

DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION IN THE POLOG REGION

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Abstract

This study aims to analyze the demographic components, with focus on the changes that occur in the number of the population, the density by which is the region populated, the natural flow (movement) of the population, emphasis on the natural growth of the population, as well as the mechanical movement of the population (internal and external).

As elsewhere in the world, the population in the Polog Region as well plays a main role and it is the main factor for the growth and development of the country. However, the population is subject to change and growth depending on various factors such as natural, economical and social factors. The demographic development is expressed through the indicators of the components of the natural and migratory movements: fertility, mortality, internal and external migration, etc.

The number of the population is one of the key factors that is influencing the socio-economic development. As the population is both productive on one side and consumer of material goods on the other, production and consumption depends on the number of the population. Compared to the historical development of human society, in the Polog Region, the role of the population in the production process has changed. These changes are most noticeable in the last decades when the technical-scientific progress has taken a big step, thus significantly affecting the population-production ratios.

Keywords: *population, density, population growth rate, migration.*

1. Introduction

Population as a social category represents a complex population system that remains in close and uninterrupted relation to the basic demographic components of the population, such as; the natural movement of the population (as a result of fertility and mortality of the population) and the mechanical movement of the population (migrations).

In this paper, we will discuss some demographic characteristics of the Polog Region, with particular emphasis on demographic components such as the general population movement, population density, natural population movement and mechanical movement of the population in this region, analyzing these components at the municipal level, as well as the ratio of urban and rural population.

The Polog Region is located in the northwestern part of the Republic of North Macedonia. The region has a total area of about 2417 km², of which approximately 1,573 km² belongs to Polog hills, while the altitude reaches from 385 m (Raotinc) to 2764 m (Korab peak in North West). The region is composed of 9 municipalities, mainly inhabited by the Albanian population, except the two municipalities which are more populated by Macedonian populations. There are 321 199 inhabitants in this region.

2. Number of population

Polog is distinguished from other regions in North Macedonia, by demographic and social characteristics as well as the numerical dynamics of the population.

The first official censuses of the North Macedonian population were made in 1921 and 1931 [2]. But the data on the population are incomplete and tendentious [5]. Post-WWII record data show that during the period 1948-2017, the region's population has increased, but the growth rates are different, depending on the natural growth rates and migration rates of the population. Macedonia's population almost doubled over the period 1948-2017, going from 1.15 million to over 2.07 million, while Polog from 144,000 to 321.199 inhabitants in 2017.

Table 1. Dynamics of the number of the population for the period 1948-2017

| | Year | | | | | | | |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 1948 | 1953 | 1961 | 1971 | 1981 | 1994 | 2002 | 2017 |
| North Macedonia | 1152986 | 1304514 | 1406003 | 1647308 | 1909136 | 1945932 | 2022547 | 2074502 |
| Polog | 144.031 | 160.260 | 170.068 | 209.436 | 259.711 | 278.031 | 304.125 | 321.199 |
| Structure % | | | | | | | | |
| North Macedonia | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Polog | 12.5 | 12.3 | 12.0 | 12.7 | 13.6 | 14.3 | 15.00 | 15.4 |
| Index | | | | | | | | |
| | 1953/48 | 1961/53 | 1971/61 | 1981/71 | 1994/81 | 2002/94 | 2017/02 | 2017/48 |
| North Macedonia | 113.1 | 107.7 | 117.2 | 115.9 | 101.9 | 103.9 | 102.6 | 179.9 |
| Polog | 111.2 | 106.1 | 122.9 | 124.0 | 107.0 | 109.3 | 105.6 | 223.0 |

