc.) GDP growth renewed its upward trend and amounted to 2.44%. However, GDP growth remained low in the following years (Table 1) and amounted to 3.44% in 2018. CPI recovery was observed since 2016 and decreased by 24.1% in 2018 compared to 2017. The very positive governmental changes were implemented for opening business – the time required to start a business was reduced by 4 times in 2018 compared to its level in 2008-2010. FDI net flows also demonstrated positive dynamics in 2015-2018 but stay at low level compared to pre-crisis period.

Table 1. Dynamics of economic, social, and demographic indicators of Ukraine in 2008-2018

Indicator Name	2008	2013	2016	2017	2018
GDP per capita (USD)	3887	4030	2188	2641	3095
Unemployment (% of total work force)	6.36	7.17	9.35	9.51	9.38
Emigration, number*	22402	22187	6465	430290	610687
Personal remittances, received (USD, million)	6782	9667	9472	12132	14694

* in 2017-2018 the data includes intraregional, interregional and interstate migration flows

Source: (The World Bank. Countries and Economies, 2019); (State Statistics Service of Ukraine, 2020).

The demographic situation and local labor market immediately reflects the current economic condition. Thus, a negative tendency of population growth remains during all the observed period of 2008-2018, with its small recovery in 2015. The fertility rate fluctuated at 1.37-1.53 point in 2008-2017, which is a very uncertain position for the demographic situation and total economy; under such circumstances it is impossible to have positive population grow in the country. The unemployment rate was increasing since the armed conflict in the East regions and only reduced by 1.36% in 2018 (Table 1), which is another push-factor for those, who have intention to emigrate.

Trying to avoid instability in Ukraine, the citizens are looking for temporary and permanent job opportunities. The year 2015 brought an increase in the number of Ukrainians migrating to the EU countries; for instance, the number of Ukrainian migrants grew by 62.85% compared to 2014 and amounted to 4.52% of total quantity of foreign migrants in Estonia; in 2018 their percentage reached 5.27%. As far as Poland has always been one of the most popular destinations for Ukrainian migration because of cultural background and easy access to the job market, in the middle of 2015 about 400 thousand declarations for temporary job were issued for Ukrainians. (Jaroszewicz M., 2015). By 2017 the stock of migrants from Ukraine amounted to 221307 people that were about one third of the total migrant stock in Poland.

Thus, Poland, Estonia, Czech Republic, Hungary, Slovak Republic, Italy, Spain, and Germany have traditionally accepted Ukrainian citizens and been the countries of immigration. Romania, Latvia, and Lithuania are also attractive for Ukrainians but because there is a negative net migration over the latest years, they may be considered as countries of emigration and we do not take them into account in the analysis.

Immigration and emigration is relatively balanced in Poland, but because it is one of the most popular countries for Ukrainian migrants it is also included into analysis (Table 2):

Table 2. Net Migration in selected EU countries in 2008-2018, number

Country	2008	2013	2015	2016	2017	2018
Bulgaria	-1397*	-1108	-4247	-9329	-5989	-3666
Czech Republic	56789	4230	3918	25219	24531	39168
Estonia	-735	-2631	2410	1030	5258	7071
Germany	-55743	433385	1196686	496090	356409	353471
Italy	453765	181719	133123	143758	188330	175364
Hungary	28061	4277	15119	13729	28241	34759
Latvia	-22367	-14262	-10640	-12229	-7808	-4905
Lithuania	-16453	-16807	-22403	-30171	-27557	-3292
Slovakia	7060	2379	3127	3885	3722	3955
Spain	310 643	-251531	-1761	87421	163272	334158
Poland	-14865	-56135	-40690	-28139	-9139	24289
Romania	-163867	-8109	-61923	-70123	-64758	-59083

* - in 2007

Source: calculated by authors based on (Eurostat, 2020).

Data presented in table 2 indicate that the majority of East European countries have negative net migration flow. This is due to the fact that the most active part of the population of these countries, primarily youth, leaves the less affluent EU countries in an effort to get higher paid jobs in more developed countries. The countries of Central and Eastern Europe, in turn, attract immigrants from post-Soviet states in their attempt to compensate the losses of the national labor market associated with a large outflow of labor force.

