POPULATION AGEING
IN SELECTED EX-YUGOSLAV STATES

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ABSTRACT:

This article presents main indicators of population ageing in Republic of North Macedonia, Republic of Slovenia and Republic of Serbia. Main indicators used in this paper are proportion of old population and "older-old" population, old dependency ratio, ageing coefficient and median age. The aim is to observe and detect similarities and differences in the age structure of the region based on indicators of ageing. The results are shown that Serbia is a country with the oldest population: 13.8% old population, 3.6% "older-old" population, the old dependency ratio 25.45 people per 100 people of working age, and 42.5 median ages. The Republic of North Macedonia has a younger population compared to other countries.

Keywords: *population ageing, demographic changes, Serbia, North Macedonia, Slovenia*

INTRODUCTION

The term demographic ageing refers to an increase in the share of the elderly population in the total population (Ђурђев, Арсеновић, 2014). Population ageing frequently involves significant changes. These include shifts in roles and social positions, and the need to deal with the loss of close relationships. In response, older adults tend to select fewer and more meaningful goals and activities, optimize their existing abilities through practice and the use of new technologies, and compensate for the losses of some abilities by finding other ways to accomplish tasks (Baltes, Freund, 2005). Ageing has many indicators that could affect individuals and societies alike. "The speed of ageing matters because, generally, the difficulties of adaptation to demographic change increase with the speed of change" (Lutz, et al., 2008:37). Global ageing is a civilization triumph of medical, health, social and economic measures, but at the same time one of the greatest challenges in the 21st century (World Population Ageing: Report 2015). Older people are a socio-economic resource that will continue to grow, and the number of older people is growing faster than the number of people of any other age category, so the share in the total population is increasing (Dobriansky, et al., 2007). Andrews et al., (2006) have provided some of the priorities of aging in Europe, which should be paid more attention in the future. The priorities relating to the fair treatment of all individuals to the population older than 65 years, in terms of support and care for the elderly by the family, promoting a model of lifelong learning, adapting the labor market, harmonization of society and economy to achieve a better integration of the elderly in society. Age-

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ing cannot be seen in isolation from social inclusion, the improvement of gender, economic stability, and the problem of poverty. Ageing is a universal phenomenon that affects different areas both at the local and global level, such as labor market, pension system and social services (United Nations, 2008).

The share of people over the age of 85 is in the largest increase in recent years in many countries, due to the increase in life expectancy, so the world is facing the demographic ageing of the elderly population (Михајловић, 2013). Population aging in Central and Eastern Europe is affected by natural population decline as well as the emigration of population (Botev, 2012) from these parts of Europe to Western Europe or overseas. With historically low fertility rates, according to the estimates of the United Nations (World Population Prospects – The 2017 Revision), in Serbia and the eastern edge of the European Union, the most pronounced zone of depopulation in the global framework is being created.

The aim of this paper is to observe and detect similarities and differences in the age structure of the region based on indicators of ageing. The reason why these countries were chosen are: Macedonia (2,022,547 inhabitants, Census 2002) and Slovenia (2,052,496 inhabitants, Census 2011) have an approximate number of inhabitants, which is practical when comparing the demographic picture of these countries. Serbia was taken into consideration in order to notice the difference between the countries that were within the same borders almost three decades ago, and today are diametrically opposed.

Ageing should not be a symbol of hamper progress. States need to enact laws and strategies to increase labor productivity and volume (The World Bank, 2007). These three countries are becoming increasingly diverse, not just socially and economically, but also demographically. These include the new member state of the European Union (Slovenia) and countries in Southeast Europe (North Macedonia and Serbia).

The ageing process of the population in Macedonia is a problem that this country is facing. When it comes to the social aspects of aging, reduces the proportion of the active population, while increasing the share of dependent population, which further causes the burden on the health system and social security system (Madjevikj, et al, 2016). As Majić & Marinković (2018) conclude, the aging process of the population of Southeast Europe became intense at the end of the 20th and the beginning of the 21st century due to the emigration of the young population and the decline in fertility. Penev (2014) consider that the Serbian population belongs to the group of countries with a very old population. Since the second half of the 20th century, Slovenia has been ranked very high on the list of countries with the oldest population in Europe (Ramovš, 2003; Kerbler, 2015). Intensive growth of the older population is noticeable since 1980s, when it increased the value of average age of childbearing, the total fertility rate fell below 2.1 children per woman, and life expectancy exceeded 70 years (Kerbler, 2015). European Commission (2015) projections indicate that by 2035, Slovenia will have 26.7% of the population over the age of 65.

DATA AND METHODS

The paper analyzes the data for the period from 1971 to 2011, according to the censuses. The countries included in this research are Republic of North Macedonia (MK), Republic of Serbia (RS) and Republic of Slovenia (SI). These three countries were part of a common state (Socialist Federal Republic of Yugoslavia), until 1991 population data are enumerated by the Federal Bureau of Statistics.

Data for the population of Republic of North Macedonia are taken from the publications of the Federal Bureau of Statistics and State Statistical Office. The 1991 census coverage was not complete and, therefore, another census in the same decade was conducted in 1994. The 1994 Census was the first census conducted in the Former Yugoslav Republic of Macedonia (FYROM) after the proclamation of independence. The 2002 Census is the last census undertaken in the Former Yugoslav Republic of Macedonia (Republic of North Macedonia State Statistical Office, 2019).

