

ON REGIONAL ASPECTS OF VERTICAL DISTRIBUTION OF MONTENEGRIN POPULATION

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Manuscript received: December 5, 2019

Revised version: February, 3, 2020.

LJEŠEVIĆ M., DODEROVIĆ M., 2020. On regional aspects of vertical distribution of Montenegrin population. *Quaestiones Geographicae* 39(1), Bogucki Wydawnictwo Naukowe, Poznań, pp. 93–98. 1 fig, 3 tables.

ABSTRACT: The coordinates of 18°26' and 19°22' east longitude and 41°52' and 43°32' north latitude set geographic position of Montenegro. The total length of its land borders is 614 km. The border alongside Croatia is 14 km long, alongside Bosnia and Herzegovina 225 km, alongside Serbia 20 km, and alongside Albania 172 km of the state border (partly across the Scadar lake and alongside the river Bojana). There is a 100 km of air distance between the furthest points at the sea. The factual length of the Montenegrin coast is about 280 km, which makes the serrated coefficient of 2.8. Montenegro is in proportion to its territory and population the smallest of all ex-Yugoslav republics. It spreads over the area of 13,812 square kilometres which makes 5.4% of ex-Yugoslav territory. According to 2003 census, 620,145 citizens lived in 1240 settlements, which were 45 citizens on a square kilometre. Out of 21 municipalities six are in the coastal region. The largest municipality in Montenegro (as well as in both ex-Yugoslavia and in the State union of Serbia and Montenegro) is Nikšić with 2,065 square kilometres, and the smallest is Tivat with 46 square kilometres. The capital of Montenegro is Podgorica with population of 96,076.

KEY WORDS: region, population, vertical distribution, migrations, demographic politic

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Relief characteristics of Montenegro state

Montenegro is the region of vast mountain ranges and ravines, deep and narrow river valleys and quite low planes (Krestić 1956). Over 90% of its territory makes areas of 200 meters over the sea level. Out of them there are 35% of mountain and hill areas (200–1000 m over the sea level), 45% of mountain areas (1000–1500 m), whereas the highest mountains make 15% (over 1500 m) of the territory. Below 1000 m over the sea level there is 45% of the territory (in ex Yugoslavia

82.2%). 15% make territories up to 500 m and 29% areas from 500 to 1000 m. Territory over 1700 m over the sea level, the high mountains area, takes about 8,5% of Montenegro territory. The slopes of the terrain are noticeable on most of the territory, which has consequences on agriculture production and constructions and especially on traffic infrastructure (Lješević 2003). Slopes of 10°, which are considered to be the higher point for intensive agriculture, take about 18% of Montenegro territory, i.e. all the valleys and most part of limestone areas. On the other side, slopes of 30°, characterised by erosion processes, denudation and mass movements, take about

24% of the territory (high mountains and incline canyon areas). Unusual relief with sudden and frequent modifications causes sharp contacts within even short distances. Therefore territory of Montenegro has not got simple geographic characteristics but can be divided into five areas, close to each other but with their own physiognomy. They are: Coast, Old-Montenegrin karsts plateau, Zeta and Nikšić plain valley, High limestone mountains and planes, and Northeastern slates area.

Regionalisation

The huge contrasts in the space exterior are most significant and noticeable in nature and geographic features. Hence, there are three regions within 190 km air distance (between the furthest east and the furthest north). They are: the Coastal, the Middle and the Northern regions (Doderović 2004).

The Coastal region, the further eastern, and the hottest part of the Adriatic seaside, has got the typical Mediterranean features. It is separated from the rest of land by high mountain ranges. Besides beautiful natural conditions for tourism development, coastal industry and some agricultural branches, there are also some other important natural resources.

The Middle region, the lower part of the continental territory, is a distinctly plane area surrounded by dry limestone hills. Besides natural well-known resources of bauxite and some hydropower potential water currents, the complex of agriculture lands is a very important industry potential in this region. However, there is a need for expensive land-reclamation measures.

The Northern region is the noticeable high mountains part of the continental territory. Numerous river valleys intersect it, and it's actually the green area. According to its features, in

most of its parts, this region has the appearance and features of the Alps type.

