

*Review paper*

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## CHANGES IN POPULATION DYNAMICS OF RAŠKA REGION

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**Abstract:** The basic characteristics of natural increase and migration of the population are being analyzed in this research, with the aim to establish the level of demographic transition in the Raška region in the beginning of 21st century. In the period (1961 – 2002), changes of natural increase are reflecting in the decreasing of birth-rate and the increasing of rate of mortality. One of the most important aims of this research is to answer the question why those differences exist in the natural increase in the population among urban and rural settlements, as well as which are the directions of even regional development. In this research different methods are used (statistics, cartographic, analytics and synthetics), and results of it might have applicable value in the future planning of demographic and economic development of Raška region.

**Key works:** Raška region, population change, regional development

### Introduction

Raška region is a geographical-historical entity placed in the southwestern part of Serbia. Field research has proved that natural boundaries of Raška region and administrative boundaries of Raška municipality are overlapping. From the morphological standpoint, Raška region is microregion that consists of eastern parts of Starovlaško-Raška highlands and the middle parts of Ibar-Kopaonik region (Pavlović & Rodić, 1994). It is divided in two parts: valley (the basin of Ibar and Raška rivers and their confluences) and mountainous (components of mountains Kopaonik, Golija, Rogozna and Željin). Along the valley of Ibar, which has meridianic direction of extension, the north part of Raška region is connected to more developed regions of Zapadno Pomoravlje and Sumadija, and in the south with Kosovo and Metohija. To the east, along the valley of the Josanica, the right confluent of the river Ibar, Raška region is connected to Toplica and Aleksandrovac valleys, and in the southwestern part, along the river Raška it is connected to Novi Pazar region and Montenegro (Military Geographical Institute, 1970). Between the above mentioned boundaries, Raška

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region covers the area of 666 km<sup>2</sup> and is administratively divided into three urban, three suburban and 55 rural settlements.

The territory of this region is located in the central part of Raška district and includes four municipalities: Vrnjačka Banja, Kraljevo, Novi Pazar and Tutin, along with Raška municipality. Raška district covers 4.43% of the territory of the Republic of Serbia and 17% of the territory of Raška district belongs to Raška region. Speaking of its territory, Raška region is in the last but one place, and its population number is the lowest in Raška district. According to the results of Census records of population dating from 2002, it states that 26 981 inhabitants lived in Raška region with the average density of population of 40.2 inhab/km<sup>2</sup>, which is less than the average for Central Serbia (97.6 inhab/km<sup>2</sup>). This comes as an alarming fact when we take into consideration that the population is the most important factor in regional development.

### **Changes in population number**

The change in population number, domestic households and the population density of Raška region has been influenced most by natural, historical, economic and social factors, as well as its geographical position. The natural richness of its rivers, forests and meadows made this region attractive in the past (Đorđević, 1987). The majority of its population lived in rural areas and did agriculture and cattle-breeding. The fast economic and social development in the period after Second World War, led to this region being recognizable in the seventies and eighties of the twentieth century of its economic activities in the sector of mining and metal industry. The first enterprises in Raška and Baljevac were established after 1960. That had positive effect on the population concentration due to the fact that the huge number of workers from the neighboring districts found employment in the factories in Raška and Baljevac and permanently inhabited there. These enterprises were the main bearers of economic growth until the beginning of the nineties of the 20th century when the economic crises began.

From the first decade of the 21st century Raška region is characterized by continuous decrease of population rate. The main reasons for this process are connected to the negative natural population birth rate, as well as insufficiently developed economy, which led to population migration from Raška region to more developed parts of Serbia. From economic standpoint, Raška fell behind Kraljevo and Novi Pazar in its development, resulting in lower number of inhabitants while the majority of migrants left this area. That made significant

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impact as Raška remains today as a small urban settlement, apart from its transport, economic and administrative functions.