Source: SSO - 1948-2015

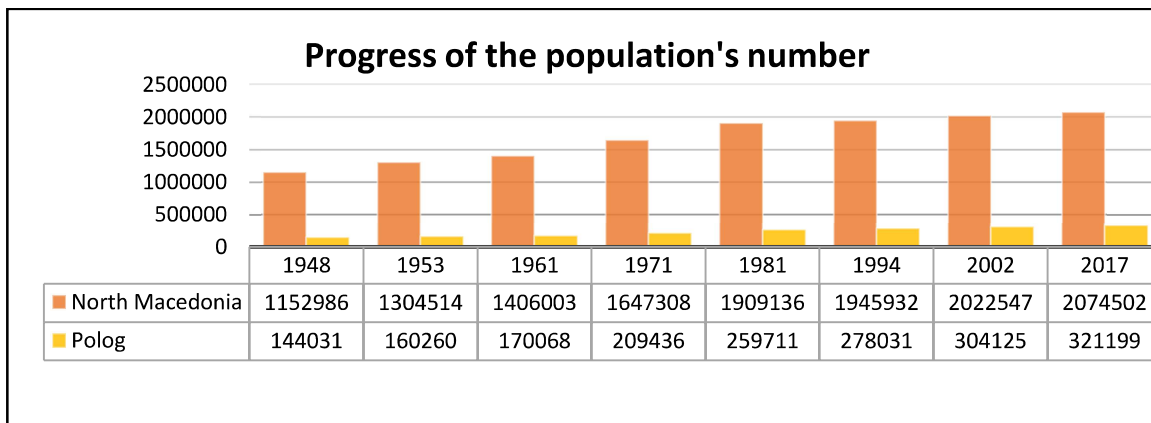


Figure 1. The progress of the number of the population in R. of North Macedonia and the region of Polog

Along with the emigration, education, emancipation of Albanian women and family planning, the numerical growth of the population has affected the slowdown of natural growth rates [3].

Table 2. Change in the number of population in Polog by municipalities

| No. | Municipality | 1948 | 1953 | 1961 | 1971 | 1981 | 1994 | 2002 | 2017 |
|-----|--------------|--------|---------|---------|---------|---------|---------|---------|---------|
| 1. | Tetovo | 30 454 | 34 797 | 41 361 | 56 342 | 72 050 | 79 401 | 86 580 | 91 988 |
| 2. | Tearce | 13 233 | 14 173 | 15 121 | 17 732 | 20 974 | 20 797 | 22 454 | 22 940 |
| 3. | Bervenica | 8 720 | 9 398 | 10 327 | 11 685 | 13 834 | 14 793 | 15 855 | 16 600 |
| 4. | Bogovinje | 12 766 | 14 329 | 15 336 | 18 950 | 23 647 | 25 137 | 28 997 | 30 964 |
| 5. | Zhelino | 8 568 | 9 528 | 10 997 | 14 042 | 18 258 | 21 760 | 24 390 | 28 114 |
| 6. | Jegunovce | 10 001 | 10 752 | 11 701 | 12 460 | 13 650 | 10 283 | 10 790 | 10 412 |
| 7. | Gostivar | 31 337 | 35 084 | 35 156 | 46 793 | 62 435 | 70 737 | 81 042 | 83 738 |
| 8. | Vrapçishte | 13 118 | 14 811 | 15 649 | 18 831 | 22 641 | 23 408 | 25 399 | 27 550 |
| 9. | Mav-Rost. | 15 834 | 17 388 | 14 420 | 12 601 | 12 222 | 11 715 | 8 618 | 8 893 |
| | Polog | 144031 | 160 260 | 170 068 | 209 436 | 259 711 | 278 031 | 304 125 | 321 199 |

Source: SSO - 1948-2017.

According to official data, Polog's population during the period 1948-2017 has grown at peak rates. This is explained by the much higher rates of natural increase during the period 1961-1994 and with some improvement of the socio-economic situation in Yugoslavia at that time. Post-WWII record data show that the number of population in each Polog municipality has changed. As a result, out of the nine municipalities, there is a decline in the number of the population only in the Mavrovo-Rostuša, where the Slavic population prevails, which is due to the decline in fertility and migration to urban centers such as Gostivar, Skopje and other urban centers.

