

# Competitiveness of Economy of **Vojvodina**

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Government of  
AP Vojvodina

## Competitiveness of Economy of Vojvodina

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# Competitiveness of Economy of **Vojvodina**

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## DEMOGRAPHY

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# Competitiveness of Economy of **Vojvodina**

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# DEMOGRAPHY

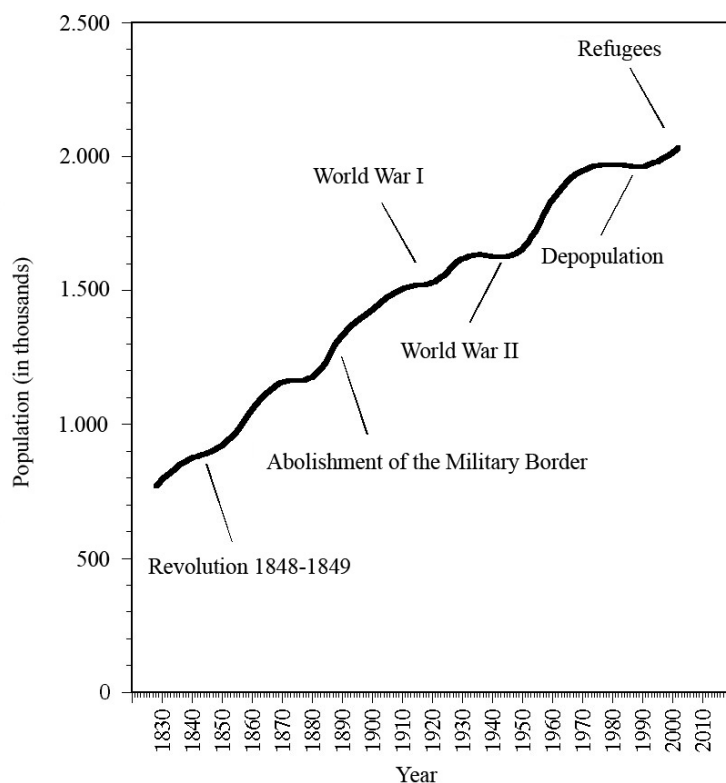
## 3.1 Human resources

### 3.1.1 Rise in population number

Statistical findings on population of Vojvodina enable us to observe its growth starting from 1828 (Chart 3.1.1). The population has grown almost in a straight line, although the flow of the line was slowed down (or stopped) occasionally by large social and historical events such as: Serbian national movement, decommissioning of the military border, two World Wars, period of sanctions and breaking up of the SFRY.

The available Census data are not entirely comparable considering that official statistics did not always apply the same definitions of total population. However, it can be concluded that majority of population was registered during the Census from 2002. That year, according to the currently valid definition (population in the country plus individuals on «temporary» work or residence in a foreign country plus foreign citizens who have been living in Serbia for more than one year), the total population made 2,032 thousand inhabitants, while according to the definition that was used in Censuses from 1971, 1981 and 1991 (population in the country plus all individuals on «temporary» work or residence in a foreign country) there were 2,099 registered individuals (Table 3.1.1).

**Chart 3.1.1.** Development of the total population of Vojvodina, 1828-2002



Looking at the demographic growth of Vojvodina by periods between Censuses (starting from the 1828 Census), we can see that exceeded one percent a year only during two periods. In all other periods it was significantly lower, and during the period from 1981 to 1991, depopulation trend i.e. reduction in number of inhabitants occurred instead of the population growth (Table 3.1.1)

The growth rates are low in other parts of the modern world as well. In none of the larger developed countries in Europe, the growth rate exceeded one percent a year by the end of the 20th century, and in Bulgaria, Hungary, Latvia, Lithuania, as well as in Ukraine and Russia, the growth rate was negative (the same as in Vojvodina during the period from 1981 to 1991). That is why it can be concluded, that demographic growth of Vojvodina is following the European civilisation and value system.

**Table 3.1.1.** Changes in number of inhabitants between Censuses

Period between Censuses	Earlier Census	Later Census	Annual growth		Doubling time (years)
			Number	Percentage (per mil)	
1869-1880	1,152,468	1,179,230	2,433	2.1	332
1880-1890	1,179,230	1,332,635	15,341	12.3	57
1890-1900	1,332,635	1,429,271	9,664	7.0	99
1900-1910	1,429,271	1,505,755	7,648	5.2	133
1910-1921	1,505,755	1,535,794	2,731	1.8	386
1921-1931	1,535,794	1,624,158	8,836	5.6	124
1931-1948	1,624,158	1,640,757	976	0.6	1159
1948-1953	1,640,757	1,699,545	11,758	7.1	98
1953-1961	1,699,545	1,854,965	19,428	11.0	63
1961-1971	1,854,965	1,952,533	9,757	5.1	135
1971-1981	1,952,533	2,034,772	8,224	4.1	168
1981-1991	2,034,772	2,013,889	-2,088	-1.0	-672
1991s-2002s	2,013,889	2,098,779	7,717	3.8	185
1991n-2002n	1,970,195	2,031,992	5,618	2.8	247
1869-1948	1,152,468	1,640,757	6,181	4.5	155
1948-2002	1,640,757	2,031,992	7,245	4.0	175
1869-2002	1,152,468	2,031,992	6,613	4.3	163

Source: Federal Statistical Office (1975); Federal Statistical Office (1993); Statistical Office of the Republic of Serbia (2003); Curcic (1996).

Note:

s – Total population according to the methodology used in Census from 1991

n – Total population according to the methodology used in Census from 2002

Unfavourable demographic growth trends of that were present during the second half of the 20th century (1948-2002) do not represent a novelty for Vojvodina. Namely, the average annual growth in that period (4.0 per mils) remained almost at the same level as it was for the last seventy years (4.5 per mils from 1869 to 1948). This means that despite numerous population that have migrated to Vojvodina during the last 50 years, the conditions for biological reproduction have not improved. Colonisation (1945-1948) and waves of refugees that came (1991-1996) have contributed only numerically (quantitatively) to the total growth of population in Vojvodina.



### 3.1.1.1 Demographic growth components

During the second half of the 20th century, Vojvodina represented the centre of great migratory movements, but also a large centre of emigration. Expressed in percentages, the share of certain components of growth in the total growth in population numbers (Table 3.1.2), indicates that this region bears transitory characteristics even today, just as it had long time ago when large groups of different nations were coming and leaving this region.

**Table 3.1.2.** Contribution of population growth and migratory balance to demographic growth

Period between Censuses	Total growth	Absolute contribution		Relative contribution	
		Population growth	Migratory balance	Population growth	Migratory balance
1948-1953	58,788	91,672	32,884	entire	-
1953-1961	155,420	123,962	31,458	79.8	20.2
1961-1971	97,568	97,094	474	99.5	0.5
1971-1981	82,239	69,466	12,773	84.5	15.5
1981-1991	-20,883	11,457	-32,340	entire	-
1991s-2002s	84,890	-81,171	166,061	-	entire
1991n-2002n	61,797	-81,171	142,968	-	entire
1948-2002	434,929	312,480	122,449	71.8	28.2

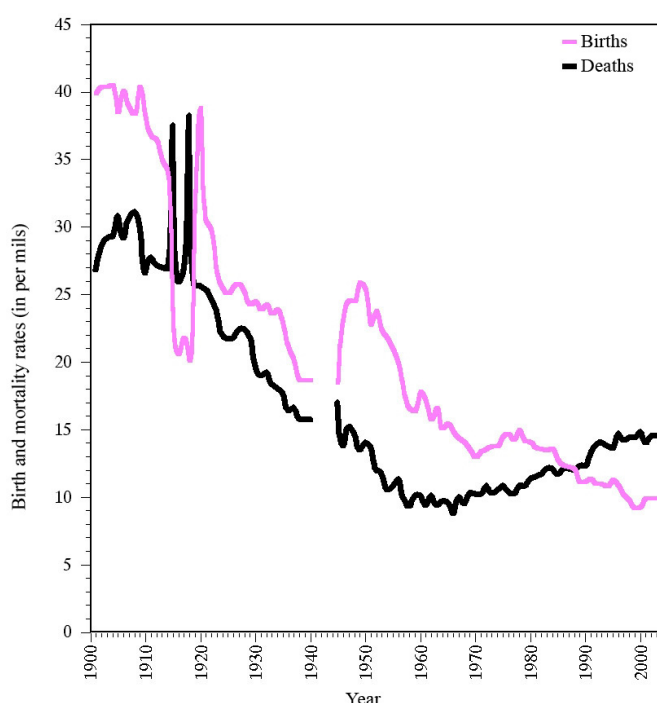
Source: Calculated based on the data of Demographic Statistics of the Federal Statistical Office

Note: See note from Table 1.

**Population growth.** During the 20th century, the rates of population growth in Vojvodina ranged from the maximum of 13.2 recorded in 1920, to the minimum of -18.1 per mils recorded in 1918. Population growth higher than ten per mils was recorded only once more during the seven years of the first decade of the last century, as well as during six years from 1949 to 1955 (excluding 1951), while negative rates of population growth were registered not only during the years of two World Wars (although there are no precise data for the period from 1941 to 1944) but also in the last decade of the 20th century and beginning of the 21st century.

All up to the end of 20th century, the wars were the cause of the minimum (during the war years) and maximum values (post-war compensation period) of population growth in Vojvodina. However, the fact that in Vojvodina, starting from 1989, the annual number of deceased surpasses that of the newly born, should be taken very seriously, in particular because the negative rate increases every year. If such tendency continues, which is to be expected, and if migration does not bring about a noticeable effect, which is to be expected as well (especially in the short run), depopulation is something that will inevitably take place in Vojvodina. It could cause a decrease in population for about half a million inhabitants by the middle of the 21st century already.

**Chart 3.1.2.** Mortality and birth rates from 1990 to 2002



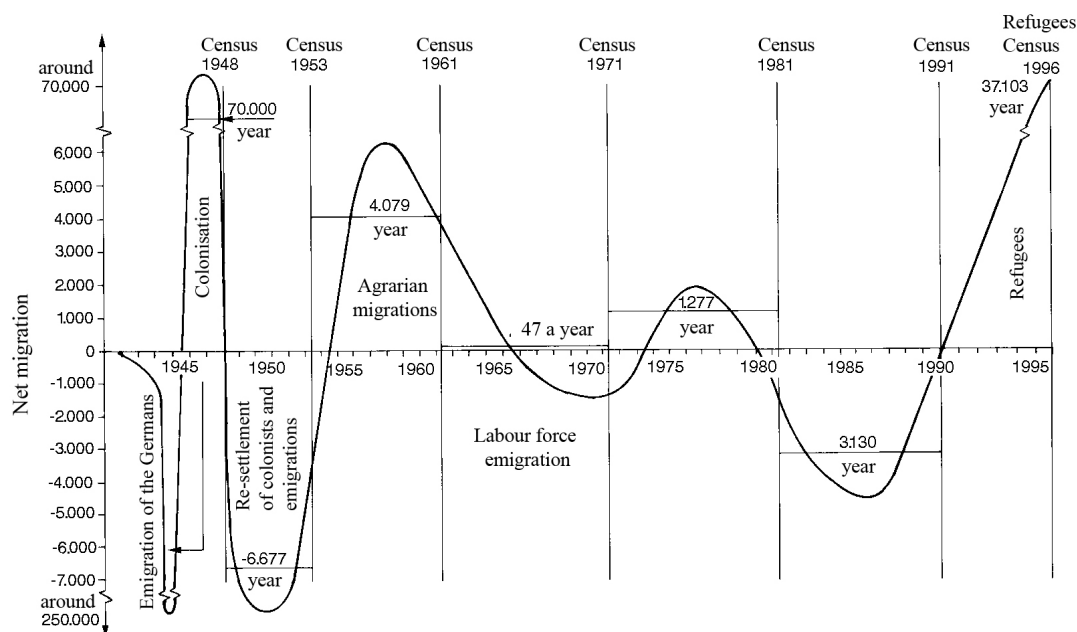
Demographic development of Vojvodina in the 20th century can be divided in three periods: the period before World War I, the period between the two wars, and the period after World War II (Chart 3.1.2). In short, we can describe the demographic growth of Vojvodina with the following sentence: an early stage of demographic transition occurred at the beginning of the 20th century in the form of decline of up to then very high fertility rate and consistently high mortality rate, while during the period between the two wars moderately high fertility rate and high mortality rate decline in parallel and very fast, whereas the fertility rate continued to decline at a lower pace after the World War II, and relatively high mortality rate for the late transitional phase started to grow. Therefore, Vojvodina is characterised by high birth rate during the mid transitional phase, constantly high mortality rate and as a consequence of all that, a slowed down and since 1989 continuously negative population growth.

Migrations. The post-war demographic development of population in Vojvodina (1945-2002) was not characterised by the process of extensive settling, but, most of all by shifting of one part of the population with another. Based on the material from the archives and data on the demographic statistics, we are able to extract the following types of migrations in Vojvodina

- The Germans move out of Vojvodina;
- Colonisation;
- Re-settlement of colonists and emigrations;
- Developmental migrations with the stage of temporary economic emigration;
- Period of exile (refugees) from 1991-2001.

All of the listed types and periods of duration of external migrations of Vojvodina can be approximated with a curve around average annual values of migratory balance (Chart 3.1.3).

**Chart 3.1.3.** Migrations in Vojvodina after World War II



Source: Djurdjev (1995)

## 3.1.2 Urbanisation

### 3.1.2.1 Spatial distribution

The post-war development and economic restructuring decreased the significance of initial natural conditions, and for the most part changed them as well, but even today, the inherited network of settlements is recognisable, the one that natural conditions affected in a decisive way, and the one that was respected by early occurrence of planned construction of settlements. Thus, today's settlements in Vojvodina are only seemingly unbalanced and irrationally distributed in technological sense. In fact, their funding was determined by very rational and precise factors. Deviations from modern theoretical layout and hierarchical solutions are the result of different natural conditions that presented the dominant factor when it came to forming of network of settlements.

Demographic development of contemporary settlements is governed by territorial organisation of developing economy. Modern economy requires the optimal territorial organisation in order to rationalise the production process. The main char-

acteristic of urban areas is large concentration of people and activities. Activities within urban areas do not require vast space and that is why it is possible to concentrate them spatially. On the other hand, technical progress in agriculture has enabled thanks to mechanisation, chemisation, and irrigation, up to a certain extent, the substitution for land. Complete substitution is still technologically limited, so that higher concentration of farmers and related activities is still not possible.

One of the characteristics of the post-war urbanisation of Vojvodina is forming of emphasised hierarchy of regional centres the gravitational property of which has conditioned the development of far larger areas than those of its base municipality. In Vojvodina, we can distinguish six gravitational centres: Subotica, Sombor, Novi Sad, Sremska Mitrovica, Zrenjanin, and Pancevo. That is why, apart from the traditional regionalisation of Vojvodina into Banat, Backa and Srem, we can distinguish two smaller regions within Banat, and three within Backa, the centres of which are some of the above-mentioned regional centres with specific demographic characteristics (Table 3.1.3).

The sub-regions of Banat, i.e. Northern and Southern Banat, reach high levels of internal homogeneity, but they are similar in demographic sense: they have the same number of inhabitants and the same decline (in Northern Banat since 1961, and in Southern Banat since 1981).

Backa is the most populated region, and over a half of Vojvodina population live in it. The most significant area in it is Southern Backa with its regional centre Novi Sad, the influence of which is felt in municipalities of Srem as well: Sremski Karlovci, Irig, and Indjija. Southern Backa has the most favourable conditions for demographic development in comparison with other sub-regions: consistent and highest growth because of the highest birth rate and the highest positive migratory balance. The population numbers of Northern Backa stagnate because of the high mortality rate. In the period from 1981 to 1991, Western Backa was characterised by depopulation because of the presence of a reversed problem: negative migratory balance that surpassed the contribution of the population growth.

A unique demographic region of Srem is characterised by the rise in population numbers partially because of the positive migratory balance and even more because of the low mortality rate, which enabled higher population growth. Relatively favourable demographic development of this region was influenced less by the activities of the regional centre of Sremska Mitrovica. Contemporary demographic development is affected positively by the vicinity of Novi Sad and Belgrade in particular.

Contrary to the traditional division into the developed north with slow demographic trends and underdeveloped south with demographic explosion, which is present both in the world and within the former Yugoslav republics, the situation in Vojvodina is reversed in several aspects: we have the prevailing agricultural north, characterised by depopulation and highly industrialised south with relatively more favourable demographic development..

In the search for causes for such condition, we must go back to the position of northern and southern regions and repeat once more that internal migrations are the most important component of inequality in development of individual settlements. While in the north and north-east the economic and demographic developments (in specific, immigration) are limited by state borders with Hungary and Romania, they are without limitations in the south, and because of the vicinity of Belgrade even improved, so that migratory links between Vojvodina and Central Serbia are the most vital ones.