Together with the mentioned above push-factors for Ukrainian out-migration process, there is a wide range of attractive pull-factors to migrate to the EU Member States. Difference in income, social security, higher living standard, easier to make a start-up, etc. For instance, in 2018 GDP per capita was more than 4.5 times higher in Estonia and Italy, about 5 times higher in Czech Republic, Poland and Slovakia, 7 times higher in Hungary, about 6,5-8 in Spain and Germany. (Eurostat, 2020). Unemployment rate has demonstrated stable tendency of declining in all these EU countries, being the lowest in Czech Republic (2.2%), Germany (3.4%), and Hungary (3.7%) in 2018. Considering demographic situation in Europe, it is necessary to mention that it influences local labor markets negatively, where low fertility rate (1.7 in Czech Republic, 1.6 in Germany and Estonia, 1.5 in Hungary, Poland, and Slovak Republic, 1.3 in Italy and Spain) and population aging, make receiving countries attract additional labor force that became another pull-factor for Ukrainian migrants.

None of the EU Member State has fertility rate higher than 1.9, which is not enough

for natural population growth. Such social indicators as government expenditure on education, research and development expenditure in Ukraine have become significant push-pull factors for out-migration of highly educated people and high-skilled workers. While in Ukraine research and development expenditure remains less than 0.9% of GDP in 2008-2018, it amounted to 2% in Czech Republic and 3% in Germany (2018). Social protection expenditure is the highest and takes about a quarter of GDP in Germany (29.7%), Italy (29.3), and Spain (23.1%) among the chosen group of EU countries.

2. Literature review

The issues of labor markets trends and international migration process have been widely studied in the literature of European, American, Asian, and CIS authors. Since Europe has become one of the most popular destinations for migrants, a special attention of scientists has been drawn to this process, its factors, influence, and consequences for local economies.

Kahanec M., Pytliková M., Zimmermann K. F. (2014) discuss EU enlargement and the impact of east-west migration on the situation in labor market. The research evaluates migration flows to the EEA and five non-EU countries (Australia, Canada, New Zealand, Switzerland, and the United States) as destination countries from the New Member States (NMSs) of EU (2004 and 2007 years). The study provides a deep analysis on the factors that determine flows, which are migration costs (difference in income, distance, language barriers, existence of migration "networks" between the home and host country, difficulties or ease in access to the labor market). By using the difference-in-differences and fixed effects econometric models, the authors conclude that migrants' connections ("networks"), distance, and low cultural and language differences between two countries are the most significant factors for migrants. Whereas, labor market policy (opening) turned out to be higher for EU-2 than for EU-8 countries. All GDP and GDP per capita variables coefficients were found to be statistically insignificant. Generally, the research demonstrated positive effect for migration flows from EU enlargement. Running triple differences econometric model, that also included such group of countries as Albania, Croatia, Russia, and Ukraine (CEE4) into the model, the research shown even more positive effect of EU enlargement for the first two groups of countries: EU8 and EU2, than for the third group.

A. Zaiceva (2014) describes evidence of the East-West migration in the enlarged EU as a generally positive effect on the labor market (wage increase, decrease in load on the sending labor market, and unemployment rate reduction). At the same time, the author discusses negative side of outmigration, pointing out on demographic challenge and skill loss in home countries.

J. Ritzen, M. Kahanec, J. Haas (2017) consider EU mobility issues after the Great Recession and potential future Brexit. The authors express an opinion that changes happening in EU labor migration, students and travelers mobility are beneficial and have more positive than negative effect for the both sides: the senders and receivers. Furthermore, migrants themselves rather win than loose in migration process by having

new career opportunities or getting a chance to start their own business and be self-employed in the host countries. At the same time, the research argues that macroeconomic impact from migration is higher in host than in home countries.

