

## **SOCIO - ECONOMIC AND GEOGRAPHICAL FACTORS OF DEVELOPMENT - STUDY CASE: CITIES BERANA, ANDRIJEVICE AND PLAVA**

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### **Abstract**

**Socio - economic and geographical factors of development - study case: cities Berana, Andrijevica and Plava**

The paper analyzes the socio-economic and geographic factors for Berane Andrijevica and Plava. The above urban settlements are located in the northeastern part of Montenegro. Isolated traffic and geographical position adversely affects the economic and social development of urban settlements. For the development of cities of greater importance are the geo-morphological and hydrological characteristics of the terrain, the climate and geology, which limits greatly compensates for modern construction techniques. Berane population increased in the period 1948-2003 to 26.81%, while in Andrijevica decreased by 42.48% and 12.43% of Plav. These data suggest to us most vividly, what are the demographic changes occurring in the region. Age groups, due to migration and decreasing birth rate changes and gets unfavorable features - reducing the proportion of younger and older increases the proportion of the population. In both cases, the disturbed age structure has a reverse effect on the movement of the population (the size of reproductive contingent), but also to all other structures of the population (the size of contingent employment, population, compulsory school contingent, contingent dependent population ratio). The main characteristic of modern urban development of cities provide processes of industrialization and urbanization. However, the economic crisis in Montenegro at the beginning of the nineties due to isolation, the economic and social strategy of circling and lack of long term economic development, stopped the social, economic, technical and technological development of urban settlement Berane, Andrijevica and Plav.

### **Key words**

Berane, Andrijevica, Plav, geographical location, natural features, population, economy, development.

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## **1. Introduction**

Urban settlements - Berane, Andrijevića and Plav, are located in the northeastern part of Montenegro, between 42 ° 28 'and 42 ° 58' north latitude and 19 ° 38 'and 20 ° 6' east longitude. This is the part of the territory of Montenegro, which includes the upper catchments Lima, from its source to gorge Tivran. According to the 2003 census, the town of Berane town which is also the regional center of the northeastern part of Montenegro's population of 12,651 lived in Andrijevića 1193 inhabitants, and Plav 5,554 inhabitants. Isolated traffic and geographical position adversely affects the economic and social development of Berane, Andrijevića and Blue. Isolated traffic and geographical position adversely affects the economic and social development of Berane, Andrijevića and Plav. With the exception of the continental branch of the main road no other important roads do not intersect or touch the considered geo-space.

The development and deployment of a modern economy is determined by numerous natural characteristics of the land. Since the natural characteristics of the development towns of Berane, Andrijevića and Plav are the most important geomorphological and hydrological characteristics of the terrain, the climate and geology, which limits greatly compensates for modern construction techniques. Discrepancy between available natural characteristics of the terrain and cities of modern economy is determined by demographic and economic structure. Age groups, due to migration and decreasing birth rate changes and gets unfavorable features - reducing the proportion of younger and older increases the proportion of the population. In both cases, the disturbed age structure has a reverse effect on the movement of the population (the size of reproductive contingent), but also to all other structures of the population (the size of contingent employment, population, compulsory school contingent, contingent dependent population ratio).

Gradual transformation of the population, have contributed to numerous economic and non-economic factors. They are, among other things, they see the rise and rapid decline in non-agricultural rural population. The process of land reclamation and the transfer of the workforce in non-agricultural activities, and accelerated the depopulation of rural areas, the aging and feminization of the village. Negative selection has led to very adverse economic structure of the population, with respect to labor and production capacity. Moreover, these uncontrolled demographic processes are not accompanied by adequate measures other necessary changes in the economy, which has been shown that the qualitative properties of optimal population and favorable economic structure, now a component in guiding the transformation of space, the decisive factor in the differentiation and polarization of the environment.

## **2. Methodology**

The core of the methodological procedure used in this research makes the geographical (spatial) method and consisted of Berane, Andrijevića and Plav. For Collection of data pertaining to basic demographic and socio-geographical factors of development, we used a statistical method. Comparative method has enabled us to social and economic development factors we look at the comparison of the population of the municipality of Berane, Andrijevića and Plav. Permeated through the entire text of the method and integrity, thanks to which we were able to identify, define and assess possible limitations of economic development. Historical

method gave us the opportunity to look at the evolution of the development of urban settlements Berane, Andrijevica and Blue, that is based on archaeological findings to reconstruct the time of settlement. The scientific explanation of terms two methods were applied as follows: analytic and synthetic. Analytical methods are considered some of the dimensions of research subjects, a synthetic whole the relations between the subject and proposed measures to stem from there.

### 3. Geography of cities

Berane, Andrijevica and Plav have a complex geography that is naturally heterogeneous and with various levels of benefits for the use of space. Although located in the Valley of Lima, the cities (except Berane) had no significant role in the structure of geo-Montenegro. The town Andrijevica and Plav is peripheral compared to the main traffic flows in Montenegro, given that in this region does not cross the road, with bond functions in the organization of space. Berane have the most important position in transportation due to the main road. Territory of the municipality, Adriatic highway coming from Bijelo Polje, Berane northwest of through gorge Tivransku gorge, entering the city and continue east to Rožaje. It is a broad highway of regional significance, which connects the neighboring municipality of Bijelo Polje, Berane and Rožaje and simultaneously makes it out to Serbia. Wind of Ribarevine, according to Kolašin and Mojkovac go to Podgorica and Montenegrin coast. Another important road is the main road Berane - Andrijevica - Plav, which is in the territory of Andrijevica the Bridge Bandović, provided through Trešnjevik, to Podgorica and from the territory of Blue, through Čakor the furnace. Both routes through Trešnjevik (1573 m) and Čakor (1849 m) are impassable in the winter months. Isolated traffic and geographical position adversely affects the economic development of cities Andrijevica and Plav.



