

Labor Migration Institution in the Modern Aging Economy

Galina Barysheva

National Research Tomsk Polytechnic University
Tomsk, Russia
ganb@tpu.ru

Elena Rozhdestvenskaia

National Research Tomsk Polytechnic University
National Research Tomsk State University
Tomsk, Russia
elena.rojdestvenskaya@gmail.com

Tran Thi Bich Ngoc

Hanoi University of Science and Technology
Hanoi, Vietnam
bichngoc2201@gmail.com

Vacheslav Babyshev

National Research Tomsk Polytechnic University
Tomsk, Russia
vacheslav84@mail.ru

Tran Duc Trung

Hanoi Electric Power University
Hanoi, Vietnam
gfox.87310@gmail.com

Abstract— The paper considers the problem of the estimation of how migration depends on the level of economic development and institutional support. We aim to test the hypothesis on the impact of migration to economic development, put forward in the framework of population ageing in relation to developed countries, using cases of Russia and Vietnam. We have concluded that there is no significant relationship between the dynamics of the workforce and external labor migration, working-age population and the dynamics of GDP and between work capacity and unemployment.

Keywords— *aging economy, employable population, economic growth, labor migration, labor market, unemployment rate, Russian case*

I. INTRODUCTION

The agenda demands to solve the problem with the aging of the population and labor migration according to deep demographic changes. The working-age population could be divided into two parts: the indigenous population of working age and the labor migration from other countries. The size and the structure of the working-age indigenous population of the country depend on demographic factors: the birth rate in the relevant years and the survival rates to active working ages. Low child mortality and uneven demographic waves of fertility due to socio-political cataclysms facilitate this trends, so we inspect the wavy changes in the proportion of working ages [1].

The size of labor immigration mainly depends on economic parameters related to the level of institutions functioning which are responsible for the living standard (security, medical and health care, quality education, housing,

food and etc.), economic stability and opportunities for professional realization. An important factor is the institution of legalization or the degree of complexity of the legalization process in the country of immigration. Most migrants prefer to live in economically developed countries. Migrants estimate the Middle East countries as a good to work at: the UAE - more than 88% of the total population is migrants; Kuwait-75 %; Qatar-65 %; Bahrain-48%; Oman-45%; Saudi Arabia-37%; Switzerland-about 30%. The USA and Germany migrants make up about 15% of the total population, in the UK and France-12%, in Russia it is just over 8% [2]. External migration resources generally depend on the labor resources of neighboring countries, which have a lower standard of living than in their own country, which makes labor migration economically beneficial for migrants.

Research method is a comparative analysis of the dynamic phenomena between which the theory of "aging economy" reveals a correlation relationship. We performed the correlation analysis of the labor resources and external labor migration, the labor resources and GDP, the labor resources and unemployment. We analyzed internal Russian migration in terms of the scientific discussion on the dominant supply or demand role in the labor market.

II. LABOR MIGRATION INSTITUTION IN MODERN AGING ECONOMY: CASE OF RUSSIA

Estimates of external migration have significant difficulties due to the large percentage of illegal immigrants. In Russia almost 16.5 million foreigners are registered as migrants in 2019, which is 13% higher compared to 2017. In the early 2000s, there were 3 million external migrant

workers. [2]. The spread of estimates of the number of illegal migration by different methods is from 2.1 million people in 2010 to 31.7 million in 2013 [3]. There is also statistics from the Ministry of Internal Affairs: in Moscow from 0.9 to 3 million people are illegal migrants [4].

The research question (1) is whether there is an inverse relationship between the number of employable population and the legal volume of attracted migrants based on the number of work permits issued. We submit the dataset in tables 1 and 2.

