

THE POPULATION DEVELOPMENT IN THE LEVOČA MOUNTAINS (SLOVAKIA)

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Abstract:

This article analyses the main characteristics of the demographical development and present-state in the Levoča Mountains in Slovakia. Before analysing the population, we develop an approach to determine the number of people residing in the geomorphological mesoregion of Levoča Mountains, which is the key point of this article, since many municipalities lie on the mountains border. For the purposes of the latter we consider municipalities cadastral areas and built-up areas. There are new concepts introduced into geographical terminology: CIN coefficient, COUT coefficient, IN mountains population, OUT mountains population, CORE municipality, BORDER municipality, OUTER municipality.

Key words:

Levoča Mountains. Population. Demographical development. People living in the mountains. New geographical concepts.

INTRODUCTION

Geomorphological mesoregion of the Levoča Mountains (called Levočské vrchy in Slovakia) delineated by Mazúr and Lukniš (1978) with an area of 620 km² are located in the northwestern part of Eastern Slovakia surrounded by the towns of Levoča, Kežmarok, Stará Ľubovňa and Lipany (figure 1). They are bounded by basins in the west and south (Poprad and Hornád basin), by mountains (Branisko, Bachureň and SpišskáMagura mountains) and by intermountains (Spiš-Šariš intermontains) in the east and north. The mountains maximum width is 30.8 km and maximum height 30.0 km. The highest point is a hill called Čierna hora (1289 m) and the lowest point is the Torysa river (480 m). Half the area was the Javorina Military District (316 km²) from 1953 to 2010, which was terminated in Slovak Law on 1 January 2011 (by 455/2010 Coll.).

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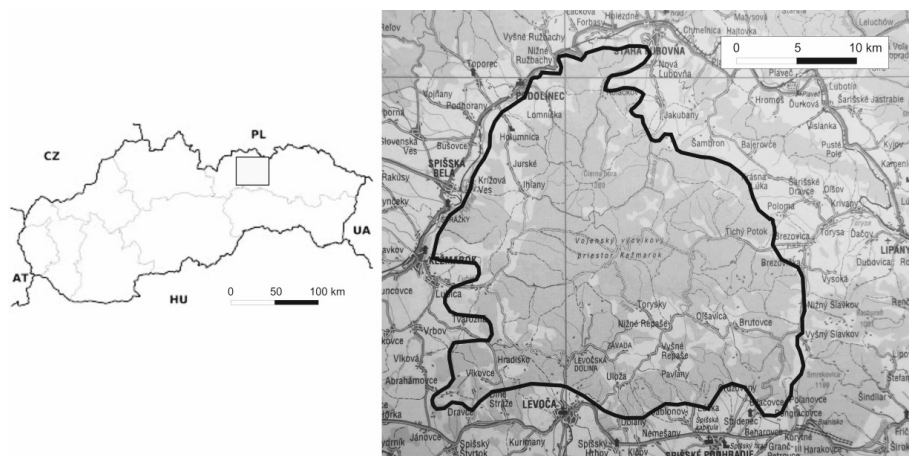