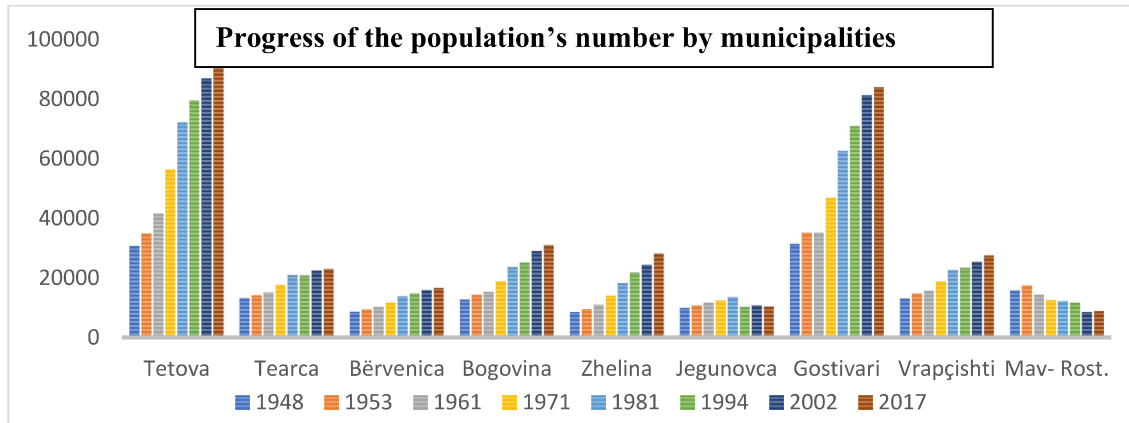


Figure 2. The progress of the number of the population by municipalities

3. The geographical spread and density of population

The population in the Polog Region is not uniformly distributed throughout the region but is distinguished by the higher density of the population in the flat part of the Polog Mountains (Lower Polog), while for the smaller density, the mountainous area.

More than 80% of the population of the region is concentrated in Polog's hinterland. Population density in this region tends to increase, as the natural increase and migration to it will continue in the future. In this contrasting region, there is a mountainous part, very little populated and losing population.

In 2017, the density of the population in North Macedonia was about 80.6 inhabitants / km², while in the Polog region 132.8 inhabitants / km² or 51.5 inhabitants / km² greater. Compared to 1948, the population density in Polog has risen about 2.2 times, while at the state level about 1.8 times.

Table 3. The density of population in NM and the Polog region in 1948-2017

| | Registration year | | | | | | | |
|-----------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 1948 | 1953 | 1961 | 1971 | 1981 | 1994 | 2002 | 2017 |
| North Macedonia | 1 152 986 | 1 304 514 | 1 406 003 | 1 647 308 | 1 909 136 | 1 945 932 | 2 022 547 | 2 074 502 |
| Polog | 144 031 | 160 260 | 170 068 | 209 436 | 259 711 | 278 031 | 304 125 | 321 199 |
| | inhabitants/km ² | | | | | | | |
| North Macedonia | 44 | 50 | 54 | 64 | 74 | 76 | 79 | 80.6 |
| Polog | 59 | 66 | 70 | 87 | 107 | 115 | 126 | 132,8 |

Source: SSO, 1948-2015.

The largest density of the population is the Tetovo municipality with 351 inhabitants / km² as the largest urban, economic, cultural and administrative center of the region. While the lowest density is in the municipality of Mavrovo-Rostusha with 13 inhabitants / km² and Jegunovca 58

inhabitants / km² (2017). These municipalities are in natural conditions suitable for tourism, livestock, and forestry, but mostly populated with Macedonian populations.

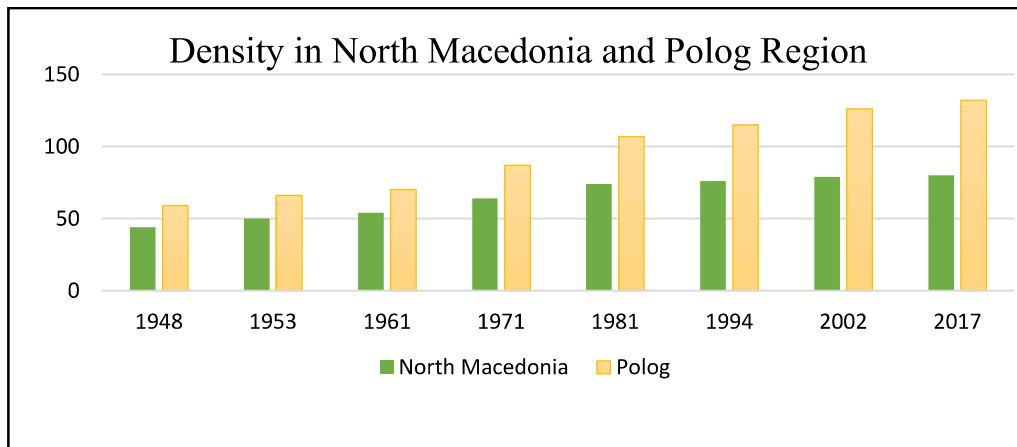


Figure 3. Density of the population in NM and Polog Region (inhabitants /km²)