Data for the population of Republic of Slovenia are taken from the publications of Statistical office of the Republic of Slovenia (Republic of Slovenia Statistical Office, 2012).

Data for the population of Republic of Serbia are taken from the publications of Statistical office of the Republic of Serbia. In the Republic of Serbia reliable data for Autonomous Province of Kosovo and Metohija are not available for Census 2002 and 2011.

Indicators of ageing that have been used in this paper are proportion of old population (population aged 65 years or over) and "oldest- old" population (population aged 80 years or over), ageing coefficient1, old dependency ratio and median age.

RESULTS

North Macedonia has the most favorable gender and age structure according to their last census in 2002. The biological structure is shown in Figure 1, on the basis of which we can see that North Macedonia has a progressive population 20 years ago, although the base of the pyramid is slowly narrowing. The situation in Serbia (Figure 2) and Slovenia (Figure 3) is disadvantageous in terms of gender and age structure, because the base of the pyramid is very narrow, and the population belongs to the regressive type.

Based on the data shown in Figure 4, at the beginning of the observed period in 1971, Slovenia was the country with the highest percentage of old population 9.83%, while the share of old population was the lowest in North Macedonia 5.76%. According to the 1991 census, all three countries have very similar values that do not exceed 9%. The reason can be found in the fact that since the 1991 census, the 80+ population category has been listed separately, and until then it was listed in the 65+ category. As already mentioned, the Republic of North Macedonia conducted the first independent census in 1994. The curve showing the share of the old population of the Republic of North Macedonia grows with each new census until 2002, when it was 10.56%, when the last census was conducted on the territory of this country.

When we look at the old population by gender, during the observed period, the largest percentage of the female population in Serbia, according to the 2002 Census, was as much as 16.19%. The percentage of the old female population is growing from census to census in all states. When it comes to the male population, Serbia is again the one with the highest percentage of 12.94% according to the 2002 Census. The lowest values of the old population, both male and female, are present in North Macedonia. According to the 2002 Census, the old female population of Serbia was ⅔ larger than the old female population of North Macedonia. In all observed countries, there is a larger share of the old female population.

"Oldest- old" population (80+) came into use in this area since the 1991 census. Data related to the "oldest- old" population of the Republic of North Macedonia are not available in census publications in the observed period, nor on the website of the Statistical Office of the Republic of North Macedonia, therefore that could not be included in this analysis. Both in Serbia and in Slovenia, a gradual increase in the ageing population is noticeable during the available observation period. The share of the "oldest- old" population of Slovenia, in 2011, was higher than in Serbia, reaching as much as 4.25%. The reason that can explain this trend is that Slovenia has been a member of the European Union since 2004, so the living standard of the population is at a higher level in this country than in Serbia, which may be one of the reasons for the large share of the "oldest- old" population. Another reason is better health care, which implies longer life expectancy. Slovenia is an economically more stable country than Serbia, for that reason, as well as from the mentioned EU membership, the population of Slovenia, especially the young and working age population, does not need to emigrate to other countries (Lung, 2019).