**Table 3.1.3.** Number of inhabitants and area of municipalities in Vojvodina

Municipality	Area (in km <sup>2</sup> )	Number of inhabitants according to the Census						
Region		1948	1953	1961	1971	1981	1991n	2002
1. Žitište	525	36,375	35,649	33,514	29,684	25,579	21,964	20,399
2. Zrenjanin	1,326	100,364	102,844	115,692	129,837	139,300	134,252	132,051
3. Kikinda	782	64,251	64,685	68,562	68,915	69,864	69,112	67,002
4. Nova Crnja	273	23,169	23,382	21,580	18,298	16,270	14,252	12,705
5. Novi Bečej	609	33,229	33,682	33,507	31,729	30,312	28,420	26,924
6. N. Kneževac	305	17,311	17,680	17,831	16,509	15,026	13,591	12,975
7. Sečanj	523	25,684	26,110	25,519	21,938	19,501	17,866	16,377
8. Čoka	321	19,302	19,885	19,482	18,364	16,653	15,118	13,832
Northern Banat	4,664	319,685	323,917	335,687	335,274	332,505	314,575	302,265
9. Alibunar	602	32,552	31,770	32,932	31,833	29,383	24,930	22,954
10. Bela Crkva	353	25,179	25,774	26,276	25,450	25,690	21,845	20,367
11. Vršac	800	51,792	55,594	61,284	60,528	61,005	54,552	54,369
12. Kovačica	419	31,682	32,808	34,654	33,489	32,798	29,745	27,890
13. Kovin	730	35,465	38,061	39,994	39,808	39,843	36,924	36,802
14. Opovo	203	12,256	12,305	11,848	11,515	11,541	11,290	11,016
15. Pančevo	755	70,943	76,283	93,744	110,780	123,791	122,534	127,162
16. Plandište	383	19,223	19,530	19,455	17,882	16,138	13,813	13,377
Southern Banat	4,245	279,092	292,125	320,187	331,285	340,189	315,633	313,937
BANAT	8,909	598,777	616,042	655,874	666,559	672,694	630,208	616,202
17. Ada	227	22,235	21,676	22,234	22,611	22,408	21,120	18,994
18. B. Topola	596	43,135	43,243	44,466	43,508	41,889	39,961	38,245
19. Kanjiža	401	36,334	35,590	34,960	33,817	32,709	30,134	27,510
20. M. Idžoš	181	17,683	16,767	17,144	15,651	14,975	14,137	13,494
21. Senta	293	29,617	29,898	31,081	31,416	30,519	28,467	25,568
22. Subotica	1,007	123,688	126,559	136,782	146,770	154,611	148,395	148,401
Northern Bačka	2,705	272,692	273,733	286,667	293,773	297,111	282,214	272,212
23. Apatin	350	31,145	32,612	34,836	34,279	33,843	31,850	32,813
24. Bač	365	19,215	21,050	22,262	19,348	18,243	16,559	16,268
25. Kula	481	39,488	41,622	46,062	48,727	49,898	48,559	48,353
26. Odžaci	411	39,355	41,124	42,242	39,585	37,967	36,189	35,582
27. Sombor	1,178	90,477	92,583	96,191	98,080	99,168	94,081	97,263
Western Bačka	2,785	219,680	228,991	241,593	240,019	239,119	227,238	230,279
28. B. Palanka	579	46,795	48,948	52,199	54,410	58,155	58,037	60,966
29. B. Petrovac	158	13,814	15,142	16,865	16,042	16,095	15,293	14,681
30. Bečej	486	42,071	43,021	44,585	44,976	44,243	42,111	40,987
31. Vrbas	376	37,174	37,614	428,533	43,490	45,756	45,803	45,852
32. Žabalj	400	22,448	23,262	25,300	25,372	26,219	25,404	27,513
33. Novi Sad	699	111,358	120,686	155,685	206,821	250,138	261,121	299,294
34. Srbobran	284	20,082	19,855	20,414	19,594	18,573	17,172	17,855
35. Temerin	170	15,257	16,157	18,336	19,643	22,557	24,386	28,275
36. Titel	262	15,757	15,686	16,103	16,131	16,364	15,896	17,050
Southern Bačka	3,414	324,756	340,371	392,340	446,479	498,100	505,223	552,473
BAČKA	8,904	817,128	843,095	920,600	980,271	1,034,330	1,014,675	1,054,964
37. Beočin	186	9,401	10,243	11,881	13,216	14,126	14,693	16,086
38. Indjija	385	27,600	29,287	36,484	40,530	44,151	42,849	49,609
39. Irig	230	13,839	14,056	14,709	13,678	12,413	11,553	12,329
40. Pećinci	489	18,800	18,567	19,289	18,490	19,284	19,865	21,506
41. Ruma	582	37,622	40,742	47,671	52,156	55,083	53,856	60,006
42. S. Mitrovica	762	49,017	52,959	63,634	78,391	85,129	83,644	85,902
43. S. Karlovci	51	5,350	5,618	6,390	7,040	7,547	7,403	8,839
44. S. Pazova	351	30,547	33,352	41,036	43,477	52,566	55,871	67,576
45. Šid	687	32,518	34,679	37,403	38,752	37,459	35,578	38,973
SREM	3,723	224,694	239,503	278,497	304,730	327,758	325,312	360,826

n According to methodology of the Census from 2002

Source: Statistical Yearbook of Vojvodina 1984, 1985, Provincial Statistical Office, Novi Sad, pg. 266; Municipalities in Serbia, Statistical Office of the Republic of Serbia, Belgrade, 2005

Growing disproportions in demographic growth of certain regions have resulted in ever larger differences in allocation of population as well. Spreading across the area of 21,506 km<sup>2</sup>, the Province takes up one fifth of the Panonian valley and one fourth of the Republic. Immediately after the War, according to the Census from 1948, the share of Vojvodina in the total population of the Republic was in proportion with its territorial share. An absolute increase of the population from then on went very slowly, so that the share in the total population declined. Vojvodina was the most densely populated part of the Republic in 1948 when there were 76 inhabitants per km<sup>2</sup>, and since the Census from 1971, the most scarcely populated. In 2002, the density of the population was less than 95 inhabitants per km<sup>2</sup>. Former distribution of population has disturbed significantly the region of Belgrade, due to a sudden and excessive increase in the number of inhabitants of the federal administrative centre, of once large Yugoslavia, which was developing various economic functions at the same time.

An average size of one of 45 Vojvodina's municipalities is roughly 500 km<sup>2</sup> with less than 50 thousand inhabitants. However, the variations in size range from 51 km<sup>2</sup> such is the case of Sremski Karlovci to 1,326 km<sup>2</sup> in the case of Zrenjanin, and variations in number of inhabitants range from 8,839 in the case of Sremski Karlovci to 299,294 of inhabitants who lived in Novi Sad municipality in 2002. The density of population also shows significant deviations from the average: in Novi Sad municipality, there were 428 inhabitants per km<sup>2</sup>, while there were only 31 inhabitants per km<sup>2</sup> in Sečanj municipality.

When it comes to distribution of population into municipalities and changes that took place from 1961 to 2002, it is possible to distinguish three groups of municipalities: municipalities showing constant decline in number of inhabitants during the periods between Censuses, municipalities with constant increase in the number of inhabitants and municipalities in which these trends were not emphasised up to such an extent. There are 15 municipalities, or 33% of municipalities in Vojvodina with a constant decline in the number of inhabitants, and the highest decline is recorded in border municipalities in Banat. Only in 4, or 9% of municipalities, the population was constantly increasing, mostly in Novi Sad municipality, where population increased for 92% in comparison with 1961. In most municipalities, i.e. 26 or 58% of them the numbers varied.

### 3.1.2. 2 Urbanisation

In the first as well as in the last year of observation, Vojvodina was depicted by the highest level of urbanisation in the Republic (which is, by definition, the portion of population living in urban areas). However, when it comes to absolute increase of urban population, Central Serbia was placed first at that time with an increase in the number of people living in cities of 2,165 thousands, followed by Vojvodina in which the increase was 619 thousands (Table 3.1.4).

It is possible to talk about differences in level of urbanisation based on the following division of municipalities according to percentage of urban population: low up to 40.0%, medium from 40.1% to 60% and high level of urbanisation where 60.1% of population and more live in urbanised areas. Based on this, it can be concluded that Vojvodina has the most balanced urbanisation at a high level. Reasons for that include the planned development of settlements in flatland areas, relatively moderate internal migrations, that have not lead to excessive piling up of population, as well as long term slow paced demographic development. Because of a large number of non-urbanised municipalities and the fact that Belgrade is one hundred percent urbanised, Central part of Serbia is an example of unbalanced urbanisation process. Apart from the existence of a network of traditional urban centres, urbanisation of Kosovo and Metohija was carried out mostly under the influence of unusually high population growth, in other words, it did not follow the pace of economic and cultural development, but was ahead of it.

**Table 3.1.4.** Urban and rural population in 1991 and 2002

Census year	Urban population			Other population		
	Number	Percentage	Rate	Number	Percentage	Rate
<b>Republic of Serbia*</b>						
Census 1991	4,138,858	54.6		3,437,979	45.4	
			0.20%			-0.40%
Census 2002	4,225,896	56.4		3,272,105	43.6	
<b>Central Serbia</b>						
Census 1991	3,036,188	54.1		2,570,454	45.9	
			0.10%			-0.70%
Census 2002	3,073,601	56.2		2,392,408	43.8	
<b>Vojvodina</b>						
Census 1991	1,102,670	56		867,525	44	
			0.40%			0.10%
Census 2002	1,152,295	56.7		879,697	43.3	

\*Without Kosovo and Metohija

Source: Federal Statistical Office, 2002.

According to the Rank Size rule<sup>1</sup>, in comparison with the size of Belgrade, all other towns in Serbia should be considerably bigger and 50% more residents should live in cities in Serbia than in 2002. More specifically, Serbia should have one city with 500-600 thousand residents as well, one with 300-400 thousands, two cities with 200-300 thousands, 6 cities with 100-200 thousands, 98 towns with 10 to 100 thousand, and the rest of towns should have more than 5,000 residents (Chart 3.1.4a).

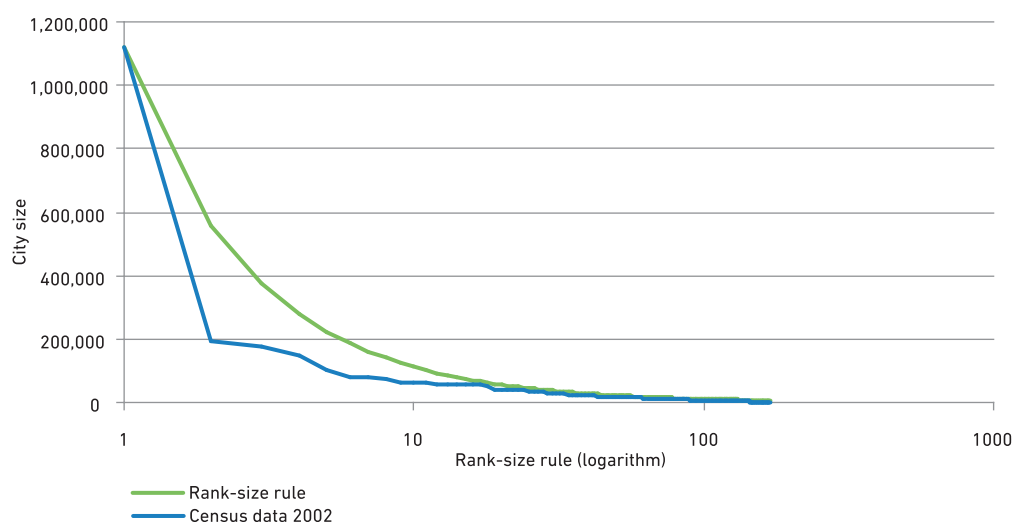
The imbalance is emphasised in particular in Central Serbia, where Niš (173,274 residents in 2002) and Kragujevac (146,373 residents in 2002) are far behind one half of (559,821 residents), namely one third of (373,214 residents) the number of residents of Belgrade in 2002 (Chart 3.1.4b). The situation is similar with the smallest settlements as well: Kuršumlijska Banja should have 63 times more residents in order to be in accordance with the Rule.

In Vojvodina (Chart 3.1.4c), the situation on this field is almost entirely in accordance with the rank size rule, because Novi Sad (191,405 residents in 2002) is ideally «followed» by Subotica (99,981 residents in 2002) and Zrenjanin (79,773 residents in 2002). There are no urban settlements in Vojvodina with less than one thousand residents, so that this part of the curve does not deviate from the rule either.

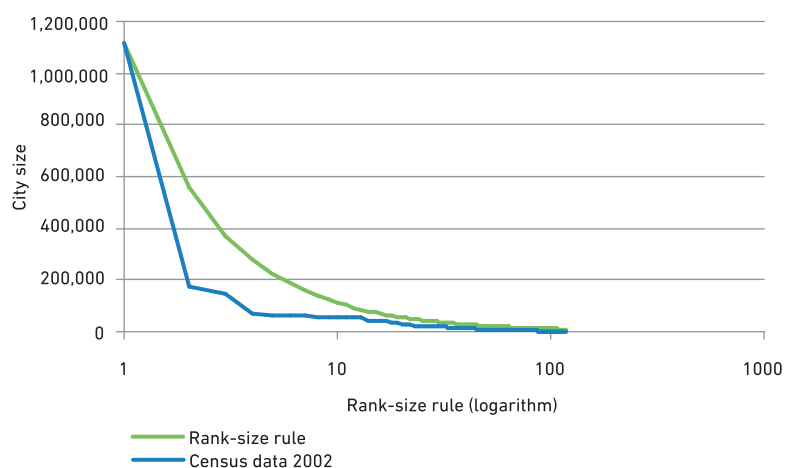
Such a model in which one town is viewed as the dominant one is called the primate/primacy model of the town. It is considered that primate/primacy towns are typical for countries in development, in which agriculture is the dominant branch of economy and in which the population is in the constant rise. The tests conducted on the basis of the data from the end of the 20th century determined that primate/primacy model existed in thirty one countries, and that it was not present in eleven countries out of the tested forty seven (Adamović, 2000). It is most expressed in Africa, Asia, and South America. Urban primacy is accompanied by a series of problems, such as high costs of functioning of large cities, transport congestion, air pollution, noise, endangered environment, and creation of slums.

The existing size distribution of cities in our Republic indicates a high level of centralism of the capital city and justifies the story of “Belgradisation”. Apart from the delayed industrialisation, the emphasis on the development of capital cities in former Yugoslavia also contributed to such uniqueness of ours (Tošić, Krunić, 2005).

**Chart 3.1.4a.** Network of cities in Serbia according to the Rank Size Rule and Census from 2002

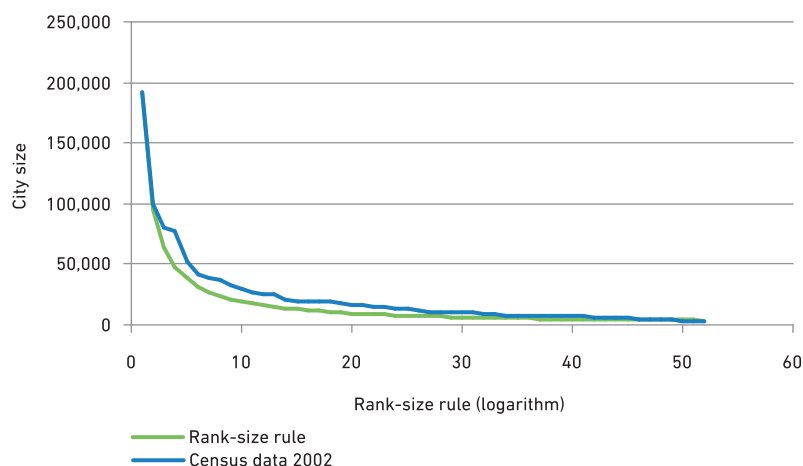


**Chart 3.1.4b.** Network of cities of Central Serbia according to the Rank Size Rule and Census from 2002



<sup>1</sup> Rank-size rule shows the relationships between order of towns and their population size. The relationship is expressed as  $P_n = P_1/n$ , where  $P_n$  stands for number of inhabitants of the town that is ranked at  $n$  place according to size,  $P_1$  stands for number of inhabitants of the biggest town, and  $n$  stands for the size order of the town. For example, if the biggest town has one million inhabitants, the second largest should have 500,000, the third largest 333,333, the fourth largest 250,000, etc.

**Chart 3.1.4c.** Network of cities of Vojvodina according to the Rank Size Rule and Census from 2002



The level and dynamics of urbanisation can be affected by population growth, migrations, re-classifications (re-qualification of rural or other settlements into urban, although the situation might be reverse) and annexation (annexation of neighbouring rural or other settlement into nearby towns). In the period from 1991 to 2002, the only sources of changes in Vojvodina in all of 52 towns were population growth and migrations.