Fig. 1: Berane, Andrijevica and Plav on the map of Montenegro.  
Source: Regional Business Centre Berane 2004.

#### 4. Natural characteristics of cities

For the development of cities of greater importance are the geo-morphological and hydrological characteristics of the terrain, the climate and geology, which limits greatly compensates for modern construction techniques.

Geomorphic characteristics of the cities we looked at in terms of morph metric evaluation of conditions for the construction of settlements and roads. The construction of the village is very small gradients (up to 1 °) are not optimal, because the removal of atmospheric and water channel requires the formation of the slope. However, given that urban settlements in the territory of Berane and Andrijevića, dominated by slopes of 1 - 3 °, unexposed surface, good structure height (height ratio as an indicator of energy efficiency infrastructure, and express transport accessibility in relation to the overcoming of differences in elevation), we have quite good conditions for the construction of settlements and roads. Berane and Andrijevića, with class II (good) benefits in relation to urban development and class I (extremely favorable) with respect to construction traffic infrastructure (Rajović 2008, 194 - 195). Eating for traffic, are typical for the winter half year. Since the mean maximum thickness of snow cover along the route of the main roads in the valley of Lima does not exceed 50 cm in January when the largest amount of snow and the number of days with snowfall lasting from October to May (when the snow melts in contact with the ground) urban settlements Berane and Andrijevića and their environment, have good conditions for traffic. Plav from the viewpoint of urban building belongs to the class III suitable terrain (due to non-exposure and vertical belt (948 m) and class II from the perspective of the construction of transport infrastructure (due to the vertical belt). Blue Area may be difficult to characterize the performance of road transport the mean maximum thickness of snow cover along the route of the main roads can reach 131 cm. The thickness of snow cover can be very difficult obstacle to traffic, especially on windy passes and hamlets, where the wind forms a high snowdrifts snow that existing machinery can break a long time (Rajović 2010, 25-27).

Thanks to the geological structure in Berane basin there are considerable reserves of brown coal and lignite (total reserves are 176,231,197 tons). Plan for development of coal in Berane basin, would cause intense regrouping and integration of industrial companies and caused the need for capacity expansion (Beran Selo, Dolac). If we add all that in a series of Miocene coal in Berane basin there are also immense reserves of marl, which for its quality meets the requirements of the cement industry, and that only the Jasikovac reserves could provide the production for two hundred years, if the 80,000 tons produced annually (Boričić and Lutovac and Petrić 1967, 69). In the vicinity of Berane and Andrijevića, there are ores of metals: lead, zinc, copper, iron and pyrite. Of non-metallic mineral deposits occur building materials: gravel, sand and decorative rock. Numerous deposits of gravel and sand are placed in the bed of the river Lim (Plav, Andrijevića, and Berane). Only in Bandović Bridge, the amount of gravel and sand, available for the annual extraction is estimated at around 100 to 120,000 m<sup>3</sup>. On the hill Žoljevica, not far from the urban settlement Andrijevića, is bearing architectural - building stone. On the hill Žoljevica, not far from the urban settlement Andrijevića, is bearing architectural - building stone. The estimated reserves of gray marble B + C1 categories, amounts 2,223,000 m<sup>3</sup>, a reserve of white and gray-white marble belonging to the C1 category is 60,000 m<sup>3</sup> ([www.andrijevića.me](http://www.andrijevića.me)).

Berane, Plav and Andrijevica as a whole, compared to the corresponding climatic characteristics, a suitable area for settlement and life of residents. From the standpoint of the optimal settling basin in which courts are located just urban settlements Berane, Andrijevica and Plav comfortable climatic conditions which cover the period from mid-May to late September, and the heating season lasts approximately from October to late April. Those high temperatures, during the summer at the bottom of the valley often show us the following information. Namely in Berane and Andrijevica, during July and August about 44, days with temperatures over 25° C and Plav about 37 days. It is not uncommon for these temperatures last for several days in a row, and even the whole week or more (Rajović 2005, 85 - 86). In countries with high living standards, humidity indirectly affects the climate of increased costs for housing and work space. In our conditions, in most cases, it's just more stress resulting thermo-regulatory mechanism of the organism (Bursać 1975). In relation to air pollution for the spatial differentiation of climatic conditions are very important characteristics of the wind. Industrial zones in Berane, Andrijevica and Plav have a very unfavorable position relative to the wind rose. Both weather stations in Berane and Plav, the dominant winds from the N and S quadrants, and industrial zones in these places are located precisely in this direction. The influence of climate on different forms of construction is expressed through shortening the period in which they can perform construction work. Climatic parameter that most closely expresses a possible period of construction works (construction season) is the period with daily mean temperatures above 0° C. According to the Rajović (2005, 87 - 88) can be concluded that the lower basin relief, he takes about 260 days to 265 days blue in Berane and Andrijevica. With a height of construction season is shortened considerably. But it should be noted that certain works for this particular construction season is shorter. It is thought to work with concrete, whose period coincides roughly with the length of the frost-free period and lasts from 124 days in the Plav, to 141 days in Berane and Andrijevica. Manifest a similar impact on the climate conditions of individual industries. Thoughts on surface mines and works on any open mining of non-metals.