Table 1. Changes in population number in Raška region according to Censuses since 1961 to 2002

Year	Population number	Index of change
1961	29 856	106.6
1971	29 367	98.4
1981	29 475	100.4
1991	28 747	97.5
2002	26 981	93.9

Source of data: SORS<sup>2</sup>, 2004

Note: Data for 2002 are given according to new census methodology.

The differences in the population dynamics of this region are most prominent on the level of settlements as they present the most noticeable process of depopulation on one hand and the concentration of population on the other hand. The urban areas present both components of population growth-natural and migrational, while in the rural areas there is a steady decline of population rate as a consequence of decrease in natural population growth along with emigration.

Half-functionality has become the most important "pull" factor for the population, which is best notified in the examples of Raška and Baljevac. Transfer of rural to an urban population has led to concentration of economic entities and businesses and population in rural areas, while on the other hand there are more and more extinguished rural households.

The difference in population number dynamics between urban and rural settlements indicates the connection between demographic and economic development. For instance, based on the results of census for the year 1961, urban population amounted to 7.6% of the total population of Raška region, while rural was 92.4%. In the year 2002, the urban population increased to 35% and rural reduced to 65% (FSOY<sup>3</sup>, 1966; SORS, 2004).

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<sup>2</sup> SORS stands for Statistical Office of the Republic of Serbia

<sup>3</sup> FSOY stands for Federal Statistical Office of Yugoslavia

### Natural population increase

At the beginning of the 20th century, an average family in Raška had 4-5 children while families with one child or two children were a rarity, only in case one of spouses had a medical problem. The period between two world wars was marked with economic crises in the society, so the number of families with three or more children was significantly reduced. After the Second World War good economic conditions had a stimulating effect on entering a marriage as well as a positive effect on birth rate and the natural growth of population (Pavlović, 1995).

Table 2. Rates of natural increase of Raška region according to Censuses since 1961 to 2002 (‰)

Year	General birth rate	General death rate	Rate of natural increase
1961	17.3	7.5	9.8
1971	15.8	9.5	6.3
1981	13.6	8.1	5.5
1991	10.1	10.0	0.1
2002	9.0	12.8	-3.8

Source of data: SORS, 2004.

The period of industrialization, which began in Raška region after the sixties of the 20<sup>th</sup> century, reflected on the reduction of birth rate. Married couples often had two, sometimes even one child and this birth system at the beginning of 21<sup>st</sup> century led to extremely negative demographic processes in Raška region. Based on the data presented in Table 2, the period from 1961 is characterized by an expressive reduction trend of *general birth rate* (from 17.3 to 9‰). The above mentioned process of industrialization had a huge impact on the population territorial concentration of Raška region. Paralelly to fastened deagrarianization of rural areas, there was the process of urbanization i. e. rapid growth of urban centers along with emptying of their mountainous hinterlands. The changes in the level of concentration and redistribution of population indicate the process of extreme polarization of area, on the zones of concentration and zones of depopulation. Depopulation as a general phenomenon in rural areas is in correlation with biological extinction and strong emigration of population from this area (Marinković, 2007).

According to statistic data shown in Table 2, it is noticeable that the average general rate of birth during the period 1961-2002 was 13.16‰. The highest general birth rate was recorded at the beginning of the surveyed period in the year of 1961 and was 17.3‰, and the lowest rate in 2002, only 9‰. The changes in age population structures of Raška region had a huge impact on constant

decline of birth rate. The increased impact of the aged population in this period is significant (from 8% to 24.3%), while the number of younger middle-aged population was lowered from 32.7% to 15.3% (FSOY, 1966; SORS, 2004).