Table 4. Density of population in the municipalities of Polog 1953-2017

| No. | Municipality | Surface area | Density (inhabitants /km ²) | | | | | | |
|-----|--------------|----------------|---|-----------|-----------|------------|------------|------------|------------|
| | | | 1953 | 1961 | 1971 | 1981 | 1994 | 2002 | 2017 |
| 1. | Tetovo | 261.89 | 133 | 158 | 215 | 275 | 303 | 331 | 351 |
| 2. | Tearce | 136.54 | 104 | 110 | 130 | 154 | 152 | 164 | 168 |
| 3. | Bervenica | 164.30 | 57 | 63 | 71 | 84 | 90 | 97 | 101 |
| 4. | Bogovinje | 141.65 | 101 | 108 | 138 | 167 | 177 | 205 | 218 |
| 5. | Zhelino | 201.04 | 47 | 55 | 70 | 91 | 108 | 121 | 139 |
| 6. | Jegunovce | 176.93 | 61 | 66 | 70 | 77 | 58 | 61 | 58 |
| 7. | Gostivar | 513.39 | 68 | 69 | 91 | 121 | 138 | 158 | 163 |
| 8. | Vrapçisht | 157.98 | 94 | 99 | 119 | 143 | 148 | 161 | 174 |
| 9. | Mav.-Rost. | 663.19 | 26 | 22 | 19 | 18 | 18 | 13 | 13 |
| | Polog | 2416.94 | 66 | 70 | 87 | 107 | 115 | 126 | 132 |

Source: SSO, 1948-2015

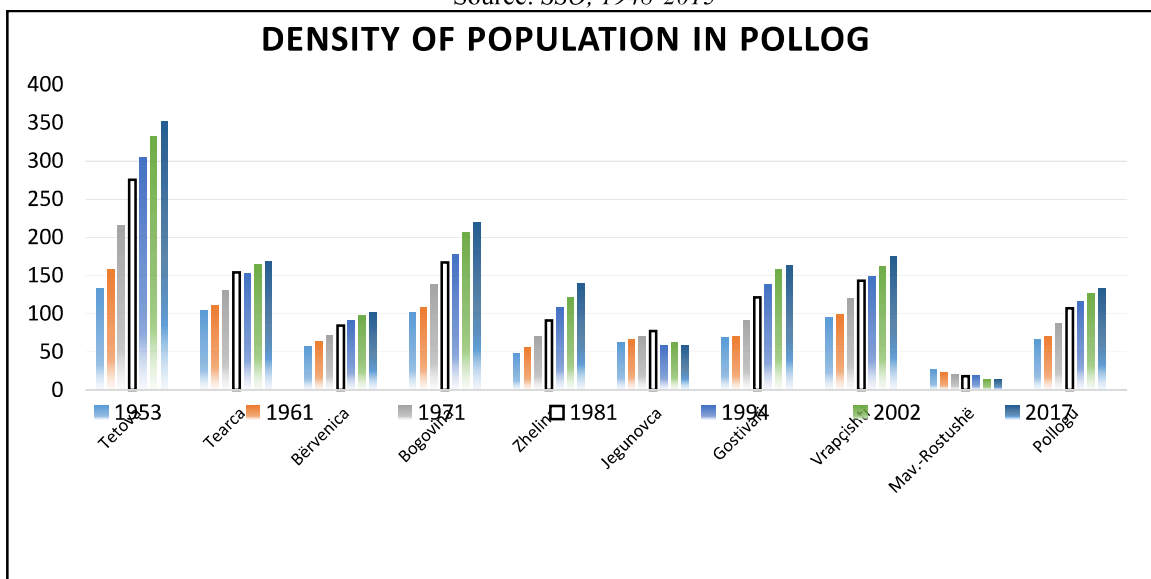


Figure 4. Density of population in Polog (1953-2017)

We have a greater concentration of population in the flat municipalities, where the density is over 160 inhabitants / km². This includes the two municipalities of Upper Polog: Gostivar with 163 and Vrapçishti with 174 inhabitants / km², as well as the municipalities of Lower Polog: Tetovo with 351 and Bogovinje 218 inhabitants / km². These data point to the differences between regions and municipalities in the region.