J. Ritzen, M. Kahanec (2017) compare institutional aspects of inward migration from some EU countries to other ones and from outside the EU, emphasizing on migration crisis in 2015-2016. The study reveals the reasons and differences in migration process for EU citizens and non-EU ones, and examines the opinion in society towards these groups of migrants. The local Europeans' attitude towards the non-EU immigrants is mostly negative and perceived more exaggeratedly than it is in reality. The authors argue that the inflows of migrants are mostly about work, study, and established migration "networks" than refugees and asylum seekers; after the latest "waves" of forced migration inflows to Europe the existing numbers of those who were given official permits are much less than it was considered in European society. The authors conclude that the current situation with the local perception of immigrants happened because the EU was not prepared for those "waves" and locals started to feel fear of the people from the outside who have different values, language, and educational background; thus, migration policy of all the EU Members should be renewed and harmonized in longer-term perspective, taking into account social and economic effect of immigrants who bring new skills, fill the gaps in low-skilled jobs, and even start their own business.

One of the decent researches among the latest publications is International Migration Drivers (2018) formulates reasons, factors, consequences, and prognosis of international migration, providing deep understanding of institutional and individual levels of human mobility. The paper collects and summarizes the theoretical background, statistical analysis, and empirical evidence in terms of econometric modelling. The latest trends in migration-related data demonstrate the most likely reasons for migration in the EU: work, education, family reunification, and asylum seeking. S. Grubanov-Boskovic and S. Kalantaryan's (2018) calculations demonstrate that the stocks of migrants within Europe stay the highest compared to stocks from other continents in the world (67% of European migrants are origins of another European country).

S. Migali (2018) postulates the structural drivers of international migration on the country- and individual levels: socio-economic, demographic, geographical, cultural, historical, and military. Based on the previous research and available empirical data, the author uses four-step analysis to reveal the main factors for decision to migrate: firstly, the countries of emigration were grouped according to their income level (low-, middle-, and high-income); secondly, the countries were grouped considering channels of migration to the EU28 Member States from non-EU countries; on the third stage the asylum seeking was the starting point; and on the last step the individual dimensions of migration were taken into account. The entire analysis was run with gravity models for all the steps. The findings shown the following factors have positive impact on migration: migrant communities for all the three groups of donor-countries (and for all the steps of the modelling), GDP per capita is important for middle-income countries. An inverse correlation was found to be significant for distance between the countries, fertility rate, GDP per capita (is important only for high-income countries). Also GDP per capita was

the most significant factor for asylum seeking group of migrants over the period 1999-2016. The following variables didn't have strong relation with migration: existence and intensiveness of trade relations between the countries of origin and destination, fertility rate for the countries with high income level; employment/ unemployment rates (for low-income countries). On the individual level analysis, it was proved that the younger the potential migrant the more willingness they have to migrate (age), males do wish to migrate more than women (gender), single status and having children also pushes people for migration (marital status), educational level, and being unemployed.

J. Bouoiyour, A. Miftah and R. Selmi (2019) explore how current economic situation attracts migrants by dividing it on favorable or unfavorable. Also the authors estimate the impact of migration inflows on economic growth and the unemployment rate using a panel quantile regression for Belgium, Germany, Netherlands, France, UK, Italy, Spain, Denmark, Finland, and Sweden. The applied methodology proved a positive relation between immigration and growth and an inverse one on unemployment in the receiving countries.

H. Bohman, P. G. Hakansson, I. Thorsen (2020) investigate the role of socio-economic and demographical inequalities both between the European Union Member States and within the countries, that make some regions more attractive for labor migration than others. The authors underline importance of a wide range of factors such as GDP per capita, income per capita, wages, employment, industrial development, technological progress, certain concentration of workforce skills, differences in educational level, working conditions, population changes, and even prices on the real estate market in labor mobility and migration process. On one hand, mobility and migration lead the involved regions to become more balanced in their economic development, on the other hand, they may exacerbate the existing spatial inequalities.

The results of other research – Rodionova et al. (2019), Babenko et al. (2019), Dominese (2019, 2020), Rogach et al. (2019, 2020) and Yakubovskiy et al. (2019) showed the instability of current accounts of East European economies caused by the negative balance of primary income in the conditions of free movement of capital and labor within the European Union.