TABLE I. NUMBER OF EMPLOYABLE POPULATION AND LABOR MIGRANTS IN THE RUSSIAN FEDERATION

Year	Number of employable population, million people [5]	Dynamics	Number of labour migrants, thousand people [6]	Dynamics
1990	86,0	N/A	N/A	N/A
1995	83,7	-2,7%	300	+300%
2000	86,6	+3,5%	211	-29,7%
2008	89,7	+3,6%	2 426	+1 150 %
2009	89,3	-0,5%	2 224	-8,3%
2010	88,0	-1,5%	1 641	-26,2%
2011	87,8	-0,2%	1 028	-37,4%
2012	87,1	-0,8%	1149	+11,8%
2013	86,1	-1,1%	1112	-3,2%
2014	85,2	-1,0%	1044	-6,1%
2015	85,4	+0,2%	182,4	-82,5%
2016	84,2	-1,4%	143,9	-21,1%
2017	83,2	-1,2%	114,9	-20,2%
2018	82,3	-1,1%	93,2	-18,9%

As a result, we have underlined the inverse relationship between the number of indigenous working-age population and labor migration observed only in 4 cases out of 13 or in 30.8 % of cases, and the coincidence in absolute values didn't observe. In other words, there is no clear correlation between the decline of the indigenous population in working age and the influx of labor migrants [8].

The research question (2) is to compare the change in the number of the total working-age population with the dynamics of GDP. We submit the dataset in table 3.

TABLE II. DYNAMICS OF EMPLOYABLE POPULATION AND MIGRATION GROWTH IN RUSSIA

Period	Change in the employable population, million people	The change in net migration rate, million people	Coincidence in absolute values '+' coincided; '-' 'didn't coincide
1990-1995	-2,3	+0,3	-
1995-2000	+2,9	-0,1	-
2000-2008	+3,1	+2,2	-
2008-2009	-0,4	-0,2	-
2009-2010	-1,3	-0,6	-
2010-2011	-0,2	-0,6	-
2011-2012	-0,7	+0,1	-
2012-2013	-1	-0,04	-
2013-2014	-0,9	-0,1	-
2014-2015	+0,2	-0,9	-
2015-2016	-1,2	-0,04	-
2016-2017	-1	-0,03	-
2017-2018	-0,9	-0,02	-

TABLE III. DYNAMICS OF GDP AND WORKING-AGE POPULATION IN RUSSIA

Period	The change in GDP [9][10]	Change in the number of employable population
1990-1995	-37,9%	-2,7%
1995-2000	+5,5%	+3,5%
2004-2005	+6,4%	+0,27%
2005-2006	+8,2%	+0,06%
2006-2007	+8,5%	-0,11%
2007-2008	+5,2%	-0,35%
2008-2009	-4,8%	-0,45%
2009-2010	+4,5%	-1,5%
2010-2011	+4,3%	-0,15%
2011-2012	+3,4%	-0,9%
2012-2013	+1,3%	-1,1%
2013-2014	+0,6%	-1,14%
2014-2015	-2,8%	+0,3%
2015-2016	-0,2%	-1,4%

Thus, only in 6 cases out of 14 (42.9% of cases) the GDP dynamics coincide with the dynamics of the working-age population, and even in cases of trends coincidence, the economic growth rates are higher than the growth rates of the working-age population. We have found out a more significant impact of post-industrial factors on economic growth (the development of new knowledge, innovation) than the growth of the working population.

There is a discussion among academics about the impact of employable population number on the rate of economic growth and unemployment. Some authors believe that other things being equal, a decrease in the rate of youth entering the labor market leads to favorable conditions (reduction of unemployment) due to their deficit and, conversely, an increase in the rate of youth entering the labor market leads to unfavorable conditions [11][12]. An alternative approach is put forward by R. Shimmer. According to his results, firms prefer to work in markets with a large mismatch between the supply and demand of young workers because they are easier to find good employees than in denser labor markets [13].

The immigration flow in Russia from the near abroad consists of 80% of unskilled or low-skilled workers. From Russia basically leave the specialists of secondary and higher qualifications. There is not enough population for the development of vast territories. In Russia, there was an outflow of employable population from the East and North to the center and South of the country (only 3 million people since the early 1990s). Now we see an outflow from rural areas to cities and from small towns to large cities. Against the background of the decline in the population of the Volga region and Siberia, the growth of the center since the early 1990s amounted to almost 4 million person per year. Moscow (with the Moscow region), St. Petersburg (with Leningrad region) Sverdlovsk region, Krasnodar region, oil and gas regions of the Urals and Siberia are the leaders regions which are attracting internal migrants. At the same time, foreign migrants generally go to similar regions.

