

STASYS VAITEKŪNAS

KLAIPĖDA UNIVERSITY

## HUMAN RESOURCES OF LITHUANIA: ON THE QUESTION OF THE FATE OF THE NATION

DOI: <http://dx.doi.org/10.2478/v10089-008-0016-4>

**ABSTRACT.** The mutual dependence of human resources and the development of the state has been one of the most important geopolitical questions discussed from the times of Ancient Greece. The article analyses the growth of the population and human resources of Lithuania, their change and influence on the state's development, the possible consequences of the decline of the population on international policies and the state's geopolitical situation. Reflecting the changes in the number of inhabitants and their structure five possible scenarios of the state's development in the future are constructed: 1) a small, but economically strong national state; 2) more pensioners than grandchildren; 3) a multinational and multicultural state; 4) the end of the national state (?); 5) a strong economic and cultural state.

**KEY WORDS:** Lithuania, human resources, scenarios of a state's development, population, population structure.

### INTRODUCTION

The inhabitants and labour resources make up the basis of the existence of any state or nation, its possibilities and identity. The question of national awareness and identity is especially important for countries with small populations. Such small states in the European Union include: Lithuania, Latvia, Estonia, Denmark, Malta, Iceland and others. Even before membership in the European Union one of the most outstanding political figures of Lithuania Vytautas Landsbergis raised the question of the survival of small nations in this union since the large nations and states (Germany, France, Spain, The United Kingdom, Poland and others) can overwhelm them.

At the start of 2008 about 497.2 million people were living in the European Union. Of those about 1/3 lived in only two states: Germany (82.2 million) and France (63.8 million). If one added the people of Italy and the United Kingdom, we can see that almost 54% of the total EU population lived in these four states. Less than half of the population lived in the remaining 23 states. The population of the smallest states – Malta and Luxembourg – does not exceed half a million. The population of Lithuania (3.4 million) comprises only 0.7% of the population of the 27 EU states. Thus, as we can see, the population of various EU states is very different, and this in turn influences the economic, social and political peculiarities of the development of the whole EU. Thus, human capital has its weight and its own levers from both internal and international aspects.

There is no doubt that the EU treaty guarantees *de jure* the equal rights of all the states and nations as well as the free opportunities for the multifaceted development of each state. However, when these possibilities are being analyzed *de facto* all this can be discussed. Facts such as the level of economic development and its change, the geographical distribution of the centres of political potential and political influence, the different political diplomatic direction of some individual states, which do not always correspond with the interests of all EU member-states provide the basis for this. Moreover, the number of EU Council members is also based on the population of the states. Therefore, this fact also confirms that the economy and political policies can be influenced and often directly or indirectly determined by many factors, among which the population of the state, its demographic potential (human capital), which can create a certain favorable situation or tension in various areas of life, are very important.

The inhabitants, their number, concentration, structure and other signs are also important in the life of a country because they are human resources. These resources are more important than others (natural resources, useful fossils, etc.) because they, unlike the others, are active resources – people are not only consumers but also the creators of all material and spiritual wealth, the constructors of any kind of progress. The concept of human resources is not defined exactly in scientific literature, but one can say that they are the inhabitants with certain physical and spiritual characteristics, life experiences, labour skills, habits and traditions. Consequently, the whole population, but distinguish as real (of working age, economically active) and potential (younger than working age, unemployed, pensioners, who can be drawn into various fields of work), can be regarded as human resources.

According to the extent of human resources one can provisionally divide the world into two basic groups: 1) regions having large sometimes “overflowing” resources (South-East Asia, Africa, Latin America) and 2) regions in which human resources are limited, and their quantity is growing slowly or even

decreasing. This applies to most European countries (including the EU) as well as North America, and partly Australia. As was mentioned earlier, such a division is provisional because it is related not so much to the size of the population but to the economic and social situation in the states. In defining human resources, the United Nations mentions certain criteria, stressing that 1) the scale of human resources in the world is inverse to their quality (although one can apply this only partially, e.g. to “the seven Asian tigers”; 2) states having limited human resources try to compensate their shortage by quality (Japan, Great Britain, The USA, Germany, Sweden and others). These states, like individual companies, not only devote a greater share of their budget funds for education and science, but also try to invite into their states scholars, high quality employees in the social fields (medicine, social care, etc.), as well as qualified workers. The latest tendency of international and smaller companies is to create branches in regions with lower wages. This not only increases profits, but also by lowering immigration protects national human resources, the national unity of the nation, its identity. It is interesting that the latter tendency is now evident in Lithuania, where its companies or even major manufacturers are investing capital abroad even in South-East Asia and Africa.

Lithuania, just as Latvia, Estonia and the states of northern Scandinavia, can be included in the regions in which labour resources can be considered limited, and their migration from the states of the East Baltic to the economically stronger Western states can bring the former to a strained demographic situation, the depletion of human resources as the guarantor for normal economic and political life of states and nations. An analysis of the size of the population, its structure and demographic processes as well as the prognosis of these factors allow one to make realistic predictions.

#### THE CHANGE IN LITHUANIA'S HUMAN RESOURCES IN THE SECOND HALF OF THE 20<sup>TH</sup> CENTURY

After the restoration of Lithuania's independence after World War I in 1918 the population of the state grew rapidly. In 1923 2,169,900 people lived in Lithuania, and in 1939 this number grew to more than 3 million. A surplus of people in rural areas emerged. Their growth was in part reduced by migration and especially World War II. One can provisionally assert that Lithuania after World War II even though it lost many people due to the war as well as the forced deportations of people to Siberia and other polar regions of the USSR had sufficient work resources. One should also not forget the fact that the pre-war population of Lithuania was restored only after 24 years (Table 1).

Table 1. Population of Lithuania in 1939–1989

Year	Total population, thousand	urban		rural		Density per km <sup>2</sup>
		thousand	%	thousand	%	
1939	3,037.1	695.5	22.9	2,341.6	77.1	44.2
1941	2,958.4	684.2	23.1	2,274.2	76.9	45.4
1945	2,500.0	375.0	15.0	2,125.0	85.0	38.3
1950	2,573.4	729.5	28.3	1,843.9	71.7	39.5
1959*	2,690.4	1024.9	38.1	1,665.5	61.9	41.6
1965	2,953.6	1296.4	43.9	1,657.2	56.1	45.3
1970*	3,128.2	1571.7	50.2	1,556.5	49.8	48.0
1979*	3,398.0	2062.0	60.7	1,336.0	39.3	52.1
1980	3,419.6	2105.9	61.6	1,313.7	38.4	52.4
1989*	3,689.8	2509.3	68.0	1,179.8	32.0	56.6

\* Date of population census

Source: Statistical Yearbook of Lithuania, 2004, p. 56; Demographic Yearbook, 2005: 3.

Lithuania was the last state in Europe to restore its population to the level it was at the beginning of 1941 even though it was not a direct participant in the war (but was occupied). The reasons for such a decline were not only the forced expulsions of the Stalinist period, but also the genocide of Lithuania's Jews during the time of the Nazi occupation, emigration of Poles from the Vilnius region, of Germans from the Klaipėda region and the departure of Lithuanians (many intellectuals and politically active persons) from Lithuania at the end of World War II before the advancing Red Army, and the casualties of Lithuanian partisans in battles against the Soviets. Moreover, many people of Lithuania in the period of the Khrushchev "thaw" were persuaded to move to the virgin lands of Kazakhstan and Siberia as well as to various "Komsomol" (Communist Youth) construction sites in other Soviet republics. That is why after World War II there was no noticeable compensation or "baby boom" period in Lithuania. Statistical calculations show that if there had not been these losses of people from 1939, then the population in 1959 would have been 3.7 million and not the 2.7 million established by the census. In 2000 the population of Lithuania would have been 4–5 million and not 3.5 million. One can assert that even the latter figure (3.5 million) was reached only due to the large immigration into Lithuania from other Soviet republics because the Soviet authorities, wanting to conceal the real scale of the forced deportations, encouraged many people, mostly Russian speakers, to move to Lithuania by providing them with various privileges, especially housing, better jobs etc. After the war until 1959 about 214,000 non-Lithuanians immigrated into Lithuania (Vaitekūnas, 1998: 143). Thus, the damage experienced by the people during and after World War II are relevant even today. Not only natural growth

of the population but also the arrival of other nationalities into Lithuania, the prohibition of emigration (only a small number of Lithuania's population mostly Jews were allowed to emigrate in the 1960s–1970s) affected the provisional growth in the population of Lithuania.