This declining tendency of general birth rate is characteristic of both urban and rural areas of Raška region, but the difference in level and intensity is significant. Emigrations of rural population in reproductive period of their lives conditioned depopulation and intensive process of demographical ageing, which directly led to a general low birth rate. Population survey of settlements of Rvati, Beoci, Kovači, Pavlica (Penjišević, 2010) resulted in conclusion that the biggest reasons of decrease of general birth rate of Raška region are the following:

- constant falling number of newborn children, especially intensified in number after the year 1991, consequently affecting declination of fertile contingent,
- notified emigrational processes from this area, affecting constant population declination,
- parents unemployment, housing problems and low family material incomes as major causes of the decline in birth rate in well-to do families, usually opting for one or two children. On the other hand, the poor are of the opinion that the material factors are not crucial when it comes to children and these families have larger number of household members.
- educational level of parents also affects the birth rate; the higher it is the fewer children they have when compared to the uneducated. This is explained by the fact that a small number of children in a family makes it easier for parents to provide better education and studying,
- upbringing of children today has become very responsible and demanding. When we say responsible it regards to the situation in today's society (drugs, sects, etc.) so the larger number of children is harder to control and aim to the right path

These are only some of the mentioned reasons for birth decline, which indicate that the assistance of the state and local community is needed in this area. For that reason it is necessary to take measures to ease economic conditions for creation of new families, births and rising of children, and giving birth to a third child should be in focus.

Unlike birth rate, *general mortality rate* of the population in Raška region in the period from 1961-2002 was constantly increasing, due to faster aging of population. An average general mortality rate for the surveyed period amounts to 9.58‰ (Table 2). The period after 2002 is featured by even higher mortality

rates. The latest statistical data (including data for year of 2010) provided by Raška municipality shows mortality rates in 2007 and 2008 were 14.9‰ (Table 3). Based upon the data, we can state that at the beginning of 21st century, number of the deceased in Raška region was doubled in comparison to 1961. Since nineties, the mortality rate has mostly been above 10‰ and constantly above the general birth rate for the same period. This trend has a negative impact on population increase and reproduction process, which is contrary to the regional development.

Table 3. Rates of natural increase of Raška region population in the 2000 – 2010 period (‰)

Year	General birth rate	General mortality rate	Rate of natural population growth
2000	9.2	12.9	-3.7
2001	10.3	10.0	0.3
2002	9.0	12.8	-3.8
2003	9.5	12.9	-3.4
2004	8.6	13.9	-5.3
2005	9.4	14.3	-4.8
2006	8.6	14.5	-5.9
2007	9.3	14.9	-5.5
2008	8.3	14.9	-6.6
2009	8.6	13.9	-5.3
2010	7.4	14.2	-6.8

Source of data: Raška municipality, 2010

Comparison of mortality data of the population in urban and rural areas indicate that rural settlements are featured by significantly higher general mortality rates, as a direct consequence of a process of demographic ageing and depopulation. Socio economic factors, primarily national income per capita and decline of standard of life have had impacts on increased mortality rate among the population of rural areas. Differing from rural population, urban population has lower mortality rates due to more favorable age structure of immigrated inhabitants, more efficient health care and higher standard of living. Taking into consideration the fact that at the beginning of 21<sup>st</sup> century, older population prevail in Raška region and that their financial position is aggravated due to economic crisis and small possibilities for getting employment, in the forthcoming years it is expected to have even bigger increase of general mortality rate.

Due to decline in birth rate and increase of mortality during the second half of 20th century, *the rate of natural demographic increase* has been constantly

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declining, and since 2000 there have been registered continuous negative values. The lowest rate of natural demographic increase was recorded in 2010 (-6.8‰), when in almost all settlements of the Raška region have been noticed negative values. The natural population growth is spread rather unevenly, so some settlements at Mt. Kopaonik and Mt. Golija are threatened to be biologically extinguished due to unfavorable age structure. Shares of population under 14 years and between 15 to 29 years are in continuous decline, due to intensive process of deagrarization. The share of population younger than 14 years decreased from 32.7% in 1961 to 15.3% in 2002 (FSOY, 1966, SORS, 2004). On the other hand, share of population older than 60 years increased three times (24.3% in 2002) since 1961, when this share was 8%.