Regions - recipients of migrants (Moscow, St. Petersburg, Yamalo-Nenets Autonomous Okrug and others) are generally characterized by a shortage of labor, and donor regions (the Republic of Altai, Kurgan, Astrakhan, Kirov regions, the Republic of Karelia, Khakassia and others), on the contrary, have an excess. Thus, there is no obvious influence of the number of employable population on economic development in Russia if there is a clear inverse relationship of the level of economic development on the number of employable population. Migration depends on the level of economic development and the state of infrastructure institutions.

There is an opinion on a widespread perception of the negative impact of competition from foreign migrants on the labor market in general and wages particularly. However, although it is more profitable for employers to hire migrants without registration (often on the basis of civil contracts) and payment of taxes, this aspect is present only in the field of heavy unskilled labor with low wages. Migrant wages are estimated to be 40 % lower than indigenous wages in similar jobs in 2009-2013 [14]. It is in the unskilled sector of the economy that most labor migrants are concentrated. Legal

migration in Russia was 31 % in 2012, migrants worked in the unskilled sector, and taking into account illegal migration the migration level upped to 60 %. At the same time, Russian migrants in general have higher education and qualifications, and the requirements for jobs are higher than those of foreign migrants. According to the authors, the competition is not only between Russian and foreign workers, but also between the formal and informal sectors of the economy (30 % of foreign migrants worked alongside domestic migrants).

In general, both domestic and foreign migration is concentrated mainly in the same sectors: construction, mining, agriculture, trade and transport, and services. In the low-skilled sector of the economy, a relatively new niche for migrants has now emerged – long-term care for the elderly. A number of developed European countries are in dire need of such foreign workers. As a result, an increasing number of migrant workers are involved in caring for the elderly in both formal and informal employment. For example, in Italy women from Eastern Europe work as nurses and AU pairs, but the demand for their services from the older generation is significantly higher than the supply. There are clearly not enough social workers from the EU. The current immigration quota is capped at 30,850 job offers. Most of these work permits are for seasonal workers in agriculture and hospitality. There is no separate migration quota for careers [15].

A number of foreign studies also show that migration is beneficial for both host and exit countries and does not have a significant negative impact on unemployment and wages in host countries. The overall benefit of expanding migration quotas and liberalizing the migration regime as a whole would be about 25 times greater than the effect of liberalizing international trade [16].

In the field of skilled work (science, education, high-tech, IT) migrants find out no noticeable advantage comparing to the indigenous population. The demand on highly skilled labor in a number of sectors of the economy and developing regions is not due to the abandonment of indigenous workers from these activities, but to the shortage of highly skilled workers that ensure economic growth in the country [17].

The involvement of labor migrants is a key factor to develop modern economy in terms of the demographic and globalization challenges. Migration reflects by dynamics more flexibly to changes in the structure of employment and reproduction of the labor force. Currently, countries are competing to attract migrants not only in high-tech sectors of the economy, but also in low-skilled industries.

III. LABOR MIGRATION INSTITUTION IN MODERN AGING ECONOMY: CASE OF VIETNAM

Russian trends reflect in developing economies in the world. We have observed the case of Vietnam and the dynamics and structure of labor migration seemed to be closed to Russian case. Especially, labor migration is closed in this two countries on the structure of immigration (male sex, middle age, low-skilled job positions).