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[1] Calculation of the ageing coefficient was including population age 65 and over.
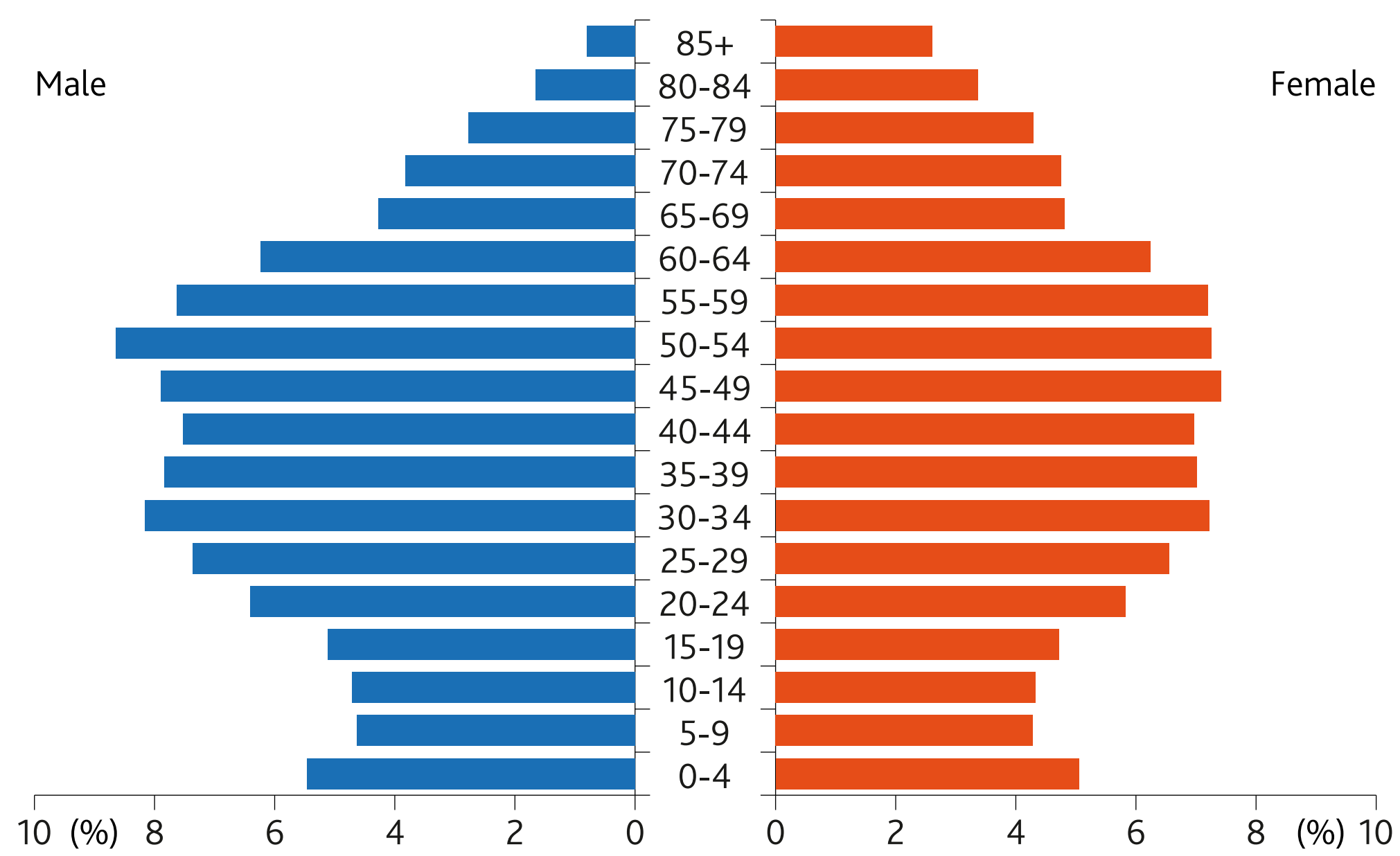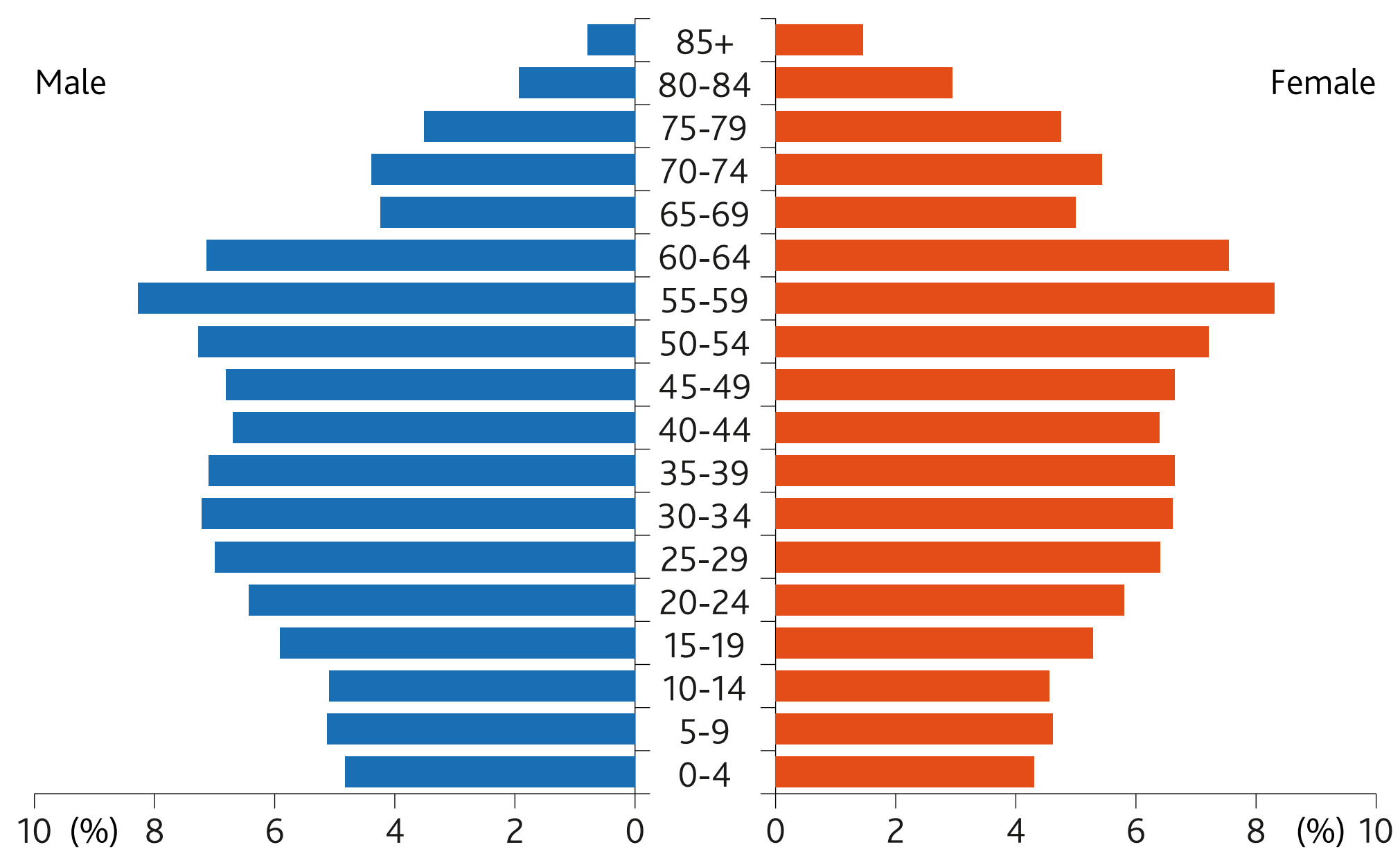