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R. M. Skupskyi, Doctor of Economics Sciences, Associate Professor,
L. S. Melnychuk, Candidate of Economic Sciences, Associate Professor,
M. Y. Shcherbata, Candidate of Economic Sciences, Associate Professor

Р. М. Скупський, д. е. н., доцент,
Л. С. Мельничук, к. е. н., доцент,
М. Ю. Щербата, к. е. н., доцент

METHODOLOGICAL ASPECTS OF LABOR POTENTIAL USE AND REGIONAL DEMOGRAPHIC PROBLEMS

МЕТОДОЛОГІЧНІ АСПЕКТИ ВИКОРИСТАННЯ ТРУДОВОГО ПОТЕНЦІАЛУ ТА ДЕМОГРАФІЧНІ ПРОБЛЕМИ РЕГІОНУ

Urgency of the research. Constant changes in quantity and quality in manufacturing components cause the transformation into quantitative and qualitative compound of workforce, a quality measure of which is their professional and qualification characteristics according to demographic factors.

Target setting. Socio-economic development of the state and its economic potential is closely associated with the formation of a stable demographic development, which guarantees to society, the reproduction of human generations.

Actual scientific researches and issues analysis. Scientific works of the scientists such as: Gryshova I. Y., Krimer B. O., Kutayeva R. A., Kutayev S. K., Libanova E. M., Malynovska O. A., Polkovnychenko S. O., Romanukha O. M. and others showed in their works specific theoretical and methodological aspects of efficient use of labor potential.

Uninvestigated parts of general matters defining. The dynamic development of use of labor problems and population aging, appearing of new characteristics in the context of changes in the implementation of the population policy of the state determines the need for research in this direction.

The research objective. This article aims to analyze the modern labor potential in Ukraine and Mykolaiv region in particular, to investigate the existing tendencies of demographic ageing of the population.

The statement of basic materials. The article studies the modern development of labor resources in Mykolaiv region. Labor assessment of the current situation evaluation: the quantitative and qualitative structure of labor resources. The authors highlighted the trends of the demographic aging of the population in Ukraine, identified the key domestic causes of the demographic crisis and compared to developed countries.

Conclusions. In Mykolaiv region for the period of 2005-2015, the amount of economically active population has decreased, which is typical for the country as a whole. Ukraine is experiencing particularly significant difficulties with social protection of the elderly and already feels such socio-economic consequences of this process as the enforce of demographic and economic burden on the working contingent, labor shortages, the general aging of workforce, dwindling of opportunities for labor provide of long-term care of the elderly, increasing demand for medical services etc. According to available demographic forecasts for the Mykolaiv region, the ageing of the population will worsen, and its general quantity will be reduced.

Актуальність теми дослідження. Постійні зміни в кількісному і якісному відношенні складових частин виробничих процесів викликають трансформацію в кількісному і якісному складі трудових ресурсів, якісною мірою яких виступає їх професійно-кваліфікаційна характеристика за демографічними факторами.

Постановка проблеми. Соціально-економічний розвиток держави та її економічний потенціал тісно пов'язані із формуванням стійкого демографічного розвитку, що гарантує суспільству відтворення людських поколінь.

Аналіз останніх досліджень і публікацій. Наукові праці таких вчених, як Гришова І. Ю., Крімер Б. О., Кутаєва Р. А., Кутаєв Ш. К., Лібанова Е. М., Малиновська О. А., Полковниченко С. О., Романуха О. М. та ін. у своїх роботах висвітлювали окремі теоретико-методологічні аспекти ефективного використання трудового потенціалу.

Виділення недосліджених частин загальної проблеми. Динамічність розвитку проблем використання трудових ресурсів та старіння населення, поява нових ознак в контексті змін в реалізації демографічної стратегії держави визначає потребу досліджень в даному напрямку.

Постановка завдання. Стаття покликана проаналізувати сучасний трудоворесурсний потенціал в Україні та Миколаївській області зокрема, дослідити наявні тенденції демографічного старіння населення.

Виклад основного матеріалу. У статті досліджено сучасний стан розвитку трудових ресурсів Миколаївської області. Представлено оцінку сучасної трудоворесурсної ситуації: розглянуто кількісний і якісний склад трудових ресурсів. Авторами висвітлено тенденції демографічного старіння населення України, визначено ключові причини вітчизняної демографічної кризи та здійснено порівняння з економічно розвинутими країнами.