4. Natural movement of the population

In the spatial aspect, the natural increase of the population of North Macedonia is presented with marked changes, which are a consequence of factors: ethnic, socio-economic, political, etc [4]. The highest indicators of the natural increase of the population in North Macedonia have the municipalities of the Albanian area such as Tetovo with 5,6 ‰ and Zhelino with 5,2 ‰, while Polog is presented with a natural increase of 2,77 ‰.

Table 5. Natural growth of the population in Polog (2017)

| <i>Nr.</i> | <i>Municipality</i> | <i>Nativity</i> | <i>‰</i> | <i>Mortality</i> | <i>‰</i> | <i>Natural growth of population</i> | <i>‰</i> |
|------------|---------------------|-----------------|----------|------------------|----------|-------------------------------------|----------|
| 1. | Tetovo | 1 233 | 13,4 | 715 | 7,8 | 518 | 5,6 |
| 2. | Tearce | 229 | 10,0 | 159 | 6,9 | 70 | 3,1 |
| 3. | Bervenica | 163 | 9,8 | 129 | 7,8 | 34 | 2,0 |
| 4. | Bogovinje | 288 | 9,3 | 189 | 6,1 | 99 | 3,2 |
| 5. | Zhelino | 316 | 11,2 | 171 | 6,1 | 145 | 5,2 |
| 6. | Jegunovce | 94 | 9,0 | 116 | 11,1 | -22 | -2,1 |
| 7. | Gostivar | 699 | 8,3 | 688 | 8,2 | 11 | 0,1 |
| 8. | Vrapçisht | 217 | 7,9 | 177 | 6,4 | 40 | 1,5 |
| 9. | Mav&Rost. | 56 | 6,3 | 61 | 6,9 | -5 | -0,6 |
| 10. | Polog | 3 295 | 10,25 | 2 405 | 7,48 | 890 | 2,77 |

Source: SSO, 2017

Table 6. Natural growth of the population according to the municipalities in Polog, 2017

| Year | No. of municipalities | Natural growth of the population | | |
|-------------|------------------------------|---|---------------|------------|
| | | High | Medium | Low |
| 2017 | 9 | 2 | 5 | 2 |

Source: SSO, 2017

According to the data of 2017, the situation in Polog municipality is as follows: out of a total of 9 municipalities, only two of them have a high natural increase: Municipality of Tetovo with 5,6 ‰ and Zhelino municipality with 5,2 ‰, The average increase in 5 municipalities is: Bogovinje Municipality with 3,2 ‰, Municipality of Tearce with 3,1 ‰, Municipality of Bervenica with 2,0 ‰, Municipality of Vrapçisht with 1,5 ‰ and Municipality of Gostivar with 0,1 ‰, while with a low natural increase of population below zero there are two municipalities, Mavrovo and Rostusha with -0,6 ‰ and Jegunovce municipality with -2,1 ‰, mostly inhabited by Macedonian population.

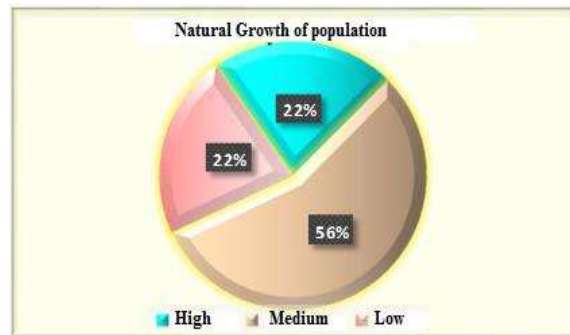


Figure 5. The natural movement of the population by municipalities in Polog, 2017

