

## 8. Demogeographic characteristics and processes in Belgrade

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The position and role of Belgrade in the regional development of Serbia is closely correlated with the changes of its geopolitical position in the past and the significance it has as within the Serbian, so within the area of South-Eastern Europe. The best indicator is its development from the periphery urban nucleus, over the significant urban centre, to the nodal centre of wide field of influence even out of the state borders (Stojanović, B. 1999). Belgrade, very soon, distinguished itself in the geo-space of Serbia by its developmental influence (but also by its strong polarisation effect), which resulted in intensive population concentration and rapid spatial-structural changes. In a short period of time of the second half of the 20th century, the region of Belgrade grew into the complex functionally urban system of urban and rural settlements, with expansive demographic growth, making thus much unevenness both in the regional and demographic development of Serbia.

The main characteristic of the demographic development of Belgrade during the second half of the 20th century was a constant and expressive population growth, which very soon brought to the formation of the special pole of demographic concentration in Serbia<sup>26</sup>. The process of urbanisation in Serbia was followed by the general rural exodus and the population concentration, starting from the local municipal centres to the primary centres of the development, but during that process, Belgrade played the dominant and key role, generating large disproportions in the geo-space of Serbia. The scope of the migrations, directed towards Belgrade, speaks on its strong polarisation influence and attractive strength which was much larger in relation to the power of attraction of other regional centres in Serbia. For instance, in the process of immigration, in which almost 2.6 million persons participated by the 1990s, the Belgrade settlement (inner city area) assimilated 41.1 % of the total immigration on the area of central Serbia<sup>27</sup>. The strong and elemental migration from the areas of Serbia (as well as from other republics of the former Yugoslavia) and its directing to the area of Belgrade agglomeration, have shown all the strength of its influence in the wider encirclement, so that nowadays, in any sense, this urban area dominates the whole area of Serbia.

In the period from 1948 to 2002, the population of Belgrade increased for two and a half times (index 249) from 634.000 to 1.576.123<sup>28</sup>. The growth of Belgrade agglomeration

<sup>26</sup> During the second half of the 20th century, it came to the clear differentiation of the space in regard of the population dynamics between central Serbia and Vojvodina and Kosovo and Metohia. Thus, except Belgrade, the area of Kosovo and Metohia was singled out as the second pole of the population growth and concentration in Serbia. As the consequence of maintaining the high rates of the increase, in some inter-census intervals, the population increased even up to three times faster in Kosovo and Metohia than the population of central Serbia and almost five times faster than in Vojvodina. It should be emphasized that the factors of the expansive growth of these areas were completely different. While in Belgrade, the migration component was the main determinant of the demographic growth, in Kosovo and Metohia, the high natural increase of the population, in the conditions of the constant population emigration, was the decisive factor of the population growth.

<sup>27</sup> By comparison, the share of other regional centres of central Serbia was tenfold smaller: Niš 5.9 %, Kragujevac 4.8 %, while less than 2 % in other centres (Vojković, 2007).

<sup>28</sup> We meet two data on the population of Belgrade in statistical sources. Namely, the 2002 census was carried out according to the new, changed methodology, in accordance with the international recommendations, which means different definition...

was faster than the population increase of Serbia, which caused the constant growth in the proportion of Belgrade population in the total population of Serbia. According to the 1948 census data, 9.7 % of the republic population lived within the borders of the present-day urban region (the City of Belgrade), while by the 2002 it increased to over 16 %. Nowadays, according to the estimation for 2007, the City is administratively divided into 17 municipalities with 157 settlements and the population of 1.7 million<sup>4</sup>.

## 8.1. Short review on the population development of Belgrade by the middle of the 20th century

The beginning of the 19th century is the period of extremely hard and unsettled circumstances in Serbia. The constant changes in the political, economic, social and cultural living conditions, in the atmosphere of insecurity due to frequent uprisings and wars, "imbued the Belgrade population with the feeling of the temporary stay and residence in the town of Belgrade, which was particularly reflected on the way of living and general living standard of Belgrade residents: in the appearance of the houses built quickly and in the way of their construction as the temporary residences" (Stojancević, V., 1974). The descriptions of the Belgrade town of that time speak of it as "neglected and considerably damaged settlement" (Čubrilović, V., 1974). By the strengthening of the Serbian state, Belgrade began to develop rapidly, so that in the last decade of the 19th century it already got its modern shape. By the independence of Serbia in 1878, Belgrade took over the role of the leading political and urban centre in the newly formed state, attracting immigrants from various regions. Every extension of the state territory contributed to the expansion of its influence and it was followed by the spatial and demographic expansion of the city. By the creation of the Kingdom of the Serbs, Croats and Slavs, Belgrade became the centre of the state of the three times larger territory and as many inhabitants, so that the period from 1918 to 1931 has been considered as one of the most dynamic in the (demographic) development of Belgrade. By the strengthening of its political, economic, social, cultural and educational functions, its sphere of influence was appreciably enlarged, the consequence of which was the permanent huge influx of immigrants, dynamic population increase and changes in all structures of the population. Although migrations had a decisive role on the city growth, with the strengthening of the demographic base, the significance of the natural component of the demographic growth also increased.

The demographic growth of Belgrade<sup>5</sup> can be followed starting from the first census

<sup>28</sup> ... of the total population. In dependence on the choice of the methodology in applying the census data, and with the aim of comparing with the previous censuses, the picture on the population number of Serbia, as well as of Belgrade is changed. According to the methodology of the previous censuses, the population number of Belgrade would be 1.638.643 in 2002.

<sup>29</sup> Source: Statistical yearbook of Belgrade 2007

<sup>30</sup> The traces of the Celtic, Thracian and Neolithic settlements speak on the long settling history of this area. Even in the early classical period, Belgrade appeared as the urban settlement. After the change of the Roman and Byzantine epochs, there had not been the trace of the city up to the 9th century, when thereafter it appeared under its Serbian name. Idrizi, in his geography from 1153, wrote about Belgrade as of thriving and well settled town. In the Middle Ages, Belgrade was twice the Serbian capital city, but thereafter it passed into Hungarian hands, while it remained under Turkish rule from 1521 to the beginning of the 19th century. The historical sources testified on many changes of the ethnical picture and demographic size of Belgrade. Thus, for example, the sources from the second half of the 16th century pointed to the existence of the large and thriving city with around 6.000 houses, which could also mean over 30.000 inhabitants; from the second half of the 17th century, Belgrade was mentioned with 17.000 houses and nearly 100.000 inhabitants; while the 1717 census, after the Austrian occupation, pointed to the population change, recording only 924 families with around 4.620 inhabitants (More about it: Radovanović, 1999; Radovanović, 1974).