Lim its tributaries is a rich reserve of surface water, the development of Berane, Andrijevica and Blue. In fact, Lim has exceptional hydroelectric potential (230 GWh /g). However, Lim has a staggering annual discharge, which ranges from 17.8 m<sup>3</sup> / s in Plav and 37.4 m<sup>3</sup> / s near Berane, which prevents Berane, Andrijevica and Plav complex industrial development. Namely, in the period January-June river flows 65 - 70% elapse total annual discharge. During the summer months (July, August, September) is during the lapse of the river 9-12 % annual discharge. To the minimum flow values during the coming summer months due to reduced rainfall, increased evaporation and water intakes for various purposes. It is height-Berane position of urban settlements, Andrijevica and Plav, in terms of utilization of waterworks emphasizes the importance of groundwater. In other words, the use of groundwater for water supply of cities is crucial. "Water-supply Berane urban settlement is done from the main city water supply Lubnice - Berane, which is supplied with water from the trap," Merića hot ". The latest assessment of Public Enterprise "Water Works"-Berane indicate that the flow of water through the main pipeline from the spring to breaking chamber about 190 l/s. Distribution network (primary and secondary) is 160 km and covers about 70% of the territory of the Municipality, and uses about 65% of Berane"(www.nasme.me). At the end of the eighties, "Water-economic organization for the development and utilization of waters of Montenegro" - Podgorica did a "water main project for Andrijevica", taking into account the then current state and future developments in the immediate

environment Andrijevisa. Thus was built the water supply sources "Krkori" Kuti village in the area which is located nearly 15 km from the village on the left side of the river Kutski. Projected water system consists of: pumping building buildings at the source "Krkori" water pipeline constructed of cast-iron pipe 300 mm. Terms of Reference for the preparation of the project of reconstruction of water supply is planned to be cast of iron-pipe is not replaced, and the only replacement of asbestos cement pipes, the use of which by European standards is no longer allowed. This amendment is made by the main project which brought the current water supply, which in addition to urban settlements Andrijevisa, and rural water supplies: Đulić, Bojovic, Seoca, Božiče, Prisoja, Slatina, Zabrdje and Trešnjevo ([www.andrijevisa.me](http://www.andrijevisa.me)). Plav supplied with water from springs and aquifers "Đuričke River alluvium". The Plav feels chronic water shortages in the summer. Water pipes in the local network at the Plav are old and made of asbestos (the main lines - the profile of 200 mm and 110 mm) and plastic - the other conductors. This circumstance causes huge losses in the network which is estimated at more than half the amount of water delivered in the pipeline. Length of water is about 5.2 km, profiles 300 and 280 mm, the primary distribution line in the Plav is about 5 km and the length of the secondary network is about 10 km ([www.nasme.me](http://www.nasme.me)). High water levels result in Lima, in addition to flooding, and increase groundwater. Floods are the most vulnerable areas of the alluvial plain in the immediate valley of Lima, with the exception of the sector in the relief flow constrictions. Berane is one of the first municipalities in northern Montenegro, which has acceded to solve flooding problems in the urban area of Lima and to the construction of gabion protection. During are the construction of fortifications on the coast-and river Budimska and Bistrica.

## 5. Socio - economic factors

The percentage increase in population of Berane, 1948 amounted to 26.81% in 2003. However, the municipalities of Plav and Andrijevisa, show significant deviations from these population dynamics of the municipality of Berane. Thus the percentage decrease in population during the period 1948-2003 in the municipality amounted Andrijevisa - 42.48% and -12.43% Plav municipalities. Based on are the tendency manifested in the movement of the total population, can be singled out in the region: the zone of concentration of depopulation and population areas. The depopulation of areas which include 85 out of 113 villages, or 72.81% (1082 km<sup>2</sup>), the total area of the region (1.1486 km<sup>2</sup>), according to Census 2003 population lived in 9578 (17.52 % of total population). Therefore, depopulation is evident in the demographic sphere in the rapid aging of the agricultural population, reducing the agricultural population and its lack of natural renewal, changes in manning and population density ...."(Spasovska and Ilić 1989, 69). In the zones of concentration according to the census in 2003, lived 45,080 inhabitants (82.47% of total population). From which it follows that the zone of stable demographic development of urban settlements included with the surroundings, which lie close to important roads, particularly road, and those extensions in the valley in which the overall living conditions were more favorable " (Bakić et al 1991, 262).

The general population density is one of the basic demographic characteristics, which indicate the spatial distribution of population. The territory she observed ranged from 17.8 per km<sup>2</sup> in the municipality Andrijevisa, 28.4 per km<sup>2</sup> in the municipality of Plav to 51.9 per km<sup>2</sup> in the municipality of Berane, or 36.8 per km<sup>2</sup> in the region. In areas of depopulation population density in 2003 was 8.85 per

km<sup>2</sup>. Formed from such a density, we can conclude that this distribution of the population had its causes in the economic underdevelopment of the region, but they were adverse effects on natural movement and structure of the population that will show the following analysis. Namely, the total population of Berane, Andrijevića and Plav, depended on the balance of natural and migratory movements. In population issues, in addition to the rural exodus and population concentration in urban areas, came to the fore the negative natural increase. The birth rate in 2003 shows that for every 1,000 residents born 11.1 Andrijevića children in the municipality, the municipality of Berane 12.5 and 12.9 in the Municipality of Plav. So in terms of territorial distribution birth, we can draw the following conclusions:

1. The birth rate would be more likely, that there is a higher standard of living, better conditions of employment, housing, education, childcare and
2. Rural settlements to Berane, Andrijevića and Plav are no longer inexhaustible source of labor force and population.

Despite the declining birth rate, mortality rate shows that for every 1,000 people in 2003 died in Berane 3.21, in the municipality Andrijevića 15.7, and the municipality of Plav 8.69 people. The biggest change in the relationship between fertility and mortality, and thus change the rate of natural increase had Andrijevića municipalities. This municipality in 2003 had a negative natural growth -4.6 ‰. In the municipality of Plav birth rate that year was 4.21 ‰, and Berane 9.29 ‰. In the future we should expect stagnation in the rate of natural increase, due to emigration and adaptation of the current population in the region, a new way of life and plan members in the family.