Висновки. В Миколаївській області за період 2005-2015 рр. чисельність наявного та економічно активного населення зменшилася, що є характерним і для країни в цілому. Україна зазнає особливо помітних труднощів щодо соціального захисту осіб літнього віку та вже відчуває такі соціально-економічні наслідки цього процесу, як посилення демо економічного навантаження на працездатний контингент, дефіцит робочої сили, загальне старіння робочої сили, скорочення можливостей трудоворесурсного забезпечення довготривалого догляду осіб літнього віку, зростання попиту на медичні послуги тощо. За існуючими демографічними прогнозами для Миколаївської області

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Keywords: population; labor force; aging; natural growth; demography; depopulation.

процес старіння населення поглиблюватиметься, а його загальна кількість скорочуватиметься.

Ключові слова: населення; трудові ресурси; старіння; природний приріст; демографія; депопуляція.

Urgency of the research. One of the main factors of production, along with land and capital is human resources. There are constant changes in quantity and quality of parts in manufacturing processes. This leads to constant adjustment and maintain optimal proportions of labor and its assets, as required by objective economic laws.

Changes of population cause transformation in quantitative and qualitative compound of the workforce. Quantitative indicators consist of data on the size and compound of the labor force by sex, age, place of residence (urban or rural). High quality labor is their professional qualification characteristics that are determined by the demographic factors (natural growth, health, mobility) needs of workforce and enterprise capabilities to meet the needs of working population in work. Modern production conditions and life needs lead to obligatory combination of the characteristics of the labor force.

Target setting. Demographics situation in many ways determines the state of the economy and social level of society. Since a human is not only a manufacturer, but also a consumer of public goods, capacity of internal market and economic potential depends on the population, its age characteristics. The viability and development of each country is closely connected to stable demographic development, which guarantees public reproduction of human generations.

Actual scientific researches and issues analysis. This issue generates considerable interest to the scientific community. Some theoretical and methodological aspects of the efficient use of labor potential in their work covered by such scholars as I. Y. Hryshova, B. O. Krimer, R. A. Kutayeva, S. K. Kutayev, E. M. Libanova, O. A. Malinovska, S. A. Polkovnychenko, O. M. Romanukha, O. B. Naumov and others.

Uninvestigated parts of general matters defining. Dynamic development of labor resources issue and population aging, appearance of new features in the context of demographic changes during implementation of the state strategy determines the need for research in this area.

The research objective. In this context, the purpose of the article is analysis of the current labor resource potential in Ukraine and Mykolaiv region in particular and also to research existing demographic tendencies for aging of population.

The statement of basic materials. Now Ukraine is one of the leading in population decline countries. There is demographic crisis because of socio-economic decline, which is especially noticeable in agricultural sector. Since 1993 there is a steady downward trend in the population in Ukraine. Thus, by 1993 the total population increased to 52.2 mln people, and later, due to the negative effects - reducing fertility, high general and infant mortality, a sharp decline in natural population growth, low life expectancy reduced to 42,7 million.

Similar demographic processes occur in Mykolayiv region, although the region as well as all other areas of Ukraine has its own specialties in social and economic development.

According to current method of accounting, during the national census population included persons who at the time of the census were at the place, regardless of they are living there permanently or temporarily, as well as those who were not at home, but usually live or work away, such as employees of road, rail, water and air transport, people working in night shifts, were on duty positions and other jobs were in the round clock kindergartens and nurseries were in the way, or met passengers etc.

By the resident population were meant people who lived at the place, including temporarily absent if their absence did not exceed 12 months. As permanent residents were noted all persons (homeless) as well, who could not name another place of residence.

Population is the key indicator of social and economic growth, as it is both a major consumer and producer of goods and services. Therefore the demographic situation (birth rate, the growth of labor) depend on labor demand and supply. At the same time, a significant impact on the demand for labor provides scientific and technical progress. [1]

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Considering the statistics in the Mykolaiv region total population has declined since 2005 till 2016 to 71,3 thousand people, including urban population – to 31,3 thousand people and the rural population - by 40,0 thousand people (Tab. 1).