One of the most important indicators of the population aging process is aging index. Population aging index grew from 0.44 (in 1961) to 1.01 (in 2002). According to this demographic indicator, population of the Raška region entered demographic senility. Population aging index for the Raška region is 1.09, in urban settlements is 0.67 and in rural settlements is 1.35 (SORS, 2004). During four decades (since 1961 to 2002) rural population of the Raška region transited from demographic youth to deepest demographic senility. Aging process is the most noticed in the mountainous rural settlements, situated on high altitude distanced from main roads and communications, even without communal infrastructure (Penjišević, 2010). For example, Pokrvenik, Badanj and Lukovo, according to 2002 Census didn't have any inhabitant younger than 19 years, so aging indexes in these settlements are extremely high- Badanj 57, Lukovo 29 and Pokrvenik 11. On the other hand, the lowest aging index have urban and suburban settlements, with dominance of young population- Suplje 0.29, Raška (town) 0.55, Varevo (0.66) and Baljevac (0.89) (SORS, 2004).

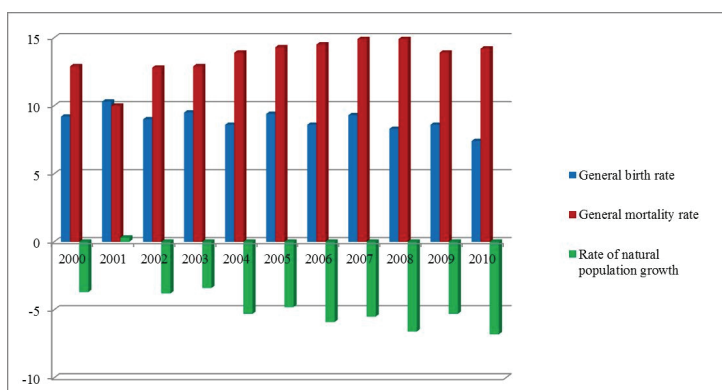


Figure 1. Natural demographic increase of Raška region in the period 2000-2010

A series of such non-favorable phenomena within the natural demographic increase at the end of the first decade of 21st century represents a serious demographic problem. It should be taken into consideration that population is the most important factor of regional development and so-far demographic tendencies can lead to demographic jeopardy of rural areas of Raška region. In that sense, it is necessary to establish a good cooperation between public and private sectors, state and local community. Besides, all the actions taken for rural development should be realized in accordance with spatial planning and goals of sustainable development and environmental protection (Spalević, 2009). In order to avoid biologic extinguishing of rural settlements in Raška region, it is necessary to give support to birth rate growth. The state and local communities should take these actions, through educative, financial, expert and cultural incentives. For that reason it is needed to provide financial help which would condition the birth rate growth, in the following ways:

- establishment of a Fund for population policy at the level of local communities, respectively regular annual allocation of funds from budgets which would be allocated as support to measures of the population policy,
- giving different forms of material help to families with three and more children (gift parcels, transport of pupils to schools, school accessories and textbooks) and giving benefits in using communal services (lower prices and exemption from municipal communal taxes),
- organizing favorable sales offers for estates, family houses and flats to families who are interested in moving to the territory of Raška region,
- Introduction of stimulation measures to young couples in rural territories for giving birth to more children, construction of traffic communal infrastructure, opening of medical out-patient clinics, etc. It is desirable to establish small family companies in villages, in order to employ rural population and keep them to live and work there,
- continual education of the young people about protection of their reproductive health, importance of family planning and promote families with several children which is vital for healthy growing up of children,
- engagement of local TVs for positive promotion of families with several children, to induce respect and make positive attitudes of surroundings towards families with a lot of members



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- 100% paid pregnancy and mother leave and also payments to pregnant women who are not employed,
- Providing enough capacities in preschool institutions (kinder gardens) and spreading a network of preschool institutions in the villages on the territory of Raška region (Strategy of sustainable development of Raška municipality, 2009).

The negative components of natural increase which have been lasting for decades in this territory are not possible to prevent by short and individual engagement of local communities. For settling of this problem, some deep economic changes in the society are needed, respectively revitalization of all the undeveloped parts of our country, Raška region inclusive.