TABLE IV. LABOR MIGRATION DYNAMICS IN 2010-2017 [18]

Province, City	In-Migration rate		Out-Migration rate		Net-Migration rate	
	2010	2017	2010	2017	2010	2017
Red River Delta						
Hanoi	10,80	3,00	4,90	3,30	5,90	-0,30
Vinh Phuc	4,80	1,70	7,20	1,40	-2,40	0,30
Bac Ninh	9,80	9,70	7,60	4,20	2,20	5,50
Quang Ninh	3,70	1,10	5,40	1,70	-1,60	-0,70
Hai Duong	5,00	1,40	7,20	2,10	-2,20	-0,60
Hai Phong	7,00	2,20	3,80	0,80	3,20	1,40
Hung Yen	6,50	3,20	6,70	1,60	-0,30	1,60
Thai Binh	2,70	1,10	11,10	2,50	-8,40	-1,30
Ha Nam	4,10	1,10	8,70	6,00	-4,60	-4,90
Nam Dinh	4,10	1,90	8,40	3,00	-4,40	-1,10
Ninh Binh	5,90	3,90	9,20	3,00	-3,40	0,90
Northern midlands and mountain areas						
Ha Giang	1,90	0,10	19,00	1,80	-17,00	-1,70
Cao Bang	4,70	1,70	9,60	4,80	-4,90	-3,20
Bac Can	4,60	1,60	6,30	4,10	-1,70	-2,50
Tuyen Quang	2,80	1,20	4,70	2,50	-1,90	-1,30
Lao Cai	3,70	2,60	3,80	2,70	-0,10	-0,20
Yen Bai	3,40	1,30	4,10	2,70	-0,70	-1,40
Thai Nguyen	11,50	2,80	6,90	3,10	4,60	-0,30
Lang Son	3,00	1,30	8,20	4,00	-5,20	-2,70
Bac Giang	3,00	1,30	10,00	2,50	-7,10	-1,20
Phu Tho	2,40	1,10	14,20	1,00	-11,80	0,00
Dien Bien	3,60	1,30	1,30	3,20	2,30	-1,90
Lai Chau	3,50	2,00	2,50	3,10	1,00	-1,10
Son La	2,00	0,40	2,40	1,30	-0,30	-0,90
Hoa Binh	3,80	1,70	5,80	2,20	-2,00	0,40

TABLE IV CONTINUATION

Province, City	In-Migration rate		Out-Migration rate		Net-Migration rate	
	2010	2017	2010	2017	2010	2017
North Central and Central coastal areas						
Thanh Hoa	6,60	3,10	13,00	4,80	-6,20	-1,70
Nghe An	2,70	8,90	10,30	2,70	-7,60	6,20
Ha Tinh	4,70	1,20	14,40	4,90	-9,80	-3,60
Quang Binh	2,40	1,60	13,40	3,30	-11,00	-1,70
Quang Tri	5,60	2,60	11,40	2,40	-5,80	0,20
Thua Thien -Hue	8,30	2,10	10,30	2,70	-2,10	-0,60
Đà Nẵng	29,80	7,00	3,40	2,70	26,40	4,30
Quang Nam	4,90	1,50	14,60	3,00	-9,70	-1,50
Quang Ngai	2,30	0,80	12,00	7,90	-9,80	-7,10
Binh Dinh	6,00	2,00	9,90	2,50	-3,90	-0,50
Phu Yen	2,50	1,40	8,40	2,90	-5,90	-1,60
Khanh Hoa	3,70	1,40	11,90	0,80	-8,30	0,70
Ninh Thuan	2,90	1,40	17,10	3,00	-14,20	-1,60
Binh Thuan	4,20	1,10	9,60	2,50	-5,40	-1,50