Table 1

The dynamics of population structure in Mykolaiv region and Ukraine *

Category	2005		2010		2014		2015		2016		Around Ukraine, 2016	
	thousand people	%	thousand people	%								
Actual population												
All population	1229,5	100,0	1189,5	100,0	1168,4	100,0	1164,3	100,0	1158,2	100,0	42760,5	100,0
Urban	821,9	66,8	804,7	67,7	793,8	67,9	792,9	68,1	790,6	68,3	29585,0	69,2
Rural	407,6	33,2	384,8	32,3	374,6	32,1	371,4	31,9	367,6	31,7	13175,5	30,8
Permanent population												
All population	1228,8	100,0	1188,8	100,0	1167,7	100,0	1163,6	100,0	1157,5	100,0	42590,9	100,0
men	568,8	46,3	548,4	46,1	539,5	46,2	538,2	46,3	535,6	46,3	19717,9	46,3
women	660,0	53,7	640,4	53,9	628,2	53,8	625,4	53,7	621,9	53,7	22873,0	53,7

* Calculated by the author, according to the Central Statistical Office in Mykolaiv region [2]

It has always been typical for rural areas sexual imbalance with a significant predominance of women over men, and this trend unfortunately remains unchanged. Thus, on 01/01/2016 the permanent population in the Mykolaiv region consists of 1000 women accounted for 861 men. This gender imbalance of the population is one reason breach legal basis for the formation of the family.

Despite the fact that in the Mykolaiv region urban population dominated over the urban population, but negative demographic phenomenon is observed in rural areas too.

By 1991 natural increase of the total population in Mykolaiv region was positive - the number of births prevailed mortality. The natural population reduces due to absolute excess of number of deaths over births, meaning direct (depopulation), loss of population in 1995 accounted 6707 people in region. Each year this index was increasing and reached its peak in 2002 - 10,084 persons. Gradually the situation was improving and in 2012 the natural population decline was the smallest - 3762 persons. 2015 data shows that the negative trend resumed and depopulation loss accounted 6341 persons (Fig. 1).

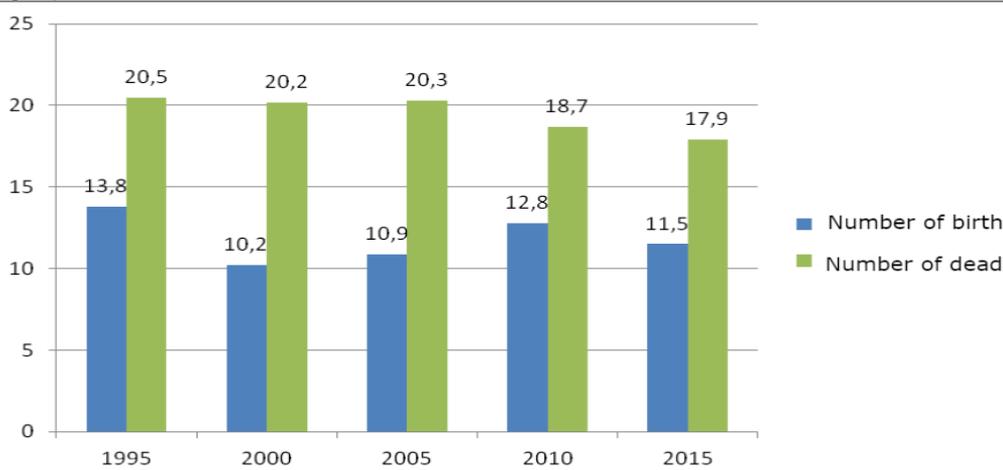


Fig. 1. Dynamics of natural increase (decrease) formation of population in Mykolayiv region in 1995-2015, thousand people

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Forecasting the qualitative and quantitative composition of the population in future, to study the dynamics of the economically active population is required, as this category of citizens is a key component of the labor market in any country and affects the level of socio-economic development.

Certainly, the most important characteristic of labor resources in favor of employment, being a key indicator of transformation processes in the economy, that over the past decade have led to a significant reduction in demand for labor.

According to forecasts of the International Labor Organization, the number of economically active population in Europe during 2013-2020 will reduce to 3,03 million people, at an average annual rate of reduction of 0.12% [3]. At the same time, shortly the total population in Europe will grow by 3.28 million people that will increase disabled categories.

Labor resources are the carriers of relations that are composed in the process of formation, distribution, exchange and use in the production process. The distribution of resources and exchange of labor resources in studied region should be considered, starting with their numbers and regional compound (Tab. 2).