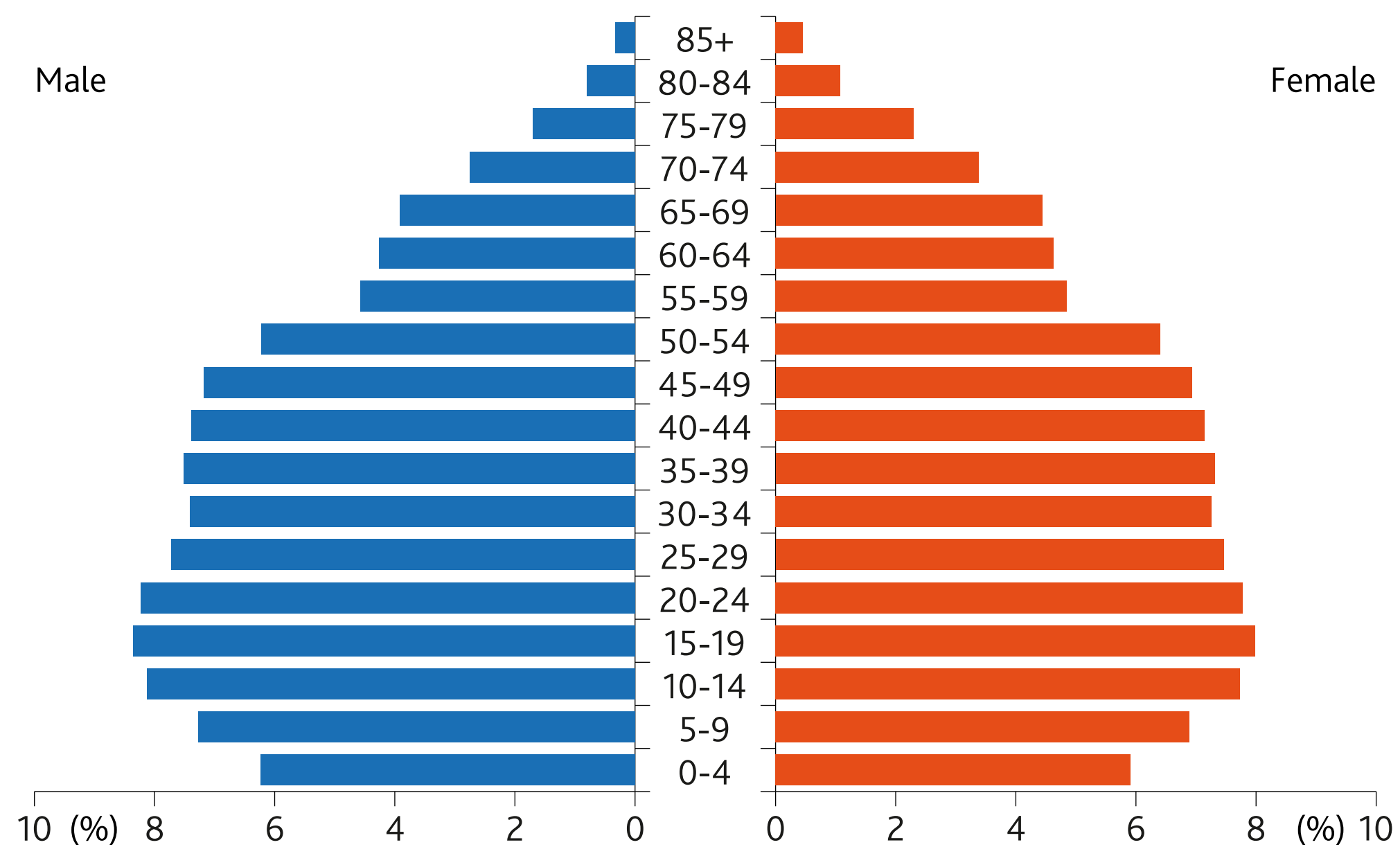
Figure 1,2,3. Population Pyramid of North Macedonia, Census 2002; Population Pyramid of Serbia, Census 2011; Population Pyramid of Slovenia, Census 2011