This regionalisation, based on both geomorphologic characteristics and nature development conditions is in relation to already done job distribution as well as some important economic and social structure of the areas and their consistency. According to this, the Coastal region consists of the following municipalities: Herceg Novi, Tivat, Kotor, Budva, bar and Ulcinj. The Middle region consists of Nikšić, Danilovgrad, Podgorica, and Cetinje. The Northern region consists of Plav, Rozaje, Berane, Bijelo Polje, Mojkovac, Kolasin, Pljevlja, Zabljak, Savnik and Pluzine. Different dynamics of sociol-economic development during the last 20 years have caused fewer differences in development on the whole. This fact supports the existing regionalisation.

The Coastal region, which experiences very dynamic development due to traffic and service sector and dominant tourism, is the most developed region in Montenegro. The Middle region is also experiencing fast development due to industry, traffic and energetics. In the Middle region, two most developed centres, Podgorica and Nikšić, are situated. In relation to its development level, the Northern region is considered an undeveloped region Montenegro compared to the other two regions.

In 1961, Montenegro had a population of 471,898 (Statistical ... 1983). By 2003 census, there were 620,145 citizens (Census of Population 2011). After the Second World War, migrations from the higher to lower areas were evident in Montenegro. (Table 1, Fig. 1). The population living in the areas up to 200 m increased from 25.95% in 1948. to 40.6% in 1981 (absolute figure difference is 139,642 people). Also, the population living in areas between 500 and 1.000 m reduced from 13.9% in 1948 to 7.7% in 1981. These migrations, continued which was shown in 2003 census. Up to 200 m 408,300 people or 65.8%

Table 1. Population in Montenegro from 1948 to 2011 by the hypsometry zones.

| Hypsometry zones (m) | 1948 | | 1981 | | 2003 | | 2011 | |
|----------------------|---------|-------|---------|-------|---------|-------|---------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| Up to 200 | 97,737 | 25.9 | 237,379 | 40.6 | 408,300 | 65.8 | 409,600 | 67.1 |
| 200-500 | 27,346 | 7.3 | 18,436 | 3.2 | 10,202 | 1.6 | 12,521 | 2.1 |
| 500-1,000 | 199,137 | 52.8 | 282,984 | 48.4 | 178,456 | 28.8 | 175,334 | 27.9 |
| 1,000-1,500 | 52,576 | 13.9 | 45,260 | 7.7 | 23,137 | 3.7 | 22,874 | 2.9 |
| Over 1,500 | 393 | 0.1 | 251 | 0.1 | 50 | 0.008 | 0 | 0.0 |
| Total | 377,189 | 100.0 | 584,310 | 100.0 | 620,145 | 100 | 620,029 | 100.0 |

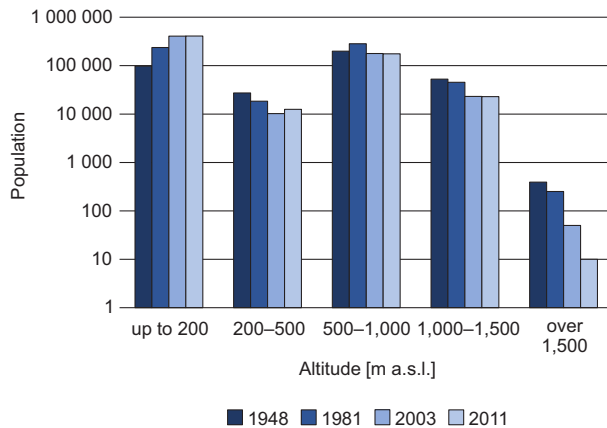


Fig. 1. Population distribution according to the altitude zones in Montenegro in the years 1948–2011 (Census... 2011).

lived, and in the area from 200 to 500 m, there were 10,202 people or 1.6%. In the areas from 500 to 1000 m there were 178,456 people or 28.8%. In the table we can notice that the higher growth was in the areas up to 200 m, which is the result of urbanisation and service sector.

If we take into consideration the permanent population, by the 2003 Census, Montenegro had

about 148,000 more citizens (compared to 1961), or if we consider those temporarily absent, there were 200,000 citizens more than in 1961 census. (Census of Population 2011). About 146,000 lived in town settlements. Of these 30,000 people lived in Podgorica, 20,166 in Nikšić and only three more towns had more than 5000 people (Pljevlja 6,005; Cetinje 9,305 and Ulcinj 5,705) and 51 villages had up to 50 people. Out of them, only three villages had less than 26 people living in them.

Nowadays, Montenegro has an increased population. It has better economy, better communications, organised institutions and urbanised settlements, whereas Podgorica has about 136,500 people, Nikšić has over 58,000 people and eight more towns have more than 10,000 people. There are also 395 villages (32.5%) with up to 50 people, 28 villages has no permanent population, 100 villages have 1–10 people, 127 have 11–25 and 140 villages with 26–50 people living in there.