3. Hypothesis, methodology and data

In recent studies of migration process a wide range of different methodologies is used, among which is econometric analysis with *VAR, OLS, gravity, and panel data models. These methods allow analyzing a large set of data and studying the significance of different coefficients used in the models. In this study, the main methodology is an econometric analysis using the panel data* structure. Making a choice among the mentioned methods of econometric analysis, it is appropriate to apply precisely panel data in case when several variables are included. Another advantage of this method is that it allows controlling variables at different levels, therefore the analysis becomes multilevel. Following the algorithm of the panel data modeling, the auxiliary regression equations should be analyzed with help of pooled model (estimates regression coefficients by OLS method that uses the time-series data not taking into account the

structure of existing panel data). However, due to the fact that the proposed model has the panel data structure which is not considered by the OLS estimation, it is appropriate to make a pairwise comparison of the statistical significance of the coefficients taking into account the individual characteristics of the factors using Fixed effects (FE) and Random effects (RE) structure (that can be considered as a special case of FE-model). In general, the model is presented in the following form:

$$y_{it} = \alpha + \beta_1 x_{1t} + \beta_2 x_{2t} + \ldots + \beta_n x_{it} + v_{it},$$

where y_{it} – endogenous, dependent variable;
α – constant;
$x_{1t}, x_{2t}, \ldots, x_{it}$ – exogenous variables of the model;
$\beta_1, \beta_{1, \ldots,} \beta_n$ – regression coefficients;
v_{it} – residuals;
i – number of observations (countries);
t – time variable.

This study aims to analyze the impact of the social and economic factors on migration process in the particular EU Member States that accept Ukrainian migrants the most over the latest years: Poland, Czech Republic, Hungary, Slovak Republic, Estonia, Italy, Spain, and Germany, which have traditionally been the countries of immigration. At the same time, it is investigated whether the quantity of migrant inflows to the country have impact on one of the most important indicators of living standard – final consumption. The following models determining the impact of the socio-economic factors are suggested:

$$FC_{it} = \alpha + \beta_1 Imm_{it} + \beta_2 Income_{it} + \beta_3 HICP_{it} + \beta_4 Tax_{it} + v_{it} \quad (1)$$

$$Imm_{it} = \alpha + \beta_1 GDP\_pc_{it} + \beta_2 Empl + \beta_3 ESP_{it} + v_{it} \quad (2)$$

$$Imm_{it} = \alpha + \beta_1 Income_{it} + \beta_2 WH_{it} + \beta_3 HICP_{it} + v_{it} \quad (3),$$

where

α –	Constant
FC –	Final consumption expenditure of households
Imm –	Number of migrants
Income –	Mean and median income
GDP_pc –	Main GDP aggregates per capita
Empl –	Employment rate
WH –	Average number of usual weekly hours of work
HICP –	Harmonized index of consumer prices
ESP –	Expenditure on social protection
Tax –	Tax rate

The given observation period is annual data from 2008 to 2017, the total amount of observations is 80 units. These panel data are balanced time series arranged one by one spatial variables; the number of spatial variables is 8. The main source of data: Eurostat statistical databases (Eurostat, 2020).

4. Results and discussion

The EU Member States (Czech Republic, Hungary, Slovak Republic, Estonia, Italy, Spain, Germany, and Poland) were considered for analysis.

Firstly, we run the regression models (1-3) with the Pooled method and apply all the necessary tests, including multicollinearity test that demonstrates the absence of multicollinearity among the independent variables. Secondly, we run the models (1-3) with the FE and RE instruments. The third stage requires determining the most appropriate method of econometric analysis for the further statistical and economic interpretation. Based on the data in the tables and applied panel diagnostics using Wald test, Breusch-Pagan test, and Hausman test, we make a pairwise comparison of each method of the estimated models. Comparing the Pooled regression and the Fixed effects regression based on the Wald test, the panel diagnostics indicates low p-value (< 0.01), which testifies that Fixed effects regression models approximate the data better than a cross-regression models as an alternative. Comparing individual Random effects models with the cross-sectional regressions, based on the Breusch-Pagan test for panel component, the low p-value demonstrates a higher statistical reliability of the models with Random effects as an alternative. According to the results of the Hausman test Fixed effects models approximate the present data better than Random effects models. It can be concluded that only the FE models have reliable estimation for further analysis. The fourth step of analysis includes the statistical estimation of the models (1-3) with Fixed effects and their coefficients relying on R-square, F-statistic for p-value, and t-statistic. The results demonstrate the models are significant and can be used for economic forecasts and decision-making in migration policy.