The inhabitants of Lithuania were known in the Soviet Union as an industrious qualified work force (Soviet terminology). This is confirmed by the statistical data about the production of industry and agriculture in Lithuania, which often exceeded that of other republics in size and quality. Unfortunately, the intelligentsia had already been "blood drained" in the post-war years and it required 40–50 years until there arose a new generation, which, being closer to the West, was able to accomplish much in science, implement discoveries in practice, etc. The level of education in the whole population improved because general school education was required in the Soviet period, studies at universities were free, the number of schools of higher education as well as students also grew. No doubt this was done for ideological considerations, wanting to show the superiority of socialism over capitalism as well as to encourage Lithuanians to surrender to the spirit of Communist ideas. However, the Soviets were also not successful here – communist ideas did not find universally acceptable soil here, and regarding the number of persons with higher education Lithuania continued to be behind Western Europe although in the Soviet Union Lithuania's human resources also had the highest rating. After the restoration of independence the quality of Lithuania's human resources regarding the level of education was lower than in the West. Toward the end of the 20<sup>th</sup> c. these differences became clearer especially in the growth of the economy, its structure, and the inability to compete with the West in the world's economic and intellectual markets.

#### HUMAN RESOURCES AND THEIR STRUCTURE AFTER THE RESTORATION OF INDEPENDENCE

The increasing economic backwardness of the Soviet Union in comparison with the West, and the open and "silent" resistance of the occupied nations led to the collapse of the USSR, which was accelerated by the "perestroika" of USSR president M. Gorbachev. Lithuania, along with Estonia and Latvia, showed particular resistance to the Soviet occupation and its system. On March 11, 1990 the Act of the Supreme Council of the Republic of Lithuania for the Reestablishment of Lithuania as an independent state was passed.

Lithuania became an independent state, joining the community of European states, signing all its adopted treaties and declarations. There was euphoria. Reality demanded a new appraisal of the inherited economy, efforts to resolve many complicated and immediate economic questions. Among these important

questions was the size of the population, the scope of human resources, their size and quality, structural peculiarities. The last (1989) census carried out census no longer reflected the true situation. There were many reasons for this. Among the significant ones was the fact that the significant contingent of the Soviet army, their officers and family members were proportionally divided among the cities and rajions (municipalities). The preparation for the new census was delayed for many reasons, among which the important ones were both economic (expenditure) and political (Lithuania was preparing for membership of the EU). The preparations for the census were carried out in a very serious manner because there was a desire to conform with EU methodology so as to facilitate a more rapid entry into the Eurostatistics system, and be more practical living in the single EU community. EU statisticians also offered all the Baltic states the new methodology, which differed from the old Soviet one. Compliance with this methodology gave the possibility to compare the economic social development, culture and other statistics of the old and new members of the European Council, to resolve current and strategic economic, social and other questions. For these reasons the preparations for the new census in Lithuania took about ten years.

The first census in the reestablished independent Lithuania was conducted in 2001. Its data, most of all the size of the population were a surprise not only to society as a whole, but even to the statisticians themselves because the size of the population (Table 2) was significantly smaller than expected. The population in 2001 was 206,700 smaller than in 1990. Several factors determined the decline in population: the withdrawal of the Soviet army (as a rule family members also departed along with the officers), some of the non-natives returned to their real homeland, although after the restoration of independence many of them remained in Lithuania, and received its citizenship. There were also other reasons. Compared with 1992 (when the population of Lithuania was the highest in the 20<sup>th</sup> c.) there were 219,300 fewer people in 2001. This occurred because part of the population after the collapse of the “iron curtain” temporarily or permanently departed to the West for work or permanent residence.

However, even these official statistics of the decline are controversial; even indirect calculations show that only some of the emigrants declared their departure. For example, according to the data of the Lithuania Department of Statistics 27,800 people departed in 2006. Of these 12,600 (45.3%) declared their departure, 15,200 (54.7%), i.e more than half did not declare it. According to unofficial statistics from 1990 to 2008 some 400 to 800 thousand people emigrated from Lithuania. Thus, the size of the population and scope of human resources is decreasing. Because young people having at least high school if not higher education and skilled workers make up a majority of those departing, there are both quantitative and qualitative losses in various demographic structures.

Table 2. Population of Lithuania in 1990–2008 (in thousand)

Year	Population			The change in population per year		
	Total	Urban	Rural	Total	Urban	Rural
1990	3,693.7	2,513.9	1,179.8	+8.3	+12.9	-4.6
1991	3,702.0	2,526.8	1,175.2	+4.3	+ 4.6	-0.3
1992	3,706.3	2,531.4	1,174.9	-12.4	-21.0	+8.6
1993	3,693.9	2,510.4	1,183.5	-22.6	-24.0	+1.4
1994	3,671.3	2,486.4	1,184.9	-28.3	-28.2	-0.1
1995	3,643.0	2,458.2	1,184.8	-27.8	-25.3	-2.5
1996	3,615.2	2,432.9	1,182.3	-27.2	-4.3	-22.9
1997	3,588.0	2,428.6	1,159.4	-25.7	-30.5	+4.4
1998	3,562.3	2,398.5	1,163.8	-25.9	-21.3	-4.6
1999	3,536.4	2,377.2	1,159.2	-24.3	-20.1	-4.2
2000	3,512.1	2,357.1	1,155.0	-25.1	-22.9	-2.2
<b>2001</b>	<b>3,487.0</b>	<b>2,334.2</b>	<b>1,152.8</b>	<b>-11.4</b>	<b>-8.0</b>	<b>-3.4</b>
2002	3,475.6	2,326.2	1,149.4	-13.1	-9.0	-4.1
2003	3,462.5	2,317.2	1,145.3	-16.8	-19.6	+2.8
2004	3,445.9	2,297.4	1,148.5	-20.6	-16.0	-4.6
2005	3,425.3	2,281.4	1,143.9	-22.0	-12.6	-9.5
2006	3,403.3	2,268.9	1,134.4	-18.4	-8.6	-9.8
2007	3,384.9	2,260.3	1,124.6	-18.5	-9.5	-9.0
2008	3,364.4	2,250.8	1,115.6	-	-	-

Source: Demographic Yearbook, 2008: 3.

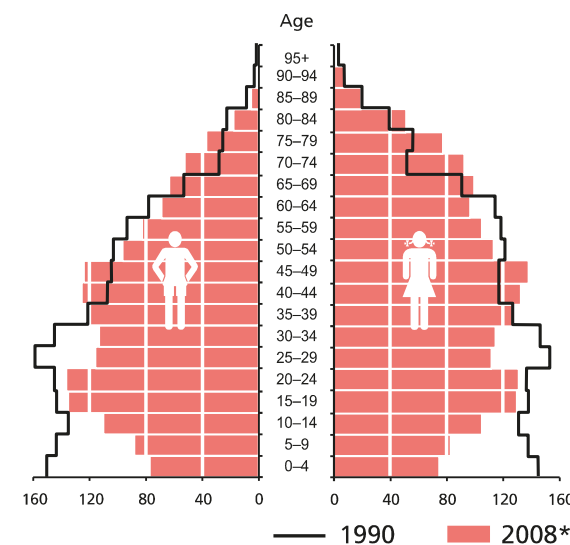


Fig. 1. Population by age and sex, 1990 and 2008 (in thousand)

Source: Lithuanian Statistics.