Population distribution showed immense changes in this period. These changes significantly caused imbalance between the space and the space and resources on hand one, and number of

Table 2. Populace figures In Montenegro by regions and municipalities (Statistical... 2004).

| Municipalities and regions | Census years | | Absolute growth 1961–2003 | Index 2003/1961 |
|----------------------------|----------------|----------------|---------------------------|-----------------|
| | 1961 | 2003 | | |
| 1. Andrijevića | 9,812 | 5,785 | –4,027 | 0.59 |
| 2. Berane | 34,260 | 35,068 | 808 | 1.02 |
| 3. B. Polje | 46,651 | 50,284 | 3,633 | 1.08 |
| 4. Žabljak | 6,564 | 4,204 | –2,360 | 0.64 |
| 5. Kolašin | 14,882 | 9,949 | –4,933 | 0.67 |
| 6. Mojkovac | 8,832 | 10,066 | 1,234 | 1.14 |
| 7. Plav | 18,913 | 13,805 | –5,108 | 0.73 |
| 8. Plužine | 9,164 | 4,272 | –4,892 | 0.47 |
| 9. Pljevlja | 46,677 | 35,806 | –10,871 | 0.77 |
| 10. Rožaje | 14,700 | 22,693 | 7,993 | 1.54 |
| 11. Šavnik | 7,533 | 2,947 | –4,586 | 0.39 |
| Northern region | 217,988 | 194,879 | –23,109 | 0.89 |
| 1. Danilovgrad | 17,378 | 16,523 | –855 | 0.95 |
| 2. Nikšić | 57,399 | 75,282 | 17,883 | 1.31 |
| 3. Podgorica | 72,219 | 169,132 | 96,913 | 2.34 |
| 4. Cetinje | 23,503 | 18,482 | –5,021 | 0.79 |
| Middle region | 170,499 | 279,419 | 108,920 | 1.64 |
| 1. Bar | 24,587 | 40,037 | 15,450 | 1.63 |
| 2. Budva | 4,838 | 15,909 | 11,071 | 3.29 |
| 3. Kotor | 16,642 | 22,947 | 6,305 | 1.38 |
| 4. Tivat | 5,974 | 13,630 | 7,656 | 2.28 |
| 5. Ulcinj | 16,213 | 20,290 | 4,077 | 1.25 |
| 6. H. Novi | 15,157 | 33,034 | 17,877 | 2.18 |
| Coast | 83,411 | 145,847 | 62,436 | 1.75 |
| Montenegro | 471,898 | 620,145 | 148,247 | 1.31 |

citizens who live within the regions on the other hand. It is important to point out that geopolitical communication in the district changed greatly in this period. Basically it is considered that space distribution in 1961 was related to space resources while in 2003 it was more related to the level of development.

The three regions, Coastal, Middle and Northern showed immense changes, among which the Northern region was depopulated. At the same time the other two regions experienced population growth. In 2003 the Northern region had 23,109 citizens less than found in 1961 census. During this period whole growth increase plus 23,109 citizens departed. Therefore its proportion in the total Montenegro population was reduced from 46.2% in 1961 to 31.4% in 2003, which makes its participation of 14.8% in population of Montenegro. In this period the Middle showed had the growth of about 109,000 citizens. So its participation in the total population of Montenegro increased from 36.1% in 1961 to 45.1% in 2011 or for 9.0%. The Coastal region also had the growth of population which was 62,436 people. Its participation with 62,436 people increased from 17.7% in 1961 to 23.5% in 2011 or 5.8% (Table 1).

Analysing these relations it is important to mention that the Northern region is the largest with an area of 7,304 km² or 52.9% (of the area of Montenegro) the Middle region ranks second with an area of 4,917 km² (or 35.6% of the area of Montenegro), and the Coastal region has 1,591 square kilometres, (or 11.5% of Montenegro, i.e. 13,812 km²).

In 2011, the Northern region formed 52.9% of the area of Montenegro and 31.4% of its population. The Middle region formed 35.6% of the area of Montenegro and 45.1% of its population. The Coastal region formed 11.5% of the area of Montenegro, and 23.5% of this population. In 2003 the population density in the Northern region was (26.7), in the Middle region was 56.8 and in the Coastal region was 91.7 citizens on a km² (Montenegro 44.9).