TABLE IV ENDING

Province, City	In-Migration rate		Out-Migration rate		Net-Migration rate	
	2010	2017	2010	2017	2010	2017
Central Highlands						
Kon Tum	6,70	2,50	4,10	1,10	2,60	1,30
Gia Lai	3,70	1,30	5,90	4,10	-2,20	-2,80
Dac Lac	6,90	2,30	8,80	3,00	-1,90	-0,60
Dac Nong	7,30	2,10	3,20	5,40	4,10	-2,30
Lam Dong	8,60	3,50	7,50	2,10	1,10	1,40
South East						
Binh Phuoc	10,30	2,10	17,20	4,70	-6,90	-2,70
Tay Ninh	3,30	0,60	7,20	1,50	-3,90	-0,80
Binh duong	89,60	30,60	15,00	6,70	74,40	23,90
Đong Nai	27,20	4,50	10,80	3,90	16,30	0,60
Baria - Vung tau	13,30	2,60	8,90	2,20	4,40	5,30
HCM city	26,20	8,50	7,80	3,20	18,30	5,30
Mekong River Delta						
Long An	5,50	1,30	9,00	4,00	-3,50	-2,70
Tien Giang	9,00	3,70	9,20	3,50	-0,20	0,30
Ben Tre	2,20	2,50	15,10	4,00	-12,90	-1,50
Tra Vinh	5,00	2,00	9,10	3,10	-4,10	-1,10
Vinh Long	4,20	3,90	17,60	7,80	-13,40	-3,90
Dong Thap	4,10	0,70	10,70	7,00	-6,70	-6,30
An Giang	3,60	1,30	11,90	5,00	-8,30	-3,70
Kien Giang	5,80	2,10	14,50	10,80	-8,70	-8,70
Can Tho	9,80	7,30	11,50	2,60	-1,70	4,70
Hau Giang	4,00	0,30	10,90	8,90	-6,90	-8,60
Soc Trang	2,80	0,70	12,70	8,30	-10,00	-7,70
Bac Lieu	2,60	0,40	13,20	4,40	-10,60	-4,00
Ca Mau	2,50	0,10	29,70	9,40	-27,30	-9,30

Table 4 shows industrial parks and clusters are concentrated in Red River Delta and Southeast Provinces, so they have a higher net –migration rate.

TABLE V. NET-MIGRATION RATE BY REGION OF VIETNAM IN 2010-2017, IN PERCENT [18]

Region	2010	2014	2015	2016	2017
Red River Delta	0.5	-0.5	0.0	0.5	0.0
Northern midlands and Mountain areas	-3.9	-2.0	-1.9	-2.5	-1.1
Northern Central and Central Coastal areas	-5.7	-1.8	-1.8	-1.1	-0.2
Central Highlands	-0.3	1.6	-1.1	-2.4	-0.7
South East	19.9	11.2	9.7	8.4	5.6
Mekong River Delta	-8.4	-6.7	-5.4	-4.6	-4.0

Vocational and education levels of migrants in Vietnam approximately fits to Russian trends:

- Household data from the survey shows that 13.6 percent of the population of Viet Nam are migrants. Of those aged 15-59, migrants account for 17.3 percent of which 16 percent are in-migrants ;

- The 2015 Internal Migration Survey in Vietnam emphasized that only one-third (31.7 percent) of migrants have professional and technical qualification and over a quarter (27 percent) have graduated from high school. Remainders do not have any qualification required in further workplace. [19].

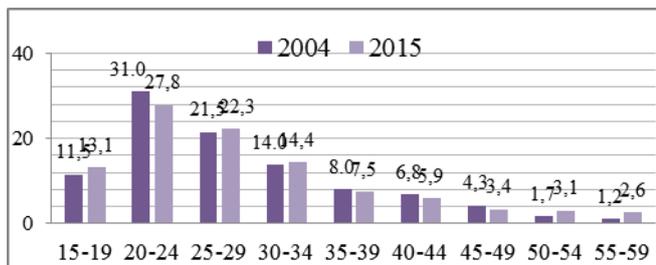


Fig. 1. Age structure of labor migrants of the 2004 and 2015 migration surveys (%) [20, p. 42]

According to the Vietnamese Labor Code, the working age is from 15 to 60 years among the three major economic sectors, the service sector has the highest proportion of respondents, followed by the industrial and construction sectors, while agriculture, forestry and fisheries sector recorded the lowest proportion. The percent of migrants employed in agriculture, forestry and fisheries sector is lower than that of non-migrants (10.2 percent versus 15.8 percent). While the percent of migrants in the industrial and construction sector is nearly double that of non-migrants (40.2 percent versus 26.4 percent). This level is similar for men and women. The percent of men working in the “industry and construction” sector is higher than that of women, whereas the percent of women working in the “service” sector is higher than that of men GSO [20, p.125].