### Migration of population

Migrations had a significant influence on reduction of Raška region population in the period 1961-2002, besides the negative birth growth. This area is featured by intensive moving out of population, and the causes of moving out are: limited possibilities for getting a job, better salaries in developed areas, better conditions for schooling and later employment of children, small incomes in economy, and economic and social insecurity of the young people in villages.

Due to non-coordinated development of primary activities on one hand and secondary and tertiary on the other hand, population is moving out from rural to urban areas of Raška region, but also to some other larger urban centers. Four main directions of such migrations are: Zapadno Pomoravlje (Kraljevo, Čačak and Vrnjačka Banja), Šumadija (Kragujevac, Belgrade, Mladenovac), Vojvodina (Novi Sad and Banatski Karlovac) and Veliko Pomoravlje (Smederevo).

Table 4. Relation of indigenous and migrant population of Raška region according to censuses since 1961 to 2002

Year	Citizen number	Live since birth in the same place	Moved-in permanently						
			From the same municipality		From the other municipality of the Republic of Serbia		From the other republic or region		
1961	29 856	20 530	68.8%	5 644	60.5%	2 617	28.1%	1 065	11.4%
2002	26 981	13 327	49.4%	8 785	64.2%	2 803	20.5%	2 066	15.3%

Source of data: FSOY, 1966, SORS, 2004

When analyzing population, number, size and structure, it is very important to establish a relation between indigenous population and migrants. These changes have recently been sources for studying inhabited territories.

According to data shown in Table 4, on territory of Raška region in year 1961 lived 29 865 inhabitants. Out of total 29 856 inhabitants in 1961, 20 530 inhabitants or 68.8% lived in the place since their birth. In 2002, this reduced by nearly 20%, which indicates to a larger spatial movement of population in comparison to 1961. In the total number of people that moved in, there is prevailing number of people who moved from one place to another within Raška region. The migrations referred to relation village-town and 60.5% took part in them in 1961, and in 2002, out of the total number of people who lived in Raška region, 64.2% were migrant. According to the Census in 2002, 3 036 or 46% inhabitants town of Raška are original inhabitants, while 3 583 or 54% are migrants (SORS, 2004).

The most important types of migrations of population in Raška region are: migrations because of marriage, population migrations from mountain-hilly areas to valleys, migrations from villages to towns, daily migrations and migrations of labor to work temporarily abroad. Migration from village to town are the most characteristic type of permanent migrations of the population from Raška region, and their main cause is post-war development of secondary and tertiary-quartic activities in urban areas. Raška, due to its semi-functional role which it has as an economic, cultural, administration, health and education center, has become the strongest immigration center. Immigration settlements are also suburban settlements called Supnje, Draganice and Varevo, mining-industrial settlement Baljevac and its suburban settlement Bela Stena, as well as a spa-tourist place called Jošanicka Banja. The above mentioned settlements attract immigrants from villages because of employment, schooling and generally because of better living conditions.

However, the intensity of migration from villages to towns started to weaken in 1990-ies, as economic crisis caused stagnation in industrial development. The companies closed down, workers got back to their rural estates. Agriculture became the only safe source of existence of Raška region population, which is proved by the data that there were 2.24% of active population in primary sector in 1981, while 12.94% in 2002 (SORS, 2004).

Unequal economic development and noticeable concentration of functions in city centers, conditioned a phenomenon of daily migrations in Raška region, which have been increasing since 1960-ies. Daily migrations in this period have

been results of changes in economic structures of labor force and transfer of population from agricultural to non-agricultural activities. In the structure of daily migrants according to economic activities, reduction of daily migrants in primary and secondary activities is noticeable, while there is increase of daily migrants employed in tertiary and quartic activities (Lukić, 2006).