Source: Statistical Office of the Republic of North Macedonia, 2002; Statistical Office of the Republic of Serbia, 2012; Statistical Office of the Republic of Slovenia, 2013.
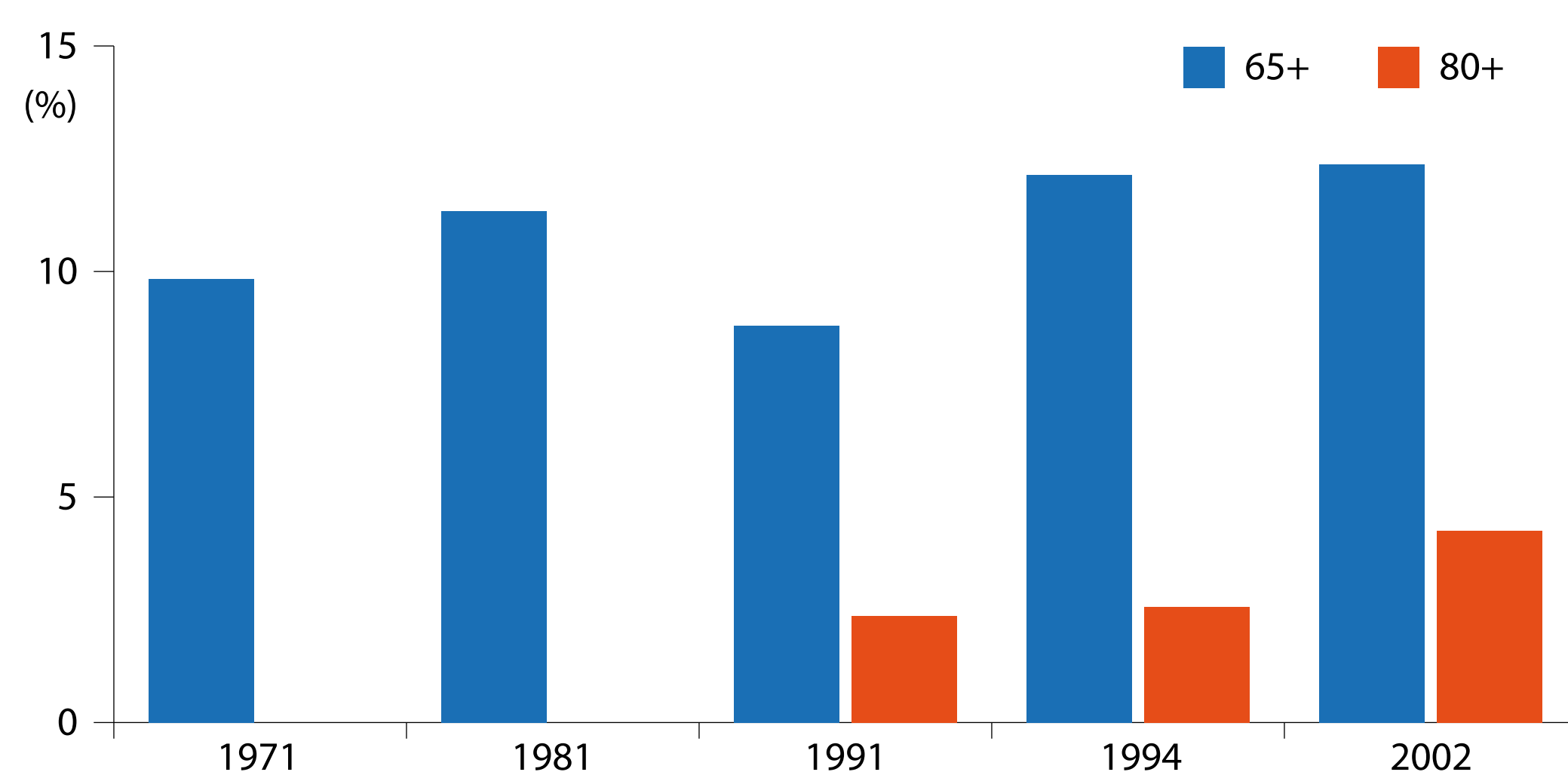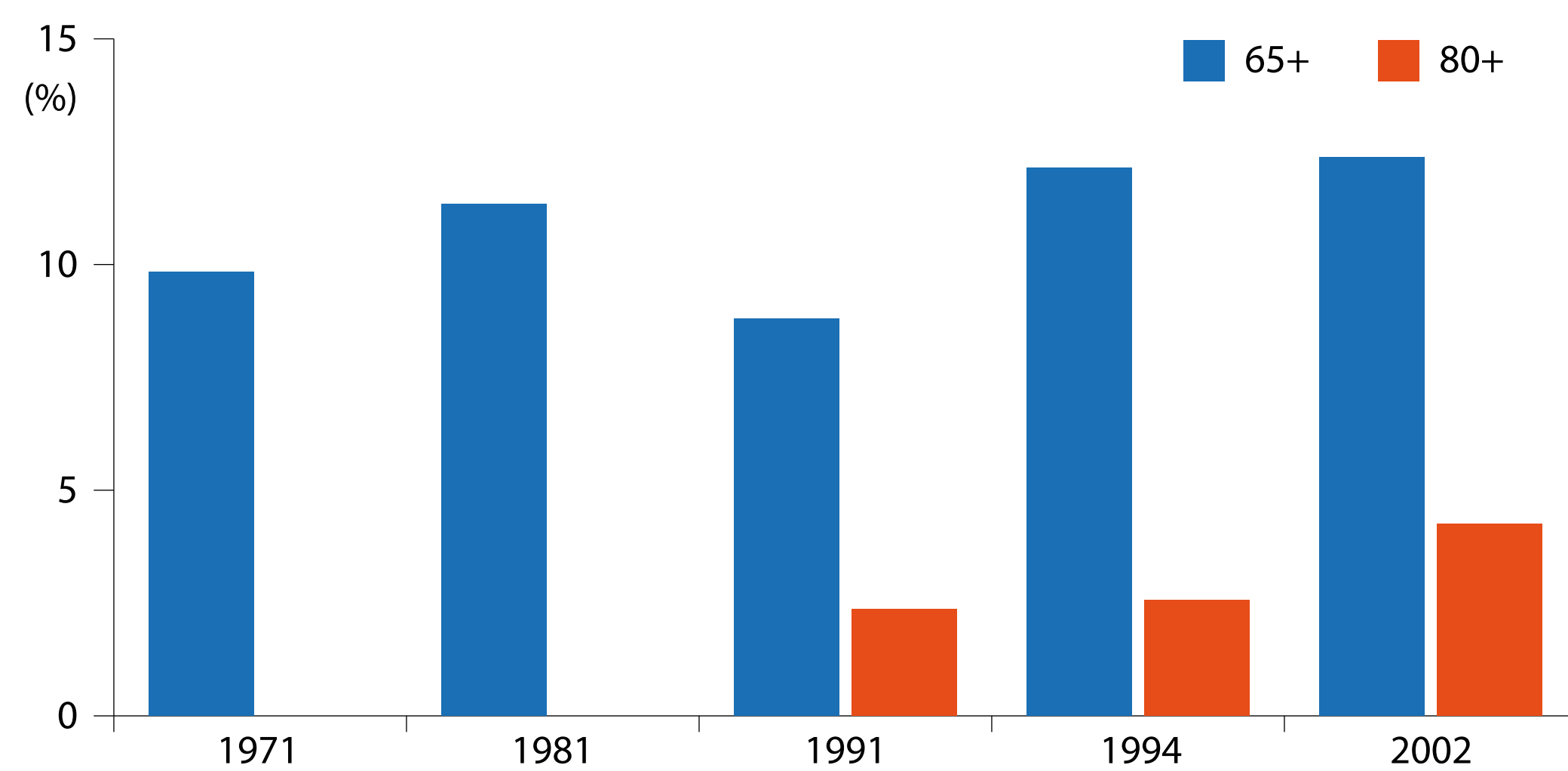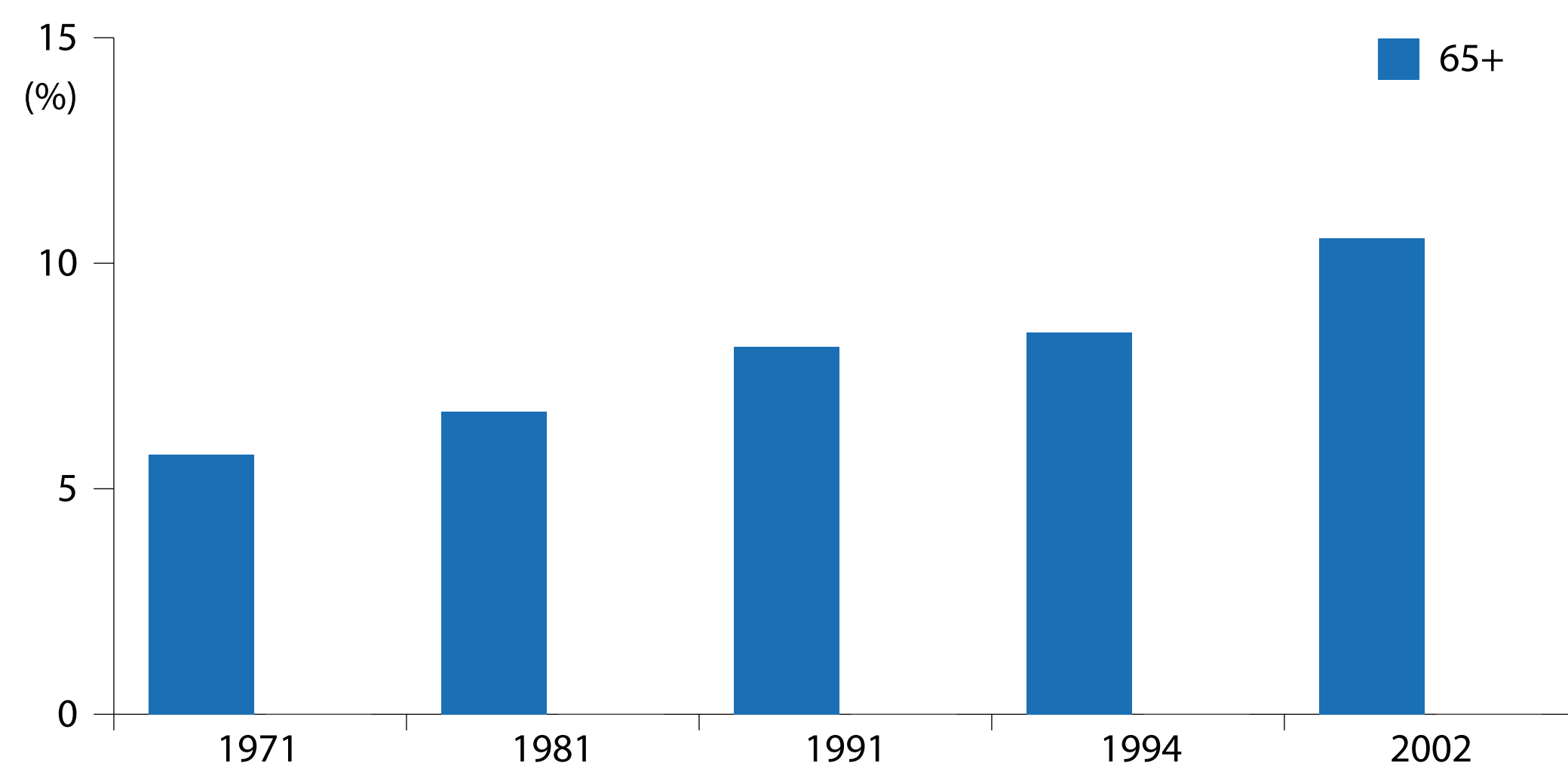
Figure 4,5,6. Proportion of old population (65+) and oldest-old population (80+) in the period 1971-2011