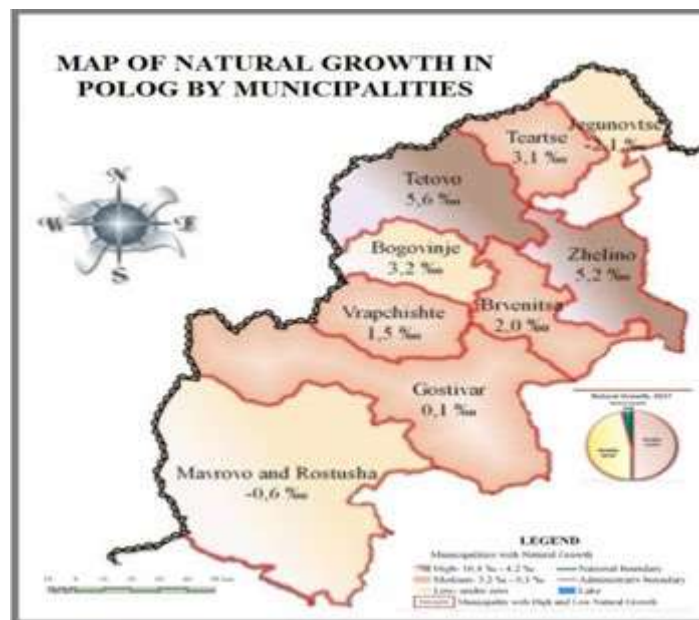


Figure 6. Map of natural growth in Polog by municipalities (Rushiti, 2017)

5. Mechanical movement of population

From the data presented for population migrations by nationality at municipality level for 2017, we see that we have migration from all ethnicities, but in urban municipalities Tetovo and Gostivar we have more migration from the North Macedonian population.

Table 7. Migrated from Polog by municipality and national composition (2017)

| No. | Municipality | Total | Albanians | Macedonians | Turks | Roma | Other |
|-----|--------------|-------|-----------|-------------|-------|------|-------|
| | Polog | 810 | 455 | 299 | 58 | 21 | 23 |
| 1. | Tetovo | 214 | 89 | 108 | 7 | 5 | 5 |
| 2. | Tearce | 44 | 33 | 8 | / | 3 | / |
| 3. | Brvenica | 46 | 26 | 20 | / | / | / |
| 4. | Bogovinje | 86 | 73 | 5 | 4 | 2 | 2 |
| 5. | Zhelino | 51 | 49 | 1 | / | / | 1 |
| 6. | Jegunovce | 33 | 11 | 21 | / | 1 | / |
| 7. | Gostivar | 189 | 77 | 88 | 8 | 10 | 6 |
| 8. | Vrapçishte | 107 | 81 | 13 | 12 | / | 1 |
| 9. | Mav-Rost. | 40 | 22 | 9 | 1 | / | 8 |