Table 2

Distribution of the population of Ukraine and Mykolaiv region, by economic activity

Category	Ukraine		Mykolaiv region	
	2010	2015	2010	2015
Economic active population, totally, thousand. people				
15-70 year old	20894,1	18097,9	586,1	558,2
in % according to certain age group	63,6	62,4	64,5	64,0
working age	19164,0	17396,0	537,4	540,9
in % according to certain age group	71,9	71,5	73,2	74,4
Busy population, totally, thousand. people				
15-70 year old	19180,2	16443,2	536,7	508,7
in % according to certain age group	58,4	56,7	59,1	58,4
working age	17451,5	15742,0	488,0	491,4
in % according to certain age group	65,5	64,7	66,5	67,6
Unemployed population, totally, thousand. people				
15-70 year old	1713,9	1654,7	49,4	49,5
in % according to certain age group	8,2	9,1	8,4	8,9
working age	1712,5	1654,0	49,4	49,5
in % according to certain age group	8,9	9,5	9,2	9,2

* Calculated by the author, according to the Central Statistical Office of Mykolayiv region

Indicators of changes in employment at the regional level are determined by regional characteristics, which must provide: the ratio between working and disabled population; development and structure of employment; union of facilities in local economy each of them in a complex network of regional commodity markets and more.

Unfortunately, Ukraine is a country with high levels of population aging: with the share of people of 60 years old and older, it is in the group of 25 countries with the oldest population. The aging of population in Ukraine is characterized by getting under impact of "demographic waves", sexual and territorial difference in population aging [9]. The Unlike Western countries, where the aging "from above" by reducing the mortality rate of aging population is growing Ukraine only "bottom" due to the high mortality rate of the adult population and lower fertility. There are rates of population aging in Mykolaiv oblast have a fairly high rate. Extremely negative trend is that the smallest share of population is from birth to 15 years old. This shows significant demographic problems in the low birth rates caused by socio-economic factors. The age distribution of the population of Mykolayiv region in 2015 is shown in Fig. 2.

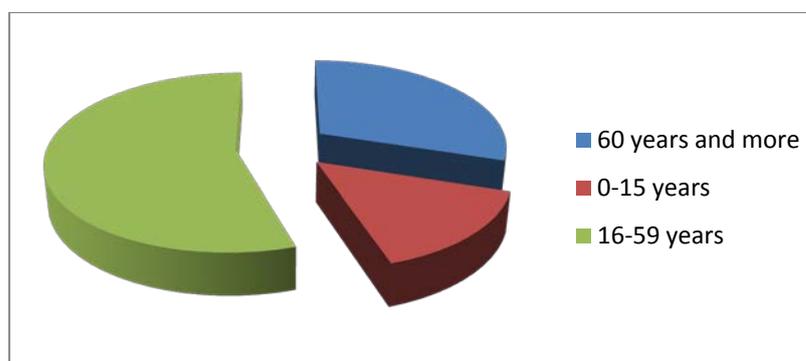
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Fig. 2. Distribution of permanent population in Mykolayiv region by the certain age groups in 2015

It should be noted that significant differences on the level of aging of population, depending on the type of settlement is typical for Ukraine. Rural population age structure is on significantly higher levels of aging, which consists of "exhausted" mass migration of young and middle-age working in the city. As a result, the number of people of retirement age in rural areas significantly dominates over the young population. It increases the numbers of older people respectively and raises costs of health and pension fund.

The decline in the birth rate in the last period happens due to the worsening financial situation of the average Ukrainian family and the abolition of a progressive system of financial aid to families after the birth of more than one child. However, studies [4, p. 129-132] show that in the postwar period in European countries (Bosnia and Herzegovina, Croatia, Georgia, Chechnya) in the past few decades, there was a general trend of decline in fertility (with minor variations) and increasing age of women giving birth. Such dynamics is expected in Ukraine after the end of the war in the area of ATU.

Emigration of skilled professionals from Ukraine for permanent living abroad is still ongoing, although the intensity of these processes are now much lower than in the previous decade. "Brain drain" (highly skilled workforce) has significant economically, socially, culturally and politically damaged the country, and as a result containment of domestic science and shortage of skilled professionals [5]. The causes of migration are clear and well known - efforts to ensure a decent life for themselves and their family. However, if in previous years the main focus of labor migration was the Russian Federation, the result of armed conflict and the worsening political and economic relations, the annexation of the Autonomous Crimea this direction of migration significantly decreased, and to some extent switched to the neighboring Republic of Poland, Czech Republic, Slovakia, Romania and others.