The results of the empirical verification of the impact of the given socio-economic factors on the final consumption expenditure of households are presented in the table 3:

Table 3. Coefficients and their statistical estimate for the model 1

Variables	Pooled method	Fixed effects method	Random effects method
Const	555323 (2.092)**	182769 (2.827)***	242601 (2.100)**
Imm	0.237 (2.390)**	0.168 (6.448)***	0.166 (4.291)***
Income	105.462 (15.50)***	2.044 (0.438)	17.709 (2.730)***
HICP	-17515.3 (-6.035)***	2910.98 (2.596)**	-361.602 (-0.229)
Tax	13453.7 (6.794)***	-4307.72 (-2.534)**	-778.851 (-0.324)
Log.likehood	–	-925.656	-1145.961
R^2	0.948	0.997	–
$F_{stat.}$ (p-value)	343.3077 (0.0001)	2404.335 (0.0001)	–

*** – statistical significance at 1% level; ** – statistical significance at 5% level.
Source: prepared by authors.

According to the calculation results depending on the chosen method of analysis, from 4 to 2 independent variables have a statistically significant impact on final consumption. However, regardless of the method of analysis in all equations, the quantity of migrant inflows to the country is present as a statistically significant factor affecting the countries` final consumption expenditure of households. Coefficients of quantity of migrant inflows variable have a positive and meaningful effect on final consumption expenditure of households in all equations.

An analysis of the correlation coefficients between the studied indicators shows that the greatest direct correlation is observed between the quantity of migrant inflows and final consumption expenditure of households for Estonia, Hungary and Germany with the corresponding correlation coefficients equal to 0.816, 0.726, and 0.725.

The results of the empirical verification of the impact of the given socio-economic factors on the number of migration inflows for the models 2-3 are presented in the tables 4-5:

Table 4. Coefficients and their statistical estimate for the model 2

Variables	Pooled method	Fixed effects method	Random effects method
Const	−846051 (−8.789)***	−130465 (−0.2705)	−744226 (−3.866)***
GDP_pc	12.216 (2.238)**	45.111 (2.851)***	29.444 (3.070)***
Empl	2342.53 (3.789)***	3014.39 (0.318)	2264.85 (1.704)*
ESP	36936.6 (9.096)***	−19135.2 (−1.292)	20527.9 (2.704)***
Log.likehood	–	−1046.466	-925.656
R^2	0.688	0.828	–
$F_{stat.}$ (p-value)	55.765 (0.0001)	33.286 (0.0001)	–

*** – statistical significance at 1% level; ** – statistical significance at 5% level, * – statistical significance at 10% level.

Source: prepared by authors.

Regardless of the method of analysis in all equations of model 2, the main GDP aggregates per capita are present as a statistically significant factor affecting the number of migration inflow. Coefficients of the main GDP aggregates per capita variable have a positive and meaningful effect on migration inflow in all equations.

An analysis of the correlation coefficients between the studied indicators shows that the greatest direct correlation is observed between the main GDP aggregates per capita and the number of migration inflow for Estonia, Germany and Poland with the corresponding correlation coefficients equal to 0.827, 0.771, and 0.698.

Table 5. Coefficients and their statistical estimate for the model 3

Variables	Pooled method	Fixed effects method	Random effects method
Const	881576 (1.137)	−2.15111e+06 (−0.919)	−48235.0 (−0.039)
Income	53.356 (6.510)***	59.928 (3.192)***	61.713 (4.874)***
WH	−18897.3 (−1.068)	51528.2 (0.966)	3486.16 (0.122)
HICP	−5747.71 (−1.589)	−3545.61 (−0.708)	−6172.80 (−1.855)*
Log.likehood	–	−1048.354	−1065.399
R^2	0.730	0.820	–
$F_{stat.}$ (p-value)	68.541 (0.0001)	31.434 (0.002)	–

*** – statistical significance at 1% level; ** – statistical significance at 5% level, * – statistical significance at 10% level.

