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DEPOPULATION IN THE BALTIC STATES

Atis Berzins
Dept. of Statistics and Demography, University of Latvia
Address: 19 Raina Blvd., Riga LV 1586, Latvia. E-mail: atis.berzins@lu.lv

Peteris Zvidrins
Dept. of Statistics and Demography, University of Latvia
Address: 19 Raina Blvd., Riga LV 1586, Latvia. E-mail: peteris.zvidrins@lu.lv

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Abstract. The paper deals with the characterization of the main demographic processes in the Baltics. After the re-establishment of statehood in Estonia, Latvia and Lithuania, the population dynamics clearly have been decreasing. This is evidenced both by the negative results of natural movement and the dominance of emigration in international migration processes. Population decline (depopulation) is a characteristic feature also for the titular ethnicities. Under-replacement fertility, relatively high mortality, especially for men, a high intensity of emigration and an ageing population are observed in all three Baltic countries, particularly after accession to the European Union in 2004. Latvia and Lithuania since 1990 have had among the highest population loss indicators in Europe. The scenarios of depopulation still prevail in the coming decades.

Keywords: depopulation, ageing, fertility, mortality, emigration.

1. Introduction

The purpose of this paper is to characterize the level and dynamics of depopulation in the three Baltic States and examine some determinants of their population decline. The term "depopulation" is mostly interpreted as a systematic natural decrease of the absolute number of population when the mortality rate exceeds birth rate. The Baltic States also have a negative net balance of international migration, which is why the rate of population shrinkage is particularly high. Since the restoration of independence, and especially in recent years, the Baltic States have been among the world leaders in population ageing. Understanding why the level and speed of ageing here are so high has come to be a central topic of demographic research. Almost everyone engaged in the study of this theme agrees that the reasons behind this phenomenon are a decrease in fertility and the emigration of population predominantly of younger working ages. Improvements in life expectancy mainly rejuvenated the population, since the increase in surviving was driven by a decline in child mortality. In the present paper we discuss the situation in the Baltics during the last two decades.

The research is based on national and international official statistical data. Comparative analysis and statistical methods have mainly been used in the paper. It should be taken into consideration that for the time being we do not have detailed data from the 2011 population censuses. However, preliminary data show that the total number of inhabitants in the Baltic States is lower and the tempo of depopulation and ageing is higher in comparison with the published indices of the national statistical boards before mid-2011. Thus, these data should regarded with care and will be subject to correction in the near future.

Various scientific publications analyze the dynamics of depopulation and ageing in the Baltic States, give comparative statistical data on the intensity of demographic processes and discuss the causes and consequences of these changes [5, 18, 23 a.o.]. On the eve of the millennium two international projects were conducted by a team from the University of Latvia, the Lithuanian Demographic research centre and the Estonian interuniversity population research centre, coordinated by INED (France): "Health crisis in the Baltic States" and "Cause – specific mortality development in the Baltic countries". As a result, several articles were published by Juris Krumins, Kalev Katus, Domantas Jasilionis, Vlada Stankuniene and some others. Estonian, Latvian and Lithuanian demographers participated in the compara-

tive research programmes Dynamics of population ageing in the ECE countries and the Family and Fertility surveys coordinated by the United Nations Economic Commission for Europe. Standard Country Reports and different publications by Kalev Katus, Vlada Stankuniene, Alan Puur, Peteris Zvidrins and some others were substantial contributions to population development research in this region. Two years ago the first special monograph was published: "The Baltic countries: population, family and family policy" [18] written by demographers of the three Baltic States.

2. Population decline

Three Baltic States and seven other former Soviet bloc countries already belonging to the EU are treated as East European in this paper and chosen for comparison with other EU countries. The Baltic States and five other Eastern countries (Czech Republic, Hungary, Poland, Slovakia, Slovenia) together with Cyprus and Malta joined the European Union in 2004. Bulgaria and Romania joined in 2007. According to the UN classification, the three Baltic States are included in the Northern Europe, but Slovenia is in Southern Europe. However, we have included them all in the East European region. As we can see from Table 1, the population of this region now is more than 100 million people. The three Baltic States are amongst the smallest populations in the EU (together about 7 million). In terms of the EU they form only 1.4% of the population (Estonia 0.27%, Latvia 0.45%, Lithuania 0.67%). The share of Poland and Romania with almost total 60 million citizens constitutes 12%.