The greatest changes in population distribution in Montenegro appeared within settlements. Towns and urban settlements showed the highest immigration rates. Rural settlements experienced removal of emigration populace. The most attractive places to settle down were municipality centres. They had 2.4 times more citizens, which was about 202,000 citizens in absolute figures.

Table 3. Population in municipality centres from 1961 to 2011 (Census... 2011).

| Municipality centres | Census years | | Absolute growth | Index 2011/1961 | Over the sea level |
|----------------------|--------------|---------|-----------------|-----------------|--------------------|
| | 1961 | 2011 | | | |
| 1. Andrijevića | 894 | 1,073 | 179 | 1.20 | 760 |
| 2. Bar | 2,148 | 13,709 | 11,561 | 6.38 | 10 |
| 3. Berane | 3,701 | 11,776 | 8,075 | 3.18 | 670 |
| 4. B. Polje | 3,547 | 15,883 | 12,336 | 4.48 | 580 |
| 5. Budva | 1,349 | 10,918 | 9,569 | 8.09 | 10 |
| 6. Danilovgrad | 1,467 | 5,208 | 3,741 | 3.55 | 55 |
| 7. Žabljak | 83 | 1,937 | 1,854 | 23.34 | 1450 |
| 8. Kolašin | 1,152 | 2,989 | 1,837 | 2.59 | 960 |
| 9. Kotor | 4,764 | 1,331 | -3,433 | 0.28 | 15 |
| 10. Mojkovac | 597 | 4,120 | 3,523 | 6.90 | 800 |
| 11. Nikšić | 20,166 | 58,212 | 38,046 | 2.89 | 650 |
| 12. Plav | 1,850 | 3,615 | 1,765 | 1.95 | 900 |
| 13. Plužine | 260 | 1,494 | 1,234 | 5.75 | 670 |
| 14. Pljevlja | 6,005 | 21,377 | 15,372 | 3.56 | 770 |
| 15. Podgorica | 30,657 | 136,473 | 105,816 | 4.45 | 50 |
| 16. Rožaje | 1,464 | 9,121 | 7,657 | 6.23 | 965 |
| 17. Tivat | 3,368 | 9,467 | 6,099 | 2.81 | 15 |
| 18. Ulcinj | 5,705 | 10,828 | 5,123 | 1.90 | 10 |
| 19. H. Novi | 3,797 | 12,739 | 8,942 | 3.36 | 15 |
| 20. Cetinje | 9,359 | 15,137 | 5,778 | 1.62 | 650 |
| 21. Šavnik | 335 | 570 | 235 | 1.70 | 700 |
| Total | 146,164 | 347,977 | 201,813 | 2.38 | |

Podgorica showed the highest rate of population growth, which was 106,000, almost a new town. Nikšić had 38,046, Pljevlja 15,372, Bijelo Polje 12,336, Bar 11,561, Budva 9,569, Herceg Novi 8,342, Berane 8,075, Rozaje 7,657, and Tivat had 6,099 more citizens. In 2011 136,473 people or 22.0% of the total population lived in Podgorica, which is 39.2% of all municipality centres. Also, 3,982 more citizens lived in Podgorica than in Nikšić, Bar, Berane, Bijelo Polje, Budva and Pljevlja together.

In relative figures Zabljak had growth of 23.3 times, Budva 8 times, Mojkovac 6.9 times, Bar 3.4 times, Rozaje 5.7 times, Bijelo Polje 4.5 times, Podgorica 4.4 times and so on.

On the contrary, rural settlements experienced total demographic erosion. It is interesting to find that it was most obvious in the Middle than in the Coastal region and least obvious in the Northern region. In 1961 in Montenegro, there was only one settlement without permanent population (St. Stefan). In 2003, this number increased to 28 settlements. In 1961, there were no settlements with 1–10 people but in 2003, there were 100 of the kind; 127 settlements had from 11 to 25 people (in 1961); 140 settlements had 26–50 people (in 1961, 48); and 395 settlements or every third rural settlement had up to 50 people (in 1961, 51).

However, in 1961, in the Middle region there were only 22 villages with up to 50 people; in 2003 there were 197 or 46.9% of its villages (in 1961, there were no villages with up to 10 people. In 2003 there were 197 villages without or 46.9% of its villages permanent population, 53 villages with 1–10 people, 64 villages with 11–25 people; and 70 villages with 26–50 people), and these villages on higher altitudes.