Source: SSO, 2017

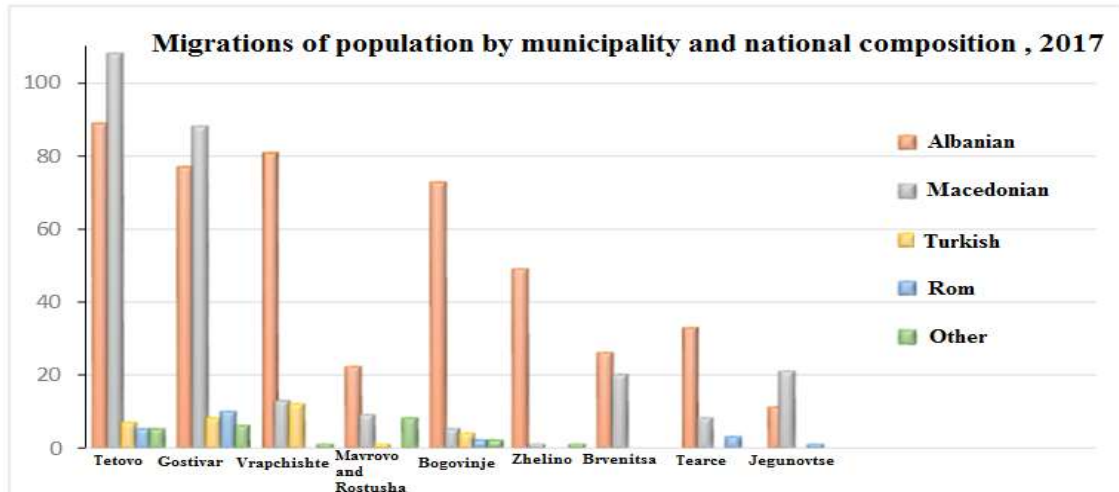


Figure 7. Migrated from Polog by municipality and national composition (2017).

These migrations of the population can be seen more clearly from the graph, where we notice that in all municipalities there is a large population migration.

6. Report of urban and rural population

As a result of various natural, historical and socio-economic conditions, two towns and 183 rural settlements have been formed in Polog, which differ from position, size, appearance, functions, etc. The urban population has been very dynamic after WWII. But, unlike the post-war period, when urbanization was at a very low level (20.5%), after 1961 the pace was accelerated and, in 1981, this process developed at faster rates than the average state rate [1]. However, the Polog region remains with the lowest percentage of the citizen population (34.26%) in North Macedonia.

Table 8. Urban population compared to the overall population (1953-2002).

| Percentage of urban population in the total population | | | | | | |
|--|------|------|------|------|------|-------|
| | 1953 | 1961 | 1971 | 1981 | 1994 | 2002 |
| North Macedonia | 31,3 | 38,6 | 48,8 | 53,9 | 59,8 | 62,47 |
| Polog | 20,5 | 23,8 | 28,0 | 28,2 | 32,6 | 34,26 |
| Tetovo | 21,7 | 24,2 | 27,2 | 28,7 | 29,2 | 35,70 |
| Gostivar | 18,2 | 23,1 | 29,1 | 27,4 | 27,9 | 32,10 |

Source : SSO, 1953-2002.

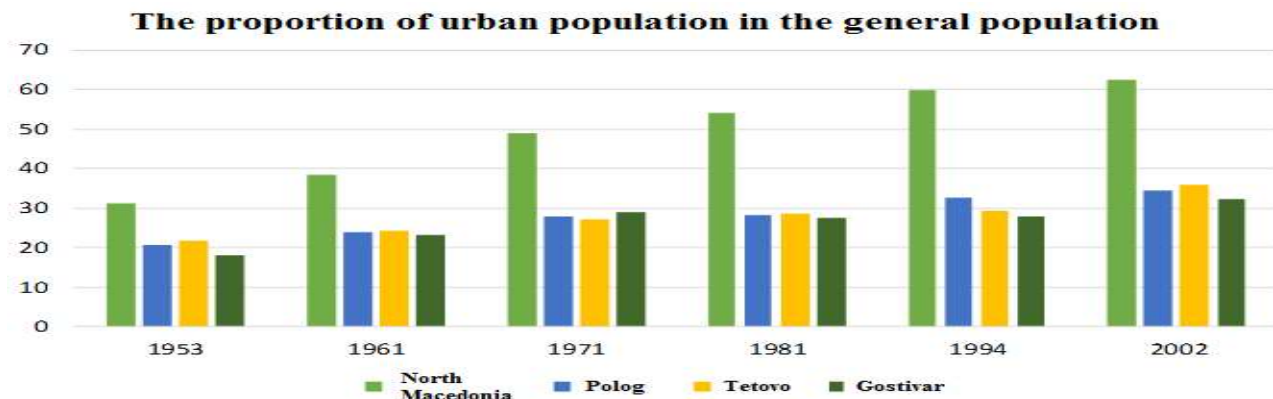


Figure 8. Percentage of urban population in the general population (1953-2002)

The acceleration of urbanization was influenced by the high natural increase of the urban population of the population as a whole. But in this process, industrialization, deagrarianization, and migration have also played an important role [6]. Too fast urbanization is the result of the rural exodus. The fastest pace in Polog is not only the result of the high natural increase of the population but also the inclusion in the urban areas of Tetovo and Gostivar in some suburban neighborhoods. The urban population in Polog in 1981-2002 has increased from 28.2% to 34.26%. In the municipality of Tetovo, the urban population increased from 28.7% in 1981 to 35.70% in 2002, while in Gostivar, from 27.4% to 32.10% in 2002 .