Source: Savezni zavod za statistiku1973. Knjiga 8; Savezni zavod za statistiku, 1982; Savezni zavod za statistiku 1987; Savezni zavod za statistiku 1991. Starost i pol; Republički zavod za statistiku, 2003. Knjiga 2; Republički zavod za statistiku, 2012. Knjiga 2; Republic of Slovenia Statistical Office, 2003; Republic of Slovenia Statistical Office, 2012; Republic of North Macedonia State Statistical Office 2019

Table 1. Ageing coefficient, old dependency ratio and median age in North Macedonia, Serbia, and Slovenia (1971-2011)

		MK			RS			SI		
		k_{65+}	k_s	M_e	k_{65+}	k_s	M_e	k_{65+}	k_s	M_e
1971	total	9.4	57.6	23.4	12.5	83.6	30.7	14.9	98.3	31.1
	male	8.4	54.1	22.9	11.2	73.8	29.6	11.9	79.5	23
	female	9.7	61.2	23	13.8	92.2	31.8	17.7	116.0	33.7
1981	total	10.5	67.2	26	14.2	93.9	31.6	17.4	113.5	31.2
	male	10.2	64.8	25.4	12.6	83.8	30.5	13.5	89.4	30.6
	female	10.9	69.6	26.5	15.7	103.9	32.6	21.1	136.1	31.9
1991	total	12.1	81.5	31.8	15.2	100.5	34.1	16.4	111.6	34.2
	male	11.0	74.1	31.2	12.8	85.6	33	11.5	80.0	32.7
	female	13.3	89.0	32.4	17.5	115.1	35.3	21.3	141.1	35.8
1994	total	12.7	84.6	30.7						
	male	11.6	77.4	30						
	female	13.8	91.4	31.5						
2002	total	15.5	105.7	33.5	24.6	165.4	41.1	21.0	147.1	39.2
	male	13.8	95.0	32.7	21.0	143.9	39.5	15.4	112.1	37.6
	female	17.2	116.4	34.3	27.9	185.8	42.7	26.8	180.6	40.9
2011	total				25.5	174.0	42.5	24.0	166.2	41.9
	male				21.6	150.6	40.8	18.6	133.3	40.3
	female				29.3	196.1	44.4	28.1	189.6	43.6

Source: Author calculation based on data from Censuses, Statistical Office of the Republic of North Macedonia, Statistical Office of the Republic of Serbia, Statistical Office of the Republic of Slovenia

Data (Table 1) showing the old dependency ratio of Slovenia and Serbia have similar values at the beginning and end of the observation period, i.e., the load increases with age. In 1971-2011, the old dependency ratio in Serbia increased from 12.49 to 25.45 people per 100 people of working age, in Slovenia increased from 14.88 to 24.04 people per 100 people of working age.

The exception is the 1991 census in Slovenia, where the value is lower by 1 compared to the previous census. North Macedonia has significantly lower values compared to the other two countries. In 1971-2002, the old dependency ratio in North Macedonia increased from 9.37 to 15.47 people per 100 people of working age. The share of ageing coefficient male population is lower in all countries than the share of ageing coefficient on female population. These results are explained by the fact that in all three countries, the female population has a longer life expectancy.

It is interesting that the data indicate that the smallest difference in the old dependency ratio between men and women was recorded in 1981, in North Macedonia. The largest difference in the ageing coefficient present between the genders was recorded in 1991 in Slovenia. The minimum values of the ageing coefficient and the elderly dependency ratio coincide in the case of North Macedonia and Serbia according to the 1971 census, while in all three countries the maximum values were recorded in the last censuses (2002 North Macedonia, 2011 Serbia and Slovenia). Which indicates that with each subsequent census, the elderly dependency ratio will increase, if something does not change. For this reason, reforms need to be made to the existing systems of these countries to sustain development in the region.