In 1961, in the Coastal region there were 19 villages with up to 50 people; (up to 25 only 2); while in 2003, there were 95 villages (41.3%). They are mostly villages further from the seaside at over 600 m over the sea level (Krivosije, Gornji Grbalj, Pobori, Maine, Pastrovici, Spic, Crmnica). The villages in the Northern region showed the least of demographic erosion. According to the 1961-census there were 10 villages with up to 10 people; in 2003, there were 103 villages (18.2%), with no permanent population there were 4 villages with no permanent population, 1–10 people in 8 villages, 11–25 people in 45 villages, and 26–50 people lived in 46 villages (Census of

Population 2011). The highest erosion was noticeable in the villages at higher altitudes.

Factors of population distribution in Montenegro

There are two development phases in the second part of the 20th century in Montenegro (Bakić et al. 1991).

1. The first three decades of intensive industrialisation, service sector, tourism valorisation of space, urbanisation, and
2. The last two decades of recovery period after the terrible 1979 earthquake, recession of economic development during the 80s and Yugoslav disintegration followed by civil war and UN sanctions during the 90s.

During the first development phase big changes happened in population distribution especially in village-town relations and from the north towards the Coastal and Central regions. The second phase was characterised by pacification of migrating flows and stronger influence of the urban on rural parts of Montenegro. Industrialisation was the main generic factor, and migrations started in the mid 50s: tourism valorisation, started, especially in the Coastal region 60s, and the service sector developed in 70s in the 20th century (Lješević 2005).

Other factors that had important influence on changes in population distribution during this period were:

- quantity of investigations in different regions, towns and urban settlements,
- rank, quality, and system of infrastructure development in regions,
- lack of urban conditions in rural settlements;
- huge regional differences in higher rank services,
- education and employment for young people outside their home places, additional qualification, for middle-aged people and their employment in municipality centres.

During the changes in population distribution (migration from the higher to the lower areas) in Montenegro a number of both positive and especially negative consequences emerged. The positive consequences are the following:

- liberation of the extras of employed in agriculture, and big reduction of latent activity in agricultural production,

- changes in economic activities that is growth of active and employed population in secondary and service sectors,
- demographic and population growth in the centres,
- quality improvement of the educational structure of the population and employed, people which led to decrease in percentage of illiterate people and at the same time increase in percentage of people with higher education,
- separation of bid households and disappearance of family farms.

There are more negative consequences in Montenegro and they gained characteristics of deep processes and tendencies also expected in the future. Some of them are the following:

1. emptying of mezzo and micro areas in back of the Coastal region, karst planes in the Middle and hilly and mountainous areas, and plains in the Northern region, which are of big importance in changed geopolitical relations in Montenegrin surrounding,
2. due to intensive turning of agricultural areas into settlements, and the traffic infrastructure, each year a number of hectares of rich land are lost. Nobody realises their obligation to replace these by cultivating some other unproductive areas,
3. all over Montenegro abandoned gardens and fruit-gardens and large unmowed meadows could be found,
4. agglomerate process in Coastal region along the coast especially from Igalo to Kamenari and the most attractive part in Budva Riviera (from Budva to Becici); also, metropolisation of the capital Podgorica where 22,00% of the Montenegrin population lived in 2003,
5. semi-urbanisation results in towns with poor life conditions, without water supply or sewerage system and so on,
6. illegal construction of various structures that damaged the landscape and ambient conditions in Montenegro.

Conclusion

During the second part of the 20th century, important changes in demographic development

and distribution took place in Montenegro. At the beginning of this period it was more in harmony with natural factors. By the end of this period it was in harmony with reached development level in industrial, communication, and tourism development, and also in urban life conditions (Pejović et al. 1998). Towns and urban settlements have enlarged 2.4 times or by about 202,000 people. Rural settlements, on the contrary, experienced demographic erosion. Thus in 2003 there were 28 settlements without permanent population (in 1961 only one); 100 settlements had up to 100 people, (in 1961, nil). 127 settlements had from 11 to 25 people (in 1961, 2), 140 settlements had 26–50 people (in 1961, 48), and 395 settlements or every third rural settlement had up to 50 people (in 1961, 51). Causes of these changes can be attributed to unequal regional development. The most important negative consequences are evident in damaging of demographic basis in Montenegro and dehumanisation of land caused by the redistribution of population. These processes and tendencies are still present. It is necessary to define the aims and long-term strategy in demographic population politics and apart from all, its sub-variant in redistribute politics.

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