Table 1. Population and its change in Eastern European countries

	Country	2010 Population (millions)	Share of total EU (%)		Population change 2000-2010, (%)
			population	territory	
1.	Poland	38.17	7.62	7.1	-1.3
2.	Romania	21.46	4.28	5.4	-4.4
3.	Czech Republic	10.51	2.10	1.8	2.2
4.	Hungary	10.01	2.00	2.1	-2.0
5.	Bulgaria	7.56	1.51	2.5	-7.7
6.	Slovakia	5.42	1.08	1.1	0.5
7.	Lithuania	3.33	0.66	1.5	-5.2
8.	Latvia	2.25	0.45	1.5	-5.6
9.	Slovenia	2.05	0.41	0.5	3.0
10.	Estonia	1.34	0.27	1.0	-2.3
	TOTAL	**102.10**	**20.38**	**24.5**	**-2.2**

Calculation of the authors from [12]

During the first decade of this century, the population size has decreased in 7 countries of the region and only in Slovenia, Slovakia and the Czech Republic has it slightly increased (up to 3%). Accordingly to official data, the highest population falls has been observed in Bulgaria (-7.7%), Latvia (-5.6%) and Lithuania (-5.2%). The data presented in Table 1, Figures 1 and 2 show that situation in Estonia is better, however only a minimal natural increase was observed there in 2010 and population decline has been a typical feature of demographic development.

According to UN Population Division data [22] the highest population loss between 1990 and 2010 was observed in Georgia (-20.3%), Moldova (-18.1%), Latvia (-15.5%), Bulgaria (-15.0%) and Estonia (-14.4%). Lithuania (-10.1%) was also among the 10 countries with the sharpest decrease of population.

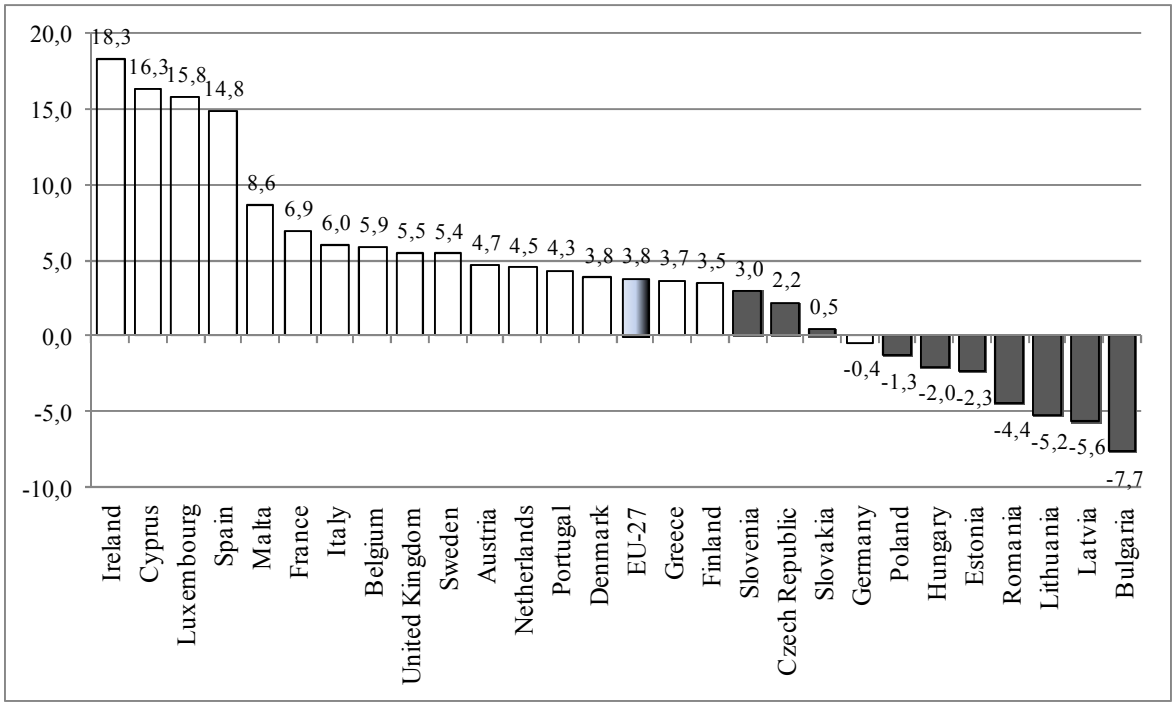

Figure 1. Population change in the EU, 2000-2009, as % of the number on beginning of 2000
Calculation of the authors from [12]