Table 9. Urban and rural population of Polog (2002)

| | Total | Urban | Rural |
|-----------------|-----------|-----------|---------|
| North Macedonia | 2.022.547 | 1.263.642 | 758.905 |
| Polog | 304.125 | 88.762 | 215.363 |
| Tetovo | 189.066 | 52.915 | 136.151 |
| Gostivar | 115.059 | 35.847 | 79.212 |
| Structure % | | | |
| North Macedonia | 100 | 62.47 | 37.53 |
| Polog | 100 | 34.26 | 65.74 |
| Tetovo | 100 | 35.70 | 64.30 |
| Gostivar | 100 | 32.10 | 67.90 |

Source: SSO -2002

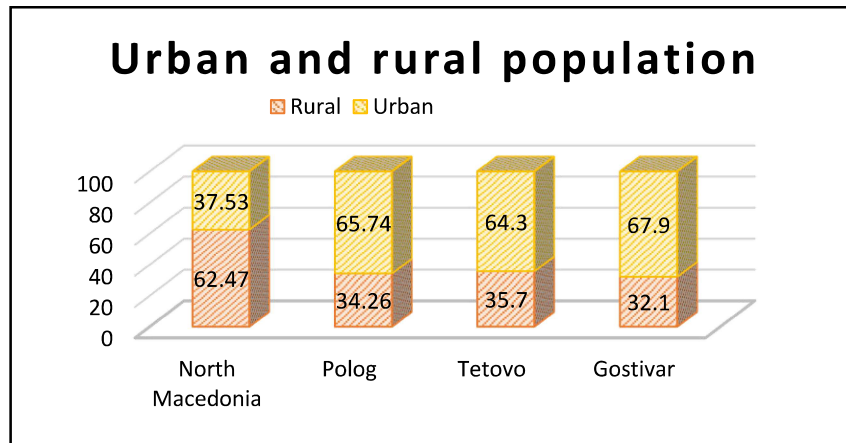


Figure 9. Urban and rural population (2002)

Rural settlements represent a real mosaic, in rapid change especially after 1990, when some remote mountainous villages began to populate at fast pace, others with better position and conditions than the first ones remained almost unchanged besides important traffic roads and urban centers, recognized growth of the population and the surface, development of the economy, infrastructure, etc. Particular interest is the time, conditions and factors that have influenced the formation of villages and their evolution, demographic and spatial development. The formation and development of Polog settlements have influenced a number of factors: relief, climate and water resources, lands, socio-economic conditions, communication opportunities, etc [3].

7. Conclusion

The Polog region is characterized by relatively good and interesting demographic developments. Rapid population growth in the region, as well as nationwide has raised the issue of population ratios with natural resources and economic opportunities for food, water, and other products.

Generally, post- WWII records show that during the period 1948-2017, the population of the region has increased from 1.15 million to over 2.07 million, while Polog from 144,000 to 321.199 residents in 2017. This is explained by the much higher rates of natural increase during the period 1961-1994 and with some improvement of the socio-economic situation in Yugoslavia at that time.

The largest concentration of the population is in the flat municipalities, where the density is over 160 inhabitants / km². This includes the two municipalities of Upper Pollog: Gostivar with 163 inhabitants / km² and Vrapchishti with 174 inhabitants / km², as well as the municipalities of lower Polog: Tetovo with 351 inhabitants / km², Bogovinje 218 inhabitants / km² and Tearce 168 inhabitants / km². These data point to the differences between regions and municipalities in the region.

Analyzing the urban population, it has been very dynamic after WWII. However, in contrast to the post-war period, when urbanization was at a very low level (20.5%), after 1961 the pace was accelerated and in the period 1981-2002 increased from 28.2% to 34.26%.

From this analysis, we can conclude that in the Polog region, the total number of the population is constantly increasing thanks to the high natural increase we have in the municipalities with Albanian population, the Municipality of Tetovo with 5.6 ‰ and Zhelino with 5.2 ‰, despite the high migration in the region.

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