Population growth is the result of the relationship of natural movement and migration processes. If the region does not make any migration of the population, then the growth rate and natural increase were the same, that there would be a territorial population balance. "However, this condition actually does not exist anywhere" (Ilić 1973, 118). There is no region in the north-eastern Montenegro. Therefore, the municipality of Berane, Andrijevića and Plav have a very complex demographic components related to population growth. Also to note that these components between the territorially distribute unevenly is causing demographic imbalances unstable economic conditions. These facts, and uneven economic development, compared to other regions of Montenegro, causing significant migration movements. These processes are 70 of the last century were intense. "Therefore there are amounts in the general public, often taken as an important proof of the vitality of our socio-economic system. However in our opinion, the right score can be obtained, if the process is put in an objective framework, or, if you locate a time, geographical and socio-economic"(Ilić 1973, 119). How long and to what extent the rate of population growth in the region should fall very hard to say because we do not have the necessary indicators of economic development in the future. But if the population growth rate is still declining, the municipality of Berane, Andrijevića and Plav in the coming time can get into a lot of difficult economic situation, due to demographic aging and population decrease in working contingent.

Tab. 1: Basic demographic factors of development of Berane, Andrijevica and Plav (in %) 2003.

Characteristics	Municipality of Berane	Municipality of Andrijevica	Municipality of Plav	North-Eastern Region of Montenegro
Index of population growth in 2003/48	26,81	- 42,48	-12,43	2,20
Number of inhabitants per km <sup>2</sup>	51,9	17,8	28,4	36,8
Number of births per 1000 population	12,5	11,1	12,9	12,4
Number of deaths per 1000 inhabitants	3,21	15,7	8,69	9,8
Participation of the population of 0-19 years in total	30,21	26,48	34,88	31,00
Participation of the population of 20-39 years in total	28,97	26,34	25,90	27,92
Participation of the population of 40-59 years in total	22,80	23,41	21,73	22,60
Participation of the population 60 and older in total	17,95	23,77	17,74	18,41
Ageing index	0,59	0,89	0,50	0,59
Participation of women in the total	49,97	56,93	50,35	49,98
Participation in the total male population	50,03	43,07	49,65	50,02
The rate of femininity	998,7	967,0	1014,1	992,2
The rate of masculinity	1001,2	1034,1	986,0	1000,8
Participation of the people without any qualifications in the total 15 + years	3,92	6,69	8,36	5,31
Participation of the population with incomplete primary education in the total aged 15 and over	11,61	13,12	18,43	13,44
Participation of population with completed primary education in the total aged 15 and over	28,69	29,21	29,86	29,03
Participation of population with completed secondary education in the total aged 15 and over	44,15	41,47	32,80	41,09
Participation of population with completed higher (education, which lasts two years) education in the total aged 15 and over	4,16	4,06	2,98	3,86
Participation of population with completed higher education in the total aged 15 and over	5,53	3,10	4,82	5,09

Source: Statistical Office of Montenegro, Census population 2003, calculations by author.

Age groups, due to migration and decreasing birth rate changes and gets unfavorable features - reducing the proportion of younger and older increases the proportion of the population. In both cases, the disturbed age structure has a reverse effect on the movement of the population (the size of reproductive contingent), but also to all other structures of the population (the size of contingent



employment, population, compulsory school contingent, contingent dependent population ratio), that is of major importance for the development of population and economic activity municipality of Berane, Andrijevica and Plav (Rajović and Bulatović 2012, 12).

The age population can be divided into young (0-19 years), young middle-(20-39 years), middle-elderly (40-59 years) and old (60 and over). In this region of Montenegro, there is a small proportion of young people (31.00%), and ranges from 26.48% in the municipality Andrijevica, 30.21% in Berane and 34.88% in the Municipality of Plav. Participation generation 20-39 years at the regional level is 27.92% and ranges from 25.90% in the Municipality of Plav, 26.34% in the municipality Andrijevica to 28.97% in Berane. The share of older generations, which are groups of 40-59 years, ranged from 21.73% in the Municipality of Plav, 22.80% in Berane and 23.41% in the municipality Andrijevica, or 22.60% at the regional level. In a group of 60 or older population at the regional level is 18.46% and 17.51% of the Municipality of Plav, 17.96% in the municipality of Berane, up 23.77% in the municipality Andrijevica.

Young people are considered in which the age group of 0-19 years accounting for more than 35%, and the old one in which groups of 60 or more years makes over 12% of the population. According to this classification, the population of Berane, Andrijevica and Plav notes are aging.

If we consider that the population is between 0-14 young, 15-65 years mature and over 65 years old, then in 2003 in the municipality Andrijevica young population coming to 18.93%, Municipality of 22.10%, municipality Plav and 25.27% to 55.44% in mature municipality Andrijevica, 56.81% in Berane and 51.81% in the Municipality of Plav and 17.53% of the old municipality Andrijevica, 19.38% in the municipality Berane and 20.24% in the Municipality of Plav. Ageing, it is the proportion of people aged over 60 years in the total population of the region is 18.46%. A high proportion of the population over 60 years in the total population in 2003 and had the individual municipalities: Berane 17.95%, 23.77% and Andrijevica municipality Plav 17.74%.

The aging index indicates the proportion of population aged 60 and older, according to the population under 20 years. If its value is less than 0.40 the population is still young, and if it is greater than 0.40 the population is showing signs of aging. Index of population aging in the region in 2003 amounted to 0.59 (0.59 Berane municipality, the municipality Andrijevica 0.89, Municipality Plav 0.50). Thus, the population of the region is in the process of demographic aging, which manifests itself increase the share of the old and the older adult at the expense of the young. The above characteristics of the population are heavily influenced by migration flows. Because the rural areas emigration, emigration and fertility contingent work tapering younger age groups, reduces the birth rate, and in this connection and slows down the flow of new generation to work contingent.