The age and sex pyramid (Fig. 1) in 2008 shows a clear decline in the number of people of the most productive age. There is a very great decline in the 25–39 age group. This decline shows that the young, with higher education, are the most successful emigrants. Thus, on the one hand, there is a “brain drain” as well as the departure of young women of fertile age, who create families and give birth to children but not in Lithuania. Thus, the structure of the main age groups of the population is changed significantly (Table 3). According to the data of the Statistics Department in 2000–2008 the decline in the population was 145,700. 106,300 (73% of the total decline) were from the cities, 39,400 from rural areas. Thus, the number of people in the cities decreased at the beginning of the 21<sup>st</sup> century although the process is the opposite in the world. The decline in the

number of children and youths as well as the increase in the number of people of pension able age indicates a rapid ageing of Lithuania’s human resources, characteristic for the developed world as a whole.

The ageing of the population is not the same in different counties (districts or *apskritis*) (Table 2). The greatest part of the most senior population are in the districts (regions) in which the majority are rural inhabitants; the population density is lower. This is the north east region (counties of Utena, Panevėžys, Šiauliai) as well as the regions of central and eastern Lithuania (counties of Kaunas, Alytus). Different reasons determined the ageing of the population of these regions.

Table 3. Population structure by major age group in 2000–2008

Age group	2000	2001	2002	2003	2004	2005	2006	2007	2008
In Thousand									
<b>Total</b>	<b>3,512.1</b>	<b>3,487.0</b>	<b>3,475.6</b>	<b>3,462.5</b>	<b>3,445.9</b>	<b>3,425.3</b>	<b>3,403.3</b>	<b>3,384.9</b>	<b>3,366.4</b>
0–14	710.0	686.6	659.6	633.0	608.8	585.1	560.4	538.1	517.0
15–59	2,133.8	2,126.3	3,131.4	2,136.2	2,138.8	2,148.5	2,148.9	2,154.9	2,158.6
60+	668.3	674.1	684.6	693.3	698.3	691.7	694.0	691.9	690.8
<b>Urban</b>	<b>2,357.1</b>	<b>2,334.2</b>	<b>232.6</b>	<b>2,317.2</b>	<b>2,297.4</b>	<b>2,281.4</b>	<b>2,268.8</b>	<b>2,260.2</b>	<b>2,250.8</b>
0–14	458.3	441.6	422.7	404.1	386.1	370.9	355.6	342.6	330.6
15–59	1,501.2	1,491.1	1,492.5	1,493.1	1,486.2	1,486.3	1,484.0	1,485.9	1,485.3
60+	397.6	401.5	411.0	420.0	425.1	424.2	429.2	231.7	434.9
<b>Rural</b>	<b>1,155.0</b>	<b>1,152.8</b>	<b>1,149.4</b>	<b>1,145.3</b>	<b>1,148.5</b>	<b>1,143.9</b>	<b>1,134.5</b>	<b>1,124.7</b>	<b>1,115.6</b>
0–14	251.7	245.0	236.9	228.9	222.7	214.2	204.8	195.5	186.4
15–59	632.6	635.2	638.9	643.1	652.6	662.2	664.9	669.0	673.3
60+	270.7	272.6	273.6	273.3	273.6	267.5	264.8	260.2	255.9
Per cent									
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
0–14	20.2	19.7	19.0	18.3	17.7	17.1	16.5	15.9	15.4
15–59	60.8	61.0	61.3	61.7	62.1	62.7	63.1	63.7	64.1
60+	19.0	19.3	19.7	20.0	20.2	20.0	20.4	20.4	20.5
<b>Urban</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
0–14	19.4	18.9	18.2	17.5	16.8	16.3	15.7	15.2	14.7
15–59	63.7	63.9	64.1	64.4	64.7	65.1	65.4	65.7	66.0
60+	16.9	17.2	17.7	18.1	18.5	18.6	18.9	19.1	19.3
<b>Rural</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
0–14	21.8	21.3	20.6	20.0	19.4	18.7	18.1	17.4	16.7
15–59	54.8	55.1	55.6	56.1	56.8	57.9	58.6	59.5	60.4
60+	23.4	23.6	23.8	23.9	23.8	23.4	23.3	23.1	22.9

Source: Lithuanian Population by Age, 2008: 22.

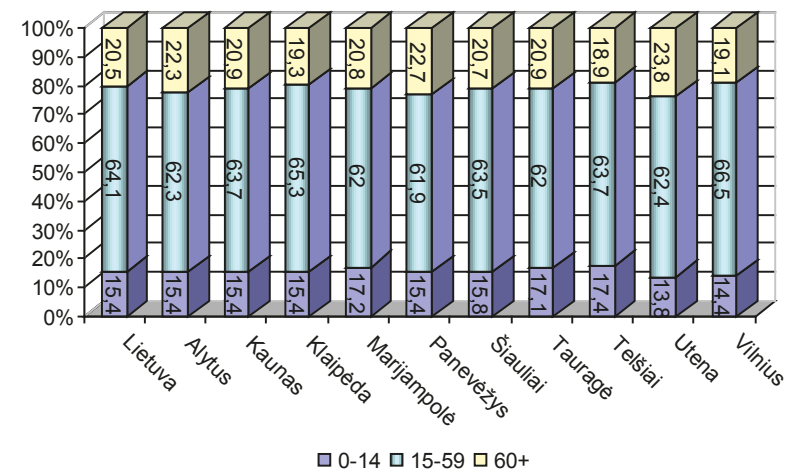


Fig. 2. Population by major age group and counties, 2008

Source: Lithuanian Population by Age, 2008: 27.

The north east region (especially Utena) lost many young, working age inhabitants already in the first years after the war when a large part of them were recruited or even forcibly shipped out to reconstruct the capital Vilnius, which had been destroyed during the war. The Varėna region, which due to its great forests had a small population, lost part of it for two reasons. First, many people from Alytus, Varėna and other regions, where there was strong resistance to the Soviet occupation, were moved mostly to Western Lithuania (the Klaipėda region) or forcibly deported to Siberia. The Kaunas district had been losing people already in the years of independent Lithuania due to their emigration mostly to the EU countries and the USA.

Undoubtedly, a great number of economic, social, and psychological factors, which exhibited different forces and forms in different regions, cities and



villages, affected the decline in population and the changes in their structure. These actions and reasons have already been comprehensively analysed by the Lithuanian and foreign authors of this article as well by other investigating demographers, geographers, and economists (Eberhardt, 1997; Hiden, Salmon, 1991; Kavaliauskas, Bražukienė, Krupickaitė, 2004; Krupickaitė, 1999; Stanaitis, Adlys, 1973; Vaitekūnas, 1990, 2002, 2006; Vaitekūnas, Martinavičius and others, 2006; Vaitekūnas, Raudeliūnienė, 2006 and others). Therefore, let us analyse the two most important indices of the demographic processes: the natural movement of the people and migration.

The negative changes in the birth and death rates of the population of Lithuania due to the sexual revolution, which began significantly later than in Western Europe, also appeared later. Until the 1970s the natural population increase in Lithuania was positive due to a higher birth than death rate (Fig. 3). This was due to the retention of the traditional family, earlier and greater number of marriages, the birth of the first child to mothers of a younger age as well as the greater number of children in the family and a higher birth rate.