With 56% of urban population registered in Serbia according to the Census from 2002, Serbia falls under the category of poorly urbanised European areas. Lower concentration of urban population in Europe was recorded only in Lichtenstein (21%), Albania (37%), Portugal (36%), Bosnia and Herzegovina (41%), and Slovenia (51%), while Croatia and Romania were at the same level (Miličić, 2004).

Since 1991, urban population in our Republic has become dominant, and since 2002, only minor changes have been noted, because the rate of urbanisation was very low, namely lower than half percent. The number of people who lived in cities increased only for 87,038: in Central Serbia for 37,413 and in Vojvodina for 49,625. At the same time, the number of people living in rural areas decreased almost twice, for 165,874, and the entire decrease took place in Central Serbia 178,046, while in Vojvodina the population increased for 12,712.

The expectations in Serbia are somewhat different. Demographic fatigue of rural population the number of which is decreasing in Central Serbia, while in Vojvodina this process was only delayed by inflow of refugees, will limit rural-urban migrations and growth of absolute number of inhabitants in cities. The level of urbanisation will, however, continue to grow, because of the rural population will continue to die out.

In 2002, 75% of settlements in Serbia had less newly born than the deceased, in Central Serbia 73%, and in Vojvodina 89%. Cities of Central Serbia were better off than the average because less than a half of them recorded negative population growth (49%), whereas in Vojvodina only four cities recorded positive values, while the rest of 92% was with negative values.

According to the Census from 2002, there were 161 municipalities in Serbia, excluding Kosovo and Metohija, with the total of 4,706 settlements, out of which 169 were urban: 117 in Central Serbia and 52 in Vojvodina. Out of that number, 81 towns or 69.2% of towns in Central Serbia are recording an increase in population. In Vojvodina, this is the case with 31 towns or 59.6% of towns. Among the individual urban settlements, the highest growth in Vojvodina for the period from 1991 to 2002 was recorded in Sremska Kamenica (44.5%), and the highest decrease was recorded in Jaša Tomić (12.4%). Locations of growth and decline indicate the future development of agglomerations around central settlements and emptying of peripheral areas.

Settlements in Vojvodina are three times bigger in size than those in Central Serbia and this difference is enlarging (Table 3.1.5). Cities in Central Serbia are larger than those from Vojvodina only due to the presence of Belgrade. Without the capital city, the average size would fall down to 16,700 inhabitants per town.



**Table 3.1.5.** Trends in number and average size of the settlements

Census years	All settlements		Towns		Other settlements	
	Number of settlements	Average size	Number of towns	Average size	Number of settlements	Average size
<b>Republic of Serbia</b>						
1991	4,702	1,611	168	24,636	4,534	758
2002	4,706	1,593	169	25,005	4,537	721
<b>Central Serbia</b>						
1991	4,236	1,324	116	26,174	4,120	624
2002	4,239	1,289	117	26,270	4,122	580
<b>Vojvodina</b>						
1991	466	4,228	52	21,205	414	2,095
2002	467	4,351	52	22,160	415	21,20

\*Excluding Kosovo and Metohija

Source: Federal Institute for Statistics, 2001; Statistical Office of the Republic of Serbia, 2003.

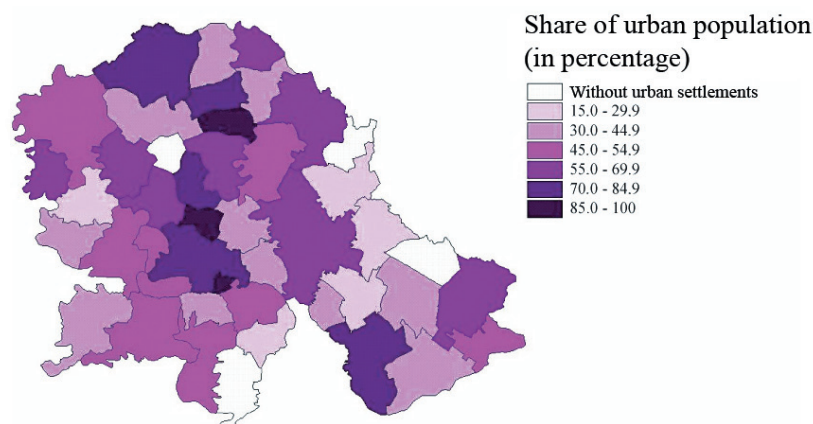
According to the Census from 2002, 73.5% of urban population in Serbia lived in cities with up to one million inhabitants. Looking at our cities according to the five size categories, we can notice that rapid growth is recorded in 63 cities in Central Serbia, the size of which ranges from one thousand to ten thousand inhabitants (out of the total of 44 settlements of this size category in Central Serbia, 29 of them are recording growth and 15 of them a decrease in population numbers during the period between two last Censuses). The fastest demographic growth in Vojvodina is recorded by the category that Novi Sad belongs to. The decrease in absolute number of inhabitants in Belgrade is noticeable as well (out of the total of ten parts of the city, fewer inhabitants were registered in seven parts). Relative share of our only million city has declined as well: 27.4% of urban population in Serbia lived there in 1991, and 26.5% in 2002.

**Table 3.1.6.** Level of concentration of urban population according to the size categories of towns

Size category	Republic of Serbia			Central Serbia			Vojvodina		
	1991	2002	Index	1991	2002	Index	1991	2002	Index
Less than 1000	2,516	2,568	102	2516	2,568	102	-	-	-
1000-9999	432,020	448,904	104	294,880	309,978	105	137,140	138,926	101
10000-100000	2,075,564	2,143,280	103	1,287,300	1,321,316	103	788,264	821,964	104
100001-1000000	495,612	511,502	103	318,346	320,097	101	177,266	191,405	108
1000000 and more	1,133,146	1,119,642	99	1,133,146	1,119,642	99	-	-	-
Total	4,138,858	4,225,896	102	3,036,188	3,073,601	101	1,102,670	1,152,295	105

Source: Statistical Office of the Republic of Serbia, 2004

Spatial regularities of urbanisation of municipalities are not evident on the map diagram, but the common feature of completely non-urbanised areas is low population density. In as much as one hundred municipalities in Serbia, or in 62% of all municipalities, less than a half of the total population lived in towns. Only in 61 municipalities, the majority of population lived in towns, and in Sremski Karlovci and six Belgrade municipalities (Novi Beograd, Rakovica, Savski Venac, Stari Grad, Vračar and Zvezdara) the entire population lived in the town.

**Map 3.1.1.** Share of urban population, March 31st, 2002



### 3.1.3 Population structure

#### 3.1.3.1 Age-gender structure

Age and gender composition of the population is of outmost importance, because these demographic structures influence largely the development in the total population and thus they affect all three components of population dynamics (fertility, mortality and migrations), but at the same time they themselves are significantly influenced by birth rate, death rate and scope of migratory movements.

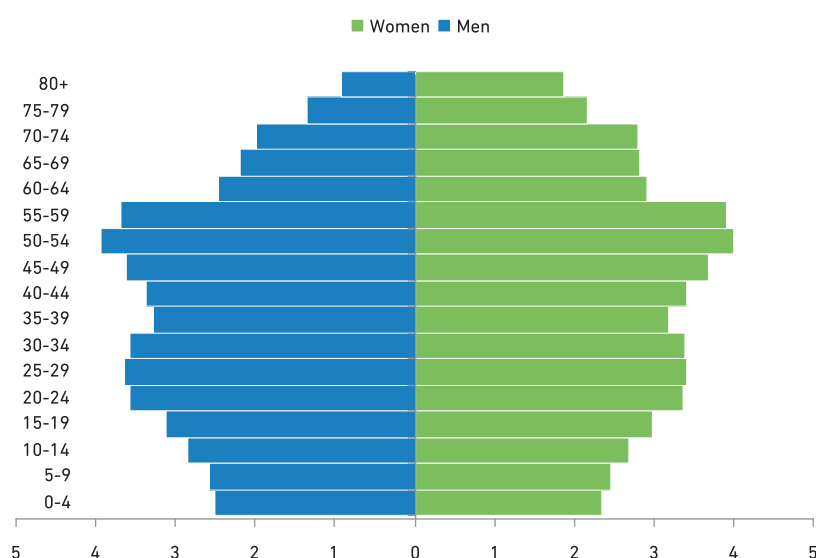
Ageing of an individual is not a problem, this is a positive process that represents the result of prolonged human life span, and a decrease of mortality rate. Further more, the decrease in the mortality rate does not necessarily have to result in ageing, it can make the population younger or older. In the beginning, the process of decline in mortality rate covers the young population and it seems that more and more members of population reach the age of 1, 5, 10...30 years. More and more people reach the reproductive period, which increases the number of births and as a result, the population gets younger. Only when the mortality rates for young and middle-aged generations reach very high levels, further progress is possible merely among the older population, and that is when the population gets older.

Extreme ageing of the total population of a certain area is linked with the process of depopulation, due to a very low birth rate and renewed growth of mortality. This stadium leads to further weakening of demographic and economic potentials, because the share of population in reproductive and work capable age is decreasing.

The most important factor in ageing of population is birth rate decrease. As a low birth rate area Vojvodina has been faced with the problems of ageing during the entire post-war period, because ever since the Census from 1948 population of Vojvodina has been older than 30.

Today, the age structure of Vojvodina population is displaying the characteristics of regressive, in other words older type of population, as a consequence of decrease of fertile and youth cohort, something that can be concluded based on the form of the age pyramid for 2008 as well (Chart 3.1.5).

**Chart 3.1.5.** Age pyramid of Vojvodina population for 2008



Vojvodina is characterised by a long-term tendency of decline of the share of the young and increase in the share of elderly population. Namely, the cohort of young population decreased from 30.0% in 1971 to 22.6% in 2002, and in 2008 it was 21.5%. For the same period, the share of elderly population has increased from 14.8% in 1971 to 21.4% in 2008, only to reach an equal share with the cohort of younger population (21.5%) by 2008. If these negative demographic trends continue, it could result with the situation where there will be more individuals aged 60 and over than young people in Vojvodina in the near future. The decrease in the share of young people, accompanied at the same time by an increase in the share of elderly population is present in Central Serbia as well, with the exception that this process was slightly more expressed in Central Serbia, so in 2008 the share of elderly population was higher than the share of the cohort of young people by 1.7%.

**Table 3.1.7.** Selected indicators of age structure of Vojvodina population from 1971 to 2008

	1971	1981	1991	2002	2008
<b>Vojvodina</b>					
Masculinity coefficient	939.9	948.6	944.5	940.7	945.4
Age coefficient (aged 60 and over)	14.8	14.9	18.7	21.4	21.5
Youth coefficient (under 19)	30	26.9	25.7	22.6	21.5
Ageing index	0.5	0.56	0.69	0.93	1
Average age	34.6	36.3	37.8	39.8	40.6
<b>Central Serbia</b>					
Masculinity coefficient	958.3	971.5	961.3	948.7	946.7
Age coefficient (aged 60 and over)	13.6	13.3	18.1	22.8	22.9
Youth coefficient (under 19)	31.3	29.2	22	22.2	21.2
Ageing index	0.43	0.49	0.69	1.02	1.08
Average age	33.5	35.4	37.4	40.3	41.3
<b>Republic of Serbia</b>					
Masculinity coefficient	953.3	965.4	956.9	946.5	946.4
Age coefficient (aged 60 and over)	13.9	13.7	18.1	22.5	22.5
Youth coefficient (under 19)	30.9	27.4	25.7	22.3	21.3
Ageing index	0.38	0.4	0.69	0.99	1.06
Average age	32.4	33.7	37.5	40.2	41.1

In 2008, an average age in Vojvodina was 40.6 years and it was 0.7 years less than the average age in Central Serbia, and 0.5 years less than the average age at the level of the Republic. Back in 1971, an average age of the population crossed the border value (30 years) that was accepted in the demographic theory as the medial value and is considered to be the beginning of ageing of certain population.

The decline in birth rate and ageing of the population caused changes in gender structure as well, the primary characteristic of which is the decline in number of the male population. Changes that happened in distribution of the total population by age are the most important immediate contributors to the decline in the share of male population. Considering the emphasised differences in composition of certain age groups by gender, in other words, numerical superiority of male population within younger age groups and larger number of women in the middle-aged groups and their numerical superiority within the older population, it is obvious that the main reasons of demographic ageing are the same time the main causes of feminisation of the total population.

Ageing index as one of the most reliable analytic indicators of process of demographic ageing in Vojvodina was 0.50 back in 1971, which was far below the border value (0.40). According to the data for 2008, its value was 1.0, in other words it was for 0.8 lower than ageing index in Central Serbia.

Vojvodina entered into the stage of demographic age four decades ago (1971). The analysis of trends in demographic ageing for 2008 indicates that northern Serbian province is in the stage of deep demographic age, as well as Central Serbia.

Taking into consideration the fact that the process of demographic ageing is ever more intensifying, in favour of which is the fact that in only six years (2002-2008) the average age of the population in Vojvodina has risen for 0.8 years, in Central Serbia for 1 year, and at a national level for 0.9 years, it is realistic to expect that in the near future our country will enter into the seventh stage of demographic age, in other words the deepest demographic age.

### 3.1.3. 1.1 Equal gender opportunities

The analysis of equal gender opportunities will be reflected based on the gender share in administration/management and based on the gender share in the school system.

The data on the gender share in administration/management (17 provincial Secretariats out of 18 in total) and in 42 municipalities in Vojvodina indicate that the share of women in administrative bodies is significantly higher: out of the 4,581 employees at the end of 2002, women made 62.7%. Almost two-third share of women in the fields that are ranked highly on the social scale hierarchy should be taken with caution. These data must not necessarily reflect the true picture and primacy of women in internal hierarchy.

The data from the current registers indicate that that share of women employed in the school system tends to decline with the level of school institutions. The share of women teachers among the total number of employees in elementary schools for the school year 1999/2000 was 76.2% (in Central Serbia 68.7%), in high schools 60.8% (in Central Serbia 58.2%), and at the Universities only 40.8% (in Central Serbia 37.3%)

If we compare the number of students from the academic year of 1999/2000 with the number of young population (from 0-19 years of age according to the Census from 2002), we can see that the percentage of those who go to Universities is 7.2%. However, if we compare the number of those who attend the University with the age group of 20-24 (which is the closest to the age of students), the value is 23.4%.

**Table 3.1.8.** Number and gender structure of pupils and students for the school year of 1999/2000

Type of school	Total number of pupils/ students	Female pupils/students	
		Number	Share (in %)
Elementary education	208,712	101,457	48.6
Secondary education	82,351	41,952	50.9
Higher and high education	36,724	19,987	54.4

Source: Statistical yearbook of Yugoslavia 2002, Federal Statistical Office, Belgrade

The above Table indicates a gender structure of pupils/students for year of 2000/2001. From the presented data, we can see that the share of women in the process of education is more significant in higher schools and Universities (54.4%) and in secondary schools (50.9%), while the males are more represented in elementary education (51.4%).

Unfortunately, we do not have statistical data on success rate of pupils during the teaching-educational process for elementary and secondary schools. At Novi Sad University 53.2% of the students that enrolled graduate, out of which 63.4% are female students.

### 3.1.3.2 Ethnic structure

As the consequence of major historical events that influenced frequent migrations, Vojvodina is today, as it was before, one of the most heterogeneous areas of the world, and in the scope of the Yugoslav ethnic diversity reached its maximum there. Ethnic complexity is manifested in a large number of nationalities and the share in the total population, but, even more importantly, their distribution and form of mutual relationships.

Ethnic heterogeneity is evident at the level of municipalities and settlements as well, and that is why it is difficult to determine the regularity in spatial distribution of certain nationalities because most of them do not have the so-called base cores, such is the case with similar regions in the world, where, by the rule, nations group together and live in ethnically "clean" settlements. In Vojvodina, people live together one with another. Industrial centres, settlements in their immediate vicinity, as well as settlements near the state and provincial borders are characterised by ethnically most heterogeneous population.

Even in the Census from 2002, as well as in all the previous Censuses in Yugoslavia after the World War II, the data on national or ethnic background were the result of free declaration of inhabitants, or parents (guardians), when children younger than ten years of age are concerned (1948, 1953 and 1961), or fifteen years of age (1971, 1981, 1991 and 2002). According to the Census from 2002, some changes have occurred in comparison with the Census from 1991 that affected the change of attitude of individuals towards declaring themselves as well as differentiated population growth of certain nationalities depending on their age structure.

The last Census indicated that in structure of the Vojvodina population according to nationality, the most numerous were the Serbs (65.0%), Hungarians (14.3%), Slovaks (2.8%), Croats (2.8%), Yugoslavs (2.5%), Montenegrins (1.8%), and Romanians (1.5%). Compared to 1991, the most significant changes were noted among those who declared themselves as Yugoslavs. The share of Yugoslavs in 1991 was 8.6% and in 2002 it was 2.5%. Changes were noted in other nationalities as well, and a unique increase, a tenfold one, in the share of non-affiliated and undeclared from 0.3% to 2.7% (Table 3.1.9).