in the Principality of Serbia in 1834. The official census datum showed that Belgrade had 7033 inhabitants, but the real number was certainly larger, because the census did not include the total population (the Turks and the Gipsies were omitted). In 1846 already, the population was doubled (14.371), while according to the census of 1866, which has been taken as the first census in the modern sense, there were 24.768 inhabitants. By the end of the 19th century, in 1890, 54.249 inhabitants lived in the city. Nevertheless, in relation to the dynamic demographic growth that would come after in the 20th century, the population growth during the 19th century was temperate. By the 1921 the population of the city was doubled again (on 111.739), while ten years needed to pass for the next doubling. According to the former territory of the city and its absorbent powers, it could be said that Belgrade was exposed to the strong demographic pressure - the greatest one of its whole history. In only 10 years, in the period from 1921 to 1930, the population grew for 117.376, whereof 14.800 by the natural and over 103.500 (87 %) by the mechanical increase (Bogavac, T. 1991). In the population census of 1931, 238.775 inhabitants were recorded. The period of World War II halted the dynamic demographic and urban growth, but soon after that, the city reached the pre-war population number. Before the census of 1953, the population from the 1930s doubled and reached almost half a million (477.982).

## 8.2. Demographic development of Belgrade in the second half of the 20th century

The demographic development of Belgrade cannot be observed separately from its spatial functional development and territorial expansion. With the expansion of the sphere of influence, its administrative borders also expanded and the changes in the administrative-territorial organisation of the city and its inner surroundings are frequent. At the end of the 19th century and the beginning of the 20th, the central area of the City included 12 km<sup>2</sup> and the population of 1900 was 69.700. The former Belgrade district, as the part of the future urban region of Belgrade, comprised the area of 2025 km<sup>2</sup> with 126.100 residents. By the middle of the 20th century, during the census of 1953, there were 731.800 residents on the same area (treated administratively as Belgrade administrative district). The administrative area of Belgrade expanded, practically, to the scopes of the present-day borders, to 3222 km<sup>2</sup>, which is 3.6 % of the total area of the Republic of Serbia, just due to the dynamic demographic and urban development in the time of the 1971 census. That was the time when Belgrade grew into a large city - by 1.200.000 inhabitants, it concentrated 14.3 % of the population of Serbia. The migration flows influenced such intensive growth, but also the expansion of the urban zone and the new settlements joining into the administrative area of the city, because exactly in those parts of the City, the immigration flows were the strongest and the spatial-functional changes were large. The effects of joining are best illustrated by the datum that the share of inhabitants of newly joined settlements was 41 % of the total demographic growth of the Belgrade settlement (Rančić, M. 1984).

By the 1970s, the inner city area (the Belgrade settlement) had more dynamic population growth in relation to the total territory of the City of Belgrade - in the period of the highest increase of the 1960s, the population grew on average for even 24.000 persons

<sup>31</sup> More about it: Stojanović, B. 1999.

per annum. During those years, the inner city area was providing even 90 % of the total growth of the Belgrade population. During that period of time, many settlements from its direct hinterland and suburban municipalities were losing their population due to their migration to Belgrade.

Table 16: Changes in the population number of Belgrade, 1948 - 2002.

	Population number								
	According methodology of previous censuses							Methodology 2002	
	1948	1953	1961	1971	1981	1991	2002	1991	2002
<b>Serbia</b>	6527966	6979154	7642227	8446591	9313676	9778991	7893125*	7576837*	7498001*
<b>City of Belgrad</b>	634003	731837	942190	1209360	1470073	1602226	1638643	1552151	1576124
<b>Inner City</b>	397711	477982	657362	899094	1087915	1168454	1163602	1133146	1119642
<b>Other area</b>	236292	253855	285428	310266	382158	433772	475041	419005	456482
	Index of population change								
	According methodology of previous census							Methodology 2002	
	1953/48	1961/53	1971/61	1981/71	1991/81	2002/91	2002/48	2002/1991	
<b>Serbia</b>	106.9	109.5	110.5	110.3	105.0	-*	-*	99,0*	
<b>City of Belgrad</b>	115,4	128.7	128.4	121,6	109,0	102,3	258,5	101,5	
<b>Inner City</b>	120,2	137,5	136,8	121,0	107,4	99,6	292,6	98,8	
<b>Other area</b>	107.4	112.4	108.7	123.2	113.5	109.5	88.2	108.9	

Note: \* without data for Kosovo and Metohia.

Source: Population Census of 2002.

In the next period, from 1980s, the demographic growth became weak on the whole area of the City, and it was halved up to 1991. While the City of Belgrade grew for over 260.000 people during the previous inter-census intervals, the growth of 132.000 new inhabitants was recorded in the inter-census period from 1981 to 1991. In that period, the area of the suburban belt and the suburban municipalities (generally speaking, because not all the settlements of this area had positive demographic trends) took over the priority in the dynamics of growth.

The stages of the urbanisation that the City went through were described by the directions and dynamics of the population development during the second half of the 20th century (Table 16, Figure 28). The changes in the territorial distribution, spatial moving and structural changes of the population are in the close interaction with the developmental flows and the urban agglomeration spreading:

- from the urban part of the Belgrade settlement, which today includes the urban parts of 10 municipalities, characterised by the specific demographic development, and the polarisation of the demographic trends - a) depopulation in the oldest urban city core (the municipalities of Stari Grad, Vračar and Savski Venac); b) the dynamic population growth in the municipalities of Voždovac, Zvezdara, Zemun and Palilula; c) the intensive population concentration in the municipalities of New Belgrade, Čukarica and Rakovica;
- over the spatial and functional expansion on the suburban ring (formally other settlements of the urban municipalities), with strong demographic transformation;
- to the fast structural changes in the suburban belt, which reflected strongly (and divergently) to the dynamic changes in number, distribution and structure of the populations of the suburban municipalities of Barajevo, Grocka, Lazarevac, Mladenovac, Obrenovac and Sopot.

Table 17: Changes in population number by municipalities<sup>32</sup>, 1948 - 2002.