The gender structure is part of the male and female population in total population. At the regional level, there is a phenomenon that more male (50.02%), but the female population (49.98). These average values will be different, especially if seen by municipalities. In the municipality of Andrijevica much greater differences between female (56.93%) and male population (43.07%) or greater imbalance between them in contrast to the municipalities of Plav and Berane. Namely

municipality Berane (female 50.03%, 49.97% male) are according to 49.98% and 50.02% female male population in the municipality of Plav. Masculinity rate shows the number of men per 1,000 women. According to the Census 2003 rate of masculinity in the region amounted to 1000.8%. In the municipality of Berane is 1001.2%, in the municipality Andrijevića 1034.1%, in the municipality of Plav 986.0%. Femininity rate shows the number of women per 1000 men. It ranged from 967.0 in the municipality Andrijevića, 998.7 in Berane and Plav municipality 1014.1 and 999.2 in the region. As you can see, the higher rate of femininity is the municipality of Plav, but the municipality of Berane and Andrijevića. This may be due to male emigration or immigration of the female population. Whereas, the more narrow framework of economic development, employment of female labor force is going much slower than men, because of the structure of economic activity, which requires more male labor force. Taking for example, in the region, there are favorable conditions for development of textile industry and handicrafts, which would be most engaged female workforce, this production can significantly affect the increased employment of women. The involvement of female labor force in the economy, it would make more additional character that would provide existential security of women in society and family.

Educational level is an important indicator of the educational structure of the population. However, in the considered region, education of the population is not satisfactory. Given that the share of population without any qualifications at the regional level is 5.31% with incomplete primary education was 13.44% with a degree in elementary education is 29.03% of the population in relation to the total aged 15 and over. According to data for 2003 in the municipality of Berane - No school was 3.92%, incomplete primary education had 11.61%, 28.69% primary education, secondary education and 41.15%, higher education 4.16 % and higher education 5.53% of total population aged 15 and over. In the municipality of Andrijevića - No school was 6.69%, incomplete primary education had j 13.12% 29.21% primary education, secondary 41.47% 190 4.06% over the high 3.10% of total population aged 15 and over. Data for the Plav municipality are as follows: No school is 8.36% with incomplete primary education 18.43% from 29.86% primary education, secondary education, 32.80%, 2.98% higher and higher 4.82% of the total population aged 15 and over. This educational structure of the population is adverse to any modernization of the economy in the region. Her eases and overcome the prerequisite for the rehabilitation and sustainable development. Based on these data, it can not be judged interest of the weak population of the municipality of Berane, Andrijevića and Plav, to be educated or to educate their children. The cause of the relatively small number of people with higher education, is definitely the weak material resources, but the fact that many after completing secondary education leaving the region due to the inability to be employed in it.

Economic - geographic factors point to the development of social and economic life of the region. Examined in several ways - through agricultural and non agricultural proportions, the active and dependent, active population by sectors. Agricultural and non-agricultural population in proportion to each other indicates the degree of reclamation. The share of agriculture in the total population in the region amounts to 9.10% and 90.90% of non-agricultural. Non-agricultural population of the municipality of Berane accounted for 93.12% of Andrijevića with 91.62% and 84.95% of Plav in relation to the total. Most of the agricultural population in total had just 15.05% of Plav municipality. Berane and Andrijevića had a smaller share of agricultural population, which ranged from 8.38% in the municipality Andrijevića to

6.88% in Berane. "The population is increasingly leading to the non-agricultural occupations, a traditional agricultural area has been changing, especially along the main traffic routes"(Grčić 1994, 37).

Tab. 2: Basic economic and geographical factors of development of Berane, Andrijevica and Plav (in %) 2003.

Characteristics	Municipality of Berane	Municipality of Andrijevica	Municipality of Plav	North-Eastern Region of Montenegro
Participation of agricultural population in total	6,88	8,38	15,05	9,10
Participation of non-agricultural population in total	93,12	91,62	84,95	90,90
Participation of active population in total	38,35	40,10	33,04	37,19
Participation of population that is served in an overall	44,46	40,88	52,51	46,11
Participation of the population with personal income in the total	16,89	18,65	13,66	16,26
Participation of female labor in the total contingent	29,97	26,07	28,16	28,65
Contingent of male participation in total employment	32,90	33,86	30,76	32,46
Utilization of female labor contingent	25,63	25,66	16,65	23,40
Utilization of the male contingent work	42,73	45,84	38,72	42,11
Participation of working population are employed in agriculture	10,39	13,30	26,67	14,08
Participation of the active population works in the industry and mining	23,69	18,52	15,15	18,36
Participation of the active population works in the construction industry	3,06	2,26	1,13	2,51
Participation of the active population works in the traffic	6,79	6,23	3,10	5,96
Participation of working population are employed in trade and catering	15,24	14,09	11,26	14,29
Participation of the active population works in the craft	4,27	2,88	3,80	4,01
Participation of the active population works in the social activities	33,56	31,60	31,25	32,86
Participation of the active population works in the outside activities and the unknown	6,98	5,84	7,20	6,90
National income per capita	170	290	148	-
GDP per capita	231	254	200	-
Participation of unemployed per 1000 inhabitants	121	77	81	106

Source: Statistical Office of Montenegro, Census population 2003, calculations by author.

Consider some indicators of economic activity of the population - the degree of utilization of contingent work, the overall activity rate and the coefficient of economic dependence. They give a realistic picture of actual economic activity of the population.

1. The degree of utilization of contingent work shows that the relationship of demographic potential and working-age population. It is calculated as  $Rk = (R: Pr) * 100$ , where  $R_a$  - active male (15 - 64 years) and female (15 - 59 years) population,  $P_r$  - male and female total population of the same age (working contingent). This indicator for the region is 42.11% male, 23.40% female, and the municipality of Berane 42.73% 25.63% male and female, and the municipality Andrijevića 45.84% of male, female and 25.66% for municipality Plav 38.72% 16.65% male and female.
2. The general activity rate indicates the number of active per 100 inhabitants. Calculated as  $R_a = (R_a: R) * 100$ , where  $R_a$  - total active population,  $R$  - total population of the region. For the region is 37.12%. The general rate of activity of the male population (the total male) was 42.11% and female (in the overall female) 23.40%.
3. Economic dependency ratio indicates the proportion of dependents and persons with personal income, according to the active population. It is made according to the formula  $F_c = (P_i + P_1): R_a$ , where  $P_i$  - dependent population,  $P_1$  - active population. Per 100 active populations in the region in 2003 there were 167.7 dependents and persons with personal income.