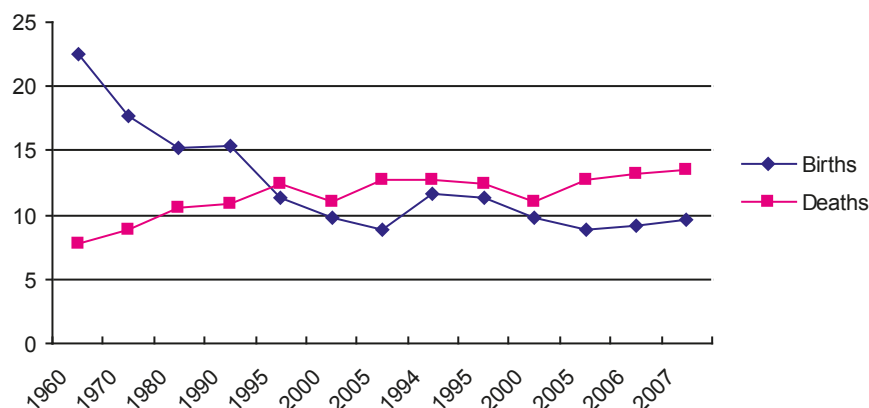


Fig. 3. Birth and death rate per 1,000 average population

Source: Lithuania in Figures, 2008:11; Demographic Yearbook, 2007.

In 1960 the birth rate was 22.5%. Subsequently, it began to decrease rapidly and in 1994 for the first time in the 20<sup>th</sup> c. was 1.1% lower than the death rate. The decline in the birth rate continued; already by 2007 it had declined to -9.6%. The death rate increased constantly although in individual periods it showed a temporary relative stability. In the first year after the restoration of independence (1990) the natural growth rate of the population was still positive and comprised 17,100 people. From 1994 it became negative. The number of deaths exceeded the number of births by as much as 13,300. In 1995–2007 the natural losses in

the population of Lithuania were 104,700 people (i.e. the same as the current population of the whole district of Tauragė).

The natural movement of the people and their tendencies in various regions of Lithuania were different (Table 4). The analysis of the natural movement of the population allows one to draw these conclusions:

Table 4. Vital statistics by Lithuanian counties, 2007

County	Urban	Rural	Births	Deaths	Natural increase/decrease	Per 1,000 population		
						Births	Deaths	Natural increase
<b>Total</b>			<b>32,346</b>	<b>45,624</b>	<b>-13,278</b>	<b>9.6</b>	<b>13.5</b>	<b>-3.9</b>
Urban			21,856	26,796	-5,140	9.6	11.9	-2.3
Rural			10,690	18,828	-8,138	9.5	16.8	-7.3
<b>Alytus c.</b>			<b>1,487</b>	<b>2,614</b>	<b>-1,127</b>	<b>8.4</b>	<b>14.7</b>	<b>-6.3</b>
Urban			897	1,172	-275	8.6	11.2	-2.6
Rural			590	1,442	-852	8.1	19.8	-11.7
<b>Kaunas c.</b>			<b>6,482</b>	<b>8,831</b>	<b>-2,349</b>	<b>9.6</b>	<b>13.1</b>	<b>-3.5</b>
Urban			4,697	5,858	-1,161	9.7	12.1	-2.4
Rural			1,785	2,973	-1,188	9.4	15.6	-6.2
<b>Klaipėda c.</b>			<b>3,924</b>	<b>4,647</b>	<b>-723</b>	<b>10.4</b>	<b>112.3</b>	<b>-1.9</b>
Urban			2,777	3,172	-395	10.1	11.5	-1.4
Rural			1,147	1,475	-328	11.1	14.2	-3.1
<b>Marijampolė c.</b>			<b>651</b>	<b>824</b>	<b>-173</b>	<b>9.4</b>	<b>11.9</b>	<b>-2.5</b>
Urban			440	525	-85	9.3	11.1	-1.8
Rural			211	299	-88	9.6	13.6	-4.0
<b>Panevėžys c.</b>			<b>2,355</b>	<b>4,022</b>	<b>-1,887</b>	<b>8.2</b>	<b>14.1</b>	<b>-5.9</b>
Urban			1,322	2,002	-680	7.9	11.9	-4.0
Rural			1,033	2,020	-987	8.8	17.2	-8.4
<b>Šiauliai c.</b>			<b>3,248</b>	<b>4,918</b>	<b>-1,670</b>	<b>9.2</b>	<b>14.0</b>	<b>-4.8</b>
Urban			1,925	2,770	-845	8.9	12.8	-3.9
Rural			1,323	2,148	-825	9.7	15.8	-6.1
<b>Tauragė c</b>			<b>1,215</b>	<b>1,809</b>	<b>-594</b>	<b>9.5</b>	<b>14.1</b>	<b>-4.6</b>
Urban			491	674	-183	9.3	12.8	-3.5
Rural			724	1,135	-411	9.6	15.0	-5.4
<b>Telšiai c.</b>			<b>1,731</b>	<b>2,227</b>	<b>-496</b>	<b>10.0</b>	<b>12.8</b>	<b>-2.8</b>
Urban			958	1,179	-221	9.3	11.5	-2.2
Rural			773	1,048	-275	10.8	14.7	-3.9
<b>Utena c.</b>			<b>1,330</b>	<b>2,918</b>	<b>-1,588</b>	<b>7.7</b>	<b>16.8</b>	<b>-9.1</b>
Urban			774	1,118	-344	8.0	11.6	-3.6
Rural			556	1,800	-1,244	7.2	23.4	-16.2
<b>Vilnius c.</b>			<b>8,883</b>	<b>11,071</b>	<b>-2,188</b>	<b>10.5</b>	<b>13.1</b>	<b>-2.6</b>
Urban			6,999	7,714	-715	10.5	11.6	-1.1
Rural			1,884	3,357	-1,473	10.2	18.2	-8.0

Source: Demographic Yearbook, 2007.

- 1) Negative population growth is found in all the districts, but the greatest losses due to the decreasing number of births and increasing deaths is in the north east (Utena and part of the Panevėžys) and southern (Alytus) districts. In them the natural negative decrease was from 6.3 to 9.1%. In the north east region an especially dramatic demographic situation occurred in the Rokiškis (−10.2%), Anykščiai (−2.3%), Ignalina (−16.2%), Zarasai (−12.7%), Širvintai (−10.7%), Švenčioniai (−11.9%), Ukmergė (−10.8%) rajions. A similar situation exists in the comunas of Southern Lithuania – Alytus (−10.0%), Lazdijai (−10.0%), Prienai (−11.4%), and elsewhere. The local governments of these municipalities can be considered to be demographic, economic and political hearths of social tension, which are constantly increasing in these regions.
- 2) The birth rate was always higher in rural areas than in the cities. In the 21<sup>st</sup> c. the general coefficient of the birth rate in the rural areas of all the regions became lower than in the cities. The most important cause of this is the rapid ageing among rural inhabitants (Table 3).
- 3) There is a negative population growth rate not only in the middle and small size cities of Lithuania (miestai) (Alytus, Joniškis, Žagarė, Druskininkai, Jonava, Kaišiadorys, Kėdainiai, Biržai, Telšiai) etc.), but also in the major cities (Vilnius, Kaunas, Klaipėda, Panevėžys, Šiauliai). This development can be explained by the fact that the always large migration waves of rural residents broke off for at least two reasons: not only did the number of work places not increase, but even decreased in many branches of production and service due to technological and technical innovations.

In rural areas as the needs for human resources decreased, their comparative excess emigrated to the more economically developed states due to higher wages as well as an often better standard of living.

The second reason for the decline in population – the emigration of human resources (Fig. 4), which grew larger especially after the collapse of the “iron curtain” and especially after Lithuania became a member of the EU. Emigration became the opportunity for many people or even whole families to find better paid jobs, different conditions than in Lithuania, to find more favourable guarantees of social security and maintenance. Emigrants send part of their earnings to other people in Lithuania, especially family members, and assist relatives financially.