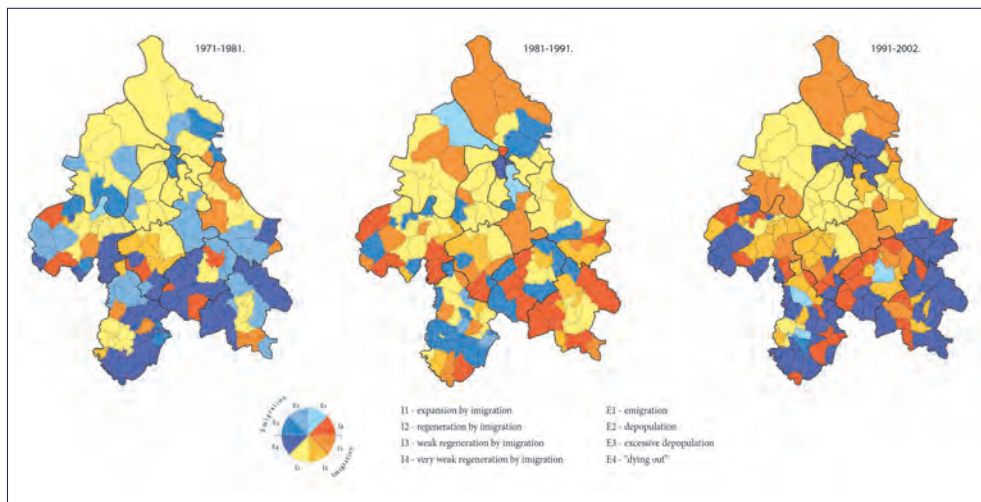
	Index of population change							Methodology 2002
	According to methodology of previous censuses							
	1953/48	1961/53	1971/61	1981/71	1991/81	2002/91	2002/48	2002/1991
<b>City of Belgrade</b>	115,4	128,7	128,4	121,6	109,0	102,3	258,5	101,5
<b>Inner City</b>	120,2	137,5	136,8	121,0	107,4	99,6	292,6	98,8
<b>Vračar</b>	120,9	117,7	95,3	93,6	88,4	88,4	99,1	86,6
<b>Savski Venac</b>	120,9	114,7	84,7	84,0	89,3	93,5	82,4	92,5
<b>Stari Grad</b>	120,1	118,7	86,8	88,1	96,0	83,0	86,8	81,0
<b>Zvezdara</b>	118,5	133,6	127,0	114,0	109,1	98,2	245,5	97,7
<b>Novi Beograd</b>	123,3	294,1	276,5	188,2	129,3	100,5	2453,2	99,6
<b>Rakovica</b>	113,4	179,2	177,5	171,4	112,3	104,6	725,9	102,8
<b>Voždovac</b>	116,9	139,6	157,0	118,7	101,3	97,8	301,5	97,1
<b>Palilula</b>	125,3	150,9	141,8	119,1	104,1	102,8	341,3	103,8
<b>Zemun</b>	116,2	142,7	146,0	123,1	105,5	109,0	342,2	108,8
<b>Čukarica</b>	115,2	151,2	202,2	129,2	117,0	112,8	601,0	112,1
<b>Barajevo</b>	104,2	96,2	94,8	113,7	115,1	119,5	148,5	118,2
<b>Grocka</b>	106,0	107,1	107,4	154,8	128,2	115,6	277,5	114,8
<b>Lazarevac</b>	106,6	113,2	104,0	111,8	115,3	102,2	165,5	101,1
<b>Mladenovac</b>	106,1	112,1	105,3	111,4	107,4	97,8	146,5	96,3
<b>Obrenovac</b>	108,4	108,4	110,4	117,6	112,2	105,5	180,6	104,9
<b>Sopot</b>	101,4	99,8	91,5	98,6	98,4	103,5	92,9	102,1

Source: Population Census of 2002.

<sup>32</sup> By the most recent administrative-territorial change from 2004, the new municipality of Surčin was formed within the urban area of Belgrade by separating from the Zemun municipality. Due to data comparison, that was not done in the table.

In the first period of the city development, shortly after World War II, the central municipalities (Stari Grad, Vračar, Savski Venac) had the highest population growth rates. In the next phase (1953 - 1961), the population growth was more intensive in the broader, peripheral zone of the Belgrade settlement (the municipalities of Čukarica, Rakovica, Palilula, Zemun, Zvezdara), because the old, central core had already been urbanised and densely populated. The intensive construction of New Belgrade, the population of which was almost doubled in all inter-census periods from 1953 - 1981, contributed especially to the expansion of the city at the Srem part. Such spatial-demographic relationships in regard of the dynamics of growth of some parts of the city were also kept in the next ten years, although generally viewed, from the 1970s, the intensive growth of the central agglomeration became weak (except New Belgrade and Rakovica), in order that by the 1980s, a more rapid growth of the suburban municipalities started.

Figure 28: Spatial-demographic changes and relations in Belgrade.



Source: Statistical Office of the Republic of Slovenia.

In the following phase, the developmental flows which caused the functional and morphological transformation of the City were characterised by the change in the core/periphery relationship. The municipalities of old urban core became depopulation, while the population growth of the suburban ring was more intensive. In the first ones, the migration balance got negative values, while the natural increase began to reduce rapidly (in these municipalities, the considerably lower natural increase rates were recorded very early in relation to other parts of the city due to different population structure) as the result of changing the population reproductive norms, but also the more rapid demographic ageing. Hence, the depopulation process began in the inner, most urbanised area of the city at the time when the population growth and concentration were intensive and permanent in other parts of the city. Moreover, the developmental flows, with the transformation of the housing area into the business one, caused the population emigration. Thereafter, in the legitimate causative-effective connection of the demographic development, the depopulation process stimulated the further decline of the natural increase. Only ten years later, the data from the inter-census period of 1981 - 1991 pointed to the expansion of depopulation trends even in the wider zone of the Belgrade

settlement (in the urban parts, three additional municipalities: Voždovac, Zemun and Palilula), in order that they expanded on much larger territory (Zvezdara and New Belgrade) during the last decade of the 20th century (Smiljanić, Z. 2003).

New Belgrade, as the completely new settlement, built at the right bank of the Danube after World War II, had a specific and very dynamic demographic development. That proved explicitly on the enormous population growth for 25 times (from 9000 to 217.000) which occurred due to immigration from all areas of the former Yugoslavia and as a result of the population redistribution from other Belgrade municipalities due to intensive collective housing construction. At first, New Belgrade was the settlement with mainly residential function. By the time, within this residential zone, other functions also developed, so that in the last decade, New Belgrade got into a completely new phase of economic, spatial-structural and demographic development.

The intensive demographic changes began with the original development of industry, or the construction of the housing projects of escort character in the area of the suburban ring. Subsequently, the changes were directed differently in dependence on the developmental policy of the City and the directions of its expansion. In the 1970s, the significant population concentration was accomplished in the settlements at the left bank of the Danube (Borča, Krnjača), so that it came to their territorial growing together with Belgrade. In the period from 1971 to 1981, Borča doubled its population (from 9500 to 18.500), while by the 2002 the population doubled again at 36.000.

The situation was similar on the opposite side of the city, where some settlements of the suburban ring also had the sudden, and then stable demographic growth. The intensity of the mentioned processes was illustrated best in the settlements of Sremčica and Kaludjerica<sup>33</sup> which were the classical examples of the population expansion. In the Sremčica settlement, the population increased for five times (from 2400 to 13.000) in the mentioned ten years long period, in order that the constant temperate population growth was maintained in the next period (on about 20.000 inhabitants in 2002). The most drastic example of elemental urbanisation was the Kaludjerica settlement which in the period from 1971 to 1981 was demographically enlarged for 6.5 times, from 1900 to 12.400 inhabitants. Thereafter, in the period up to 2002, the population growth was constant (index 177). Kaludjerica was well known by the illegal "wild" construction by which it practically grew in Belgrade.