The share of dependent population in the region is 46.11%. Number of dependents per 100 active populations is 124. This number is in the municipality of Berane was 116, in the municipality Andrijevića 102, 159 and Plav. This much is the share of dependent population that is a consequence of aging. Declining are share of young population and an increase in persons with personal income. The share of persons with personal income ranges from 13.66% in the Municipality of Plav, 16.89% in the municipality of Berane, up 18.65% in the municipality Andrijevića, or at the regional level is 16.26%.

Population structure by sectors is a reflection primarily of industrial development. In fact, agriculture in 2003 was absorbed 14.08% of the active population at the regional level, or 10.39% of the active population in the municipality of Berane, 13.30% at the level of Andrijevića and 26.67% in the municipality of Plav. Secondary sector activities viewed individually is quite uneven. Of all the secondary activities of the most intensive development of the industry had. From the division of population by type of activity we see that the active population employed in industry ranged from 15.15% in the municipality of Plav, 18.52% at district level and 23.69% Andrijevića in the municipality of Berane, or 18.36% to regional level. Spaces of industrialization and urbanization of Berane, Andrijevića and Plav have a specific character. This follows from the fact that the industrial concentration of its existence is largely aligned with the hierarchy of urban settlements in the network. The largest concentration is in Berane. This is the main measure associated with transportation and market position. Our research noted little evidence of active participation of the population employed in handicrafts, at the regional level 4.01% and 2.88% of Andrijevića, the municipalities of Plav 3.80%, Berane municipality of 4.01%. In construction the number of active employees was 1.13% in the Plav municipality, the municipality of 2.26% and 3.06% Andrijevića in Berane, or 2.51% at the regional level. The overall development of socio-economic complex has a direct bearing on the level of development of tertiary activities. Thus, the share of working population in traffic ranged from 3.10% in the Plav municipality, the municipality of 6.23% and 6.79% Andrijevića in Berane, or 5.96% at the regional level. It is significantly larger share of active population employed in trade and catering, and that number ranges from 11.26% in the Municipality of Plav, 14.09%

of the municipality and Andrijevića 15.24% in the municipality of Berane, at the region 14.29%. According to given data shows a relatively high share of active population in the social services sector 32.86% at the regional level and 31.25% for the municipalities of Plav, 31.60% at the level of Andrijevića and 33.56% in the municipality of Berane, which is the result of a polycentric network of education and health in the region. Namely, the high position given the contingent teachers (teachers, professors, doctors) who perform professional duties in rural areas and this entails, and increase administrative and other non-economic activity of workers. In the group of outside activities and 6.90% unknown part of the active population at the regional level, or 5.84% at the level of Andrijevića, 6.98% in the municipality of Berane and 7.20% in the municipality of Plav.

The most reliable indicator of the economic development of the region's current level of gross domestic, product and national income per capita. National product per capita in 2001 in the Municipality of Plav amounted to 200 marks, while in the same year per capita in Montenegro amounted to 2233 DEM. National income per capita in the municipality of Plav amounted to 148 DM, while in the same year per capita in Montenegro amounted to 1698 DEM, and the municipality of Budva 3417 DEM. From which it follows that the national income per capita in the municipality of Plav 23 times smaller than that in Budva, or 11.5 times smaller than the average in Montenegro. Almost identical situation we have with the municipalities Andrijevića and Berane. In fact, national income in the municipality of Berane 2002 amounted to 170 DM, a GDP of 231 marks. Statistical Office of Montenegro in 2002 notes that the national income in the municipality amounted to 290 euros Andrijevića, a GDP of 254 euros. Percentage of unemployed per 1000 population is high and ranges from 77 in the municipality Andrijevića, 81 in the Municipality of Plav to 121 unemployed in the municipality of Berane.

Without going deeper into theoretical considerations, based on economic and geographical factors of development, we can conclude that due to specific geographical conditions, there was a structural deformation and territorial disparities, which led to polarization between relatively developed municipalities of Berane and underdeveloped municipalities Andrijevića and Plav.

The current plans of demographic and economic development, are not sufficiently respected the specific geographical conditions and a constellation of factors of territorial development in the region. Development problems and irrational economic system, kept all the professional and scientific narratives, with no possibility of any immediate action implemented. The economy has been blocked and moving the logic of their powerlessness. And then a look now, we were able to rise above statement. Therefore, the conclusion that it is necessary to develop a special demographic-economic strategy for innovative regional policy, adapted to the hilly and mountainous areas (Grčić 1991, 67 - 68).

## **6. Development city**

The evolution of the human race is accompanied by improvement of man's residence. From the first primitive habitat to skyscrapers of modern times, increasing the number, multiplied modernize the look and function of settlements. They represent the most realistic picture of how life of residents, the volume of material production and the degree of spiritual creativity. It is often based on

archaeological finds way to reconstruct the life of the population and determine the time of settlement.

Our research evidence, based on similar research Stamenković and Tošić (1996, 23-36) and Tošić (2001,15-25) pointed out the manifest to the fore the fact, that is. To the development of Berane, Andrijeвица and Plav, we can distinguish three phases of development: rural and urban borough.