Immigration into Lithuania is significantly lower than emigration. In the first years of independence it was thought that most of the emigrants would return to the homeland after a while. Unfortunately, practice shows something else – only a small number, mostly those who were unable to find the desired employment, were of pensionable age and were not qualified or did not adapt psychologically to the new environment and manner of living. There is no serious basis to

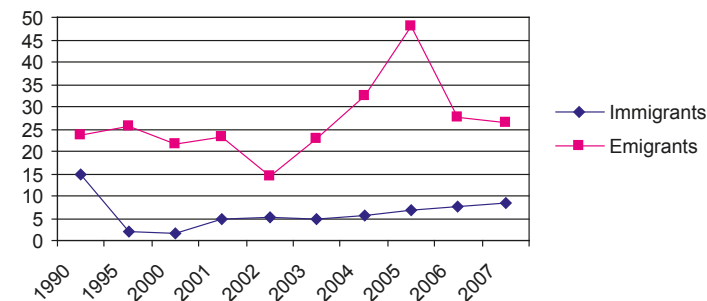


Fig. 4. International migration 1990–2007 (in thousand)

Note: The emigration since year 2001 includes persons who have not declared their departure

Source: Demographic Yearbook, 2005, Demographic Yearbook, 2007.

believe that the number of returnees will increase. Several factors strengthen this conclusion. First, the post World War II emigrants (“second wave”) living in the USA, Canada, Australia, and the countries of Western Europe and South America had expressed hopes to return to Lithuania after the restoration of independence. These expectations were not fulfilled – only a small number, mostly pensioners returned. Second, the various projects created by the Lithuanian authorities to encourage the return of highly qualified persons, mostly scholars, even offering them higher wages did not produce any results. Moreover, one can regard such projects as absurd or even dangerous to Lithuania as this can only encourage young scholars to go abroad so that after their return (if only they would return?) they would have more favourable working conditions.

Due to the lower birth rate and greater emigration the size of the population is decreasing constantly. The decline in population has an especially unfavorable effect on their age structure. The working age share in the country is 63.1% of the population. There is higher percentage only in the largest cities (Vilnius, Kaunas, Klaipėda, Šiauliai, Panevėžys) and the industrial municipalities (Elektrėnai, Jonava, Mažeikiai, Utena, Marijampolė). However, the comunas of most of the municipalities have significantly smaller working-age human resources. All the regions of the north-east, south and Samogitia have such characteristics (Fig. 5).

For the mentioned reasons the size of the population (Fig. 6) of the cities and larger district centres is decreasing rapidly. Along with this process in Lithuania there is also the world tendency – the concentration of the population in the largest cities. According to the 1989 census 1,480.5 thousand (59%) people lived in the five largest cities. In 2008 their population declined to 1,325.0 thousand (58.9%) of all urban residents or 39% of the republic’s total population. The number of rural residents in 1989–2008 decreased from 1,179.8 to 1,115.5 thousand.

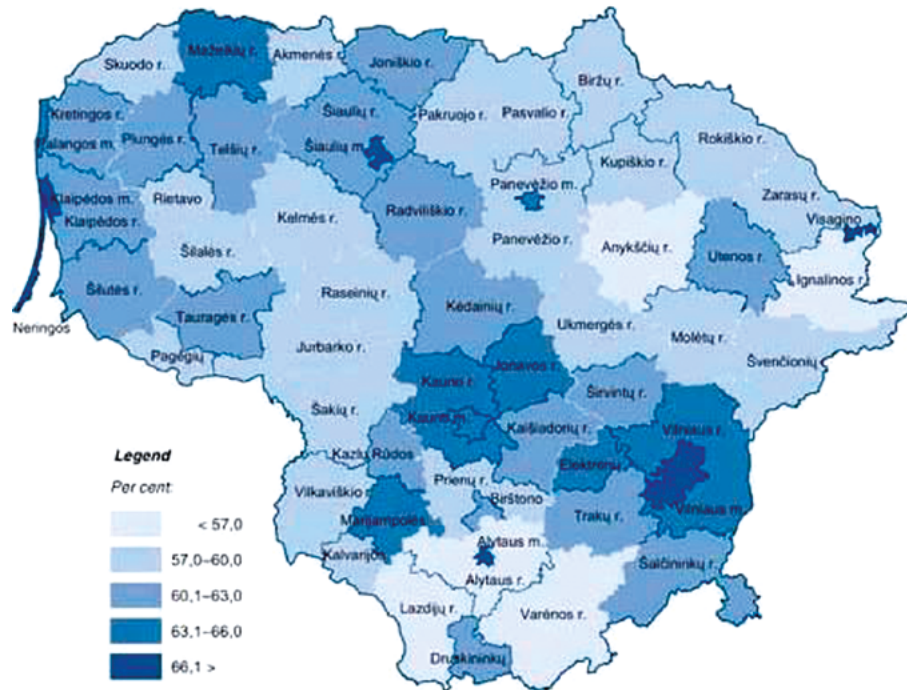


Fig. 5. Working age population in total number of population, 2007 (as a percentage).

Source: Lithuanian Statistics.

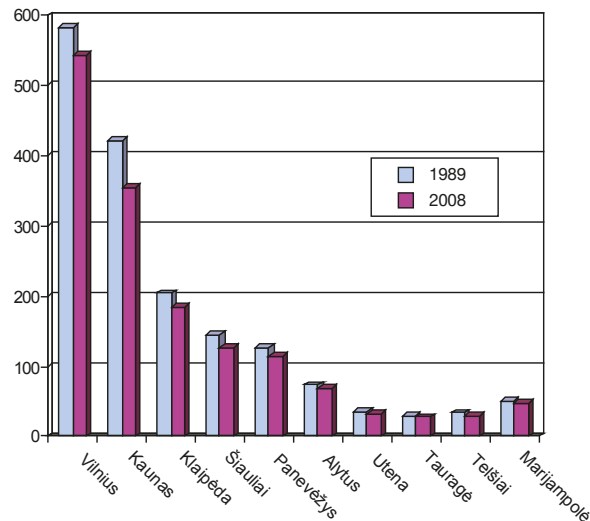


Fig. 6. Number of population in the cities and towns 1989 and 2008 (in thousand)

Source: Statistical Yearbook of Lithuania, 1990; Population by county, 2008.

In 2008 the proportion of the population living in cities was 66.9% and 33.1% in rural areas. The average population density fell from 56.3 to 51.8 inhabitants per sq. km. These population figures and demographic and territorial tendencies will remain for a long time.

### PREDICTIONS FOR THE POPULATION OF LITHUANIA

The prognosis of the population is important not only from a theoretical, but also a practical point of view – economic progress/development, social and even political aspects of life depend on the quantity of human resources and their demographic structure. Finally, the fate of the nation and state, the resolution of geopolitical problems rely on the size of the population. Moreover, one must adjust many tendencies of the development of many areas of life according to demographic prognoses.

Lithuania’s Department of Statistics made its prognosis of the population for the first time in 1995. They predicted that in 2001 3,674.1 thousand people would live in Lithuania, but the census of 2001 found only 2,487 thousand, i.e. almost 200,000 fewer. For this reason it was made more accurate, using the more modern and accurate methodology of Eurostatistics. Three possible prognoses were made: optimistic, medium, and pessimistic (Fig. 7).

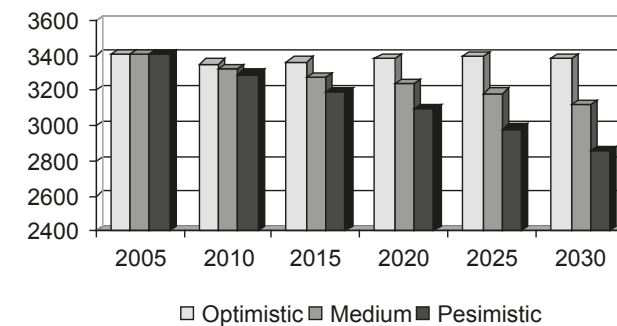


Fig. 7. Population projections 2005–2030 (in thousand)

Source: Population Projections of Lithuania, pp. 16–31.