**Table 3.1.9.** Population according to national or ethnic background, for 1991 and 2002

Nationality	1991		2002	
	Number	%	Number	%
Total	2,013,889	100.0	2,031,992	100.0
Serbs	1,143,723	56.8	1,321,807	65.0
Montenegrins	44,838	2.2	35,513	1.7
Yugoslavs	174,295	8.7	49,881	2.5
Albanians	2,556	0.1	1,695	0.1
Bosniaks	-	-	417	0.0
Bulgarians	2,363	0.1	1,658	0.1
Bunjevci	21,434	1.1	19,766	1.0
Vlachs	132	0.0	101	0.0
Goranci	-	-	606	0.0
Hungarians	339,491	16.9	290,207	14.3
Macedonians	17,472	0.9	11,785	0.6
Muslims	5,851	0.3	3,634	0.2
Germans	3,873	0.2	3,154	0.2
Roma	24,366	1.2	29,057	1.4
Romanians	38,809	1.9	30,419	1.5
Russians	1,019	0.1	940	0.0
Ruthenians	17,652	0.9	15,626	0.8
Slovaks	63,545	3.2	56,637	2.8
Slovenians	2,730	0.1	2,005	0.1
Ukrainians	4,565	0.2	4,635	0.2
Croats	74,808	3.7	56,546	2.8
Czechs	1,844	0.1	1,648	0.1
Other	5,100	0.3	5,311	0.3
Non-affiliated and undeclared	5,427	0.3	55,016	2.7
Regional confession	2,503	0.1	10,154	0.5
Unknown	15,493	0.8	23,774	1.2

The Serbs display a continuous increase in number and share, and this is the result not only of their natural development but also of large scale settlement of the Serbs. It would be wrong to claim that this is the result of purely national frame in which the migrations took place after the World War I. If it were like that than the number of Croats and Slovenians should have grown throughout the period prior to secession. However, the data on those peoples indicate a completely opposite tendency. It is natural that state borders direct migratory movements within the territory defined by borders and set conditions for spatial convergence of different nations that live there. However, it cannot be denied that in conditions of spontaneous migrations the importance of ethnic distance, the existing quantum of native population of certain nationality that had been creating and cherishing a unique cultural ethos attracted fellow-countrymen who decided to move from their country of origin mostly because of economic reasons and enabled their easier adaptation to a new environment. With the share of over 50% in the total population, ethnic basis for continuous settling of the Serbs was a strong appealing factor during the entire post-war period. Up to the occurrence of the newest wave of refugees the share of Serbs that immigrated to Vojvodina in the total Serb population in Vojvodina was lower with every Census, meaning that the importance of natural movement was the prevailing factor in demographic development, even though before the newest wave of refugees around three quarters of all new settlers that came to Vojvodina were the Serbs.

It can be seen that the number of Serbs from 1848 to 2002 increased from 841,246 to 1,321,807, in other words for 480,561 in absolute terms, or 57.1% in relative terms. The highest increase took place during the second analysed period, between the Census from 1953 and the one from 1961. By the end of that period, in 1961, according to the data from the Census, there were 143,337 Serbs more in Vojvodina than in 1953. This means that the average annual absolute increase between those two years was 17,917. Even though the number of the Serbs was in a continuous rise, such a large increase during the period between two Censuses did not happen again. In the period that followed, i.e. from 1961 to 1971, an absolute increase was two times smaller and it was 71,449 or 7.0%. It would be interesting to point out that for the entire period from 1971 to 1981 an absolute rise in number of the Serbian population was slightly higher than the annual growth for the period from 1953 to 1961. The slower pace of growth of the Serbian population took place at the same time when the increase in number of Yugoslavs took place, which offers an explanation to such data. The period from 1981 to 1991 is characterised by a small increase as well: the number of the Serbs increased by 3.3% in comparison with 1981. During the period from 1991 to 2002, major changes took place, most of all on the political map of the Balkans. Those changes had a profound influence on the

population of the entire region, as well as on Vojvodina. A high absolute increase in number of the Serbs was recorded again: from 1,143,723 to 1,321,807, in other words for more than 178,000 inhabitants. A significant rise in the share of the Serbs in the total population was also recorded in that period: from 56.8% to 65.0%. This was caused by several factors: large scale migrations and settling of the Serbian population from Croatia and Bosnia and Herzegovina, moving away of certain portions of Croatian population to Croatia after its declaration of independence, their renewed declaration of being Bunjevci and Šokci and the so-called ethnic transfer of Yugoslavs into Serbs.

Serbian population is spread throughout Vojvodina. However, the share of the Serbs in general population varies from one municipality to another. The smallest population of the Serbs (less than 20% of general population) lives in three northern municipalities of Vojvodina: Kanjiža (7.4%), Senta (10.7%), and Ada (17.5%). In municipality of Mali Idjoš, the number of the Serbs makes less than 20% of the total population, namely 17.5%. In majority of municipalities, i.e. in 20 of them, the share of the Serbian population ranges from 60% to 80%. This group includes larger cities such as Novi Sad, Kikinda, Zrenjanin, and Sombor. In seven municipalities, the Serbian population makes up around one half of the total population, in other words, it is represented with the share that is around 40% to 60%. These municipalities are Plandište, Alibunar, Bečej, Kula, Vrbas, Novi Kneževac, and Bač. The share of the Serbs in the total population higher than 80% was recorded in nine municipalities in Vojvodina. They are mostly municipalities that are bordering with Serbia - Sremska Mitrovica (87.3%), Ruma (86.6%), Pečinci (92.5%), Stara Pazova (81.2%) and Opovo (86.3%), followed by one municipality in the western part of Vojvodina - Odžaci (82.8%) and three central municipalities - Indjija (84.9%), Titel (84.9%) and Žabalj (86.3%).

Creating of the Yugoslav state interrupted the Austro-Hungarian ethnic migratory routes, but the autochthonous minorities of Hungarians, Slovaks, Romanians, and Ruthenians continued their demographic development relying on one component alone - the population growth. Since these are the groups of adequate size, the absence of mechanical influx during the last seventy years did not lead to significant downfall in numbers of these minorities, and thanks to their population growth alone (frankly speaking, constantly lower and for the long time inadequate for mere regeneration), they have survived. It should be taken into consideration that among all the larger group of members of other minorities, there is a large number of members of those minorities in mixed marriages and that they often declare themselves as Yugoslavs. The same can be said for children from mixed marriages. Members of nationalities that are small in numbers (Bulgarians, Czechs, Italians, Polish, Russians, and Turks) display a decrease in numbers, because they were the subjects of assimilation by the more numerous environments due to their small numbers. The share of the Jews is insignificant today mostly because of the exodus they experienced during the World War II, while the Germans moved away by the end of the war or few years afterwards. The number of Roma people has been in a constant rise since 1961, which can be explained by the rise of ethnic awareness of this minority.

After the World War II, together with the massive exodus of the Germans, a large portion of Hungarian population left as well. According to the data from the Census, Hungarians have experienced a significant demographic regression in Vojvodina since the World War II. Looking at the total period from 1948 to 2002, Hungarian ethnic group in Vojvodina lost around 139,000 members, which implies a demographic regression of 32%.

At the beginning of the period, in 1948, Hungarians made one quarter of population of Vojvodina. They kept such a significant share in the following two periods as well, so that according to the Census from 1961 there were 442,561 Hungarians in Vojvodina that accounted for 23.9% of the total population. In that period, the number of Hungarians was still rising, but this was a small increase.

After 1961, the number of Hungarians and their share began to decline rapidly. In the period from 1961 to 2002, the number of Hungarian population decreased for more than 150,000, and the share in the total population decreased from 23.9% to 14.3%. The reason for such a decline in number of Hungarians was mostly because of low population growth, negative migratory balance, and probably the effect of assimilation up to a certain extent.

It could be said that territorial distribution of Hungarians in Vojvodina is logical. Starting from the north to the south, in other words from the border with Hungary, the share of Hungarians in municipalities is increasing from less than 10% to over 60%. A small share of Hungarian population, up to 10%, was registered in 24 municipalities. The significant share of Hungarians, i.e. from 30% to 60% was registered in five municipalities in the north of Vojvodina. These municipalities are: Bačka Topola, Čoka, Mali Idjoš, Subotica, and Bečej. The highest share of Hungarians in the total population is registered in municipalities of Kanjiža 86.5%, Senta 80.5%, and Ada 76.7%.

According to the Census from 2002, Slovaks were the most numerous national minorities in Vojvodina after the Hungarians. Even though they had a negative growth after 1961, they were still significant in number and share in 2002.

In the period after the World War II, from 1948 to 1953, the number of Slovaks was in a moderate rise. After the end of this period, there were 1,428 Slovaks more, or 2.0%. Positive, although weaker trend was maintained in the following period when at the end of it there were 370 (or 0.5%) Slovaks more than eight years before that.

An absolute decline in the number of Slovaks for the entire observed period was 15,395. The number of Slovaks began to decrease after 1961. In the beginning, this decline was small, but it kept increasing during each period that followed. There were 1,038 less Slovaks in 1971 than ten years before that. In the period that followed, i.e. from 1971 to 1981, an absolute decline was 3,243, while in the period from 1981 to 1991 the Slovak population decreased for over 6,000 members. In the last period between two Censuses, an absolute number of Slovaks decreased for 6,908.

According to the Census from 2002, the Slovaks represented majority in two municipalities in Vojvodina - Kovačica where they made up a relative majority with 41.1%, and Bački Petrovac where they represented an absolute majority with the share

of 66.4% in the total population. Somewhat smaller but significant share of the Slovak population was noted in the following municipalities: Bač (19.8%), Bačka Palanka (9.9%), Stara Pazova (8.9%), and Šid (6.5%).

Out of nine municipalities in which the share of Slovaks in the total population was higher than 5%, five of them are in the east of Vojvodina, one is in the south, and other two are in the south-eastern part of Vojvodina. Almost all municipalities of the northern part of Vojvodina have the share of Slovaks lower than 1%.

The number of Croats has stagnated for a long time, because of the decrease in immigration, and the fact that secession of the republic of Croatia conditioned significant emigrations. All up to the Census from 1981, Montenegrins, Macedonians, and Slovenians displayed a typical immigration character, since there were more newly settled inhabitants belonging to those nationalities compared to autochthonous ones due to colonisation processes. Muslims (as well as Albanians, Turks and Vlachs) are also the minorities with an immigration character, even though the contribution of the newly settled to future demographic development is decreasing here as well.

Just as in the case of Hungarians, the trend in the number of Croats in Vojvodina during the period after the World War II up to date is displaying the characteristics of a significant demographic regression. The change in absolute number of Croats conditioned appropriate changes in their share in the total population of Vojvodina during the observed period.

According to the first Census conducted after the World War II, there were 134,232 Croats in Vojvodina. The share of Croats in the total population of Vojvodina was 8.1% at that time. The number of Croats has decreased significantly during the observed period, so that according to the Census from 2002 there were 56,546 Croats in Vojvodina accounting for 2.8% of the total population. During the period from 1953 to 1961, the number of Croats increased by 13.5% and according to the Census from 1961 there were 17,287 Croats more than in 1953. This was the only period when the number of Croats was increased. The highest absolute decline in number of the Croatian population was registered in the period from 1981 to 1991 when their number decreased for 34,935 in absolute terms, or 31.5% in relative terms. After the splitting of former SFRY, the number of Croats in Vojvodina continued to decline. Along with a negative population growth, this was also the result of negative migratory balance, in other words of moving away into a newly formed motherland, as well as, as it was mentioned before, ethnic transfer into Bunjevci and Šokci.

As in the case of Hungarians, the territorial position of Croats is also expected and logical. The difference is that in majority of municipalities in Vojvodina the share of Croats is less than 5%. The smallest share is in municipalities in the east and southeast of Vojvodina and they are: Kovačica (0.2%), Alibunar (0.3%), Kovin (0.3%), Nova Crnja (0.3%), Žitište (0.4%) etc. As municipalities are more to the west, in other words closer to the border with Croatia, their share grows as is the case with the following municipalities: Šid (5.3%), Sombor (8.3%), Sremski Karlovci (8.5%), Bač (8.5%), Subotica (11.3%), and Apatin (11.5%).

Since the second half of the 1990s, Montenegrins have been recording negative population growth, and since the total decline in numbers of this population is significantly higher, we can conclude that one portion of this population has changed their national confession during the period between two Censuses. The share of Montenegrins in ethnic structure of population of municipalities in Vojvodina is the highest in Vrbas (24.8%), Mali Idjoš (20.8%) and in Kula (16.3%).

Romanians represent another ethnic minority in Vojvodina with regressive trend in population numbers. The number of Romanians has declined from one Census to another, except during the period from 1953 to 1961 when a very low increase was registered. Thus, the Census from 1961 registered 57,259 members of the Romanian ethnic community, which represented an increase of 23 members compared to the previous Census that was conducted eight years before that. After that, the number of Romanians in Vojvodina has been constantly declining. Such a decline in population numbers is accompanied by a decline in the share in total population that has declined from 3.6% in 1948 to 1.5% registered in the Census from 2002.

Comparing the data of the Census from 1961 with those registered in the Census from 2002, we can notice a decline in the number of members of Romanian national minority. In 1961 57,259 Romanians were registered (3.1% of the total population), in 1971 there were 52,987 of them (2.7% of the total population), in 1981 the number declined to 47,289 (2.3%), in 1991 to 38,809 (1.9%), and to 30,419 by the end of the observation period (that made 1.5% of the total population).

The main reasons for the decrease in number of the Romanian population are similar as with other minorities – it is mainly the matter of decline in the fertility rate, economic migrations, and a large number of mixed marriages that lead to partial assimilation.

According to the Census from 2002, the Romanians in Vojvodina had a significant share in the total population in six municipalities. These municipalities are the ones in which the Romanians make up more than 5% of the total population. The majority of Romanians live in municipality Alibunar (26.5%), followed by Vršac (10.9%), Žitište (9.0%), Plandište (7.2%), Kovačica (7.0%) and Bela Crkva (5.4%). In 33 municipalities in Vojvodina, the Romanians participate with less than 1% in the total population.

The distribution of municipalities with the highest share of Romanians is similar with the one of other minorities the native country of which is some of the Vojvodina neighbouring countries (Hungarians, Croats). Thus, all the municipalities in which the share of Romanians is higher than 5% are located along the border with Romania or in its immediate vicinity.

Although the share of the Roma people in the total population of Vojvodina reached 1% only in 1981, the minority is included in the analysis because of the positive trends in terms of development in population number.

The total absolute growth of the Roma population in the period from 1948 to 2002 was 21,472. According to the Census from 1948, 7,585 of Roma people lived in Vojvodina, and according to the results of the Census from 2002, the Roma population had 29,057 members. This means that from 1948 to 2002, the number of the Roma people increased by 283.1%.



It should be mentioned that in the period between the Censuses from 1948 and 1961, there was a marked decline in the number of the Roma people from 7,585 to 3,312. However, this decline was compensated by a sharp increase in the number of the Roma population in the period that followed immediately after that. The period from 1971 to 1981 is the period with the highest absolute growth that made 11,933.

As it was already mentioned, the share of the Roma people in the total population was less than 1% all until the Census in 1981. After that, the share of the Roma people in the total population of Vojvodina was followed by an increase in the total number of Roma.

The increase of their number in the population Censuses (especially after the 1960s) is the result not only of a high birth rate and declining mortality, but also of their national emancipation as they increasingly declare themselves as Roma, while they previously declared themselves mainly as members of national environment in which they lived (as the Serbs, Hungarians, Romanians, etc.).

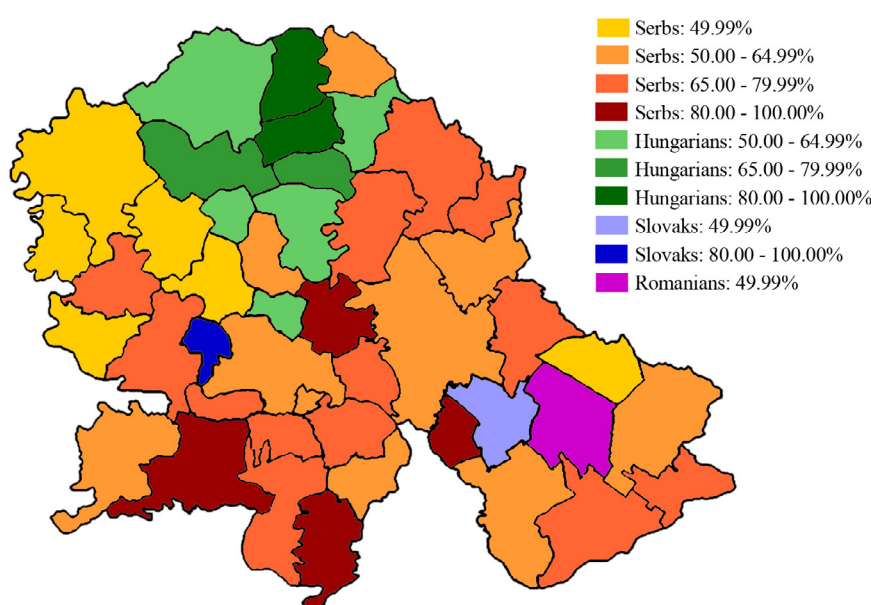
The territorial distribution of the Roma people in Vojvodina has no emphasised characteristics. In three municipalities of Vojvodina, the Roma people have a significant share of the total population. They are the municipalities of Novi Knezevac (5.0%), Beočin (6.5%), and Nova Gradiska (6.8%).