TABLE VI. PERCENTAGE DISTRIBUTION OF EMPLOYED MIGRANTS AND NON-MIGRANTS BY ECONOMIC SECTOR AND BY SEX [20, P. 111]

Economic sector	Total		Male		Female	
	None-migrant	Migrant	None-migrant	Migrant	None-migrant	Migrant
Total	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry and fisheries	15.8	10.2	18.7	12.2	13.5	8.5
Industry and construction	26.4	40.2	29.8	42.8	23.7	37.8
Service	57.8	49.5	51.5	45.0	62.9	53.7

The data show that migrants are much more likely than non-migrants to be employed in the ‘Processing and manufacturing sector’ with 31.9 percent of migrants employed in this sector compared to 18.5 percent of non-migrants [20, p. 111].

Vocational and educational level of migrants is low and most of them move from rural area to industrial centers, so they often do simple jobs, which require low vocational qualifications and easy training.

IV. CONCLUSION

External labor migration does not depend on the volume of labor resources in the national economy; migration flow doesn’t stream at free jobs, but creates a certain competition in the field of unskilled and low-paid labor.

The GDP in Russia does not show a significant relationship with the volume of the working-age population, so it is incorrect to talk about either a deficit or a surplus of labor. In turn, we have figured out no noticeable link between the change in the number of working-age population and the level of unemployment. Russian case shows a shortage of supply and demand for labor. Otherwise, the reduction of the working-age population through the release of jobs would lead to a decrease in the unemployment rate and backward. In contrast, we have made clear inverse relationship between the number of vacancies and the unemployment rate. We have concluded that besides widespread belief about the shortage of labor resources in Russia potential resources are existed to increase employment. Despite the weak population in most regions of Russia we have found out an excess of working-age population in comparison to labor demand, which causes additional migration to economically favorable regions of the country.

The socio-economic well-being of the population is strongly dependent on the migration policy, legal and institutional support for migration, which allows attracting and optimizing the professional composition of migrants.

New trend emerges in increasing demand for low-skilled workers wishing to work in the long-term care sector. This requires the introduction of additional quotas for work visas for immigrant professionals in the care of the elderly.

Migration regulation system success depends on proper management of the collecting the statistical information on legal and illegal migration and the implementing continuous monitoring which is reflected migration process in various spheres of economic activity.

We have found out clear inverse correlation between the number of vacancies and the unemployment rate. We have concluded that there is no shortage of employable population in Russia, and external labor migrants create a certain competition for the indigenous population due to low wages, and do not occupy vacant jobs. We revealed the dominant role of supply over demand in the labor market in relation to Russia. We supposed a new niche for migrant workers-involvement in the care of older people in both formal and informal employment. We analyzed Vietnamese labor migration to compare Russian trends in transition economy with familiar one. We have found out overlapping in most cases.