Among the suburban municipalities, the demographic flows passed through various phases. In the first phase, in the time of the expansive growth of Belgrade during the 1950s and 1960s, the population immigrated to Belgrade from a large number of the settlements of these municipalities. In the second phase, under the influence of the developmental influence of Belgrade, the municipalities of Lazarevac and Obrenovac, due to their closeness and development of industrial activities, also became attractive for the population migration from all parts of Yugoslavia. Nevertheless, the expansive growth mainly developed in the municipal centres and the settlements that were the closest to the municipal centres due to population immigration, while other settlements of these municipalities still recorded the depopulation. Among the suburban municipalities, the Grocka municipality "stood out", with the most dynamic population growth (just due to enormous growth of Kaludjerica). The Sopot municipality was characterised by the

<sup>33</sup> Administratively, Kaludjerica belongs to the suburban municipality of Grocka, but it is close to the settlement of the suburban ring by its location and spatial-structural changes.

opposite tendencies. As the most underdeveloped municipality of the Belgrade region and aside from the major highway directions, it became depopulation very early. The negative natural increase rates were recorded almost in the 1960s which caused, along with emigration, the intensive process of demographic ageing. It was interesting that after the 40 years long period of the population decrease, a relatively weak demographic "regeneration by immigration" was recorded in the last inter census interval.

The last decade of the 20th century was the period of the tumultuous changes on the whole territory of the former Yugoslavia, while the important historical events had the significant consequences on the demographic development of Belgrade. During the last decade of the 20th century, the dynamics of the population growth was retarded considerably and ranged at average annual rate of only 1.4 ‰. The population increased for 24.000 in the area of the City of Belgrade throughout the whole period (the amount of the average annual growth was the same in the periods of the most intensive agglomerating of the population) and it was exclusively the result of the population increase of the suburban region. Except the reduced field of the metropolitan influence in the significantly narrowed borders of the new state territory, the growth was also influenced by the weakening of the migration waves from the area of Serbia due to the economic crises (and already exhausted "emigrational reservoirs"), and the negative natural increase values. On the other side, the City was exposed to a special pressure of war refugees from the endangered regions, while at the same time a large number of inhabitants emigrated from the country.

### 8.3. The influence of migrations on the intensive demographic growth

As in the case of all large urban systems, migrations significantly influenced the growth and demographic development of Belgrade<sup>34</sup>. The characteristics did not refer only to changed migration dynamics throughout different socio-historical periods, but also to their different scope and influence in the territorial expansion of the City. Moreover, the known selectivity of migrants according to sex and age was reflected in the characteristics of the demographic structures. The researches showed that, among the settled population, the statistical superiority of the female population was emphasized and that the largest number of inhabitants (over 50 %) aged between 15 and 29 changed their residence (Stevanović, R. 1999).

In the years of the greatest settling, between 1956 and 1966, the migration increase was around 20.000 migrants a year (Radovanović, S. 1999). During the inter census intervals from 1961 - 2002, the migration increase was declining successively: first, from about 18.000 to 15.000 per year on average; then the number was halved to 7000 persons per year on average; in order that in the last decade of the 20th century the mechanical increase was 5 times lower than in the years of the highest influx- 4300 per year on average. The fact that the mechanical increase was not registered in Belgrade for the first time in 1991 represented best the situation of the country in the years of the political and economic crises.

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<sup>34</sup> The increase by immigration always represented the dominant component of the population growth of Belgrade: from 1.1 million which was the population increase of Belgrade in the period from 1900 to 1991, over 750.000 as the result of the mechanical population influx (Stojanović, 1999).



Table 18: Shares of migration and natural component in population growth of Belgrade.

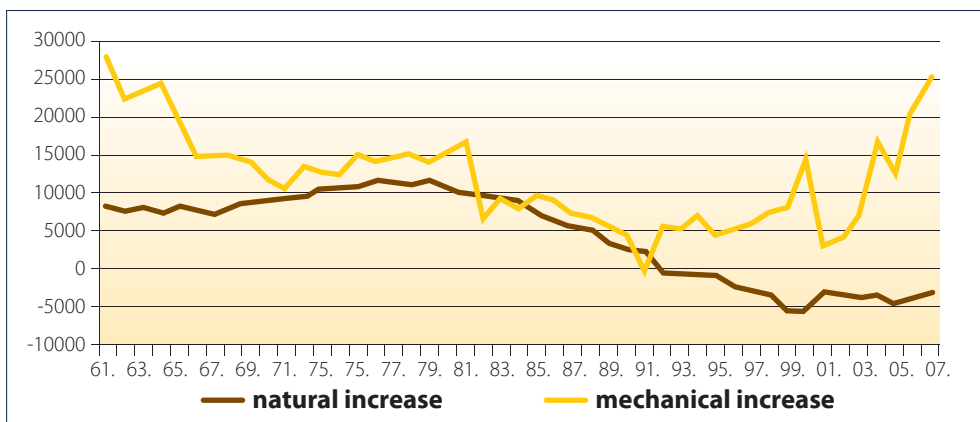
Inter-census period	Growth	Natural increase	Migration increase	Growth rate	Rate of natural increase	Rate of migration balance
<b>1961-1971.</b>	267170	83801	183369	24.84	7.79	17.05
<b>1971-1981.</b>	260713	108063	152650	19.46	8.07	11.39
<b>1981-1991.</b>	132153	62380	69773	8.60	4.06	4.54
<b>1991-2002.</b>	36417	-10849	47266	2.04	-0.61	2.65

Source: Statistical yearbooks of Belgrade.

In the structure of demographic growth of Belgrade during the 20th century, several phases can be distinguished regarding the influence of the migration component (Stojanović, B. 1999):

- the migration component dominated absolutely in the population growth of the city up to the beginning of World War II;
- in the second phase, after the war up to the 1970s, the migration influx was still large, but with a tendency of reduction in its share;
- between the 1970s and the 1990s, the contribution of the natural and migration component to the population increase became balanced;
- during the last decade of the 20th century, the migrations again became a decisive factor of the population growth, but this time not as a result of their scope, but due to negative natural increase.

Figure 29: Natural and mechanical increase of the population, 1961 - 2007.



Source: Statistical yearbook of Belgrade 2007.