During the post-war period, until the 1960, the number of almost all ethnic groups increased due to the high rate of population growth. Something more dynamic growth was registered among the Serbs and Montenegrins because the majority of population, which came to Vojvodina during colonisation, were their compatriots from other parts of the former Yugoslavia. However, after that period there was a decrease in value of population growth, which led to a reduction in the number of most ethnic groups in Vojvodina. The number of the Serbs increased in that period as the result of immigration and assimilation, while the increase in the number of Montenegrins is the result of their continuous settlement.

The beginning of 1990s announced new significant changes in the ethnic composition of the population of Vojvodina. Nationalism that was raging in the republics of the former Yugoslavia resulted with emigration of the Yugoslav people into their home republics. This was felt most in Vojvodina, due to emigration of the Croats and their renewed declaring as Bunjevci and Šokci, and because of immigration of the Serbs from Croatia and BiH. Those processes culminated with the outbreak of the conflict in the former Yugoslavia. Great masses of Serbian refugees found shelter in Vojvodina, while at the same time a number of persons belonging to national minorities left the province. However, their emigration was not only caused by political reasons but also by economic, because of difficult living conditions due to international economic sanctions imposed against the FR Yugoslavia. Therefore, one part of the autochthonous Serbian population also moved out of Vojvodina. All of this resulted with certain changes in the ethnic composition of Vojvodina. Although the ethnic diversity has been largely maintained, the number of individual nations as well as their share in the total population of Vojvodina has changed.

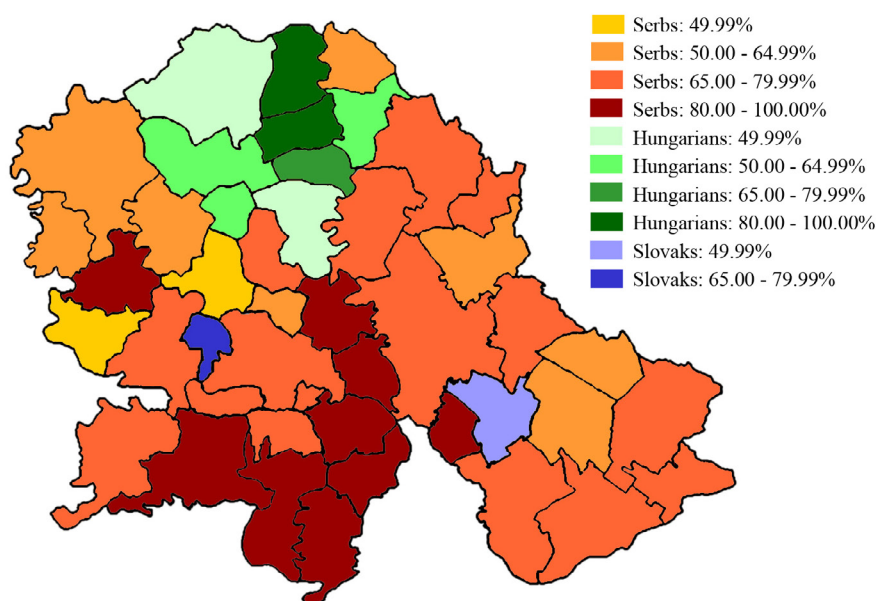
According to the Census from 1948, four nations made the majority in Vojvodina municipalities. They were, in addition to the Serbs, the Hungarians, Slovaks, and Romanians. The Serbs had relative majority in 6 municipalities: Sombor, Kula, Vrbas, Apatin, Bac, and Plandište. In 27 municipalities, the Serbs were represented as absolute majority. The Hungarians made an absolute majority in nine municipalities (Map 3.1.1).

**Map 3.1.2.** Share of inhabitants belonging to majority nations in Vojvodina according to the Census from 1948



Compared to the situation in 1948, there were no major changes in 2002 when it comes to majority nations. Only the share of the majority of the population changed. The exception is Alibunar, where the Romanians were in relative majority in 1948, while according to Census from 2002 the Serbs constituted an absolute majority. At the same time, it is the only municipality where the Romanians were the majority population in 1948. In addition, in the municipality of Temerin, the Serbs instead of the Hungarians have become the majority since the Census from 2002 (Map 3.1.2).

**Map 3.1.3.** Share of inhabitants belonging to majority nations in Vojvodina according to the Census from 2002

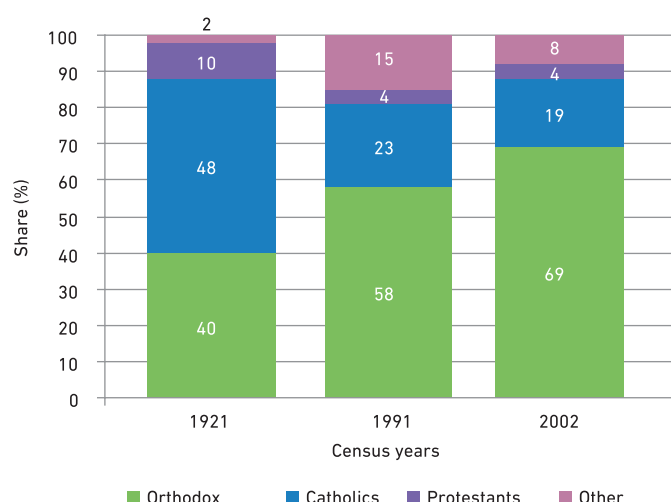


### 3.1.3.3 Religious structure

In a series of Censuses after the World War I, the question of religious confession appeared only five times: in 1921, 1931, 1953, 1991 and in 2002. In Censuses from 1921 and 1931, this question was asked without emphasising the subjective character, so that responses represented formal confession (entering into Registers) to a particular confession. The classification included 8 reply modalities: Orthodox, Roman Catholic, Greek Catholic, Evangelical, Muslim, Jewish and other religions, and the possibility for people without religious confession (Radovanovic, 1995). In the Census from 2002, the issue of religious confession was entirely free, except for children younger than 15, for whom the replies were given by their parents, foster parents, or custodians. The most detailed classification of religious confessions enabled 69 reply modalities in 2002, but the grouping published included 11 of them: Islam, Judaism, Catholic, Orthodox, Protestant, pro-oriental cults, a member of the religion that is not listed, a believer not belonging to any religion, undeclared, non-believer and unknown (Statistical Office of the Republic of Serbia, 2003).

In 1921, Vojvodina was almost entirely located in the Christian spiritual circle. Even 98% of the population confessed one of the Christian religions, although members of none of them made an absolute majority of the population. During the 1970s, the share of Christians decreased to 85%, and in the beginning of the 20th century, the share of Christians share exceeded 90% again. The main reasons for this include the emergence and disappearance of communism, the departure from the faith and return to faith. In 1921, among a few "other" group, the Judaists comprised 85%, which means that at that time almost everyone belonged to the group of believers. In 1991, people "without religion" and "unknown" accounted for 95% of "others", while in 2002 that was the case with one third of the group of "others", (the majority were "undeclared" in that case).



**Chart 3.1.6.** Population according to religious confession

Under the influence of the World War II and post-war conditions in the past, members of the Jewish religion almost disappeared (only 329 were registered in 2002), the number of Protestants was cut for more than a half (there were 157,157 of them in 1921, and only 72,159 in 2002), and the number of Catholics decreased by 47% (from 737,614 to 388,313). The number and share of other religions was not significantly changed. Among Christians, the number of the Orthodox was more than doubled (there were 603,956 of them in 1921, and their number rose to 1,401,475 until 2002), and that they made almost 70% of the total population according to the data from the last Census (Chart 3.1.6).

### 3.1.3.4 Educational structure

A very rapid expansion of literacy and the growth of education of persons with vocational and professional education in the last half a century, that is, in just two generations could be the main finding of this Chapter. Holders of the development of Vojvodina can rely mostly on professionals with secondary education as a potential for routine tasks. It should be noted that the rapid development of the education system was politically mediated: the new political forces in power have been creating intensively their own professional staff and intelligence, eradicating illiteracy in that process.

Two basic elements of the population structure according education include literacy and school degree (education level).

Looking at the data from the last six Censuses (1953-2002), we can say that in absolute and relative terms, the share of illiterate people has been getting smaller and smaller. The data from last Census conducted in 2002, that 2.4% of the population in Vojvodina (older than 10 years) were illiterate, which, according to the international standards, can be considered eradicated illiteracy (the world standard is 3% and less).

The downward trend of illiteracy is typical for both genders, where illiteracy among women is still larger and declines at a relatively slower pace than in the male population. In 2002, the rate of illiteracy among the female population was 3.7% and among male it was only 1.0%. The expected trend of decline in the number and share of illiterate has been blurred by an unexpected trend of deepening the gender differences: in the Census from 1953, the illiterate women constituted 69.4% of all illiterate people, and in the following fifty years, the share was increasing from Census to Census and until 2002 the share of women reached even 80.1% of all illiterate people (Table 3.1.10).

**Table 3.1.10.** Illiterate individuals aged 10 and over according to gender, 1953-2002

Census	Total		Male		Female	
	Number	%	Number	%	Number	%
1953.	180,861	12.9	55,354	8.5	125,507	17.0
1961.	172,721	11.3	48,753	6.6	123,968	15.6
1971.	152,528	9.0	41,381	5.1	111,147	12.8
1981.	101,713	5.8	26,659	3.1	75,054	8.3
1991.	72,612	4.1	15,940	1.9	56,672	6.2
2002.	44,090	2.4	8,787	1.0	35,303	3.7

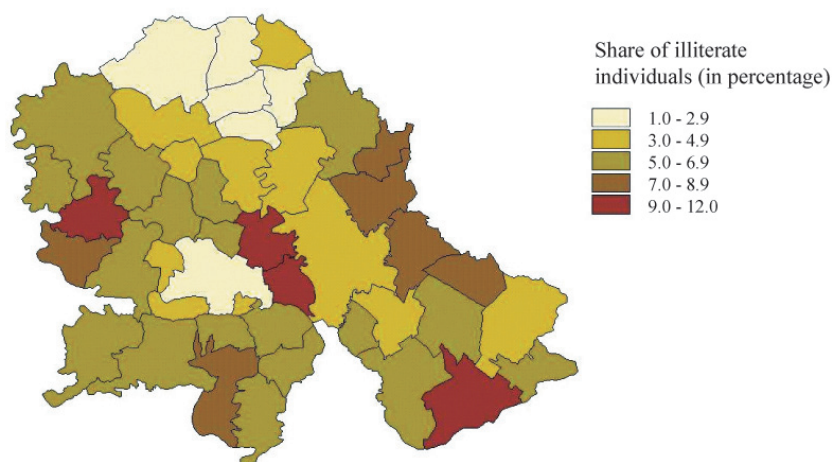
Sources: Group of authors, 1984, Population and households of the Republic of Serbia, Statistical Office of the Republic of Serbia and Center for Demographic Research, Belgrade, pg. 88; Svetlana Radovanović, editor, 1995, Population and households of the FRY according to the Census from 1991, Federal Statistical Office and Center for Demographic Research, Belgrade, pp. 175-176.

Observed by age, it can be seen that the largest concentration of illiterate women is among those aged 65 and over, where there are as many as 2/3 or 66.9% of all illiterate women, while the illiterate men in that age made only slightly more than one third, or 35.9%. This means that over time, gender differences, will be reduced after all. An argument in favour of this thesis is the data from the Census from 2002 that at the age of 25, there are more men in the group of illiterate people. However, the share of illiterates is less than one percent of the total population in each of the gender groups until the age of 40, and since then, the female illiteracy exceeds one percent of the population, all until the age of 65 and over when female illiteracy even reached 12.5%. Illiteracy among men exceeds one percent only at the age of 60 and over, and reaches the maximum of 2.5% in the age group of 65 and over.

Looking at illiteracy according to the type of settlement, we see that in urban settlements, there are only 1.5% of illiterate persons aged 10 and over, while in the group of "other" (rural) settlements, there were even 3.6% illiterate people. The generation and gender differences are particularly emphasised in villages: while there were 1.6% of illiterate men, the share of women accounted for 5.5%, taking into account that 2/3 of those women were aged 60 and over.

Looking at municipalities, we see that the smallest share of illiterate people is registered in the north of Vojvodina: Subotica municipality with only 1.0% of illiterate people, Kanjiza with 1.2%, and Coka with 1.3%. The share of illiterate people was too high in the following municipalities: Nova Gradiska 5.3%, Plandište 5.2, and Žabalj 5.0%, which is the consequence of illiteracy of older population (see the Map).

**Map 3.1.4.** Share of illiterate individuals age 50 and over, March 31st, 2002



The decline in the number and share of individuals without elementary education is probably the best illustration of expansion of education: while in 1953 there were over a million or almost 85% of such individuals, half a century later, their number was reduced to one-third of the previous one, and their share to only about twenty per cent. With the approaching of the end of the century, this process accelerated even more: in 1991, there were over half a million persons without elementary education, or more than one third of persons aged 15 and over. In 2002, individuals with completed elementary education accounted for 24.9%, those with secondary education accounted for 43.9%, and 9.5% of persons aged 15 and over completed higher school or had university degree. This last category increased at the fastest pace: in relation to 1953, the number of these persons increased even 23 times until 2002, i.e. from 6,982 to 162,081 (Table 3.1.11).

**Table 3.1.11.** Population aged 15 and over according to education

Census year	Total <sup>1</sup>	Up to the 3rd grade	From 4th to 7th grade	Elementary school	Secondary school	Higher school or university
Absolute numbers						
1953	1,268,302	349,959	711,889	88,171	105,473	6,982
1961	1,360,824	316,779	732,765	120,432	170,552	16,855
1971	1,539,760	273,735	689,037	234,398	293,871	43,356
1981	1,629,497	218,286	345,550	517,009	442,220	83,833
1991	1,627,459	171,056	373,723	411,552	537,333	120,689
2002	1,709,778	110,103	245,663	425,564	751,182	162,081
Structure (in %)						
1953	100	27.6	56.1	7	8.4	0.6
1961	100	23.3	53.8	8.8	12.5	1.2
1971	100	17.8	44.7	15.2	19.1	2.8
1981	100	13.4	21.2	31.7	27.2	5.1
1991	100	10.5	23	25.3	33	7.4
2002	100	6.4	14.4	24.9	43.9	9.5

<sup>1</sup> The difference up to "total" (up to the total number of individuals aged 15 and over) are individuals with the unknown education level

The latest Census data show that educational structure change under the fastest pace during the period between two last Censuses, i.e. in the period from 1991 to 2002. The number of people without a school degree and with incomplete elementary education (1st to 3rd and 4th to 7th grade) is lower, the same number of people with elementary education is almost the same, and the number of people who completed secondary school, as well as higher school and university is significantly higher.

However, despite the improvement of educational structures, it should be noted that even every fifth resident of Vojvodina (older than 15) has not completed elementary school. Due to a modest knowledge, this massive cohort may become the subject of manipulation and limit the speed of changes.

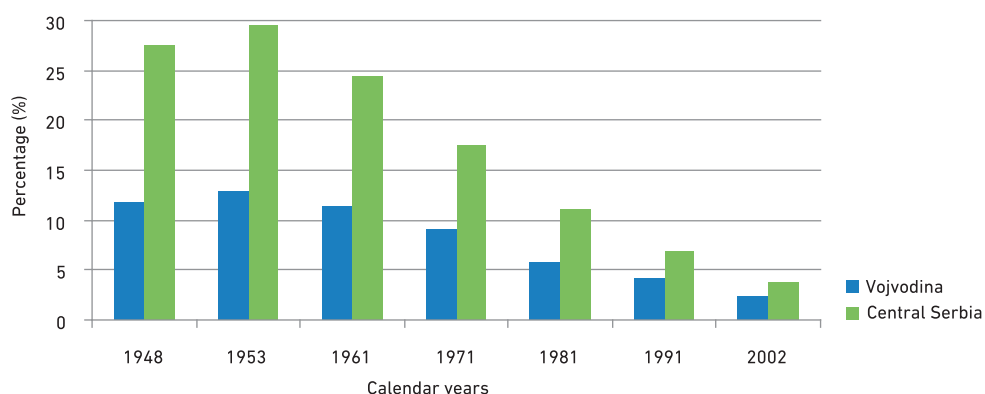
More unfavourable position of women in education is evident in the Census from 2002 as well. For 52.5% of women, the highest education is a complete or incomplete elementary school. Most men have completed secondary school, i.e. 50.3% of them. However, those differences disappear when it comes to higher and university education, since there are 10% of men and 9% of women in that category. The fact that majority graduates of the Novi Sad University are women (Table 3.1.12) also speaks in favour of that.