Figure 1: *Levoča Mountains location within Slovakia.*

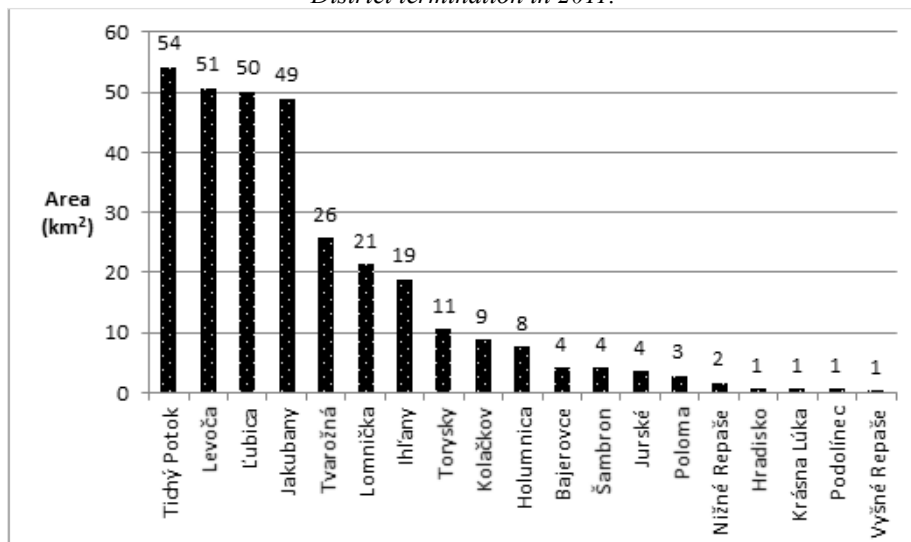
LEVOČA MOUNTAINS MUNICIPALITIES

Since 2011, there are 56 municipalities with their cadastral area reaching into Levoča Mountains territory, including 6 towns (Kežmarok, Levoča, Podolíneec, Spišská Belá, Spišské Podhradie and Stará Ľubovňa). Just 12 municipalities' cadastral areas are entirely within the mountains border (table 1). Due to the formation of the Javorina Military District in 1953, Blažov (46 km²) and Ruskinovce municipality (18 km²) were liquidated; a further 23 municipalities had suffered a loss of part of their cadastral areas, especially Jakubany (49 km²), Levoča (40 km²), Ľubica (33 km²) and Lomnička municipality (21 km²). Following the termination of the Javorina Military District in 2011, the cadastral area of 19 municipalities expanded (figure 2). In the course of history there have been several occurrences of municipal integration.

Table 1: *Municipalities and their cadastral areas within the Levoča Mountains (LM) since 2011.*

COUT in LM	Number	Names of municipalities
1	12	Brutovce, Hradisko, Ihľany, Jurské, Lomnička, Nižné Repaše, Ofšavica, Pavľany, Tichý Potok, Torysky, Vlčkovce, Vyšné Repaše
0.8 to 0.999	8	Holumnica, Kolačkov, Križová Ves, Lúčka, Ľubica, Ordzovany, Tvarožná, Uloža
0.6 to 0.799	6	Bijacovce, Doľany, Jablonov, Jakubany, Levoča, Pongrácovce
0.4 to 0.599	5	Abrahámovce, Brezovica, Brezovička, Forbasy, Nižný Slavkov
0.2 to 0.399	10	Bajerovce, Dravce, Hniezdne, Kežmarok, Klčov, Nemešany, Nižné Ružbachy, Podolíneec, Poloma, Studenec
0 to 0.199	15	Bušovce, Dlhé Stráže, Jánovce, Krásna Lúka, Nová Ľubovňa, Poľanovce, Spišská Belá, Spišské Podhradie, Spišský Hrhov, Spišský Štvrtok, Stará Ľubovňa, Šambron, Vlčková, Vrbov, Vyšný Slavkov

Figure 2: Municipalities' cadastral area expansion due to the Javorina Military District termination in 2011.



Based on 455/2010 Coll.

METHODOLOGY FOR CALCULATION OF THE LEVOČA MOUNTAINS (LM) POPULATION

How many people live in the Levoča Mountains (LM)? There is no easy answer. No census was taken in LM; national census always takes place only within particular municipalities' cadastral areas. It should also be said that LM borderline, as delineated by Mazúr and Lukniš (1978) is not identical, nor approximate to the borderlines of some municipalities cadastral areas. Thus, to determine the LM population, a different approach must be applied. In the following lines we consider four approaches to determine the LM population: LM as a part of Slovakia, LM macro municipality, LM municipalities cadastral areas and LM built-up area.

Firstly, the Levoča Mountains form about 1.27% of area of the Slovak republic, therefore, we could say that 1.27% of the Slovak population (68,323 people in 2011) live in the LM area (provided the uniform population density in Slovakia). It could also be stated that this number of people influence in certain way the LM territory (provided the uniform influence of Slovak citizens on their territory).