The collapse of the Soviet Union and the regaining of political independence in the Baltic States cardinally changed social and economic conditions and demographic developments. This inevitably led to fundamental changes in the reproductive and migratory behaviour of the population. As a result, the net migration in all Baltic States has become negative since 1990, and only in Estonia and Lithuania it was slightly positive in some years around the turn of the century. After the accession to the European Union in 2004, emigration from the Baltic States even increased, particularly in the period of economic crisis. Since 1991 there has been an excess of deaths over births, excluding a small excess of births over deaths (35 people) in Estonia in 2010 [17]. We can observe a similar situation also in some other countries of this region (Poland, Romania, Hungary and Bulgaria). A better situation is seen in Slovenia, the Czech Republic and Slovakia.

We see that in the Baltic States a characteristic feature of demographic development has been a decrease of population (depopulation) both among the titular ethnicities (Estonians, Latvians and Lithuanians) and among ethnic minorities. However, according to data at Statistics Estonia the number of ethnic Estonians in Estonia (about 900,000) since 2009 has grown unsubstantially. The total population of the Baltic States decreased from 7.9 million in 1990 to 6.9 million in 2010, or by 13%. Thus, the Baltic States have one of the highest population loss indicators in the world. The population decrease for minorities was even sharper.

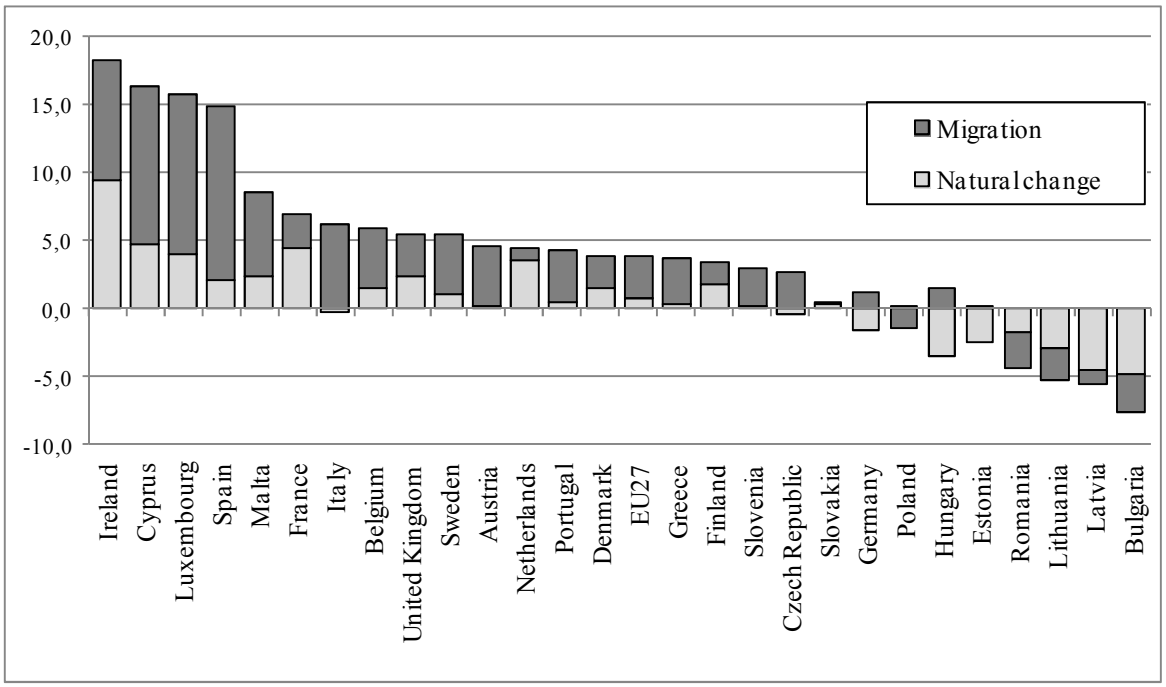

Figure 2. Structure of population change in the EU, 2000-2009, as % of the number on beginning of 2000
Calculation of the authors from [12]

3. Dynamics of fertility and mortality

Estonia and Latvia have had a low fertility rate since the beginning of the 20th century, and it has not ensured even a simple level of population replacement. For many years, Estonia and Latvia were the two republics in the former USSR with the lowest fertility rates. The period total fertility rate (TFR) fluctuated between 1.7 and 1.9 for a considerable time, but in the mid 1960s it dropped to 1.7 births per woman. In Lithuania fertility rate in the Soviet period was much higher, however it continuously decreased, reaching a minimum in the early 1980s (1.97 in 1980-1982), after which it slightly rose again as in the other Baltic States. After these changes all three Baltic States reached an approximately equal level of fertility rate by the mid 1980s and there was simple generational replacement during that period of time.