**Table 3.1.12.** Population aged 15 and over according to education degree and gender, in 1991 and in 2002

Year	Gender	Total	Without education or from the 1st to 3rd grade of elemen. school	From the 4th to 7th grade of elemen. school	Elementary education	Secondary education	Higher education	University education	Unknown
		Number							
1991	Total	1.627.459	171,056	373,723	411552	537,333	56,625	64,061	13,109
	M.	782.551	51,047	150,662	194226	312,386	30,211	37,338	6,681
	F.	844.908	120,009	223,061	217326	224,947	26,414	26,723	6,428
2002	Total	1.709.778	110,103	245,663	425564	751,182	73,485	88,596	15,185
	M.	819.605	30,082	91,457	192829	412,616	36,604	47,257	8,760
	F.	890.173	80,021	154,206	232735	338,566	36,881	41,339	6,425
Structure in %									
1991	Total	100	10.5	23	25.3	33	3.5	3.9	0.8
	M.	100	6.5	19.3	24.8	39.9	3.9	4.8	0.9
	F.	100	14.2	26.4	25.7	26.6	3.1	3.2	0.8
2002	Total	100	6.4	14.4	24.9	43.9	4.3	5.2	0.9
	M.	100	3.7	11.2	23.5	50.3	4.5	5.8	1.1
	F.	100	9	17.3	26.1	38	4.1	4.6	0.7

Compared to the Central Serbia we see that illiteracy in Central Serbia was still much higher than in Vojvodina and that despite a faster decline it was still a problem since there were 3.8% of illiterate individuals among people aged 15 and over (Chart 3.1.7), and that the number of illiterate women among them is particularly high (6.4% of them). A similar situation can be found in Romania and Croatia where in 2001 there were 3% of the total population without education (illiterate), taking into account that there were even 5% of such individuals were women. The situation among female population was better only in Hungary: only 1% of men and 2% of women were illiterate.

**Chart 3.1.7.** Share of illiterate individuals aged 10 and over

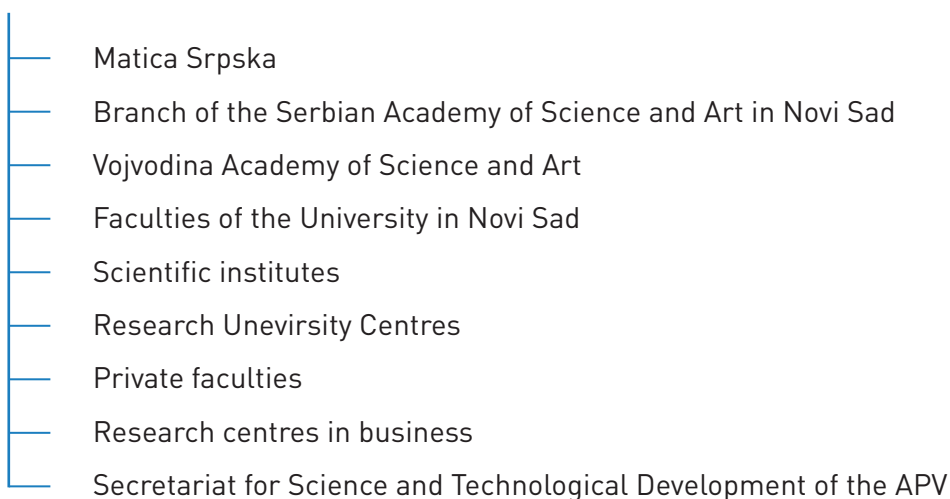


Limitations and problems are, therefore, the existing gender, generation, ethnic, and settlement type differences in literacy and education level.

Successive Census data in the last fifty years indicate that the possible direction of development is reducing the share of illiterates to the level below one percent and disappearance of gender, generation, ethnic and settlement type difference in education.

In comparison with the neighbouring countries, it may be noted that scientific work in Vojvodina is concentrated mainly at the university, although the funds allocated for science are too small. The strategy of the European Union envisages that by 2010 all Member States should allocate at least 3% of their gross domestic product for research and development, of which at least 1% from the budget, and the remaining larger part from the economy. In the beginning of the 21st century, the allocations for research and development in Europe were the highest in Denmark (2.6%), the European Union average was 1.9%, Croatia allocated 1.1%, Hungary 1.0%, and Romania, only 0.4% of their GDP. In the structure of appropriations, the states in the European Union participated with only 34% on the average, while in Hungary, the share of the state was even 58%, in Romania, it was 48%, and in Croatia, it was 46%.

### Organization structure in Vojvodina



Article 35 of the new Law on Scientific-Research Activities (Official Gazette of the Republic of Serbia no. 110/05) sets forth that, in addition to the Republic, the founders of an institute can be the province and local self-governments. It speaks of the accepted model of decentralisation and regionalisation of scientific-research work that has been implemented in some EU countries (Germany, Spain, and Italy), as well as in some of the most developed European countries which are not the European Union Member States (Switzerland), and that the European Union insists on in other of its Member States, and in particular on the occasion of association of new Member States. The tendency of investing into science from the budget of the AP Vojvodina is evident and it exceeds the Republic average.

The world economy is experiencing significant and rapid changes, with an emphasis on the ability for creation, accumulation, dissemination, and application of knowledge. The globalisation of the world economy has stimulated competition, and increase of competitiveness can be achieved by innovations based on knowledge. Innovations and technology transfer (including knowledge dissemination and commercialisation of technology), development of human resources and lifelong learning in the EU and around the world, are the key factors in increasing the level of competitiveness, both at the company level and at national and regional level. The growth of national income of the most developed countries in the world today of over 75% is conditioned by application of innovations, patents, and new technologies. More than 60% of the total turnover of the market values in the world accounts for the values of intellectual property. In Japan, for example, the impact of innovation processes on economic growth jumped from 20% in 1960 to over 80% today.

## 3.2 Labour force

In addition to impacts of the global economic crisis, labour market in our country is faced with problems related to the transition that have been cumulating for many years. All countries in transition, in particular East European countries show severe transition balances at the labour market. The high share of long-term unemployment, namely high unemployment rate among young and unskilled people, and women, causes high unemployment rate in Serbia notably.

Aiming at improvement of conditions at the labour market, the Autonomous Province of Vojvodina adopted the Employment Strategy (2006-2008), which is in conformity with the National Employment Strategy of the Republic of Serbia 2005-2010 and based on the principles of the European Union Employment Strategy and struggle against unemployment. This document is based on the following priorities: decentralisation in the field of employment, implementation of active employment policy measures, stimulus to be given to the employment in agriculture and tourism sectors, gender equality when it comes to opportunities offered at the market, as well as cross-border co-operation in the area of employment.

### 3.2.1 Activity

Out of the total population of Vojvodina in 2008, 66.7% accounted for working age population (aged 15-64). Out of the total working age population, the share of economically active population was 62.6%, whereas economically inactive population accounted for 37.4%. The total working age population in Vojvodina was almost three times lower than in Central Serbia, accounting for 27.1% of the total working age population in the Republic of Serbia.

Economically active population aged 15 and over constituted 49.4% of the corresponding population category, that is, 41.7% of the total Vojvodina population in 2008. Economically inactive population aged 15 and over constituted 50.6% of the same age population, i.e. 42.7% of the Vojvodina population.

**Table 3.2.1.** Population according to activity and region, 2008

Category	Vojvodina	Central Serbia	Republic of Serbia
Working age population (15-64)			
Active population	813,405	2,280,888	3,094,293
Inactive population	524,732	1,317,099	1,841,831
Total	1,338,137	3,597,987	4,936,124
Population aged 15 and over			
Active population	837,689	2,426,118	3,267,107
Inactive population	856,723	2,226,498	3,083,221
Total	1,694,412	4,655,916	6,350,328

Source: Labour force Survey, 2008

Activity rate of the Vojvodina working age population in 2008 stood at 60.8%, and was lower by 1.9% than activity rate in the Republic, and by 2.2% than in Central Serbia. When it comes to gender differentiation, the activity rate of the Vojvodina working age population was 70.8% for men, and 50.7% for women.

The highest activity rate within the working age population was recorded in the age groups from 30-34, followed by the group from 35-39 and 40-44.

The activity rate of the Vojvodina population aged 15 and over was 49.4% in 2008, namely it was by 2.0% lower than at the Republic level and by 1.7% lower than in Central Serbia. As with the working age population, the activity rate of the Vojvodina population aged 15 and over was the highest in 30-34, 35-39, and 40-44 age groups.

**Table 3.2.2.** Population activity and inactivity rates [%] per regions, 2008

Rate	Vojvodina	Central Serbia	Republic of Serbia
Working age population (15-64)			
Activity rate	60.8	63	62.7
Inactivity rate	39.2	37.2	37.3
Population aged 15 and over			
Activity rate	49.4	51.1	51.5
Inactivity rate	50.6	49	48.6

Source: Labour force Survey, 2008

The inactivity rate of the population aged 15 and over was 50.6%, with the highest rate recorded in the population aged 15-19 years and population aged 60 and over. The inactivity rate of the population aged 15 and over in Vojvodina was higher than in the Republic (by 2.0%) and Central Serbia (by 1.6%).

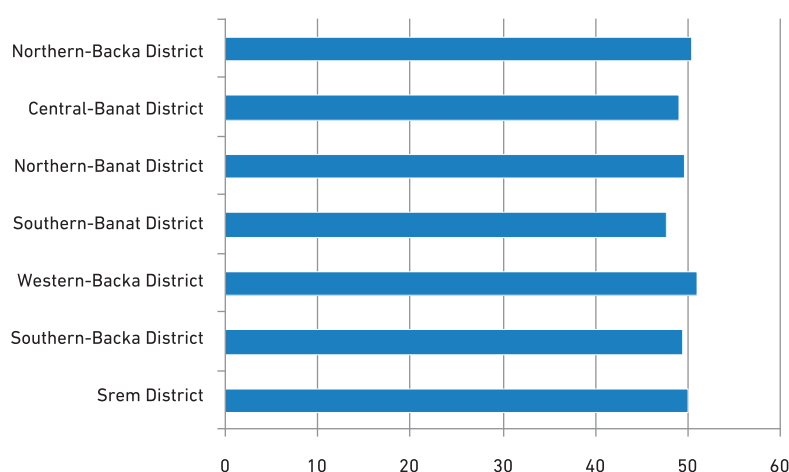
**Table 3.2.3.** Activity and inactivity rates [%] of the Vojvodina population, aged 15 and over, 2008

Age Category	Activity rate	Inactivity rate
Total	49.4	50.6
15-19	18.1	81.9
20-24	50.0	50.0
25-29	76.0	24.1
30-34	82.1	17.9
35-39	86.5	13.5
40-44	83.8	16.2
45-49	76.0	24.0
50-54	68.4	31.6
55-59	46.5	53.5
60-64	19.8	80.2
65-69	10.4	89.6
70-74	6.5	93.5
75 and more	3.9	96.1
Working-age population (15-64)	60.8	39.2

Source: Labour force Survey, 2008

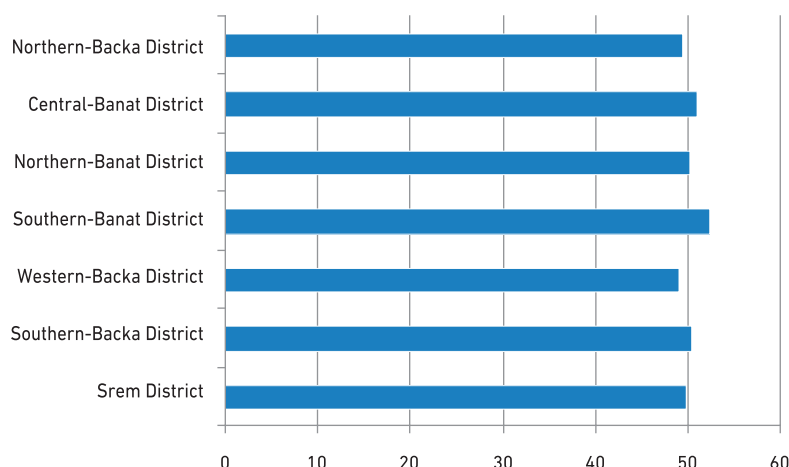
At the regional level, the highest activity rate among the population aged 15 and over in Vojvodina, was recorded in the Northern-Banat District (51.0%), followed by the Srem District having the activity rate of 50.5% and Northern-Backa District with 50.1%. The remaining districts, namely, Western-Backa, Central-Banat and Southern-Backa districts had activity rates below 50.0%, i.e., 49.7%, 49.5% and 49.0% respectively, while the lowest activity rate of 47.7% was recorded in the Southern-Banat District.

**Chart 3.2.1.** Activity rate of the population aged 15 and over [%], per Districts in Vojvodina, 2008



The highest inactivity rate was registered in Western-Backa (52.3%) and Northern-Backa (51.8%) districts, followed by Srem District (51.0%), Northern-Banat (50.5%), Southern-Backa (50.3%), and Central-Banat (49.9%) districts, while the Southern-Banat District had the lowest inactivity rate of 49.0%.

**Chart 3.2.2.** Inactivity rate of the population aged 15 and over (%), per Districts in Vojvodina, 2008



### 3.2.2 Employment

According to the Labour force Survey conducted by the Statistical Office of the Republic of Serbia, employed persons are those who have worked for pay for at least one hour during the reference week of the survey, or who have been employed, but who were absent from work during the reference week. Employed persons are all persons performing work for company, institution or some other kind of organisation as employees or working as private entrepreneurs, including individual farmers, contributing family workers, persons performing some individual job they have found and contracted themselves, without actual employment for whom such work made the only source of income.

**Table 3.2.4.** Total employed population per regions in 2008

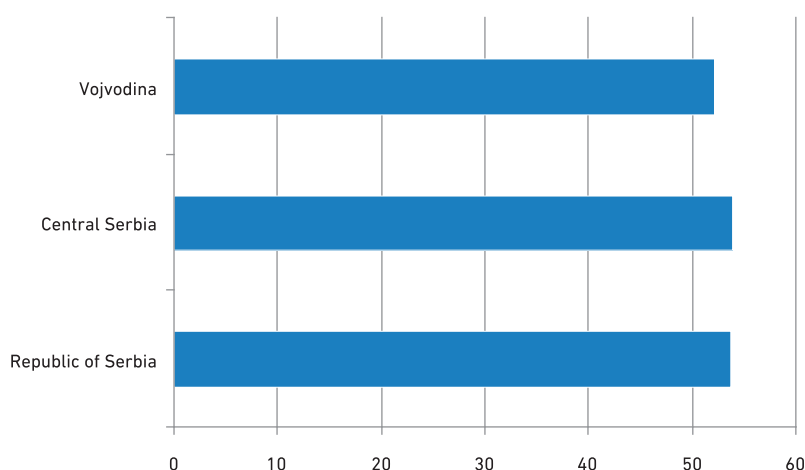
Region	Persons aged 15 and older	Working age (15-64)
Vojvodina	722,193	698,029
Central Serbia	2,099,530	1,951,296
Republic of Serbia	2,821,724	2,649,326

Source: Labour force Survey, 2008

Out of the total population in Vojvodina in 2008, the employed working age population accounted for 34.8%, while the share of employed persons aged 15 and over was 36.0%.

Employment rate of the Vojvodina working-age population in 2008 was 52.2%, being by 1.5% lower than employment rate in the Republic, i.e. by 1.7% lower than in Central Serbia.

**Chart 3.2.3.** Employment rate of the working-age population (15-64), per regions, 2008



Majority of persons of working age who were in employment belonged to the age groups from 44-49 and 45-49 (30.0% of employed persons were in these two age groups), while the lowest number was in the age groups from 15 to 19 and 60-64 years, which is understandable since these groups represent high school students and elderly people.

**Table 3.2.5.** Employed working age persons in Vojvodina, by age and gender, 2008

Age category	Employed	Structure [%]
15-19	14,159	2.0
20-24	45,036	6.5
25-29	69,828	10.0
30-34	85,915	12.3
35-39	84,999	12.2
40-44	108,415	15.5
45-49	100,947	14.5
50-54	98,231	14.1
55-59	68,246	9.8
60-64	22,252	3.2
Total	698,029	100.0

Source: Labour force Survey, 2008

Employment rate of persons aged 15 and older in Vojvodina was 42.6% in 2008, with men's employment rates considerably higher (53.2%) than women's (33.0%). Employment rate of persons aged 15 and older in Vojvodina is lower by 1.5% than in Central Serbia, i.e. by 1.8% in relation to the employment rate at the Republic level.