Regarding the territorial distribution, 96 % of the migration influx was concentrated towards the central urban agglomeration all up to 1970s. In the 1980s, the influx towards the Belgrade settlement was reduced to 70 %, in order that in the 1990s, the degree of the immigration attractiveness of the Belgrade settlement became noticeably lower, only 53 % (Stojanović, B. 1999). The last decade was specific by the turn in the directions of immigration, so that almost 90 % of the migration influx of those years was directed towards the settlements of the suburban ring and the suburban municipalities.

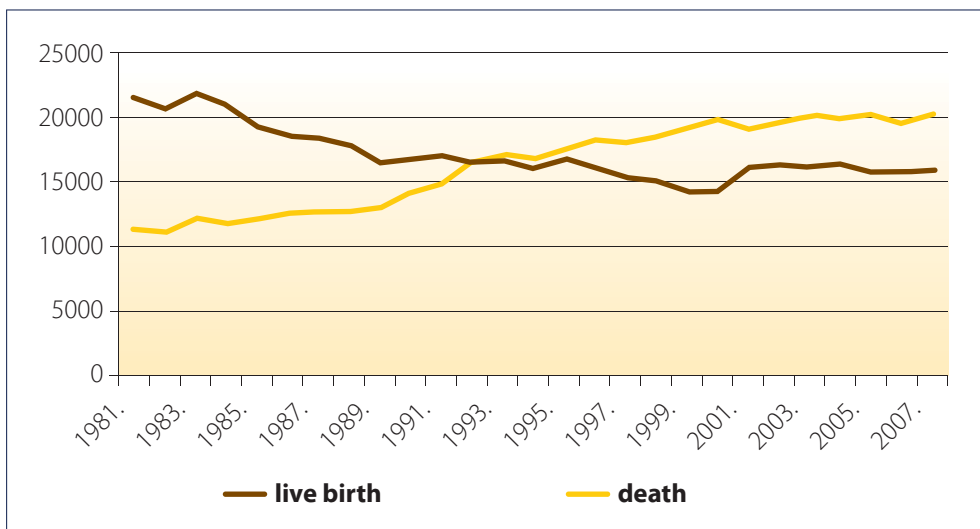
During that decade, the role of positive migration balance was emphasized in the conditions of the negative natural increase. Nevertheless, the reasons for migrations and the structure of migrants were significantly changed. Among the settled population (and there were 208.000 registered), the participants of forced migrations dominated. Moreover, in the conditions of instability, social and economic crises, the number of emigrants increased (it was estimated on 1.610.000), while the emigration of young and educated people characterised this contingent. The positive migration balance was realized mostly in the settlements away from the inner city area: the figure was 42.000 of the total migration balance of 47.266 persons. When the corps of 111.300 refugees was added to the estimated number of 35.000 of internally displaced persons from Kosovo and Metohia (the 2002 census) it turned out that every tenth inhabitant of the City of Belgrade was a refugee or a person endangered by war. The share of refugees in the Zemun municipality which had them most recorded (21.800) was 11.4 % in the total population (Rašević, Penev, 2006).

## 8.4. Tendencies in the Natural Development of the Population

Historical-demographic researches point to a very unsuitable situation in regard of the natural development of the Belgrade population during the 19th century (Sikimić-Spasovski, M. 1977; Radovanović, M. 1974; Vojković, G. 1992). The following specific demographic and social-historical factors are mentioned as the reasons of the negative rates in the conditions of low natural increase and very high mortality: the living conditions in the former urban area, frequent epidemics, the low health care level, disturbed sex structure, but also the methodological lacks of the vital statistics of that time. The years of positive natural increase were uncommon, confirming that "Belgrade developed least from its own biological strength" (Radovanović, S. 1999 : 49). A period of positive balance between births and deaths began by the 1920, but the natural increase rates remained low, so that Belgrade, in the Yugoslav scales, stood out by its extremely low natural increase rates. According to Bogavac T. (1991), Belgrade was forced to base its development on the natural increase only, while on the population increase which was realized from 1920 to 1931 it should have waited the whole 75 years.

Shortly after World War II, the natural increase of the Belgrade population grew due to considerable birth rate increase (the rates exceeded 20 ‰) during the so-called compensational period, and continued tendencies of the gradual mortality decrease. However, the birth rate became steady at about 14 ‰ relatively quickly, in order that by the beginning of the 1990's, it decreased at about 10 ‰. The crude death rate reached its lowest level of 5.4 ‰ in 1965/66 as the result of greater social care for people's health, but also of relatively young age structure of the population. In the following period the level of the crude death rate would be in a constant increase under the direct influence of the age structure of the Belgrade population, and at the beginning of the 1990s, the crude death rate would be returned on the level before World War II.

Figure 30: Natural movement of the population of the City of Belgrade, 1981 - 2007.



Source: Statistical yearbook of Belgrade 2007.

During the 1960s, owing to the natural component, the population of Belgrade increased on average for about 8400 per year, by the rate of natural increase of 7.8 ‰ (Table 18). In the period from 1971 to 1981, although average annual natural increase rate did not have more significant increase (it was 8.1 ‰), the absolute natural increase was enlarged for almost 30 %. The trend of the natural increase decline began from the 1980s. During the inter-census interval from 1981 to 1991, the natural increase reduced in the absolute amount for over 40 % (on 6.200 per year on average, with the rate of 4 ‰, but since migrations went into a phase of calm during those years, the significance of the natural component in the structure of the Belgrade population growth has become more emphasized.

The overall demographic trends were also reflected in differences regarding the natural increase of the population of the municipalities of Belgrade region. Nowadays, the natural increase has been negative in all municipalities, but the history and tempo of its decrease were different. Thus, for example, in 1970s the natural increase rates were even 10 times higher in the municipalities with the strongest population immigration. The natural increase rates at Čukarica, Zemun, Voždovac, Palilula (all the municipalities of dynamic development of the settlements of the suburban ring) were ranging in the interval from 10 to 14 ‰. Higher rates of the natural increase also had the newly formed municipality of Rakovica (around 13 ‰), while the rates of the natural increase which exceeded the Belgrade average were also recorded at New Belgrade and Zvezdara. Regarding the demographic development of Grocka, a rise in the natural increase of this municipality (at 8.5 ‰) in the 1980s appeared as the reflection in the demographic expansion by the young population immigration and population 'rejuvenation'. The antipodes of the mentioned municipalities were the central urban municipalities with extremely low natural increase (Vračar and Stari Grad 1.5 ‰) or suburban emigrational municipalities of Sopot and Barajevo where, at that time already, there was not natural increase of the population. Today,