After the collapse of the USSR all the Baltic States underwent a severe social crisis. Many people saw a deterioration in their standard of living and a moral breakdown in the 1990s. State support for kindergartens declined and subsidies for children's products were eliminated. The absolute and relative numbers of marriages declined dramatically throughout the 1990s. As a result, the TFR dropped to 1.2-1.4 in 1997-2005 (with a minimum in 2002), and only in 2006-2009 was it slightly higher, particularly in Estonia. In this country, as well as in Bulgaria, Lithuania, and Slovenia, the TFR is the highest in the Eastern Europe. In contrast to the Soviet period and the first decade of independence, the lowest fertility was observed in Lithuania (1.3 in 2001-2007 and 1.47 in 2008). The adjusted TFR (free from the tempo effect) is considerably higher (1.6-1.85), indicating that most of the fall in the TFR was driven by postponement of first births [23].

Figure 3 shows a fertility increase in all countries of Eastern Europe except Hungary between 2000 and 2009. In 2009-2011 mainly due to the economic crisis the situation deteriorated rapidly in Latvia. The TFR in this country decreased from 1.45 in 2008 to 1.18 in 2010. In Estonia this rate remains relatively high (TFR 1.62-1.65) but in Lithuania it slightly increased (1.55 in 2009). A closer investigation would require more precise age-specific rates based on census data or cohort analysis.