**Table 3.2.6.** Employment rate of persons aged 15 years and older, by age and gender, 2008

Age category	Employment rate
Total	42.6
15-19	11.3
20-24	36.0
25-29	60.4
30-34	70.3
35-39	74.9
40-44	75.0
45-49	69.2
50-54	61.6
55-59	42.2
60-64	18.1
65-69	10.3
70-74	6.5
75 and older	3.9
Working-age persons (15-64)	52.2

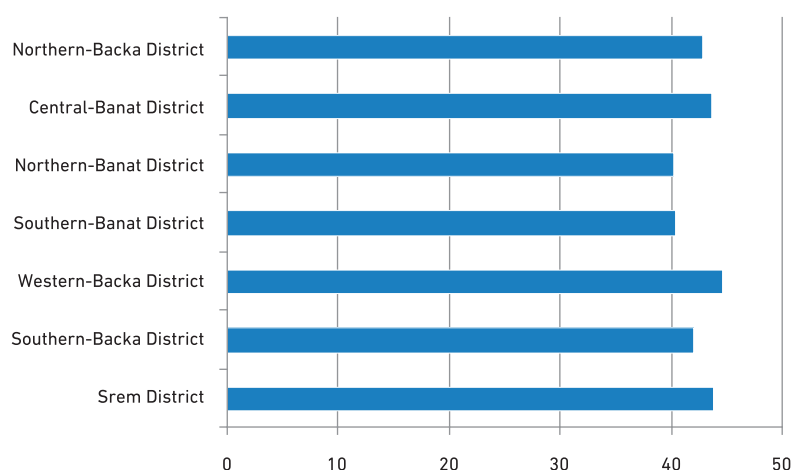
Source: Labour force Survey, 2008

Employment rate of persons aged 15 and older by Districts in Vojvodina, was the highest in the Northern-Banat District (44.6%), followed by Northern-Backa District (43.8%) and Southern-Backa District (43.7%). Employment rate in the Srem District was 42.9%, in Central-Banat District 42.0%, Southern-Backa District 40.4%, with the lowest employment rate in the Western-Backa District (40.3%).

Employment rate analysis per districts shows that the Northern-Banat District had the highest employment rate in the Vojvodina Province. Northern-Banat and Potisje regions are among the most developed industrial regions in Serbia, with export-oriented economy, and they were among few regions in Serbia in which exports exceeded imports in 2007 (by 103.8%). Privatisation of socially owned companies in this region has been almost completed, and presently numerous foreign companies (from France, Slovakia, Austria, Germany, Japan...) operate in the region of Northern Banat. Predominant industrial sectors in the Northern-Banat are agriculture, manufacturing and manufacture of clay building material (accounting for 2/3 of building material manufacturing capacities in Serbia), as well as metal industry. Manufacture of crude petroleum and natural gas has been an important mainstay of economy in this region. Northern-Banat region accounts for about 50.0% of the Serbia's oil output and one third of natural gas production.



**Chart 3.2.4.** Employment rate of persons aged 15 and older per Districts in Vojvodina, 2008

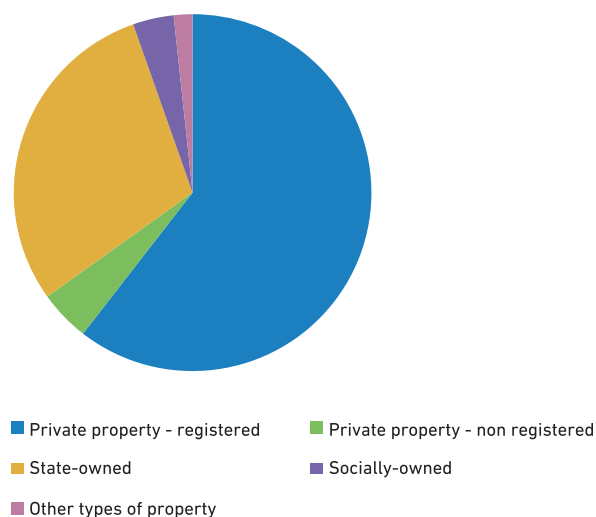


### 3.2.2.1 Structure of employed persons by status in employment and type of property

With respect of the working status, the largest number of employed persons aged 15 and over belonged to the group of employees (72.9%), self-employed accounted for 22.7%, while contributing family workers represented 4.4% of the total number of employed persons.

Differentiation of employed persons (aged 15 and over) by the type of property (property) indicates that 60.5% of them work in the registered private sector, 29.5% in the state-owned sector, 4.6% in the non-registered private property sector and 3.7% in the socially-owned sector.

**Chart 3.2.5.** Structure of employed persons according to the type of property (property), 2008



### 3.2.2.2 Structure of employed persons by industry

More than a half of the total number of employed persons aged 15 and over are working in three industries, namely in agriculture, forestry and water management (23.3%), Manufacturing sector (21.0%) and wholesale trade and retail trade (15.6%). Other large employing industries are construction, health care and social work, transport, public administration and education. Most working age employees are also employed in three top employing industries, with the largest share in the Manufacturing sector (21.7%).

**Table 3.2.7.** Total number of employed persons and structure by sectors of economic activities in Vojvodina, 2008

Economic activity	Aged 15 and over	Working age (15-64)
Agriculture, forestry and water management	168,176	146,339
Fishing	11,779	1,179
Mining and quarrying	5,138	5,138
Manufacturing	151,624	151,202
Electricity, gas, and water supply	9,794	9,794
Construction	52,861	52,475
Wholesale trade and retail trade; repairs	112,841	112,669
Hotels and restaurants	19,180	19,180
Transportation, storage and communications	37,330	37,330
Financial intermediation	13,848	13,848
Real estate, renting services	19,438	19,438
Public administration and defence, compulsory and social security	26,745	26,745
Education	25,491	25,368
Health and social work	43,627	43,400
Other community, social and personal service activities	29,920	29,717
Activities of households as employers of domestic staff	4,346	3,552
Extra-territorial organisations and bodies	656	656
Total	722,193	698,029

Source: Labour force Survey, 2008

Extra-territorial organisations and bodies, Households as employers of domestic staff and Mining and quarrying have the smallest part of employed persons in relation to the total employed population.

Total number of employed persons aged 15 and over working in Agriculture, forestry and water management in Vojvodina made 23.8% of all employed persons in that sector in the Republic, while those working in the Manufacturing sector in Vojvodina constituted 31.3%, and in wholesale and retail trade 27.0% of the total number of employed persons in the country.

### 3.2.3 Unemployment

Unemployed persons are all persons who, for the whole survey week, were without any paid job, nor they were temporarily absent from work they could return to upon expiry of the subject absence, providing they had been undertaking active steps in seeking the paid job within the last four weeks, and who were available to start working, in case that the job had been offered to them, within 2 weeks; or they had not been undertaking active steps in seeking the paid job during the last four weeks since they had made arrangements to start a new job after the survey week, but not later than three months after the reference period.

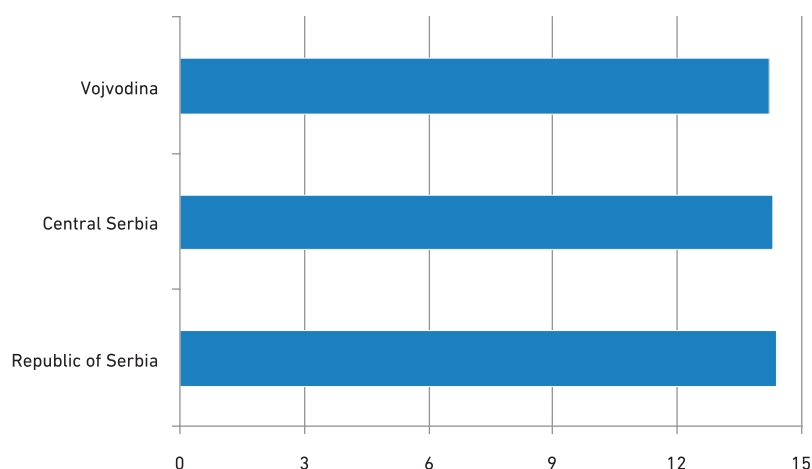
**Table 3.2.8.** Total unemployed population by regions, 2008

Region	Aged 15 and over	Working age (15-64)
Vojvodina	115,496	115,376
Central Serbia	329,888	329,591
Republic of Serbia	445,383	444,967

Source: Labour force Survey, 2008.

The unemployment rate in Vojvodina was 14.2% in 2008, being lower by 0.2% than in the Republic, that is, 0.1% lower than unemployment rate in Central Serbia.

**Chart 3.2.6.** Unemployment rate of working age population (15-64), by regions, 2008



The unemployment rate of persons aged 15 years and over was 13.8% in Vojvodina, being the highest in the 15-19 and 20-24 age groups. The unemployment rate of female population aged 15 years and over accounted for 15.9%, being lower by 3.6% than unemployment rate among male population. The unemployment rate of persons aged 15 years and over in Vojvodina was higher by 0.2% than in the Republic, and higher by 0.1% than in Central Serbia.

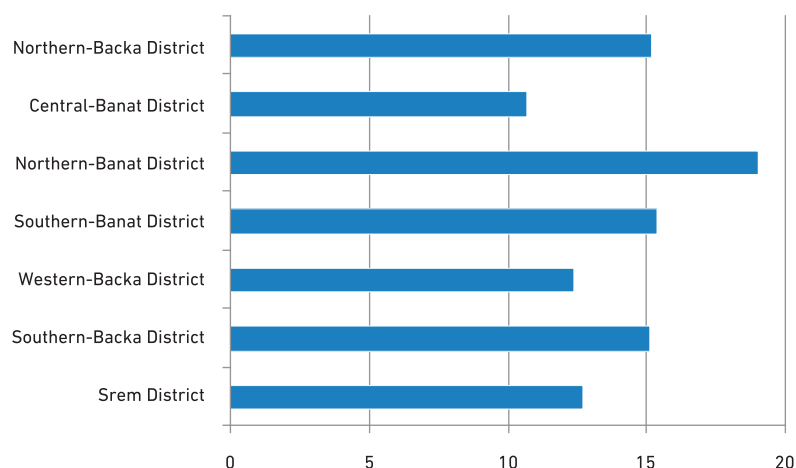
**Table 3.2.9.** Unemployment rate of population aged 15 years and over, according to age and gender, 2008

Age Category	Unemployment rate
Total	13.8
15-19	37.9
20-24	28.1
25-29	20.4
30-34	14.3
35-39	13.5
40-44	10.6
45-49	9.0
50-54	10.8
55-59	9.3
60-64	8.4
65-69	1.0
70-74	-
75 and over	-
Working age population (15-64)	14.2

Source: Labour force Survey, 2008

When unemployment figures were broken down by Districts in Vojvodina, it could be seen that Western-Backa district had the highest unemployment rate of 19.0%, being higher by 5.2% than unemployment rate of persons aged 15 years and over in Vojvodina. It is followed by Southern-Banat (15.4%), Srem (15.2%), Central-Banat (15.1%), Northern-Backa (12.7%), and Northern-Banat (12.4%) Districts. Southern-Backa District had the lowest unemployment rate of 10.7%, being lower by 3.1% than total rate at the provincial level. Out of seven Districts, four had a higher unemployment rate of persons aged 15 years and over than at the Vojvodina level, while three Districts it was lower.

The waiting period for the largest share of unemployed persons ranged from 4 to 6 years (15.6% of the total unemployed persons aged 15 years and over), whereas 13.8% of the total number of unemployed waited for employment from 6 to 11 months and 13.6% from 2 to 4 years. Persons waiting for employment for 10 years and more account for 11.2% of the total number of unemployed. Persons waiting less than a month represent 4.6%, and those waiting 1-2 months account for 6.5% of the total number of unemployed persons.

**Chart 3.2.7.** Unemployment rate of persons aged 15 years and over, per Districts in Vojvodina, 2008

### 3.2.4 National Employment Service

To reduce the unemployment rate and provide employment opportunities for young people, the National Employment Service applies a wide range of incentive measures, that is, implements active employment policy measures, such as employment subsidies for unemployed and entrepreneurs, entrepreneurial skills training and counselling programmes, career planning, additional education, job fairs, etc.

Unemployed persons are offered the possibility to attend specific training programmes in the Business Centre within the National Employment Service, in order to double-check sustainability of their projects and find out what documentation is required to start their own business. Financial support offered by the National Employment Service includes subsidies for self-employment, subsidies for re-employment, and subsidies within the "Severance to Job" Project and grant payment, i.e. lump compensation paid to start one's own business.

Employers are offered the possibility to get financial and professional support from the National Employment Service when expanding business and hiring new employees. Employers are subsidised for up to 50 newly created jobs, provided financial support from "Severance to Job" Project, offered skills training and counselling programmes, and exempted from paying social insurance contributions as provided for by Article 45 of the Law on Obligatory Social Insurance Contributions.

Courses organised by the National Employment Service are intended primarily for the unemployed to inform them on the unemployment rights and responsibilities, meetings with counsellors related to activities to be taken and available support programmes, developing personal presentation skills etc.. There is also a Jobseekers' Club offering members the opportunity to share their knowledge and experience and increase motivation during job search.

In the recent years, the National Employment Service devotes special attention to trainees' employment. During 2008, 2,954 trainees were employed in Vojvodina, accounting for 1.5% of total employment. In relation to 2007, the number of employed trainees rose by 22.8%. Out of the total number of trainees employed in 2008, women made 56.9% and men 43.1%. Out of the total number of trainees employed in the Republic of Serbia in 2008, 40.2% were from Vojvodina.

## 3.3 Population projection

Many fears of the modern world (fear of war, poverty, hunger, disease, or natural disasters) are common worldwide. Fear of population growth, however, is not the same everywhere. In many parts of the traditional world, the fear of overpopulation is still prevailing, despite the fact that the world evolved from the fear of overpopulation to the fear of human extinction.

Human resources are limited and projections of future population planning must take into account the minimum number required to sustain the existing infrastructure.

The time horizon to be covered by this Study of Competitiveness is the first third of the 21st century, i.e. by the year 2033. Demographic development is very slow, not easily changeable process, and is, therefore, more visible when analysed in the longer time horizon, in this very case in the next fifty years, that is, by 2058.

Both Vojvodina and Serbia are in many aspects a part of the traditional world, but in the aspect of demographic development, they are, unfortunately, a part of the modern world. For that reason, demographic development will be a limiting factor in total development of Vojvodina and entire Serbia in the next fifty years. Number of births will be smaller than number of deaths throughout the entire projected period. Under falling-fertility scenario, the number of newborns is likely to fall by one-third in the second half of the 21st century.

Total population of Vojvodina will continue to decline under all alternative scenarios over the projection period. As a result, Vojvodina shall experience a 12.9% population decline by 2033 in relation to 2002 Census under rising-fertility scenario, or 16.6% population decline under falling-fertility scenario. Over the next fifty years, however, the situation will seriously deteriorate: the population shall decline by 24.1% to even 38.6%. The downward trend is even more dramatic in the Central Serbia.

According to the European Union population projections (the member of which we intend to become), the population is projected to increase by 2025, and thereafter gradually decline by 2050, when total population size will be smaller by 1.5% than at the beginning of 2004. Population growth will be caused mostly by immigration, since the deaths will outnumber the births as from 2010. The sharpest relative population decline is expected in Latvia (-19.2%), and absolute in Germany (-7.9 million).

Population decline, however, is not the worst scenario. It is even worse when decline is followed with proportional deterioration in "quality" of some functional cohorts, thus significantly reducing competitiveness of Vojvodina.

**Table 3.3.1.** Total population

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	2,031,992	1,979,389	Falling	1,940,776	1,892,934	1,836,453	1,770,819	1,694,031	1,248,349
			Constant	1,942,636	1,899,467	1,850,009	1,793,442	1,727,892	1,373,467
			Rising	1,944,896	1,907,397	1,866,436	1,820,829	1,768,998	1,541,844
Central Serbia	5,466,009	5,370,833	Falling	5,226,377	5,067,463	4,898,493	4,715,784	4,508,536	3,326,307
			Constant	231,330	5,084,768	4,934,446	4,776,064	4,599,030	3,660,522
			Rising	5,237,349	5,105,756	4,977,934	4,848,911	4,708,799	4,110,153
Serbia	7,498,001	7,350,222	Falling	7,167,152	6,960,397	6,734,945	6,486,602	6,202,567	4,574,657
			Constant	7,173,966	6,984,235	6,784,455	6,569,507	6,326,922	5,033,989
			Rising	7,182,245	7,013,153	6,844,370	6,669,740	6,477,796	5,651,997

The share of population under 15 years of age in Europe will decline from 16.4% as it was in 2004 to 13.4% (in Italy to as low as 11.2%) by 2050. In our country, the share of population under 15 years of age shall range from the minimum of 10% to the maximum of 16% over the next fifty years, while in 2033 it will range from 11% to 15%.