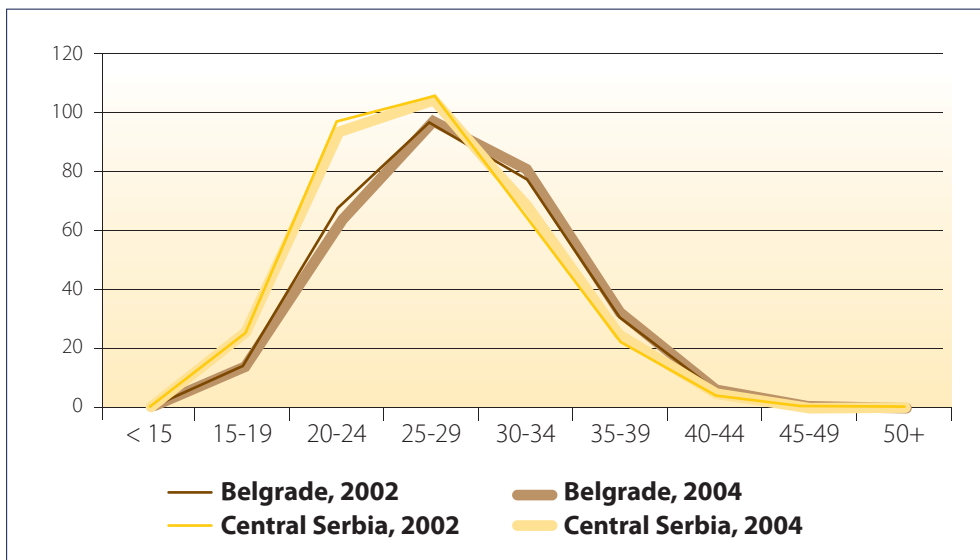
all these municipalities have high negative values of the natural increase which exceed - 10 ‰. The demographic and socio-demographic structure and higher reproductive norms of the population in the suburban municipalities (Lazarevac, Obrenovac, Grocka) and settlements of the suburban ring (Rakovica, Čukarica) would contribute to the later phenomenon of the negative natural increase (in the 2000s) on these areas.

Summing up the mentioned, it can be said that the influence of the natural increase on the increase of the Belgrade population was undoubtedly less significant than the migration component especially that its continuous declining began after the characteristic post war rise and relatively high level up to the 1950s. In regard of the natural increase, Belgrade follows the trend of the population growth in central Serbia and Vojvodina, so that in 1992, the negative natural increase was recorded in the area of the city for the first time after World War II. Since that year, the negative difference between births and deaths has become the characteristic of the demographic development of the City, as well as central Serbia, while the lowest rate of natural increase of - 3.3 ‰ was recorded in 2000. It is obvious that those are the first effects of the increased births (in the period from 1971 to 1981 the influx of more numerous generations in the reproductive contingent reflected in the rise of the natural increase rate at 15 ‰), realized by intensive immigration and more significant participation of young population which, thereafter, were annulated by the impacts of the factors of living in a large city. That just confirms the rule that the migrant population changes relatively quickly their reproductive behaviour and accepts lower reproductive norms of urban population. Throughout the 1980s, the fall of the natural increase became intensified, so that the previous advantage was lost in relation to the average of central Serbia.

Tumultuous social changes, deep economic crisis, especially in the period of the sanctions of the international community, the social changes and the institution crisis in the times of 'surviving', with the special implications and problems of living in a large city which also bears many structural obstacles (starting from the unsolved housing problems and unemployment, the baby-sitting problems, to all those characteristics assigned to unsatisfied economic standard, intensified particularly in the large city), certainly left deep trails on the reproduction of the population of Belgrade. Low fertility rate of population is the general characteristic of present demographic and social moment in Serbia. However, the fact that the City of Belgrade, as a pole of the expressive demographic concentration, and relatively more favourable age structure of population in relation to other areas of Serbia, has been classified into low birth rate area and that it has a clear and constant decline of births is socially upsetting. It is obvious that those numerous factors which are commonly noted as the causes of low fertility of population in the contemporary society (low standards on the desired number of children due to high economic and psychological price of raising a child, high expenses in arranging the parentage and professional activity, the feeling of insufficient security or emphasized individualism) are more expressive at present social and economic climate in Belgrade than in other areas in Serbia with low birth rate. Moreover, the phenomenon of delayed births in Belgrade, especially in the central urban municipalities, is more expressive than in other areas in Serbia with low birth rates. Almost 60 ‰ of women aged 25 - 29 and every third woman aged 30 - 34 in Belgrade did not bear a child (Rasević, Penev, 2006). In the 1970s, the largest number of births (43 ‰) had mothers aged 20 - 24, while their share is reduced at 23 ‰ in 2002. Age limit of the largest number of births (34 ‰) is raised to 25 - 29 years. Moreover, mothers aged 30 - 34 make more than one-fourth, so that the share of older

mothers is doubled in relation to the 1970s. During the last few years, it has come to further moving of woman's child-bearing years in relation to 2002. Age fertility rates 20 - 24 declined from 67.9 ‰ to 62.6 ‰, while age fertility rates 30 - 34 increased from 77.6 ‰ to 80.2 ‰. The differences are significant in relation to the average reproductive model in central Serbia (Figure 29) where age fertility rates up to 29 are higher, while they are lower in older ages. At the beginning of the 1990s, the total fertility rate in Belgrade was already 1.56 children per woman in order that it declined at the lowest level of 1.3 children per woman during the critical 1999. In that year, the lowest number of live births was recorded in Belgrade (14.182). Nevertheless, in the following years the number of live births increased, total birth rate was stabilized at about 9.8 ‰, while total fertility rate was stabilized at 1.5 children per woman (Penev, 2005).

Figure 31: Fertility rates in Belgrade and central Serbia according to mother's age.



Source: Statistical yearbook of Belgrade 2007.

## 8.5. The main characteristics of demographic structure

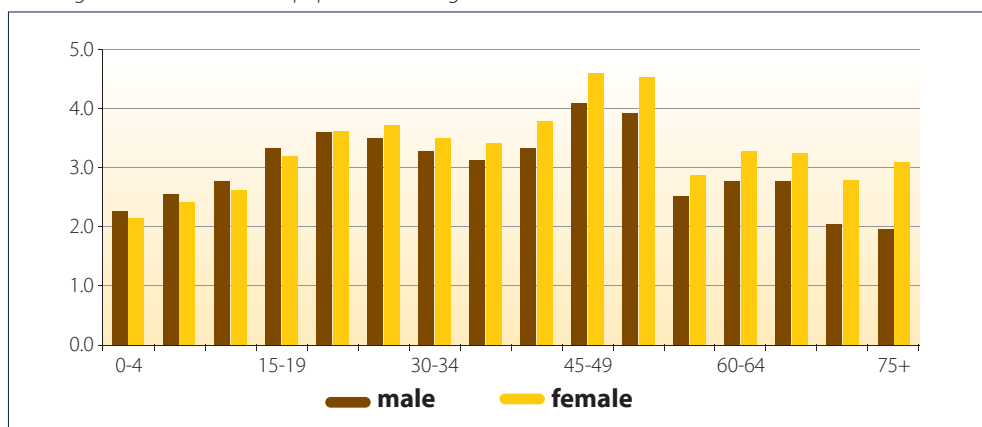
The population growth of Belgrade, the migration trends and the trends of the natural increase are closely connected with the changes in the structural characteristics of the population.