Rural settlement phase starts in prehistoric times and lasts until the second half of the fifteenth century. Before the settlement of Slavs, the area of Berane, Andrijeвица and Plav, Balkan peoples inhabiting the old Illyrians. Numerous sites were discovered, Illyrian settlement (Beran krš, Grace, Torovik, Rudeš...)" (Lutovac 1973, 7-14).

In the second period, before the settlement of the Slavs, were considered the area under Roman rule. The remains were found in the Roman area of the village: Lužac, Dolac, Budimlja, Luge, Donja Rženica, Jasikovac, Zabrdje, and Slatina... Traces of medieval civilization are numerous: Đurđevica, Mrtvica, Kućišta, Lokve, Borova Glavica, Gusinje, Dosuđe, Kaludra, Lubnice, Goražde, Uroševica, Konjuhe, Košutiće" (Lutovac 1957, 44-55).

At the time Nemanjić studied area was called parishes Budimlja. Here is St. Sava, 1219 he founded one of the first Serbian bishoprics with episcopal throne in the monastery Pillars of St. George. A highly developed and rich spiritual life of Serbs in this area, most are numerous monasteries and churches and the remains and ruins, located in Šudikova. In Šudikova, Presentation of the Virgin church, there is one of the earliest written documents from these parts - "Sveto-trojički Collection" (Đukić 2009). At the time of Nemanjić, blue is represented the center of the parish, and was mentioned as a village of fishermen (in the charter of Emperor Dušan mentioned as Pulav). At the site of today's urban settlement Andrijeвица, until the beginning of the second half of the fifteenth century (1455), was the only church "Andrijevnna" fret schools and close to the fortress on the hill Grace. This fort was preceded by the development of today's urban settlement Andrijeвица.

The development phase of the town began in the second half of the fifteenth century and lasted until the end of the nineteenth century. It covers the period of Ottoman rule. In the Turkish Empire in Berane and Plav become an important administrative and administrative headquarters. And are provides the status of town (the town) which is, in fact, a transitional subset of urban settlements, from daily receipts (square) to the first cities. At that time, Andrijeвица began to develop as a settlement around the church "Andrijevne".

Urban settlement stage in the development of Berane, Andrijeвица and Plav started the first years of 1912 and will last until our time. However, the initial momentum of development of Berane, Andrijeвица and Plav was interrupted, first, the Balkan Wars (1912-1913) and the First World War (1914 - 1918) and later the Second World War (1941 - 1945). Between the two world wars and the postwar period, Berane, Andrijeвица and Plav have a peaceful and sluggish growth. Although at that time was the district center of Berane, a district Andrijeвица place with Plav-Gusinjski districts. The contemporary period is marked by urban abundance, in the true sense, spatial changes, as in the internal structure of urban neighborhoods and in their surroundings. The main characteristic of this period, which are begins immediately

after the Second World War in Berane and early seventies in Andrijevića and Plav and lasts to the present time, given the processes of industrialization and urbanization. In this developmental period have been established and started operating industrial enterprises as drivers of economic development. In Berane - building material (brick and tile factory, "Rudes"), rubber industry (tire rethreading plant "Guming"), wood (timber Combine "Lim"), chemical industry (factory plywood and fiberboard), Leather (Leather Factory "Polimka"), pulp and paper industry (factory sulfate pulp and paper) and coal (brown coal mine "Ivangrad"). In Andrijevića - Non-metal industries ("Marble" - Komovi), metal industry ("Termovent" - Belgrade), leather industry (driven children, fur and leather products "Polimka" - Berane), paper (Paper products) and food processing ("Soko Stark" - Belgrade). In the Plav - Wood industry (Forest-Industrial Complex "Bor"), chemical ("Termoplast" - Gusinje), textiles (yarn factory) and metal industry ("Lignoplast"). Their intense development has caused many changes in demographic, physiognomic and functional characteristics of urban neighborhoods.

One of the key indicators of these changes is an intensive population growth in the three urban settlements in the period after World War II. The percentage increase in population during the period 1948-2003 in the town of Berane settlement amounted to 241,8 % in urban settlement Andrijevića 33.45% and urban settlement Plav 200.2% and 201% in the region. "Therefore, the demographic development of urban settlements marks the major changes. They are reflected in the declining importance of primary and secondary strengthening, tertiary and quaternary functions of urban settlements. The main change is reflected in the fact that the function is the leading agricultural industry gave way to his place (the transfer of an agrarian to an industrial city population). At the same time, due to increased mechanical influx of population, mostly from the surrounding villages, there is a transfer of the rural active population in urban " (Stamenković 1996, 20 ).

Tab. 3: The population of urban settlements, Berane, Andrijevića and Plav in the period 1948-2003.

Urban settlements	1948.	1953.	1961.	1971.	1981.	1991.	2003.	1948/2003 Change in %
Berane	3.701	4.513	6.969	11.164	12.720	12.267	12.651	241,8
Andrijevića	894	899	1.007	994	941	933	1.193	33,45
Plav	1.850	2.018	2.535	3.058	3.348	4.560	5.554	200,2
Region	6.445	7.430	10.511	15.216	17.009	17.760	19.398	201

Source: Statistical Office of Montenegro, Census population 2003, calculations by author.

According to Kalezić (1976, 53 - 54), the reasons of such a population growth of population in the towns of Berane, Andrijevića and Plav, are multiple, we will in our opinion, reduced to the most important ones:

1. Provided conditions for non-agricultural production which could be achieved more productive work, and therefore higher and more stable income. Whether it is working or intense economic activity, society, naturally, within the limits of its capabilities, provides the necessary means of production and other conditions that allow the employee's permanent employment of labor for which such options on individual agricultural property in rural areas in the northeastern part of Montenegro, in most cases it was not,
2. Existential security, which stems from the high degree of certainty that the inclusion of non-agricultural activities, generates income-means of

livelihood. In agricultural production, the individual held in the region, which is still subject to the influence of external factors, there is uncertainty, both in terms of achieving the yield of certain crops, and the price at which to sell their products, all of which leads to significant fluctuations in the amount earned income. Therefore, there is a fear in securing the safety of the material conditions for maintaining its own existence;

3. Engaging in employment in non-agricultural activities individual farmer, on this basis will be entitled to health care (you and your family), and the conditions for retirement, which is an important element of social security and
4. General conditions of life in the city provide far greater opportunities for education and a cultured life, full health care and other benefits that the city has, in relation to the village, which was an important motivation for migration and emigration, particularly of young people.