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References

- [1] Scherbakova E.M. Demographic trends necessitate the increase of employment and labor productivity. [Electronic resource] // Demoscope Weekly. October 5 - 18, 2015. Vol. 657 - 658. URL: <http://www.demoscope.ru/weekly/2015/0657/barom01.php> (access date: 18.10.2019).
- [2] Egorova E., RIA Novosti 10.10.2019. URL: <https://ria.ru/20191010/1559607160.html> (access date: 18.10.2019)
- [3] Florinskaya Yu.F., Mkrtychyan N.V., Maleva T.M., Kirillova M.K. Migration and the labor market. // Institute of social analysis and forecasting. - M.: Publishing House "Delo" RANEPА, 2015. - 108 p. - (Scientific reports: social policy).
- [4] Shmatko Yu. O. Selected essays. Analysis and assessment of unregistered migration in Russia. [Electronic resource] // Demoscope Weekly. August 1 - 24, 2014. Vol. 605 - 606. URL: <http://www.demoscope.ru/weekly/2014/0605/student01.php> (access date: 18.10.2019).
- [5] Filippov V. How the ethnic composition of Muscovites changed. [Electronic resource] // Demoscope Weekly. November 8 - 21, 2004. Vol. 177 - 178. URL: <http://www.demoscope.ru/weekly/2004/0177/analit01.php> (access date: 18.10.2019).
- [6] Demoscope Weekly. Applications Demographic indicators for 15 new independent states. Age and sex structure of the population of Russia. URL: http://www.demoscope.ru/weekly/ssp/rus_pop_age.php (access date: 18.10.2019).
- [7] Shcherbakova E.M. Migration in Russia, preliminary results of 2018. By the end of 2018, the number of foreigners with a valid work permit in Russia fell to 93 thousand people, and with a valid patent it increased to 1662 thousand people. [Electronic resource] // Demoscope Weekly. March 11 - 24, 2019. Vol. 805 - 806. URL: <http://www.demoscope.ru/weekly/2019/0805/barom06.php> (access date: 18.10.2019).
- [8] Sitnyansky. G. Yu. Bushkov V.I. Population Migration in Central Asia: Past, Present and Future. M.: Institute of Ethnology and Anthropology RAS, 2016. - p.340
- [9] Vishnevsky A. G. Zayonchkovskaya J. A. Denisenko M. B. Mkrtychyan N. V. Demographic challenges of Russia. Part Three - Migration. [Electronic resource] // Demoscope Weekly. 2017. Vol. 753 - 754. URL: <http://www.demoscope.ru/weekly/2017/0753/tema02.php> (access date: 18.10.2019).
- [10] Spasskaya O. V. Analysis of structural changes in the Russian economy for the period 1990-2000: dynamics, main trends and cross-country comparisons. // Scientific works: Institute of Economic Forecasting RAS. January 1, 2004. URL: <https://ecfor.ru/publication/analiz-strukturnyh-izmenenij-v-ekonomike-rossii/> (access date: 18.10.2019).
- [11] Rybina Z. V. National economy of Russia: a training manual. 3.2. The economic dynamics of Russia. M., B., 2019
- [12] Fuchs M. Unemployment decline in East Germany: the role of demography. // Review of Regional Research. October 2016. Vol. 36, Iss. 2. Luxembourg: Springer Berlin Heidelberg, pp. 145-168. URL: <https://link.springer.com/article/10.1007%2F978-3-642-01066-3> (access date: 18.10.2019).
- [13] Richard A. Easterlin. Population, Labor Force, and Long Swings in Economic Growth: The American Experience. The American Baby Boom in Historical Perspective. 1968. p. 77 - 110.
- [14] Shimer R. (2001) The impact of young workers on aggregate labor markets. Q J Econ 116(3):969-1007.
- [15] Immigrants Today - portal on Italian immigrants affairs. URL: <https://immigrant.today/italy/13550-italija-ostro-nuzhdaetsja-v-inostrannykh-rabotnikakh-osushhestvlyajushhikh-ukhod-za-prestarelymi-ljudmi.htm> (access date: 18.10.2019).
- [16] Rodrik, D. Feasible Globalizations, Kennedy School of Government, Working Paper Series RWPO 2029, July. 2002 цитата по: World Migration: Costs and Benefits of International Migration. IOM. 2005, p. 164.
- [17] Khokhlova, MG. Youth labor market: European experience in Russian context // Mirovaya ekonomika i mezhdunarodnye otnosheniya. 2019. T.63, Vol. 9. - p. 118-128. DOI: 10.20542/0131-2227-2019-63-9-118-128
- [18] Statistical Year Book of Vietnam 2018, p. 113 - 118
- [19] General Statistics Office of Vietnam, 2016, p 1 - 72. URL: <https://www.gso.gov.vn> (access date: 18.10.2019).
- [20] General statistic Office: The 2015 Internal Migration Survey: Major Findings. Vietnam news agency publishing house. Hanoi, December, 2016, 250 p.) https://vietnam.unfra.org/sites/default/files/pub-pdf/PD_Migration%20Booklet_ENG_printed%20in%202016.pdf. (access date: 18.10.2019).