In contrast to the imbalance in the sex structure of the population of Belgrade, which throughout the whole 19th century and the first half of the 20th century was characterized by the considerable lack of the female population, the second half of the 20th century was characterized by the domination and constant increase in the share of the female population. New socio-historical relationships, the change of the socio-cultural milieu and the changes in the position of woman in the socialist society were closely connected with such characteristics in the sex structure of Belgrade. The last census of 2002 showed larger numerosness of women for over 80.000 and their share of 52.6 % in

the total population. The decrease in rates of masculinity (from 954 to 903, according to the 2002 census) was a trend, opposite from the one at the population of Serbia and it was the result of the dominant role of the migrations in the increase of Belgrade population where the share of the female population was larger. The differences in sex structure of population of the inner city territory in relation to broader area of the city also pointed to it, while the differences were more striking on the municipal level: the highest sex imbalance to the female population was in the municipalities of the inner city core; the suburban municipalities were on the other pole with the considerably more balanced sex structure, or even with 'surplus' of men in the rural area<sup>35</sup>. Almost from the age of 15, the rates of masculinity in Belgrade were lower than those in the area of central Serbia, while the differences in age from 35 to 59 increased. In central Serbia, the rates of masculinity decreased below 900 from the age of 55, while in Belgrade, at all five - year groups after the age of 35.

The female population aged 20 was more numerous, and there were two reasons of the imbalance in the sex structure. At younger middle - aged population, the imbalance was mostly the result of the migrant selectivity according to sex (women were more numerous in migration)<sup>36</sup>, while the differences in mortality between the sexes contributed to the imbalance at older population.

Figure 32: Sex structure of population of Belgrade in 2002.



Source: Statistical yearbook of Belgrade 2007.

In the area of Belgrade, migrations influenced more significantly the formation of the population age structure than it has been usual in other areas. But, regardless the huge constant population influx, the fertility decline together with the increase of life expectancy caused the continuing developing of the demographic ageing process. During the second half of the 20th century, in the area of the City of Belgrade, the share of persons younger than 20 decreased from 32.1 % (in 1953) to 21 %, whereas the participation of old increased significantly from 8.1 % to 21.6 %. In the absolute term, the number of old aged 60 and more increased for almost six times (from 59.000 to 341.000), while the

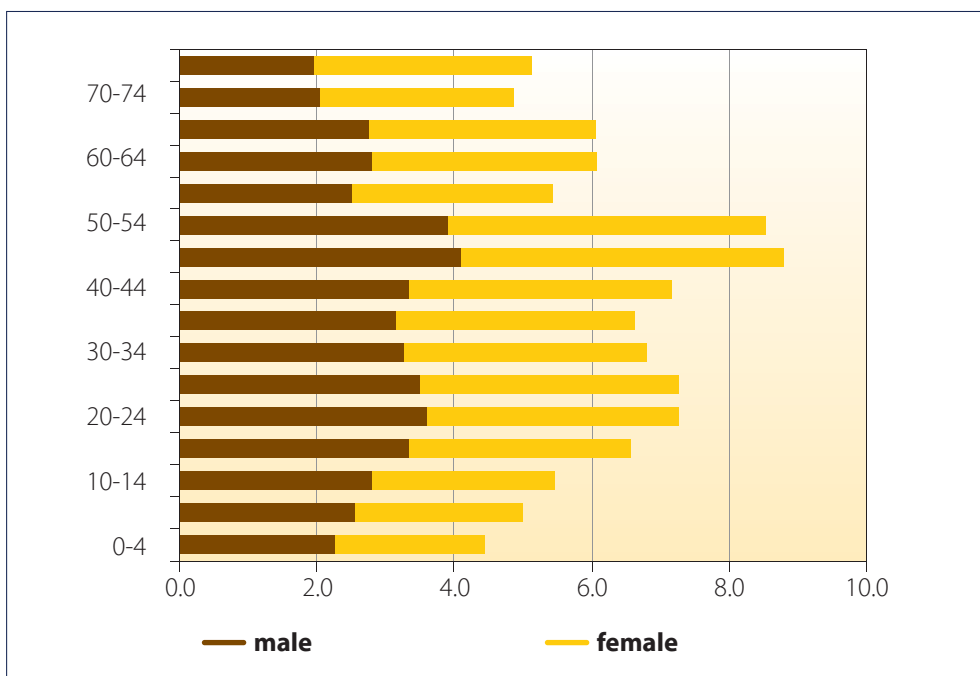
<sup>35</sup> More about it: Penev, 1999. The example of the municipality of Lazarevac is interesting, where the structure of the economic activity obviously influenced the higher rates of masculinity in the urban centre also in relation to other municipalities.

<sup>36</sup> The contrary, in the rural areas of the Belgrade region, women were more numerous in emigration, especially during the 1950s and 1960s, so that it reflected in higher rates of masculinity of middle-aged and older population in these settlements (Penev, 1999).

increase of the young population contingent was only 40 % (from 238.000 to 330.000). The great increase of the old population contingent was followed by the entry of many generations from the time of the intensive migration of the 1960s. It is interesting that up to 1981, above the reduction of the relative share, the absolute number of young was increasing, while during the last two decades their absolute term was decreasing (index of 85.7). In that way, the number of old exceeded the number of young in Belgrade.

While in the 1970s the population of the inner city area was demographically younger, because the immigration was directed towards the central parts of the City<sup>37</sup>, up to the 1990s, the situation changed completely due to peculiarities of the spatial-demographic transformations. Except that this area always had higher fertility rates, the migration towards the periphery of the city in this period also contributed the situation. According to all characteristics of age structure (average age 40.4, age index 1.03), the population of the City of Belgrade belonged to the regressive type and it was classified into the group of demographically oldest population (the stage of deep demographic age). The characteristics of its age structure did not differ much from the age structure of the population of central Serbia. Taking into consideration the increase in the number of older middle-aged persons (coinciding of many generations born in the time of baby boom after World War II and large migration balance of immigrants from the period of still intensive immigration during the 1970s) and expected further mortality decline at older population, the more rapid ageing process could be expected in the following period.

Figure 33: Age-sex structure of population in 2002.



Source: Statistical yearbook of Belgrade 2007.

<sup>37</sup> According to the 1971 census, the share of the middle-aged and younger middle-aged population (20-34 years) was notably smaller in the age structure of the population in the peripheral area of the City than it was the case in Belgrade. The migrations influenced the considerable lack of the middle-aged persons, directed mainly towards the central urban agglomeration (Penev, 1999).