Along with the negative social consequences of migration, it is a kind of "economic straw" of economy. According to the experts, made on the basis of economic and mathematical modeling, without exaggeration, Ukraine has lost about 7.1% of its economic potential. [6]

During the period of heightened political situation since the end of 2013 and the escalation of the armed conflict in the Donbas, during the induction into the armed forces of Ukraine lead to a new wave of labor migration - "anti war migration." Young people of military age leaving Ukraine in order to avoid serving in the territory of ATU. If during the first wave of military mobilization in 2014 such cases were occasionally, later it began to get massive.

Demographic aging involves a process of changing age structure of the population, which is manifested in the growth of the share of the elderly, and takes place under the influence of a combination of factors: the dynamics of fertility and mortality, migration movements, wars. Most often the age 60 (65th) is considered as the beginning of aging period.

Analyzing the aging of population in Mykolaiv region and in Ukraine in general, the level of aging of population is determined by the estimated scale by J. Bozhe-Garnie and Rosset. Having calculated the index, we've found that in Ukraine d_{60+} is 38%, in the Mykolaiv region - 37.3%, which indicates extremely old population (20% and more).

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In international comparisons on the recommendation of the UNO there is also another factor of aging, that is defined as the share of people in age of 65 and older (d65 +,%). Thus, the established gradations of 7% or more - this old general population in Ukraine is d65 + 15.9%, while in the Mykolaiv region - 15.5%.

These data clearly shows that typical for Ukraine significant differences on the level of an aging population, depending on its type. Significantly higher levels of aging differs rural population age structure is "exhausted" mass migration of young and middle-age working in the city. As a result, the number of people of retirement age in rural areas significantly dominated over the young population.

Mortality in the elderly population in Ukraine is considerably higher than in EU countries (average – in 1,7 times), and in general even slightly higher than that in the Russian Federation. This is compared to the most developed European countries exceeding the maximum characteristic of a "young" age interval - 60-74 years: mortality of Ukrainian men in this range is now more than three times, and women - more than two times higher than in Norway [10].

The stability of future societies must be lower than in current societies. By European data in 2010 there was one pensioner to four people in productive age, but its it presumed that by 2050, there will be each retiree to two people in productive age. As well as for North America, there will be reduction from five to productive residents of a productive age in 2010 to three ratio of people of working age for every pensioner in 2050. All the developed countries are trying to solve this problem, and it is now widely discussed [7].

Considering this problem, the international community, studying the aging population as an economic phenomenon, has formulated two main statements:

1. Aging does not involves lower of economic growth in terms of implementation of policies that stimulate productivity growth and increases economic activity.

2. Conducting a balanced policy can mitigate the impact of population aging on the budget spending (especially on pensions and health care) [8, p. 2].

Conclusions. Labor resources are one of the key factors of social production. Considering the situation regarding the availability and use of labor resources should be noted that in Mykolaiv region for the period of 2005-2015 number of current and economically active population has decreased, which is typical for the country as a whole. Ukraine suffers particularly significant difficulties for social protection of the elderly and already feels such socio-economic consequences of this process, such as strengthening of demographic and economic (and tax) burden on hard-working contingent labor shortages (especially skilled), general aging of workforce, reduction of labor resource capacity to ensure long-term care of the elderly, the increase in demand for medical services and so on.

Unfortunately, according to the existing demographic forecasts for Mykolayiv region, even under favorable socio-economic conditions in the short term, the aging of population will aggravate, and its total number will decrease.

References

1. Kutaev, Sh., Kutaeva, R. (2016). *Trends of the population reproduction and their impact on the movement of workforce in the North Caucasian Federal District*. Economic Annals-XXI, № 160 (7-8), pp. 88-91 [in English].
2. *Demografichna ta socialjna statystyka [Demographic and social statistics]*. Retrieved from: www.ukrstat.gov.ua [in Ukrainian].
3. *Official website of the Statistical service of the European Union*. Retrieved from: <http://epp.eurostat.ec.europa.eu> [in English].
4. Krimer, B. O. (2015). *Vplyv na narodzhuvanistj vojennykh konfliktiv ostannikh desyatylytj u krajnakh Jevropy [The effect on fertility of military conflicts of the last decades in Europe]*. Demografija ta socialjna ekonomika. № 1 (23), pp. 126-136 [in Ukrainian].
5. Gryshova, I. (2016). *Strielkowski W. Ukrainian labour migration in the Czech Republic*. Naukovyi visnyk Polissia, № 4 (8), pp. 224-231 [in English].