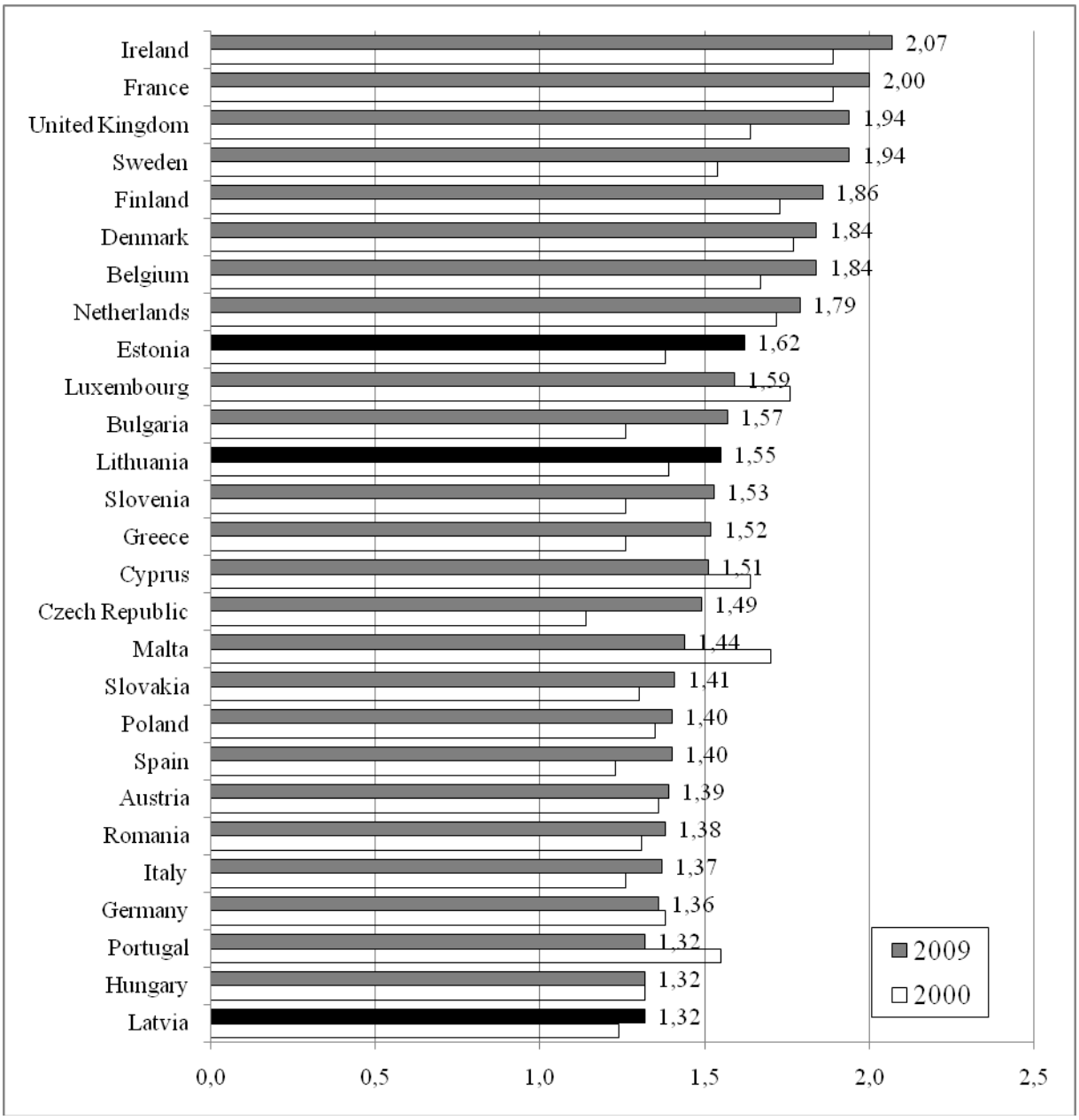

Figure 3. Total fertility rate in the EU, 2000 and 2009 [9], [12]

The intensity of mortality in the Baltic States increased significantly in the first few years after the restoration of independence, largely because of reduced levels of medical care and the inability of many people to adapt to the new economic situation in these countries. The average life expectancy in the Baltic States in the mid 1990s was considerably lower than in 1990, especially for men. In deteriorating economic circumstances and mass unemployment, men's behaviour appeared to be affected much more strongly than that of women. Calculations by J. Krumins and D. Jasilionis show that the decrease in life expectancy was due primarily to a mortality increase in working ages [16, 18]. The incidence of deaths due to unnatural causes was three times higher than in economically developed countries of Europe. The situation improved in the last decade, although the average life expectancy of men in the Baltic States (65-69 years) is the lowest among countries of the EU. These data indicate that in the Baltic States male life expectancy is about 10 years shorter than that is in Western Europe (see Figure 4). On other hand, in Russia, some other Slavic countries and Romania the situation is even worse.