The 2004 prognosis is also more accurate because the data of the 2001 census and an analysis of the annual demographic processes allowed one to make certain corrections tied with the natural movement of inhabitants, migration, and the tendencies of family creation. In making the prognoses more attention was devoted to the demographic behaviour of each generation of women, their fertility



coefficients, total fertility rate as well as changes in later generations. Moreover, life expectancy at birth, possible levers of emigration and immigration, the ageing of the population, etc. were also calculated.

The analysis of all the variables allows one to draw the conclusion that there is little optimism even in the optimistic prognosis – in all the prognoses the predicted population in 2030 is less than in the initial period. According to the optimistic forecast in 2030 the population of Lithuania would be 3,385.4 thousand, according to the medium forecast 3,117.2 thousand, and according to the pessimistic one 2,854.7 thousand. Some figures of the medium forecast (Table 5) also affirm a dramatic decline in the size of the population and their demographic structure.

Table 5. Population projection for the years 2005–2030 according to the medium variant.

Year	Population			Total fertility rate	Life expectancy at birth, years		Net migration
	Total	Men	Women		Men	Women	
2005	3,406.3	1,588.5	1,817.8	1.27	66.8	78.3	-8,333
2010	3,323.9	1,547.2	1,776.7	1.53	68.2	79.4	-5,901
2015	3,277.4	1,526.5	1,750.9	1.65	69.8	80.6	-4,550
2020	3,236.7	1,509.7	1,727.0	1.65	71.4	81.6	-3,611
2025	3,184.5	1,486.9	1,697.6	1.65	72.5	82.4	-2,630
2030	3,117.2	1,456.4	1,660.8	1.65	73.0	82.7	-2,084

Source: Population Projections 2005–2030, p. 16.

The medium forecast has some negative indices which should raise the concern not only of scholars.

*First*, there is a rapid decrease in the size of the population, which cannot be compensated by the natural growth of the population. There is no real reason to believe that this tendency will change significantly. These tendencies could be changed not so much by the demographic policies carried out by the state, the essence of which would have to be effective growth of the economy, a well planned economic strategy and a favourable economic situation in the whole European Union, and not the opinion that one can increase the birth rate by only increasing the payments to families having children. The demographic policies have to be more complex, including various economic, legal incentive areas, as well as being directed at the whole population. For this reason, it is difficult to expect that the coefficient of women’s fertility in the short period from 2005 to 2015 would increase from 1.27 to 1.65 because so far the tendencies are the opposite – from 1990 to 2005 it decreased from 2.07 to 1.27. Moreover, the age of persons marrying is “growing older”, and the birth of the first child is postponed to a later date. One can also not expect a greater return to Lithuania of people who

had emigrated when the economic and social conditions of life in Lithuania remain lower than in the immigration states. For the same reasons one cannot expect the immigration of qualified specialists as well as labour resources. Therefore, there are no sources that could result in an increase in human resources.

*Second*, even according to the medium prognosis the structure of the population’s age groups is dramatically changing (Table 6). From the restoration of independence until 2030 the number of children under the age of 5 will decrease by 6.2% of the general population, the human resources of the working age group by 5.1%. During that period the population over the age of 60 will increase (by as much as 11.3%). This will create several negative factors: an increase in the distribution of the state budget for the social needs of the elderly, their pensions. At the same time, the possibilities for increasing expenditure for education and culture, the creation of a knowledge (information, educated) society will decline. The number of people withdrawing from the workforce will be greater than the number seeking to replace them. Moreover, every working person will have to support a non-working person (child or pensioner). The demographic ageing of the population may demand an extension of the working age and a later entry into a retirement, a prolongation of the working age of specific groups of people (military officers, firemen, etc.), a decrease in the number of ineffectively employed persons in state service. New technologies, whose effectiveness is now evident, especially in agriculture, may in part compensate for the shortage of human resources.

Table 6. Population by age in 2000–2030 (%)

Age group	1990	2000	2005	2010	2020	2030
Total	100.0	100.0	100.0	100.0	100.0	100.0
0 – 14	22.6	20.2	17.1	15.1	16.9	16.4
15 – 59	61.4	60.8	62.7	63.8	59.7	56.3
60 +	16.0	19.0	20.2	21.1	23.4	27.3

Sources: Lithuania’s Statistics Yearbook, 1993; Lithuanian Population by Age, 2008; Population Projections of Lithuania 2005–2030.

*Third*, as the average life expectancy of the population becomes greater, the great difference between men and women will remain. In 2030 the average life expectancy of men will be about 10 years less than that of women. This means that the suggestion made sometimes of increasing the upper limit of the working age for men to 70 years is unrealistic. In that case, men would not receive any earned rest. Only women would receive pensions. The longer life expectancy of women naturally suggests that the working age of women should be increased to 65 years and thus be made equal to that of men.



Fig. 8. Population by main age groups in 2000–2061

Source: Eurostatistics.

The predictions on the age of the population carried out by Eurostatistics are that the size of the population of the 27 EU countries will increase from 497.4 million to 505.7 million in 2009–2060 (Eurostat’s Database...). In Lithuania this number will decline constantly and will be: 2030 – 3.1, 2040 – 2.9, 2050 – 2.7, 2060 – 2.5. The population of Lithuania in 2060 will make up less than 0.5% of population of the 27 EU states and according to the size of the population take the 20th position among them. In this way in 60 years (2001–2060) the population of Lithuania will decrease by one million or more than a third. The age structure of the population will change dramatically also – the percentage of older people will increase, and we may see the upturned sex and age pyramid. (Fig. 8, 9). This naturally raises the question of what awaits the nation and state when there is such a decrease in the population.

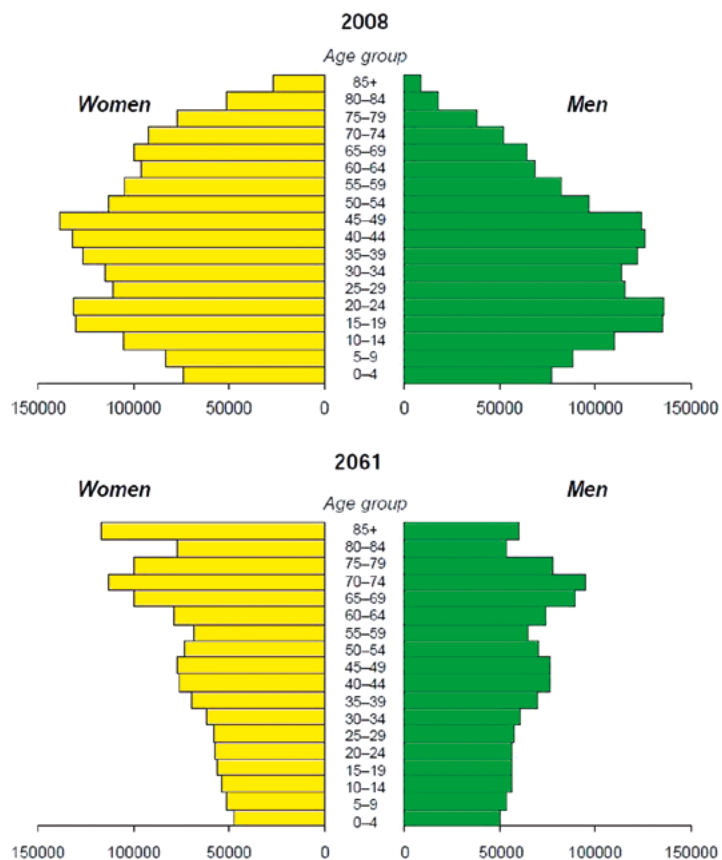


Fig. 9. Population by age and sex 2008 and 2061

Source: Eurostatistics.