Література

1. Kutaev, Sh. Trends of the population reproduction and their impact on the movement of workforce in the North Caucasian Federal District / Sh. Kutaev, R. Kutaeva // Economic Annals-XXI. - 2016. - № 160 (7-8). - P. 88-91.
2. Demografichna ta sotsialna statystyka [Demographic and social statistics]. [Electronic resource]. – Retrieved from : www.ukrstat.gov.ua [in Ukrainian].
3. Official website of the Statistical service of the European Union. [Electronic resource]. – Retrieved from : <http://epp.eurostat.ec.europa.eu>.
4. Krimer, B. O. Vplyv na narodzhuvanist vojennykh konfliktiv ostannikh desyatylyt u krainakh Yevropy [The effect on fertility of military conflicts of the last decades in Europe] / B. O. Krimer // Demography and and social economy. – 2015. - № 1 (23). – P. 126-136 [in Ukrainian].
5. Gryshova, I. Ukrainian labor migration in the Czech Republic / I. Gryshova, I. Strielkowski // Scientific bulletin Polissya. – 2016. - № 4 (8). - P. 224-231.

ЕКОНОМІКА ПРАЦІ

6. Malynovska, O. Suchasnyi stan ta problemy trudovoi migratsii z Ukrainy [Current state and problems of labor migration from Ukraine]. Ukrainian information-analytical monthly newspaper "Migration" Vseukrayinska informacijno-analitychna shhomisiachna hazeta «Migratsiia». Retrieved from: <http://migraciya.com.ua/News/migrant-workers/ua-present-situation-and-problems-of-labor-migration-from-ukraine-continued/> [in Ukrainian].

7. Strielkowski W, Lisin E, Gryshoval. (2016). *Climate Policy of the European Union: What to Expect from the Paris Agreement?* Romanian Journal of European Affairs, Vol. 16, № 4, pp.78-91 [in English].

8. Ghryshova, I. Y. (2016). Otsinka migratsiynykh potokiv yak faktor transformatsii sotsialno-ekonomichnoi sfery [Estimation of migration flows as a factor of transformation of the socio - economic sphere] Ukrainian Journal of Applied Economics, Vol 1, № 1, pp. 50-58 [in Ukrainian].

9. Romanukha, O. M. (2016). Sotsialno-ekonomichni naslidky starinnya Ukrainy [Socio-economic consequences of the ageing of the Ukraine]. Scientific bulletin of Kherson state university, Is. 17, Chastyna 3, pp. 91-94. [in Ukrainian].

10. Libanova, E. M. LiboKompleksnyi demografichnyi proghnoz Ukrainy na period do 2050. [Complex demographic forecast for Ukraine until 2050]. P. 138 [in Ukrainian].

6. Malynovska, O. Suchasnyi stan ta problemy trudovoi migratsii z Ukrainy [Current state and problems of labor migration from Ukraine]. Ukrainian information-analytical monthly newspaper "Migration" [Electronic resource] / O. Malynovska. – Retrieved from : <http://migraciya.com.ua/News/migrant-workers/ua-present-situation-and-problems-of-labor-migration-from-ukraine-continued/> [in Ukrainian].

7. Strielkowski, W. Climate Policy of the European Union: What to Expect from the Paris Agreement? / W Strielkowski, E Lisin, I. Gryshova // Romanian Journal of European Affairs, Vol. – 2016. - 16, № 4. – P. 78-91.

8. Ghryshova, I. Y. Otsinka migratsiynykh potokiv yak faktor transformatsii sotsialno-ekonomichnoi sfery [Estimation of migration flows as a factor of transformation of the socio - economic sphere] / I. Y. Ghryshova // Ukrainian Journal of Applied Economics. - 2016. - Tom 1, № 1. – P. 50-58 [in Ukrainian].

9. Romanukha, O. M. Sotsialno-ekonomichni naslidky starinnya Ukrainy [Socio-economic consequences of the ageing of the Ukraine]. Scientific bulletin of Kherson state university [in Ukrainian].

10. Kompleksnyi demografichnyi proghnoz Ukrainy na period do 2050. [Complex demographic forecast for Ukraine until 2050]. By the reduction of NANU, d.e.n., prof. E. M. Libanova [in Ukrainian].

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