According to Table 1, in the period for 50 years, we conclude that the population in Serbia are getting older for 11.8 years, making it the country with the oldest population, after it passes to Slovenia10.8 years and 10.1 years North Macedonia. The median age of the male population is growing in all countries. The exception is North Macedonia, which has a lower median age value in 1994 than in 1991.2 The largest increase in the me-

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[2] The data are corrected based on the definitive processing of data from the Census of Population, Households, Dwellings and Agricultural Holdings in 1991.

dian age of men was recorded between the 1971 and 1981 censuses in Slovenia and amounted to 7.5 years. The male population of Slovenia has aged 17.2 years in 50 years. Median age of the female population is constantly growing in all countries. The difference between the median age of the female part of the population of Slovenia and North Macedonia, at the beginning of the observation period (1971) is as much as 10.7 years. According to the last census in 2011, the median age of the female population in Serbia (44.4 years) stands out as the highest in relation to other countries.

DISCUSSION

All countries in developed world record an increase in the old population. The number of inhabitants of the world over the age of 65 was 703 million in 2019. That number is thought to double by 2050, meaning that in 2050, 16 percent of the world's population will be older than 65. The population over the age of 80 is projected to triple by 2050, from 143 million to 426 million (United Nations, 2020).

The development of society for all generations implies respect for the phenomenon of ageing - as a guideline for the gradual but thorough harmonization of social and economic trends with demographic changes. Starting from the fact that in the current practice insufficient attention has been paid to the issues of population ageing in the Republic of Serbia and that the phenomenon of aging - as a universal phenomenon - increasingly affects all segments of life in Serbia, as well as all generations and their general well-being - priority strategic direction of action, which refers to the requirements to approach the issues of population aging in a quality, different, more comprehensive and engaged manner (Влада Републике Србије, 2006).

Differences in age between male and female populations are due to higher male mortality rates. The population of the Republic of Serbia is among the oldest populations in the world. According to the 2002 census, more than 1 200 000 people in the country, 300 000 of them in Vojvodina, are 65 or older, or relatively, a sixth of the total population is old. The ageing process of the population will continue in the immediate future, and the further ageing of the "oldest-old "population will be especially intensive. Poverty is more prevalent among the elderly, and housing conditions and consumption patterns are poorer compared to the rest of the population. Every other elderly person lives in a nursing home. At the same time, there are clear weaknesses in the institutional and instrumental satisfaction of the needs of the elderly, as well as weaknesses in the overall social organization (Влада Републике Србије, 2006).

Magdalenić & Galjak (2016) dealt with the ageing of the population in the Balkans. They conclude that North Macedonia is one of the countries that will gradually start to age, but that Slovenia is at the top of the list of old countries. All the young countries in the Balkans have a significant Muslim population. That is one of the reasons why North Macedonia has a younger population compared to other countries. In general, the area of Southeast Europe has the characteristics of old age (Majić & Marinković, 2018). The countries of Central and Eastern Europe will face several questions when it comes to seizing the opportunities of aging and addressing the challenges that arise from them (Botev, 2012). "The average Slovene will be 47.4 years old in 2025 among the oldest in the world" (The World Bank, 2007:1). Accordingly, that the birth rate is constantly decreasing, the only demographic potential in the future in these countries will be the old population. Suggestions that could contribute to greater inclusion of the elderly in various spheres of society and contribute to development in the region are as follows: moving the retirement age, greater involvement of the elderly in everyday activities, intergenerational solidarity (Соларевић, et al., 2018).

CONCLUSION

The share of the old and oldest-old population continuously increases, and the proportion of the young population decreases it is necessary to include the old population in various spheres of society. They should be accepted because they make up the total population in Southeast Europe. What led to this demographic picture are low birth rates, SUF below replacement level in all countries, negative natural increase (Serbia and Slovenia), and intensive emigration of the young and working-age population (North Macedonia and Serbia) due to poor living standards. All the above leads to fewer inhabitants, depopulation, and ageing. North Macedonia has the smallest share of the old population in the yield of the other two countries. The natural increase is positive and the old population below 10% lies in the ethnic structure of this country. Namely, according to the last census from 2002, 25% of the population in North Macedonia is Albanians. This population is known for its high reproductive norms and progressive age structure. Based on the analysis of ageing indicators, we assume that the most favorable demographic situation was in North Macedonia. According to the last census in Macedonia in 2002, these data should be taken with prudence, because the demographic picture has changed in the next 10 years, but it is assumed that the aging trend of the population in North Macedonia is still smaller than in Serbia and Slovenia.

The population of Serbia and Slovenia is on approximately the same demographic ageing scale. High values of ageing indicators indicate that it is necessary to reorganize the social, health, and pension systems in these countries. Countries in the region need to pay more attention to cooperation in the field of demographic integration. It is necessary for experts and decision-makers to think about - what can be done to improve the "poor" practice so far? Ageing is not seen as a factor of development in the region. This fact must change to develop there.

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