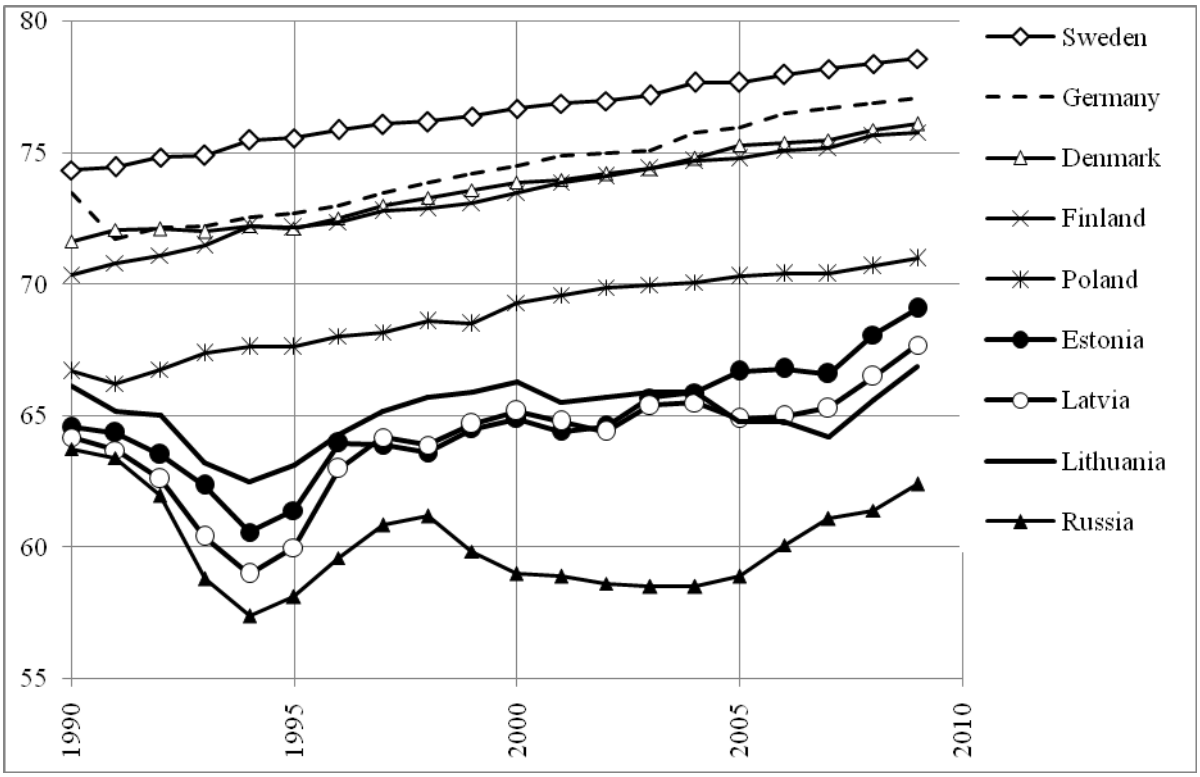

Figure 4. Life expectancy of males at birth in the Baltic Sea region countries, 1990-2009 (years) [12], [19].

4. Level and trends of ageing

The Baltic States (and particularly Latvia) are among the most ageing countries in the world. The mean age of population exceeds 40 years, which slightly surpasses even the European average. Therefore the overall mortality rate in all the Baltic States (13-14 deaths per 1000 population) is high and the expected increase in life expectancy in circumstances of high tempo of ageing does not lead to a decrease in these overall death rates.

The ageing process has been accelerated by the emigration of the predominately younger population of working age. According to the calculations of the authors, the rank of Latvia and Estonia by three indicators (mean age, percentage of older population 60+ and ageing index (ratio of the population aged 60 years or over to that aged under 15)) was within the twenty oldest countries of the world in 2010, and Lithuania was within the thirty oldest (see Table 2). According to the United Nations 10th Inquiry (2009) all governments in the Baltic States considered population ageing to be a major concern [21].