Source: prepared by authors.

Regardless of the method of analysis in all equations of model 3, mean and median income is present as a statistically significant factor affecting the number of migration inflow. Coefficients of mean and median income variable have a positive and meaningful effect on migration inflow in all equations.

An analysis of the correlation coefficients between the studied indicators shows that the greatest direct correlation is observed between mean and median income and the number of migration inflow for Estonia, Hungary and Germany with the corresponding correlation coefficients equal to 0.939, 0.837, and 0.746.

Thus, according to the calculation results positive causality is observed for the number of immigrants, GDP per capita, mean and median income. GDP per capita and income level are attractive pull-factors for immigrants in the given countries which are determined by their social and economic development.

Migration policy, intensive growth of the local economies and current needs of labor markets in the receiving European countries have led to a relatively high employed rate of recent immigrants from other EU countries: in 2018 it was 84.6% in Poland, 79.4% in Germany, 79% in Czech Republic, 67.9% in Estonia, 68.3% in Spain, 62.9% in Italy, and 54.7% in Hungary. In general, the percentage of employed immigrants in 28 EU countries increased from 70.2 in 2008 to 78.9 in 2018.

On the other hand, much less number of foreign non-EU migrants found jobs in Spain (46.1%), Germany (40.7%), Hungary (36.6%), Italy (36.1%). In Poland it was 78.3%, in Czech Republic 70.7%, in Estonia 88.2% that was connected with the positive dynamics of local labor markets. In general, the percentage of employed non-EU migrants (in age class from 20 to 64 years) in 28 EU countries slightly decreased from 62.5 in 2008 to 59.6 in 2018.

The analysis emphasizes how important migration process is for economic development of the host countries. Earning money during their stay in the country, immigrants not only send remittances to the countries of origin, they also spend a part of their income on current consumption of goods, services, renting apartments, medical care, etc. Besides, they fill gaps in job vacancies in the local labor markets, providing higher productivity. According to The World Bank, the economic contribution of immigrants is substantial as they provide more than 9% of global GDP. That is why the migration policy is becoming more balanced, consciously managed, and adopted to the current economic and political situation in the world and the EU in particular by providing certain measures of regulation on national, regional, and international levels (Mohieldin M., Ratha D., 2019).

After joining the EU, the highest quantity of temporary residence and constant settlement permits were issued for Ukrainian citizens in Poland (Iglicka K., Ziolek-Skrzypczak M., 2010). In condition, when Poland accepts large scale of immigrants from Eastern Europe, the new approach and measures are required to its migration policy. The latest framework document in this sphere called "Polish migration policy" is being under development since 2019, which considers both sides of migration process: migrants' contribution into economic development and their integration process, at the same time taking into account possible threats and perspectives for social and cultural security (Open Democracy, 2019).

Although Czech Republic provides more favorable migration policy towards EU citizens and has protection measures for national workers, the economic growth requires additional labor force. In 2018, GDP annual growth was 2.96% and GDP growth per capita 2.7%. Ukrainian migrants take the first place among other non-EU citizens, who receive permanent residence permits (Drbohlav D., Janurová K., 2019); (The World Bank. Countries and Economies, 2019).

Over the latest years Estonia witnessed economic growth (GDP 4.8% and GDP per capita 4.48%) and development in IT sector that created new job opportunities and required more labor force (Maasing H., Asari E.-M. 2016-2017). Migration policy has become more liberalized that led to increase in migrants inflows. About 12% of all migrant stocks are migrants from Ukraine. Slovak Republic also experiences economic growth (GDP annual growth 4% and GDP growth per capita 3.89%) and increase in migration inflows (The World Bank. Countries and Economies, 2019). The main document of regulation of migration policy is "Migration Policy of the Slovak Republic. Perspective until the year 2020" (The Government of the Slovak Republic Resolution, 2011).

Having become a country of inward migration in the early 1980-s, Italy faced migration flows from Romania, Poland, Ukraine, Moldova and other Eastern European countries. Since this country became one of the "favorite" countries of destination for Ukrainians (especially for women), their numbers only increasing during the last 15 years. Nowadays about 4% of total migrants stock come from Ukraine (Vianello F. A., 2016).