Men prevail in daily migrations, unlike the definitive ones in which women prevail. However, in the structure of daily migrants classified per sex at the level of central Serbia, there is a noticeable increase of women from 7.8% in 1961 onto 34.3% in 2002 (FSOY, 1966; SORS, 2004). That is in accordance with increasing education of women and process of women's inclusion in total active population that are employed. There is a higher concentration of women in a service sector, so women are mainly employed in quartic activities, while more than a half of men daily migrants are employed in the production sector (Lukić, 2007). Analyzing Serbian municipalities by point system according to the average qualification of workers-commuters who live in these municipalities, categorization of municipalities in Serbia has been made in three groups (Lukić & Tošić, 2009). According to this classification, Raška municipality is in the second, the most numerous municipality group, with medium qualified labor force.

Migrations of labor to work temporary abroad are of low intensity on the territory of Raška region, which results from very present other forms of migrations. Unemployment and wishes for a better standard of life influence population to go abroad. In 1981, only 0.9% out of the total number of population from this territory was working abroad temporarily. That is three times less comparing to the level of the Republic of Serbia. According to the results of the population census in 2002, number of people who were working or staying abroad up to one year amounted to 52, which represents 0.2% of the total number of inhabitants of Raška region in that year. As for sex structure, men dominate with 70% participation in the total number of the people who temporary moved abroad, and as for countries in which migrants work; they stay most in Germany, Switzerland and France. As for age structure, the subject population is between 20-34 years, mainly uneducated or with finished primary school (Socio economic analysis of Raška municipality, 2008). Work abroad enabled some poor rural people from Raška region to get equal economically with other society levels. With earnings made abroad, workers-migrants build houses of modern architecture, mainly in urban and suburban areas, and they move there as well as members of their families from villages.

## Conclusion

The results showed that the determinants of the natural growth of population from 1961 to 2002 have a negative trend. The decrease in population number occurred as a result of negative natural growth and intense process of emigration from this area. The population growth rate during the second half of 20<sup>th</sup> century has been constantly declining, caused by a decline of the birth rates and rising death rates. This is one of the most important problems, which is a negative feature of the demographic situation at the beginning of the 21st century in the Raška region. In addition, the contemporary migrations of younger population to the city, led to a redistribution of natality and its transferring from the villages to the city. As a result, some mountain villages are almost deserted (Pokrvenik 11, Orahovo 34, Lukovo 38 inhabitants).

The negative trends in natural growth reflected on the population structure. The share of elderly groups is growing, which is definitely not suitable for increasing the rate of natural growth. It is, therefore, inevitable and the only effective measure to ease the process of emigration from the Raška region. We think that this can be achieved through proper direction of economic development, which should be based on agriculture, mining and tourism. The necessary conditions for the development of these activities exist, but certain measures for their improvement should be implemented. Otherwise, one cannot expect that the negative processes which affected the population of this part of Serbia will spontaneously change in unchanged economic conditions.

## References

- Đorđević, T. (1987). *Raška and surroundings (Raška i okolina)*. Raška: Center for culture of Raška municipality.
- Federal Statistical Office of Yugoslavia. (1966). Activity and work. In *Population census 1961* (book XIV). Belgrade: Federal Statistical Office of Yugoslavia.
- Federal Statistical Office of Yugoslavia. (1966). Employed active population according to work and sex. In: *Population, households and dwellings in 1981*. Belgrade: Federal Statistical Office of Yugoslavia.
- Federal Statistical Office of Yugoslavia. (1966). Migrational characteristics. In *Population census 1961* (book XII). Belgrade: Federal Statistical Office of Yugoslavia.
- Federal Statistical Office of Yugoslavia. (1966). Sex and age. In *Population census 1961* (book IX). Belgrade: Federal Statistical Office of Yugoslavia.