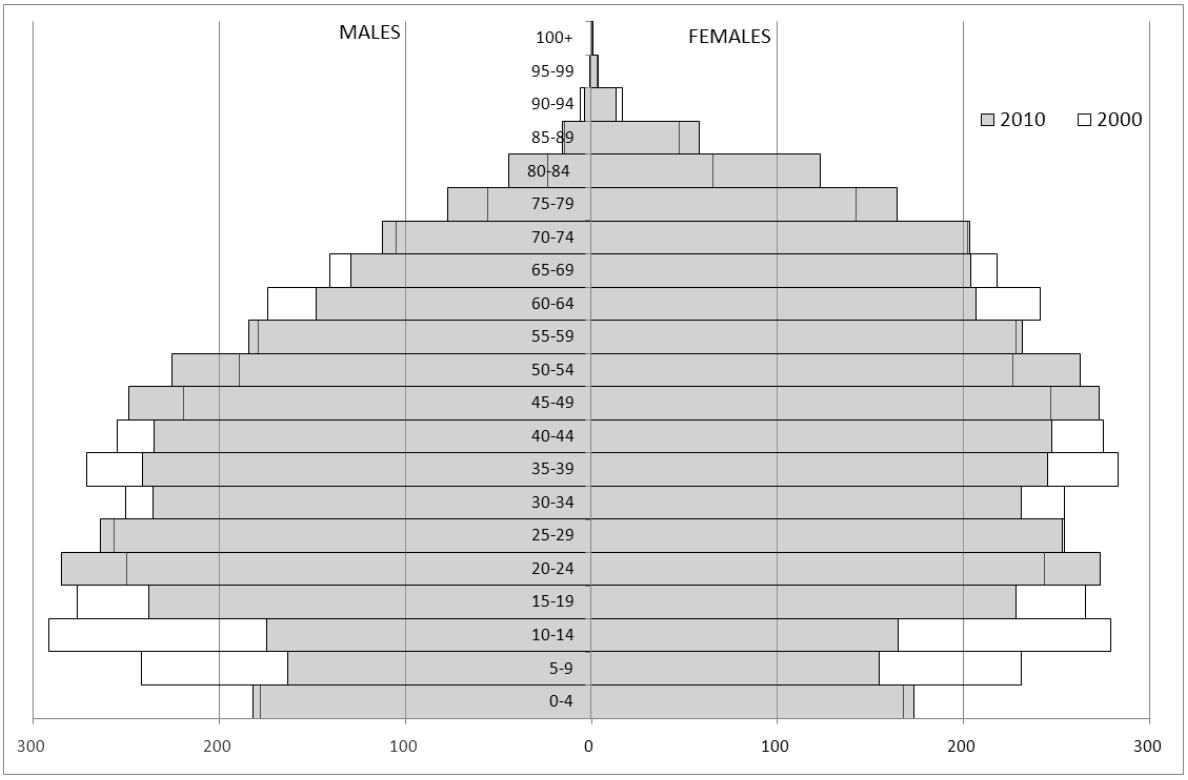

Figure 5. Changes of age structure in the Baltic States between 2000 and 2010 (thousands)
Calculation of the authors from [12]

In the 2000s the decrease in the number of children (especially in the 5-14 age group) and increase of elderly people is clearly evident (see Figure 5). However, it should be noted that in all the Baltic States the number of young people aged 20-26 has increased significantly, reflecting the increase of fertility in the second half of the 1980s.

We have found dissynchronous ageing trends among different population groups. The foreign-origin population (non-titular ethnicities) has become older than population of titular ethnicities (ethnic Estonians, Latvians and Lithuanians). In contrast to the Soviet period, the urban population is now even slightly older than the population of rural areas. On average the oldest populations are found in major towns, and the biggest increase of population mean age during the last two decades can be observed in major cities (especially in capital cities). The urban population ageing process is more rapid due to a lower fertility rate.

The Baltic States are characterised by a high level of women ageing and the biggest gap between women's and men's ageing indicators among the Member States of the European Union. Women predominate in the elderly population. Calculations show that the working population itself is undergoing a process of demographic ageing.

We show in Figure 2 the components of population decrease in the Baltic States and other Eastern European countries in the last decade. Emigration prevailed in the majority of post-socialist countries of Europe also in the 1990s. It should be noted that emigration indicators do not fully account for unregistered massive emigration flows, especially in the period after the EU enlargement of 2004. As now documented, the large proportion of migrants did not withdraw from population registers of the Baltic States. While improving on the whole, statistics remain comparatively poor and international statistical data are not always comparable. As a result, the published figures for emigration absolute and also those for relative rates for sending countries do not reflect the factual situation (for example, in Latvia). Analysis of migration processes on the whole has become a very difficult field of population studies.

Table 2. Country ranking by ageing in the world: the most aged and Baltic States, 2010
(rank by 3 indicators: 60+ (%), median age, ageing index)

	60+ (%)	Median age	Ageing index	Sum of ranks	Rank by 3 indicators
Japan	1	1	1	3	1
Italy	3	2	2	7	2
Germany	2	3	3	8	3
Latvia	18	18	6	42	14-15
Estonia	19	24	19	62	21-22
Lithuania	25	29	22	76	26

Calculation of the authors from [22]

One of the defining features of the period after the EU enlargement of 2004 was the outflow of large groups of the labour force from Eastern to Western Europe. Comparatively large and growing diasporas have emerged in the United Kingdom, Ireland, Germany, the Scandinavian countries and some others. The proportion of EU countries in the flow of international long-term emigration comprised about 60%, the rest being to other countries, mainly the Russian Federation, Ukraine and Belarus. The average age of emigrants is slightly lower than amongst permanent residents in the Baltic States, promoting ageing in the sending countries.

According to projections of Eurostat (2010) the total population in the Baltic States will decrease to 5.5 million in 2060, or by more than 20%. The sharpest decline is projected for Latvia (-25.6%) and the lowest for Estonia (-12.5%). According to the projection, a decrease in population is expected also for other countries of the Eastern European region [11].

All demographic projections show that the intensity of ageing in the Baltic States will be high [1]. A particularly strong increase will be in proportion of the oldest old. National social security systems (and pensions schemes in particular) should respond to these challenges. The law-defined age that gives the right to receive an old age pension has been increased considerably in all the Baltic States. The statutory retirement age for men reached 62-63 years, for women from 60 years in Lithuania to 62 years in Latvia [2]. Since 2008 the fall in economic development and the loss of hundreds of thousands of jobs caused conflict between the young and the old over public resources, which is a new phenomenon in the Baltic States, and a further increase in retirement age will have the biggest impact on the sustainability of existing pension systems. Experts and governmental bodies have already started to discuss or to work out corrections to the existing systems.