And even though the process of the demographic ageing did not start at the same time and develop in the same tempo, today that has been the characteristic of all municipalities. At first, migrations were the significant factor of keeping relatively more favourable age structure of the population of some municipalities, and in dependence on the spatial redistribution of the migration to certain territories, the age structure of the population also changed. When the immigration became calmer, the negative influence of the reduced fertility was clearly expressed, so that the ageing was more intensive in all municipalities. For example, the municipality of Rakovica, characterised by very intensive demographic growth of the 1970s, high positive migration balance and higher fertility rates, had the most favourable age structure of the population (index of ageing 0.2, share of old about 6 %, young over 30 %) according to the 1971 and 1981 censuses. According to the last census, the share of old population also exceeded the share of young (21.7 % : 20 %), the index of ageing was 1.07 and the average age of the population was 41 years. Similar processes also occurred in New Belgrade, and according to the last census, those two municipalities have been in a group of the populations with deep demographic age.

Today, the municipalities of old city core, being the emigration areas since 1960s (being also followed by corresponding changes in the population reproduction-total fertility rates below 1.3 children per woman) have been certainly characterized by the most developed process of ageing. Ageing was especially intensified during the last decade, so that the shares of old population in the total population of these municipalities (from one-fourth in the municipality of Savski Venac to 27.6 % in the municipality of Vračar) exceeded significantly the share of young (it ranges from 17 % to 19 %). The average population age of 44 years speaks on the stage of the so-called 'deepest demographic age'<sup>38</sup>.

Generally, today the suburban municipalities have relatively more favourable age structure of the population. Nevertheless, in dependence on the total developmental and demographic trends, they differentiate in regard of the stage of the demographic age. The municipalities of Lazarevac and Grocka are among the 'youngest', the municipality of Sopot, as typically underdeveloped and depopulation area, is among the 'oldest'. Due to large influx of immigrants, the 'rejuvenation' of the population appeared in the municipality of Grocka at one period. According to the 1971 census data, it was included into the category of the oldest Belgrade municipalities, and then the complete change occurred. The population growth in some smaller settlements (first of all in Kaludjerica) took the scales of the real 'demographic explosion', so that in 1991 Grocka became the Belgrade municipality with the youngest age structure (Penev, 1999). Even today, this municipality has the lowest index of ageing of 0.8 and the lowest average age - 39 years.

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<sup>38</sup> According to the criteria for determining the stage of the demographic ageing of G. Penev (1995), the Belgrade municipalities are included into the following groups: Vračar and Stari Grad - the seventh stage of the deepest demographic age; the greatest number of the municipalities of the central agglomeration (Savski Venac, Zvezdara, Voždovac, Rakovica, New Belgrade) and the suburban municipalities of Mladenovac, Sopot and Barajevo - the sixth stage of deep demographic age; the municipalities of Čukarica, Palilula, Zemun and the suburban municipalities of Obrenovac, Lazarevac and Grocka - the fifth stage of demographic age.



## 8.6. Conclusion

The key problem of the present-day Serbia is the expressive disproportion in the regional and demographic development. The strengthening of the political-administrative, economic and cultural-educational functions and the role of Belgrade in the regional development of Serbia and wider encirclement obviously had a strong influence on the population growth, territorial expansion and redistribution of the former town into the metropolitan of broad field of influence. In the short period, Belgrade grew into the powerful pole of the concentration of the population and activities, and the factor of controlling the demographic flows in the wider area. Today, the counterpoise that creates the balance to Belgrade in the demographic and regional development does not exist in the geo space of Serbia.

Migrations played the key role in the rapid growing of the city. Both the dynamics of immigrations and population growth can be separated into several phases, different by the intensity, scope and included area. The differences in migrations influenced the differentiation of the Belgrade area and they have been in the close interdependence with the functional, urban-territorial and socio-economic development of the parts of the city and suburban regions (Radovanović, M. 1984). In the period of the intensive industrialization and urbanisation of Serbia, Belgrade had the role of the central pole of the population concentration, and it was the period of massive, elemental and intensive demographic changes in the inner city area. Thereafter, in a causative-effective link, large changes in the spatial-functional structure and socio-economic development of the Belgrade region reflected in the intensive spatial-demographic and structural-demographic changes. The changes of the functional profile of the city or parts of the city, the formation of larger residential zones, in direct nearness of the central agglomeration in most of the cases, the development of the secondary centres (municipal centres mainly) - all that directed the migration flows, influenced the redistribution of the population of the City, caused differences in the tempo of the development of demographic processes on different areas of the city and intensified or weakened the population growth of certain settlements. The developmental and demographic impacts of Belgrade were much wider than its administrative area, and that referred especially to strong impacts in the municipalities of Pančevo and Stara Pazova.

In the 1980s, Belgrade got into a phase of the immigration quieting and new processes in the spatial redistribution of the population within the region. New relationships were established on city-periphery relation. The transition of fertility brought to the changes in the reproduction of the Belgrade population, (rates of natural increase had low or stagnant values) that would be sublimated in the following stage through the process of depopulation in the urban city core, by insufficient natural increase, quieting of the demographic processes and demographic ageing. Nevertheless, the extraordinary circumstances from the end of the 20th century were manifested in Belgrade through the massive influx of the refugees and the so-called internally displaced persons, and they influenced the level of fertility and the overall structure of the population over the socio-economic conditionality.

Within the Belgrade region (the City of Belgrade, the area of 17 municipalities), the differences were expressed clearly in demographic development of the inner core of the

central agglomeration (old urban core), the wider area of the central agglomeration, the suburban ring and the suburban municipalities (in which, the municipal, urban and industrial centres and their suburban zone are also differentiated from other rural settlements). By the 1991, the population of all suburban municipalities increased (except Sopot), while in the last inter-census period the increasing trend remained only in the municipalities of Grocka and Barajevo. According to the projections of the population, there were also differences in the following period, when depopulation continued in the Belgrade settlement, while the wider area of the city still recorded the increase. From 1992, the City of Belgrade had negative rates of natural increase that were recorded first in the inner city area, while they were also recorded in the settlements of the wider zone after four years. The mechanical component, actually, alleviated the tempo of the population decreasing. Today, according to the main characteristics of age structure, Belgrade belongs to a group of demographically older populations. Both the number of young and older than 60 have almost been equal, and only every fifth inhabitant of Belgrade is younger than 20. In the following period, the further population ageing should be expected, which would develop from the basis, but even faster from the top of age pyramid (Rašević, Penev, 2006). The changes in the scope and share of the most important age-functional contingents would be in the reduction of children of pre-school age and school-compulsory age, as well as the female fertile contingent.