### THE FATE OF THE LITHUANIAN NATION AND STATE IN THE 21<sup>ST</sup> CENTURY: POSSIBLE SCENARIOS

*I scenario: A small, but economically strong national state.* This scenario is the most desired by all EU small states; however, it will be difficult for Lithuania, along with Estonia and Latvia, to accomplish this. In 2000–2005 due to its rapid economic development Lithuania was called the “Baltic tiger”. Although this attribution is no longer heard in the economic press, some statistical figures at first glance are optimistic. The general internal production (GIP) grew from 45.7 billion litai in 2000 to 96.7 billion litai in 2007 (respectively, from 13,052 to 28,659 litai per person). The average net wage in that period increased from 970 to 1,813 litai. The decrease in the unemployment rate from 16.4% to 4.3% also indicated economic growth. Such a decrease in the level of unemployment was first of all determined by the large emigration of the working age population. The annual growth in employment also contributed. One can also view favourably the direct foreign investments which in 2000–2007 grew from 8.3 billion to 28.9 billion litai. These and other factors encouraged economic growth.

Other important factors have a negative influence on economic growth: inflation, slow implementation of innovations in industry and in the service sphere, other indicators of stagnation in industry. Inflation in 2000–2007 increased from 1.4% to 8.1%. Such an increase in inflation was the main reason preventing the adoption of the EU currency – the euro. In recent years the annual growth in industrial production slowed down from 116% in 2003 to 104% in 2007. A possible reason for this might be the slow introduction of innovations. Although the government of Lithuania adopted a programme of creating an information society in 2003, its implementation is problematic.

The programme states that “the principle factor in the growth of competitiveness is the systematic creation, use, and spread of information in the whole economy and society... It is vital to improve the education system and increase human resources so that the citizens would be prepared to acquire and implement information as well as to share it” (Lietuva: žinių ekonomikos..., 2003). This question became even more relevant when Lithuania joined the EU because the general competition of the market increased, there was a change in the orientation of the markets from East to West. One would assume that after such decisions by the government the attitude toward the financing of scientific investigations and technological expansion (SITE) would change rapidly. For subjective and objective reasons this did not happen. Even in 2007 this financing reached 657.8 million litai, i.e. only 0.8% of the annual GNP. For this reason the number of SITE workers is increasing slowly – in 1996 they comprised 16,067 persons while in 2007 they barely increased to 16,379. Employment in the high technology sector in 2003–2006 even decreased from 1.7 to 1.6%. The reform of higher education foundered, problems arose in the whole education system. In 2008 the reform of education had changed the school only slightly from 1990 even though its content and direction were partially changed.

*II scenario. More grandparents than grandchildren.* In the last decade and the near future various processes of globalization will effect Lithuania even more strongly, increasing pressure on the traditional family. Family values will be reevaluated even more, and most of the favourable demographic processes for society and the state will acquire more negative traits. For a while the number of unmarried (cohabiting) families will increase. In 1990 such families constituted a significantly smaller proportion than in recent times. Some statistical figures confirm this. In 2001 21.1% of women and 28.2% of men had never been married. In 2008 the corresponding figures were 35.7% and 44.8%. At the same time there is a decrease in the number of married people. At 2001 51.6% of women and 60.7% of men were married. In the beginning of 2008 these figures declined to 39.6% and 44.1%. Such a decline can be explained not only by the growth in the number of cohabiting families, but also by the postponement of marriage until a later date. For this reason more and more children are born in unmarried families. In 2000 7,713 children were born in them (22.6% of all those born) while in 2007 – there were 9,449 (29.2%). It is interesting that more unmarried children were born in rural areas. This is an indication of the damaged age and sex structure in rural areas. Moreover, the birth of a third or later child in families is decreasing. In 1990 9,033 children (15.9% of total births) were the third or later child. In 2007 this number decreased almost by half and was 4,593 (14.2%). The growth in the number of divorces also raises problems, especially when 63% of the children in 2006–2007 were in such families. Many children are now growing

up in families of only one parent. Including illegitimate children, some of whom also live with only one parent (mostly mothers), the number of such children will increase in the future, which in turn is already now raising problems of their incomplete upbringing.

With the lower birth rate and number of children there was also the concurrent increase in the number of older and pensionable age persons, even though the pensionable age of both men and women is increasing (Fig. 7, 8). In 2000 persons under the working age made up 21%, but in 2020 they will constitute only 16% of the total population. In the same period the percentage of pensionable age persons will increase from 20 to 24. Thus, in 2005 there were 85 children under the age of 14 for 100 pensioners. In the future according to the medium prognosis these figures will change radically. In 2020 there will be only 72 children and in 2030 only 60 children for 100 pensioners. Accordingly only every second potential grandfather will be able to rejoice in a grandchild, and only every third potential grandmother. These numbers once again affirm the dramatically ageing Lithuanian nation from a demographic point of view. This ageing will create many economic and social problems.

*III scenario: Multinational and multicultural Lithuania.* Lithuania today can be described as a national state in which the main nationality – Lithuanians – constitutes 83.5%, Poles 6.7%, Russians 6.3%, Belarusians 1.2%, other national minorities 2.3%. Other EU states are also such national states: Finland (93% Finns), Germany (92% Germans), Poland (97% Poles), Slovenia (92% Slovenians). In 2001 people of more than 115 nationalities lived in Lithuania. Communities of some of these nations (Russians, Gypsies, Belarusians, Latvians, Germans, Tatars, Jews, Karaites) have been living since the Middle Ages. Others are more recent. During the Soviet period the population from Georgia, Armenia, Moldova, Kazakhstan and other Soviet republics increased. The Kremlin’s policies favoured the mixing of nations, the idea of the creation of a unified “Soviet populace”. After the reestablishment of independence and with the shortage of human resources people from many, mostly from the economically weaker states, were invited in an organized manner or of own their own accord came to Lithuania.

The number of Chinese, Bulgarians, Greeks, Romanians, Koreans, Vietnamese, Afghans, Iraqis, Kurds as well as Serbs, Bosnians, Croats, Chileans, Czechs, Italians and other nationalities in Lithuania is increasing. Such an increasing immigration of other nationalities and the strengthening of their communities can create additional problems for their adaptation, the creation of an educational system for national minorities, their integration into political life, etc.

The number of foreigners will principally depend on the immigration quotas determined in Lithuania, the extent of the emigration of Lithuania’s inhabitants, as well as on economic development. In the current circumstances a large part,

mostly educated youths and qualified workers, will continue to emigrate from Lithuania to Western countries seeking better living and working conditions. Only the immigration quotas of these states, or various other laws can limit their departure, but because there is a shortage of such people in the West, the quotas for Lithuania's inhabitants can be more favourable than from the economically backward states.

*IV scenario: The end of the national state (?).* Talking about the future of the state the idea can arise: is it really important to preserve the national state, the idea of which was especially popular at the end of the 19th and beginning of the 20th centuries when with the break up of empires many states (Czechoslovakia, Hungary, Poland, Finland, Norway, Estonia, Lithuania, Latvia, etc.) were being created on a national basis. The same also occurred at the end of the 20th c. when former Yugoslavia splintered into national states. One can assert that the role of nations and their culture in current times has not declined, but even increased. In the modern world, which is unmercifully affected by the process of globalization, the existence of nations and their cultures, and their survival become especially important because with the disappearance of the nation and culture the very state may disappear. After a temporary loss of statehood, due to wars, occupations, and mergers into various unions, the state can be recreated. With the loss of a national identity the nation state dies.