Since the Baltic States regained political independence, their demographic policies have remained more passive. However, some governments have declared their intention to elaborate policy instruments: pro-natal policy measures or even to implement a longer-term programme for demographic recovery. According to the United Nations 10th Inquiry (2009), the Latvian and Lithuanian governments viewed population growth as "too low" and declared their intentions "to raise it". The Estonian government viewed population growth as satisfactory with policy aimed at raising the population growth rate [21].

During the period of 2004-2007, a very rapid growth in GDP has reduced the backwardness of Estonia, Latvia and Lithuania relative to the older European Union Member States and has also promoted some demographic achievements. However, since 2008 an economic crisis has been observed in all the Baltic States. Ministries and other central public administration institutes have decreased budget expenses for 2008 and particularly for 2009-2011, including expenses for public procurements (in the primary health care, in assistance to families, etc.). For these reasons the reduction of the populations of Latvia and Lithuania in the near future will most likely be even sharper than recently projected for this period. The population will decrease mainly due to sub-replacement fertility and the negative natural change, but net migration also will be profoundly negative. Estonia provides us with the example of more effective economic and social policy and most likely the natural and migration movements in the coming years will be more or less balanced.

5. Conclusions

1. The collapse of the Soviet Union and the regaining of political independence in Latvia, Estonia and Lithuania in 1991 cardinally changed the direction and intensity of migration and population reproduction. The Baltic States from countries of immigration became countries of emigration, particularly in the first half of the 1990s and since joining the

European Union. For two decades natural movement balance was distinctly negative in all the Baltic States. In recent years Estonia has improved its demographic situation and that improvement is in contrast to the other two Baltic States. A sudden reversal of the demographic patterns in the Soviet and independence periods changed the population proportions of the titular ethnicities, Slavs and other minorities in Latvia and Estonia.

2. Since the restoration of political independence the Baltic States experienced a very rapid decrease in fertility, especially in Lithuania. At the turn of century the Baltic States had one of the world's lowest marriage and fertility rates. The intensity of fertility increased slightly in the first decade of this century (excluding the last 3-4 years), however, a situation of depopulation (in Latvia and Lithuania a deep depopulation) also exists at this time. Average life expectancy at birth is only slightly higher than at the beginning of the 1960s. The dynamics of male mortality are especially unfavourable.

3. Already from the 1930s Estonia and Latvia were referred to demographically aged countries. In the Soviet period migration (predominantly a mass immigration of younger people) froze the ageing process. The ageing process has been accelerated by the decrease of fertility and the emigration of population predominantly of younger working ages. As a result, Latvia and the other Baltic States are among the most ageing countries in the world.

4. Population decline is the current reality in Eastern Europe on the whole. In Estonia, Slovenia, the Czech Republic and Slovakia we observe a nil increase situation. Nevertheless, baseline demographic projections indicate a movement towards depopulation in the foreseeable future. Population decrease arises not only from low fertility but also from a relatively high level of mortality (especially for males) and emigration. The rapid decline of population in such countries as Bulgaria, Romania, Hungary, Lithuania and Latvia has markedly negative social and economic consequences.

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DEPOPULIACIJA BALTIJOS ŠALYSE

Atis Berzins, Peteris Zvidrins

Santrauka. Šiame straispnyje nagrinėjami pagrindiniai Baltijos šalyse vykstančių demografinių procesų bruožai. Atkūrus nepriklausomybę Estijoje, Latvijoje ir Lietuvoje išryškėjo gyventojų skaičiaus mažėjimo tendencija, kurią nulėmė neigiama natūrali gyventojų kaita ir neigiama neto tarptautinė migracija (išvykusiųjų skaičius viršija atvykusiųjų skaičių). Kartų kaitos neužtikrinantis gimstamumo lygis, santykinai aukštas mirtingumo lygis (ypač vyrų), intensyvi emigracija ir gyventojų senėjimas stebimi visose Baltijos šalyse. Šios nepalankios tendencijos ypač pasireiškė šalims įstojus į Europos Sąjungą 2004 m. Nuo 1990 m. Latvija ir Lietuva pasižymi vienais iš didžiausių depopuliacijos tempų Europoje. Depopuliacija tęsis ir artimiausiais dešimtmečiais.

Reikšminiai žodžiai: depopuliacija, senėjimas, gimstamumas, mirtingumas, emigracija