Recently Germany has gone through a very challenging situation with migration process in 2015 when 476.5 thousand asylum seekers applied for citizenship that was 57.5% higher than in previous year (Eurostat, 2020). The number of applications was

the highest among all the EU Member States. At the same time, Germany managed to interact with and take under control migration process due to implementation of migration policy measures and providing the newcomers with jobs. Germany also pays attention to migrants from Eastern Europe and Ukraine in particular that was reflected by adoption of a new immigration law that concerns employment of foreigners (Ukrainian Institute for the Future, 2018).

The analysis also emphasizes how important migration process is for economic development of the home countries. For instance, the migrant remittance inflows have also very significant impact on the balance of payments and final consumption expenditure of households in Ukraine. In particular, migrant remittance inflows to Ukraine have increased from 5.9 bln.USD in 2009 to 15.9 bln. in 2019 that according to the World Bank calculation was equal to 11.8% of country`s GDP (World Bank, 2020). For Georgia migrant remittance inflows in 2019 were equal to 12.3% of GDP; for Armenia – 11.9%; for Bosnia and Herzegovina - 10.5%; for Moldova – 15.6%; for Montenegro – 10.4%.

5. Conclusion

Based on the results of the analysis of different approaches and method of studying migration process, it was proved that econometric modeling based on panel data analysis is one of the most appropriate and useful tool in case of studying a group of countries, in this paper – the EU Member states.

Results of investigation of economic and social factors that influence inward migration to the destination countries: Czech Republic, Hungary, Slovak Republic, Estonia, Italy, Spain, Germany, and Poland, which are deeply involved into migration process with the other European countries and non-EU countries, including Ukraine, have proven that immigration flows are highly depended on GDP per capita and income level in the host countries.

Results of the studying of the impact of immigration on consumption, as an important indicator of living standard in Czech Republic, Hungary, Slovak Republic, Estonia, Italy, Spain, Germany, and Poland, have proven that migration inflows have positive statistically significant influence on final consumption expenditure of households in these countries.

Thus, the results of the analysis have shown that the overall role of migration in the EU and Ukraine is constantly increasing. This is due to both the quantitative increase in the number of recent immigrants in the EU countries and their percentage of total population from 0.9% in 2009 to 1% in 2018 (the largest increases were observed in Germany and Austria for which the percentage of number of recent immigrants of total population increased from 0.8 and 1.6 in 2009 to 2.0 and 2.9 in 2018) as well as to the growing influence of migrant activities on the socio-economic development of countries.

Migrant remittance inflows have also very significant impact on the balance of payments and final consumption expenditure of households in the developing European states. For instance, for Armenia, Bosnia and Herzegovina, Georgia, Moldova,

Montenegro and Ukraine the migrant remittance inflows in 2019 exceeded 10% of national GDP. Despite the fact that during the last ten years, in general, the percentage of employed immigrants in 28 EU countries has increased, still less than half of foreign non-EU migrants can find jobs in Spain, Germany, Hungary and Italy. Moreover, during the last ten years, in general, the percentage of employed non-EU migrants in EU countries has decreased.

In terms of intensive migration process in Czech Republic, Hungary, Slovak Republic, Estonia, Italy, Spain, Germany, and Poland and high percentage of Ukrainians among all immigrants, it is crucial to develop closer cooperation between these EU Member States and Ukraine on the national and internal level, making migration policy more balanced and managed, especially in Ukraine. That will allow creating new job opportunities for Ukrainian citizens and comfortable conditions for return migrants in Ukraine. Migration policy should be adopted to the current economic situation and meet the needs of local labor markets. It should be noted that Ukraine is implementing new reforms in economic and social sphere which may affect migration process as well as other processes in society. Nowadays Ukrainian legislation is mostly concentrated on regulation of inward migration (for instance, the Law of Ukraine "About Immigration" and other laws), although it is necessary to create new conditions for legal and controlled emigration process with the European Union, to strengthen partnership with the host countries, to provide more intensive economic growth and higher living standards in Ukraine.

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