In a variety of demographic changes are caused by population movements, especially the settlement of the city, as well as some relevant physiognomic and functional changes, achieved by gradually changing the economic structure of urban settlements. The spatial development of urban settlement is achieved by expanding in the peripheral, and the modern construction of housing, community, business and recreational facilities and areas, mainly in urban centers and areas around it, but in other parts of the urban territory. "It was constituted a modern functional zoning, which is an adequate size of urban settlements. It comprises the town center zone, residential zone (individual, collective and mixed housing), recreational and business (industrial) zone. This was based on the rational use of urban territories, provided the unity of individual functional areas and spreading harmful effects of industrial areas to other spatial-functional parts of the village. That basically means that the internal functional areas and meets the needs of modern urban life quality " (Stamenković 1996, 21). However, in the last census periods, there is a calming process of land reclamation, especially when it comes to urban areas. This process is, after a period of intense industrialization in the sixties, primarily directed at the development of tertiary - quaternary sector, particularly in the municipality of Berane. The economic crisis in Montenegro at the beginning of the nineties due to isolation, inflation, the economic and social circling and lack of economic development strategy in the long run, stopped the social, technical and technological development of Berane, Andrijevica and Plav.

## 6. Conclusion

Results of the analysis of economic and geographical factors of development of Berane, Andrijevica and Plav, suggests the following conclusions:

1. Isolated traffic and geographical position adversely affects the economic and social development of Berane, Andrijevica and Plav. With the exception of the continental branch of the main road no other important roads do not intersect or touch the considered geospace.
2. Natural characteristics of cities suggests - to have a Barane and Andrijevica class II (good) benefits in relation to urban development and class I (extremely favorable) with respect to the construction of transport infrastructure. Thanks to the geological structure in the considered area there are considerable reserves of brown coal and lignite, mining of metals and nonmetals, which are still waiting on the possibility of exploitation. From



the standpoint of climate, urban settlements Berane, Andrijevica and Plav have favorable conditions for settlement and life of residents. Lim its tributaries is a rich reserve of surface water but with fluctuating annual discharge, which ranges from 17.8 m<sup>3</sup> / s in blue and 37.4 m<sup>3</sup>/s near Berane, which prevents Berane, Andrijevica and Plav complex industrial development.

3. Berane population increased in the period 1948-2003 to 26.81%. However, the municipalities of Andrijevica and Plav, show significant deviations from these population dynamics. Thus the percentage decrease in population over the same period accounted for in the municipality Andrijevica - 42.48% and -12.43% Plav municipalities.
4. Age groups, due to migration and decreasing birth rate changes and gets unfavorable features - reducing the proportion of younger and older increases the proportion of the population. In both cases, the disturbed age structure has a reverse effect on the movement of the population (the size of reproductive contingent), but also to all other structures of the population (the size of contingent employment, population, compulsory school contingent, contingent dependent population ratio).
5. The process of land reclamation has increased due to the transfer of agricultural labor force in non-agricultural activities. As a consequence we have that in 2003 agriculture absorbed 14.08% of the active population at the regional level. Secondary sector activities, viewed individually, are quite uneven. Of all the secondary activities of the most intensive development of the industry had. From the division of population by type of activity shows that the active population employed in industry amounted to 18.36%. The overall development of socio-economic complexes directly reflects the level of development of tertiary activities. The largest proportion had an active population employed in trade and catering 14.29%. It is apparent rather high share of active population in the social services sector 32.86% at the regional level. In the group of outside activities and 6.90% unknown part of the active population at the regional level.
6. The contemporary period is marked by urban abundance, in the true sense, spatial changes, as in the internal structure of urban neighborhoods and in their feature environment. Primary this period, which begins immediately after the Second World War in Berane and early seventies in Andrijevica and Plav and lasts to the present time, given the processes of industrialization and urbanization. In a variety of demographic changes caused by migrations, especially immigration the city, as well as some relevant physiognomic and functional changes, achieved by gradually changing the economic structure of urban settlements.

Finally, the economic and geographical factors of development of Berane, Andrijevica and Plav should be viewed realistically, without undue optimism, pessimism and even less. The process of general and qualitative transformation of the region will be relatively very slow and time consuming. So you should work on it patiently, but persistently and continuously.

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**SOCIO – ECONOMIC AND GEOGRAPHICAL FACTORS OF DEVELOPMENT -  
STUDY CASE: CITIES BERANA, ANDRIJEVICE AND PLAVA**

***Summary***

Generally the natural conditions, social development and economic situation in the territory of Berane, Andrijevica and Plav lot has been written and much is known. It is assumed that the matter has been sufficiently discussed, researched and published in the literature. In this work we tried to point out only part of the truth of important issues related to socio-economic development of Berane, Andrijevica and Plav. Therefore, we indicated in the text of the socio - economic and geographical factors of development of northeastern Montenegro, that is, we tried to identify the key factors that affect the socio-economic development. But when a more thorough economic and geographic analysis is an insufficient discussed topics. Specifically the region with the participation of 106 inhabitants in 1000 unemployment reached a high level of unemployment, which along with low domestic product and national income per capita is formed unfavorable conditions of life for its residents. Stop the negative socio-economic processes there is a key factor in development and strategic goal and the overall economic recovery and future social development Berane, Andrijevica and Plav.