For this reason it would not be permissible and forgiveable not to evaluate this factor and suppose that national culture in the 20th c. is only a relic. On the contrary, the role of a national culture at the end of the 20th and beginning of the 21st c. became even more important because "culture constitutes, forms the society" (Kavolis, 1996: 158). The national composition of the inhabitants of a state and national identity are especially important for small nations, physically, ideologically, and culturally surrounded by large powers. Ancient Greeks and Romans also valued their nation and national identity as an important political and military force. Later political figures as well as military strategists valued these factors in a positive manner. Later, the Prime Minister of Prussia Otto Eduard von Bismark (1815–1898) used the expression of nationalism to strengthen Prussia so that its voice would be heard in all of Europe (Perry, Chase and Jacob, 1989: 555).

In the years of pre-war Lithuania geographer and geopolitician Kazys Pakštas also talked about this. He valued the geographical position of the Republic of Lithuania as "abnormally dangerous". Already in 1928 when commemorating the 10th anniversary of Lithuania's independence the professor wrote: "It would be very careless to suppose that we will preserve our independence for ever. Maybe it is only a meteor, flashing in a strange glow in the course of historical ages. Living abnormally in an abnormally dangerous place, we in no way have to be satisfied

with only normal works. Our geographic position demands that we must exceed the normal norm of progress..." (Pakštas, 1928: 343). His quoted words were prophetic – two decades later Lithuania was occupied and lost its independence. Today, small nations can disappear not necessarily due to occupation, but also through the economic and political pressure of the large states, globalization, the intermingling of nations, inadequate processes of emigration and immigration. The rapidly growing population in the most impoverished Asian and African states can raise an especially large danger here for Lithuania, as well as other European states. Immigrants, moreover, come from states in which there are traditions of higher birth rates, stronger family ties. Thus, more children are born in the immigrant communities than in the main national community. France, Germany, and Great Britain, in which there are a growing number of people of Afro-Asian origin with their own culture, traditions, religion, psychology and not always a great desire to integrate into the culture of the immigration state, are now encountering this problem. Such a danger may emerge for Lithuania if its economic situation improves while the more wealthy Western countries already "over-saturated" with immigrants begin to limit immigration. Such a danger would be reduced if the demographic situation in Lithuania changed rapidly (if the national growth rate increased), national consciousness and patriotism grew. Re-emigration would increase.

*V scenario: Lithuania a strong economic and cultural state.* History shows that Lithuania, having lost many inhabitants more than once, was capable of rising out of the ashes like a phoenix and being newly reborn. It is worth remembering here the words of the president of Lithuania, which have not lost their relevance up to now. In 1934 he declared: "Lithuania is an important state as a chain between Russia and Germany. If we do not evaluate our position, if we continue to remain passive, then we will be looked at as compensatory material to smooth out other conflicting interests" (Smetona, 1924: 4). He also stressed more than once that it is not the size of a nation that is important, but its quality, national attitude, its determination to create its own state. The large emigration of Lithuania's inhabitants, the desire of the youth to have material goods "here and now", the meagre motivation for choosing life in their homeland allows one to conclude that in this area none of the institutions of education, universities or the state is doing enough. The development strategy of the state, its material and spiritual foundations, effective policies toward the population, which so far do not exist or are only separate fragments for resolving immediate tasks are needed to improve the situation. According to this scenario communities of emigrants in Lithuania will grow and their different work habits and cultural experience will improve the economic life in Lithuania. This scenario is more hypothetical than real although the interests of the nation and state would demand its implementation.



Evaluating all these scenarios one can draw the conclusion that it is unlikely that any of them will be realized in the way that it is described. It is more likely that the scenarios of Lithuania's future will consist of many various details which will allow the creation of a normal state, preserving its nationality, cooperating in a beneficial manner with neighbouring and more distant countries.

## REFERENCES

- Bubnys, A.** 1998: *Vokiečių okupuota Lietuva*. Vilnius: Demographic Yearbook, 2007, Vilnius: Statistics Lithuania. Demographic Yearbook 2005, Vilnius: Statistics Lithuania. Demographic Yearbook 2008, Vilnius: Statistics Lithuania.
- Eberhardt P. (1997). Przemiany narodnościowe na Litwie, *Przegląd Wschodni*, Warszawa: Eurostat's database (18 June 2008).
- Gaučas, P.** 1978: Gyventojų skaičius Lietuvoje 1923–1939 metais. *Geologija ir geografija*, t. XIV.
- Hidden, J. and Salmon, P.** 1991: *The Baltic Nations and Europe: Estonia, Latvia and Lithuania in the Twentieth Century*. London & New York: Longman.
- Kavaliauskas, P., Bražukienė, I. and Krupickaitė, D.** 2004: Demografinių, ekonominių ir politinių Lietuvos socialinio lauko įtampų teritorinė raiška. Mokslas VU Gamtos fakultete. Vilnius: VUL.
- Kavolis, V.** 1996: *Kultūros dirbtuvė*. Vilnius: Baltos lankos.
- Kosiński, L.** 1970: *The Population of Europe*. London: Longman.
- Krupickaitė, D.** 1999: Changes of the number of urban population in Lithuania in 1989–1998. *Tiltai*, Nr. 1 (6).
- Lietuva: Žinių ekonomikos plėtra. Vilnius: Pasaulio bankas, 2003.
- Lietuvos gyventojų skaičiaus prognozės 2005–2030/Population Projections of Lithuania 2005–2030, 2004, Vilnius: Lietuvos statistika.
- Lithuania in Figures, 2008, Vilnius: Statistics Lithuania.
- Lithuanian Population by Age, 2008, Vilnius: Statistics Lithuania.
- Lithuania's Statistics Yearbook. 1993, 1994, Vilnius: Lithuanian Department of Statistics.
- Pakštas, K.** 1928: Iš praėjusio dešimtmečio į ateinantį. *Židinys* No. 5–6.
- Perry, M., Chase, M. and Jacob, J.R.** 1989: *Western Civilization*. Boston: Houghton Mifflin Company
- Population by County, 2008. Vilnius: Statistics Lithuania
- Smetona, A.** 1924: Kelias Vilniui atgauti. *Tautos vairas*, No. 12.
- Stanaitis, A. and Adlys, P.** 1973: *Lietuvos TSR gyventojai*. Vilnius: Mintis
- Statistical Yearbook of Lithuania, 2008, Vilnius: Statistics Lithuania

- Vaitekūnas, S.** 1990: International migration and population ageing. *Acta Demographica* Praha, Vol. IX.
- Vaitekūnas, S.** 1998: *Lietuvos teritorija ir gyventojai*. Vilnius: Alma litera.
- Vaitekūnas, S.** 2002: Litwa w regionie Bałtyckim: sytuacja geoeconomiczna i geopolityczna w latach 1990–2000. In Kosiedowski, W. editor, *Przedsiębiorczość i innowacyjność jako czynniki rozwoju regionalnego i lokalnego*. Wrocław: WTN.
- Vaitekūnas, S. and Raudeliūnienė, I.** 2006: *Šeima ir jos transformacija XXI a. pradžioje. Krikščioniška šeima ir visuomenė*. Klaipėda: KU.
- Vaitekūnas, S.** 2006: *Lietuvos gyventojai per du tūkstantmečius/Population of Lithuania over Two Milleniums*. Vilnius: MELI.
- Vaitekūnas, S., Martinavičius, J.** and oth. 2006: *Portrait of the Regions of Lithuania*. Vilnius.

## CORRESPONDENCE TO:

Stasys Vaitekūnas  
Klaipėda University  
H. Manto 84, LT-92294 Klaipėda, Lithuania  
e-mail: stasys.vaitekunas@zebra.lt  
stasys.vaitekunas@ku.lt