The cohort of preschool children (aged 1-3 years) shall decline in the next twenty-five years under all scenarios, probably even by one-third.

**Table 3.3.2.** Cohort of preschool children (aged 1-3 years)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	54,491	57,652	Falling	56,209	50,849	44,743	39,598	35,841	18,534
			Constant	57,330	53,661	48,970	45,050	42,599	31,906
			Rising	58,717	57,100	54,105	51,657	50,857	52,186
Central Serbia	147,352	159,236	Falling	149,763	133,612	117,915	106,068	97,152	49,806
			Constant	152,752	141,046	129,132	120,691	115,323	85,655
			Rising	156,450	150,121	142,724	138,389	137,556	139,995
Serbia	201,843	216,888	Falling	205,972	184,460	162,659	145,666	132,993	68,340
			Constant	210,082	194,708	178,102	165,741	157,922	117,561
			Rising	215,167	207,220	196,829	190,046	188,413	192,181

If fertility rate remains unchanged, the cohort of preschool children (aged 4-6 years) shall decline by about 30% in Serbia by 2033.

**Table 3.3.3.** Cohort of preschool children (aged 4-6 years)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	61,108	58,115	Falling	57,582	54,235	48,290	42,480	37,898	20,312
			Constant	57,710	56,058	51,701	47,197	43,840	33,066
			Rising	57,838	58,279	55,834	52,900	51,030	51,768
Central Serbia	162,386	160,296	Falling	157,618	143,427	126,787	112,570	102,215	54,318
			Constant	157,960	148,268	135,798	125,149	118,197	88,449
			Rising	158,304	154,160	146,699	140,316	137,529	138,477
Serbia	223,494	218,411	Falling	215,201	197,662	175,077	155,051	140,114	74,630
			Constant	215,670	204,327	187,499	172,346	162,037	121,514
			Rising	216,142	212,438	202,533	193,216	188,559	190,245

The cohort of school children (aged 7-14 years) will be reduced by one-third by 2033 if fertility rate stay constant.

**Table 3.3.4.** Cohort of school children (aged 7-14 years)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	187,614	169,895	Falling	156,683	152,568	145,218	130,295	114,872	64,584
			Constant		153,322	149,559	138,917	127,087	95,360
			Rising		154,209	154,810	149,345	141,835	138,148
Central Serbia	493,829	450,088	Falling	429,436	416,503	385,285	342,605	304,138	171,276
			Constant		418,514	396,803	365,417	336,689	253,252
			Rising		420,885	410,727	392,957	375,896	367,199
Serbia	681,443	619,982	Falling	586,119	569,071	530,503	472,901	419,010	235,860
			Constant		571,835	546,363	504,335	463,776	348,611
			Rising		575,093	565,537	542,302	517,731	505,347

The cohort of secondary school children (aged 15-18 years) will be reduced by two-thirds by 2033 in relation to its size at the time of the 2002 Census.

**Table 3.3.5.** Cohort of secondary school children (aged 15-18 years)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	109,547	95,473	Falling	86,523	78,583	76,457	73,986	66,696	38,547
			Constant				75,709	70,633	51,820
			Rising				77,829	75,433	69,323
Central Serbia	284,341	248,159	Falling	226,703	215,329	21,1173	196,759	175,210	102,387
			Constant				201,344	185,614	137,720
			Rising				206,987	198,279	184,295
Serbia	393,888	343,633	Falling	313,227	293,912	28,7630	270,743	241,906	140,935
			Constant				277,053	256,247	189,540
			Rising				284,815	273,712	253,618

The cohort of young people reaching the age to attend university (19 years) will follow the same trend as projected for the cohort of secondary school children

**Table 3.3.6.** Cohort of youths reaching age to attend university (19 years)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	28,230	25,578	Falling	22,686	20,443	19,083	19,141	17,664	10,264
			Constant				19,268	18,383	13,324
			Rising				19,396	19,234	17,253
Central Serbia	73,533	66,167	Falling	58,917	86,754	52,709	51,451	46,569	27,400
			Constant				51,790	48,474	35,564
			Rising				52,133	50,728	46,046
Serbia	101,763	91,744	Falling	81,603	75,310	71,792	70,592	64,234	37,664
			Constant				71,058	66,858	48,888
			Rising				71,529	69,962	63,300

The proportion of people aged 65 and over will almost double in size in Europe, and is projected to rise from 16.4% in 2004 to 29.9% (in Spain and Italy it will rise above 35%) by 2050.

If fertility rate remains unchanged in macro regions in Serbia, the share of elderly people shall rise from 16% to over 22%.

**Table 3.3.7.** Cohort of elderly population (65 years of age or older)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	315,185	318,395	Falling	316,230	345,943	375,394	389,111	386,712	37,7184
			Constant						
			Rising						
Central Serbia	925,320	944,469	Falling	900,652	967,533	1025,816	1,039,476	1,015,851	995,055
			Constant						
			Rising						
Serbia	1,240,505	1,262,864	Falling	1,216,882	1,313,476	1401,210	1428,588	1,402,563	1,372,239
			Constant						
			Rising						

The cohort of elderly population (80 years and older) will experience the fastest growth and will more than double in size

**Table 3.3.8.** Cohort of elderly population (80 years and older)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	39,174	55,177	Falling	64,250	70,057	69,543	70,392	84,478	92,785
			Constant						
			Rising						
Central Serbia	106,303	175,783	Falling	202,556	209,556	198,248	194,469	234,339	251,785
			Constant						
			Rising						
Serbia	145,477	230,960	Falling	266,326	279,613	267,790	264,862	318,817	344,570
			Constant						
			Rising						

The cohort of working age population (men 15-64 and women 15-59 years). The share of working age population (between 15 and 64 years of age) in Europe is projected to fall from 67.2% in 2004 to 56.7% (in Spain to as low as 52.9%) by 2050, representing the reduction of 52 million in working age population. In Serbia, the number of working age people will be reduced by almost a million, whereas the load coefficient of the working age population shall remain unchanged, but the share of elderly people shall increase in the total load.

**Table 3.3.9.** Cohort of working age population (men 15-64 and women 15-59 years)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	1,320,694	1,298,487	Falling	1,261,866	1,199,198	1141184	1,094,615	1,048,971	712,428
			Constant				1,096,465	1,055,474	776,049
			Rising				1,098,713	1,063,368	855,529
Central Serbia	3,476,003	3,451,800	Falling	3,333,740	3,165,997	3030483	2,920,250	2,794,991	1,910,499
			Constant				2,925,176	2,812,218	2,080,436
			Rising				2,931,162	2,833,109	2,292,650
Serbia	4,796,697	4,750,287	Falling	4,595,666	4,365,195	4171667	4,014,864	3,843,963	2,622,927
			Constant				4,021,640	3,867,691	2,856,486
			Rising				4,029,873	3,896,477	3,148,178

Female fertile cohorts (women aged 15-49) in two macro regions of Serbia will be reduced by approximately 27% in 2033.

**Table 3.3.10.** Female fertile cohorts (women aged 15-49)

Area	Census 2002	Status 2008	Assumed fertility	Projections					
				2013	2018	2023	2028	2033	2058
Vojvodina	496,596	464,252	Falling	442,569	422,667	405373	384,143	358,222	234,762
			Constant				385,053	361,417	265,996
			Rising				386,158	365,296	305,014
Central Serbia	1,312,721	1,240,483	Falling	1,185,810	1,140,502	1090500	1,024,873	950,709	625,445
			Constant				1,027,296	959,174	708,873
			Rising				1,030,238	969,440	813,051
Serbia	1,809,317	1,704,735	Falling	1,628,379	1,563,169	1495873	1,409,016	1,308,931	860,207
			Constant				1,412,348	1,320,591	974,870
			Rising				1,416,396	1,334,736	1,118,065

### 3.4 What is to be done?

A general objective of sustainable demographic development is stationary population, i.e. population unchanging in size, in which future generations will be of the same size as the present ones. Such a simple replacement level of the population means that a woman must give birth to one female child during her lifetime, that is, net reproduction rate must equal to one. Under the present conditions in our country, where mortality rate is low and fertility below the population reproduction level, net reproduction rate is about one when the replacement level fertility is about 2.1 children per woman. This means that 100 women will have to bear 100 females and 105 to 107 males (being genetically predetermined) in order to replace themselves with daughters in the next generation, and, additionally, it has to be taken into account that about 3% of the alive female infants are expected to decrease before they bear children.

The global response to the fear of extinction of the human species resulted in several different population policy measures (Teitelbaum, Winter, 1985), namely, the modern world responded to below replacement fertility with the following measures:

- Measures aimed at extending human life spans,
- Measures aimed at restricting access to birth control,
- Measures aimed at increasing immigration,
- Measures aimed at adjusting to demographic changes,
- Measures aimed at increasing fertility through positive incentives.

Primordial fear of death resulted in a variety of measures aimed at extending human life span. It should be noted that life span extension was not the measure taken to combat depopulation. Extension of human lifetime came with modernisation processes and caused significant growth of the world population. Under constant fertility conditions, growth rate rises by 38 per mil points and life expectancy increases from 20 to 70 years. However, the longer the life span is, each further extension has less effect on the population growth. For example, extension of human life span from 20 to 30 years, increases growth rate



by 14 per mil points, while extension from 60 to 70 years increases growth rate only by 4 per mil points. If net reproduction ratio were less than one, even immortality would not mean indefinite. Therefore, future life span extensions will not significantly affect the growth rate (Coale, 1959).

Restricted access to birth control means has always been an unpopular measure used in totalitarian regimes. "... Seeking to raise the birth rate figures, Romania imposed more or less restrictive policy against intentional interruption of pregnancy in the period 1966-1989. Similar measures were introduced in Bulgaria, Czechoslovakia, and Hungary on several occasions, as well in Poland in the nineties. However, long-term effects in terms of increased birth rates were not attained " (Rašević, 2001, 75). Similar measures, but in a milder form, have been introduced in some democratic countries such as contraception ban, unavailability of sterilisation, etc...

Measures to increase immigration are used by wealthy countries, which buy labour force. Over million persons are migrating to the USA annually, which is more than during the most intense immigration period from 1901 to 1910, when less than 900 thousand immigrants per year moved to that country.

Efforts to keep large number of foreign labour at the lowest possible wages could be a possible explanation for a shift in the US policy in family planning programme strategy. At the 1984 Conference on Population held in Mexico, the US policy statement on population represented a major shift in the official US position in Bucharest 1974, holding that population growth is a neutral phenomenon and necessarily a negative force in economic development. This was very surprising position, and by adding or taking out some phrases, it was very similar to the China's statement in Bucharest ten years before, namely, that the population growth issues disappear in an appropriate economic system (Murray, 1985).

It seems that this shift arose from a very accurate calculation. According to the calculations of the renowned American demographer Thomas Espenshade (Espenshade, 1980) showed child-rearing expenses, that is, how much parents spend on children. For direct costs, i.e. costs of food, clothing, housing, medical care and education to age 18, plus costs of 4-year college, parents have to pay 85000 dollars per a child. When indirect costs are added (the income mothers forgo by staying at home to care for their children) these expenses rose to as much as 100 thousand dollars for low-income family and 140 thousand dollars for typical middle-class family. This estimate is higher by 30% than estimate from 1977, meaning that child-rearing expenditures are much higher today. By importing labour in the years of peak productivity, huge demographic investments are drastically reduced, thus reducing savings and production inputs. A negative attitude assumed by the media towards invasion of labour force from the south is cynical. The West depends on that labour, needs that labour, but insists on the right of selection, requiring only healthy workers, in the years of peak productivity, educated, and speaking their language.

Over a million persons are migrating to the US annually, being more than during the most intense immigration period from 1901 to 1910, when less than 900 thousand immigrants per year moved to that country. On the other hand, these measures help solve labour shortage problems in the short run, but, will cause shift of one population with another in the long run. According to the projections of Bouvier and Davis (Bouvier, Davis, 1982) should the annual immigration of million people in the USA continue (as it is now), the share of white people (not-Hispanic Americans) shall decline by almost 80% by 2080, that is, by 50% in relation to their number in 1980. Similar trends are obvious in the Western European countries, too. Changes in racial and ethnical structure lead to changes in the linguistic and cultural composition of the given society.

Adjustment to demographic change means that a country experiencing the challenges of depopulation seeks to compensate for labour shortages by advanced technologies in certain economic sectors. As this measure is not easily achievable, pension reform is imposed, meaning raising the retirement age and/or cutting pensions. Such a measure has serious political implications, since everyone is against it – economically active population and pensioners.

It is, however, of utmost importance to provide normal living conditions to an increasing number of ageing and older people:

- by converting excess school buildings into elderly people's homes,
- by removing architectural barriers, which make physical accessibility difficult, like kerbs in the streets, elevator installation in the public transport system, encouraging home delivery services.

Measures for increasing fertility through positive incentives were applied in various combinations and intensity in most countries with low birth rate, but appeared to have limited effect. One of the reasons could lie in the fact that many measures were not suitable, while some of them seemed insufficiently stimulating for some users. Therefore, stimuli must be simple, clear, accessible to all, understandable and attractive.

For a long time, children are not considered an economic benefit in our country, and already low traditional standards have reached critical values. In such a situation, it is not surprising that some authors believe that children are born only for the unique satisfaction enjoyed by parenthood in the modern societies.

The last measure constitutes a sustainable response to low birth issues, indicating that instead of a population policy, family planning approach should be taken, taking into account, among other things, number of children needed for simple reproduction.

It is important to have well defined goals and make clear distinction between the terms population policy and family planning. Population policy is a part of the social policy and population policy measures do not necessarily cause changes in birth rates. Population policies are, above all, aimed at harmonisation of relations in the society. Family planning is a more exact term by which desired number of children is defined.

In order to increase fertility rate, family planning must take into account number of needed children as well as numerous other factors. To this end, social action is needed, including identification and investigation of the problems, measures, and experience related to similar population problems worldwide, as well as monitoring of achieved results.

The fundamental principle should be: higher fertility must be an economic advantage. Provided that children are partly an ordinary asset, as everything else, societies with continued decline in the number of children must offer a price to «buy» more children. In such a situation, it is not popular to insist on more allocation. However, analysing family distribution according to the number of children in the regions without population replacement problems, it can be concluded that the number of families with three and more children will not be particularly high.

Alternatively, there are serious proposals that mothers should be given the vote weighted by the number of minor children and that working population should pay a part of their parents pension directly to them (Demeny, 1986). It is the old-age security motive for fertility, stimulating working population to have more children, who, in turn, will secure and enlarge their pensions. The latter means that we would be again faced with the situation in which our children would “feed us with daily bread”.

Universal goal is to reach stationary population, one that is both stable and unchanging in size, requiring no excessive demographic investments and having no problems with generational replacement.

### **3.5 Designing a pro-natalist programme**

Learning from the experience of inefficient pronatalist policies in the European countries, some important prerequisites for the application of any set of measures must be highlighted, taking into consideration prevailing socio-economic trends (Harbison, Robinson, 2002, 45-46).

- First, each programme must be oriented towards women (prospective mothers), taking care about their health, education, and types of child-rearing supports. Continuously low fertility initiated gender transition process, highlighting and promoting the role of women in planning and implementation of new social programmes.
- Second, yet another aspect of woman-oriented policy is the fact that woman with their children make a nucleus of any programme. In other words, the programme should not be family-oriented, because of the declining role of the family. As single households are not practical, most men and women share households in one way or another. More appropriate term for such way of living could be «cohabitation» or «co-residential union». Today it is much easier to get married and divorced than to buy or sell house in majority developed countries.
- Third, the programme must offer clear economic support and motivation to a woman thinking of giving birth. This programme does not mean that society is buying a «child», but that it takes responsibility for financial and psychological costs a new child will bring to a prospective mother.
- Fourth, a pronatalist programme must be accompanied with a well-designed media campaign aimed at promoting higher fertility. One may argue that this is a form of manipulation. Such a statement could hardly be denied since emotional fear of extinction can once again provide someone with the opportunity to claim children for state, church, political party, instead of claiming wealthier society for all people.
- Family planning programmes are very expensive and they require public debate and clearly defined funding sources.
- The programme must be at the national level, but may be tested for a certain period of time in a smaller territory.

To achieve the above-listed goals, the following specific objectives must be achieved both at global and local level:

- To adjust work and parenthood (private life),
- To reduce psychological cost of motherhood,
- To promote reproductive health for youth,
- To combat sterility,
- Healthy motherhood,
- Positive population climate.

## 3.6 References

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