## Changes in population dynamics of Raška region

- Lukić, V. (2006). Commuting of active population in Serbia (Dnevne migracije aktivnog stanovništva u Srbiji). *Bulletin of Serbian Geographical Society*, 86(1), 141 – 150.
- Lukić, V. (2007). Sex differences in commuting in Serbia (Selektivnost dnevnih migranata u Srbiji prema polu). *Bulletin of Serbian Geographical Society*, 87(2), 67 – 77.
- Lukić, V., & Tošić, B. (2009). The qualification degree of workers as a factor of commuting in Serbia (Nivo kvalifikovanosti radnika kao faktor odvijanja dnevnih migracija u Srbiji). *Bulletin of Serbian Geographical Society*, 89(2), 27 – 42.
- Marinković, D. (2007). Determination of demographic development and perspective population of Republika Srpska (Determinante demografskog razvoja i perspektive stanovništva Republike Srpske). In M. Todorović (Ed.). *Proceedings of the First Congress of Serbian Geographers*, 2 (pp. 553 – 561). Belgrade: Serbian Geographical Society; Geographical Institute "Jovan Cvijić" SASA, Belgrade; Faculty of Geography, Novi Sad; Department of Geography, Tourism and Hotel Management.
- Military Geographical Institute (MGI) (1970). *Topographic map 1: 50 000, (Topografska karta 1: 50 000) Paper Novi Pazar 1. (Number of map sheet 580-1)*. Belgrade: Military Geographical Institute (MGI).
- Pavlović, M., & Rodić, D. (1994). *Geographica of Yugoslavia I (Geografija Jugoslavije I)*. Belgrade: Savremena Administracija
- Pavlović, R. (1995). *Population and settlements of the Raška municipality in the function of economic development (Stanovništvo i naselja opštine Raška u funkciji privrednog razvoja)*. Belgrade: Ethnographic Institute SASA.
- Penišević, I. (2010). *The factors and the directions of regional development of Raška region (Faktori i pravci regionalnog razvoja Raškog kraja)*. Published master's thesis, Belgrade: Faculty of Geography.
- Regional Agency for Economic Development of Sumadija and Pomoravlje (2008). *Socio – economic analysis of Raška municipality*. Regional Agency for Economic Development of Šumadija and Pomoravlje.
- Spalević, A. (2009). Possibilities of rural development in the Republic of Serbia (Mogućnost za razvoj ruralnog područja u Republici Srbiji). *Journal of the Geographical Institute "Jovan Cvijić" SASA*, 59(2), 133 – 148.
- Statistical Office of the Republic of Serbia. (2003). *Municipalities in Serbia 1961 – 2002. (Opštine u Srbiji 1961 – 2002)*. Belgrade: Statistical Office of the Republic of Serbia.
- Statistical Office of the Republic of Serbia. (2003). Sex and age. In: *Population, households and dwellings in 2002 (book II) (Pol i starost. U Popis stanovništva, domaćinstava i stanova u 2002. godini (knjiga II))*. Belgrade: Statistical Office of the Republic of Serbia.
- Statistical Office of the Republic of Serbia. (2004). Activity and sex. In: *Population, households and dwellings in 2002 (book V) (Aktivnost i pol. U Popis stanovništva, domaćinstava i stanova u 2002. godini (knjiga V))*. Belgrade: Statistical Office of the Republic of Serbia.

Statistical Office of the Republic of Serbia. (2004). Migrational characteristics. In: *Population, households and dwellings in 2002* (book VIII). Belgrade: Statistical Office of the Republic of Serbia.

Statistical Office of the Republic of Serbia. (2004). Population: comparative survey of population 1948-2002. In: *Population, households and dwellings in 2002* (book IX) (Uporedni pregled broja stanovnika 1948 – 2002. U *Popis stanovništva, domaćinstava i stanova u 2002. godini* (knjiga IX)). Belgrade: Statistical Office of the Republic of Serbia.

*Statistical data for Raška municipality 2000 – 2010 (Statistički podaci za opštinu Raška)*. Raška: Statistical Office.

*Strategy of sustainable development of Raška municipality 2009 – 2019 (Strategija održivog razvoja opštine Raška 2009 – 2019. godine)*. Raška municipality and non-governmental organization "PDM".