Secondly, taking the LM macro municipality, which means taking all municipalities' cadastral areas, at least part of each one is located in the LM area. There are 56 municipalities with total population-size of 105,632 and the area of 1062 km² in 2011. Since LM covers the area of 621 km², thus we could say only 58.5% of 105,632 people live or influence the LM territory, which is 61,795.

The third approach for determining the LM population is to determine the coefficient of the single LM municipalities. The coefficient will be denoted as COUT. $COUT = 1$ means that cadastral area of a municipality is entirely located in LM. For instance, COUT of Abrahámovce municipality is 0.541, what means that 54.1%

of municipality's cadastral area is located in the LM area. The product of COUT and population of a municipality determines the number of people living in the LM territory. In 2011, there were 12 municipalities in the LM area with their cadastral areas completely within the LM territory (COUT equal to one). The remaining 44 municipalities extend into the LM territory only in part, between 0.9 and 98.3% (COUT 0.009 to 0.983), see table 1. The number of people in LM or people who influence the LM area was calculated at 41,851 in 2011. We denote these people as OUT population.

One could argue that people do not live uniformly over the cadastral area of a municipality, but they live only in built-up areas of a municipality. Thus the fourth approach to determine the LM population is similar to the third. The difference is that instead of the coefficient of a municipality cadastral area (COUT), the coefficient of a municipality built-up area is going to be calculated. We denote this coefficient as CIN. This approach is applied in this paper in order to characterize the LM population. There are just 27 municipalities having a part of their cadastral area within the LM area, 15 municipalities' cadastral areas is completely covered within the LM area and 12 municipalities between 5% and 60% (table 2). The population calculated by CIN will be called IN population. Depending on the value of CIN we introduce also terms of CORE municipality (CIN = 1), BORDER municipality (CIN is ranked between 0 and 1) and OUTER municipality (CIN = 0).

Table 2: *Municipalities built-up area proportion in the Levoča Mountains since 2011.*

CIN in LV	Number of municipalities	Names of municipalities
1	15	Brutovce, Holumnica, Hradisko, Ihľany, Jurské, Krížová Ves, Lomnička, Nižné Repaše, Oľšavica, Pavľany, Tichý Potok, Torysky, Uloža, Vlkovce, Vyšné Repaše
0.4 to 0.6	3	Lúčka, Nižný Slavkov, Vyšný Slavkov
0.2 to 0.3	3	Abrahámovce, Doľany, Pongrácovce
0.05 to 0.1	6	Bijacovce, Dravce, Jánovce, Kolačkov, Levoča, Ľubica
0	29	Bajerovce, Brezovica, Brezovička, Bušovce, Dlhé Stráže, Forbasy, Hniezdne, Jablonov, Jakubany, Kežmarok, Klčov, Krásna Lúka, Nemešany, Nižné Ružbachy, Nová Ľubovňa, Ordzovany, Podolíneč, Poloma, Poľanovce, Spišská Belá, Spišské Podhradie, Spišský Hrhov, Spišský Štvrtok, Stará Ľubovňa, Studenec, Šambron, Tvarožná, Vlková, Vrbov

It must be said that none of the approaches for determining the population of a mountain area is perfect, but they are all only approximate. There are municipalities in LM with permanent residency of a people recorded, however, many of them work in towns outside the mountains and are only residing or vacationing in the mountains. A group of people aged 20 to 30 very often have their permanent residency registered in a small village of LM, although they live outside that area in big cities or abroad. On the other hand, there are town borders extending into the LM area, whose vacancies attract people of those surrounding municipalities, which are not registered as permanent residents in LM.

What does being a resident of a municipality mean? It requires further examination. Not everybody listed as a permanent resident of a certain municipality actually lives in that municipality; not only people listed as permanent residents of certain municipality live there. Generally, it can be declared the greater population of a certain municipality the greater the influence of IN and OUT people on it. Places where people work, road network and its quality, attractiveness for tourism and other factors are not negligible in this examination.

COUT has been calculated based on municipalities' cadastral areas in LM by means of QGIS 2.2.0 software. CIN has been calculated based on municipalities built-up areas in LM using the Google Maps application. The population-size, number of houses and flats of a municipality, the population ethnic and age structure, economic activity, education and computer skill shave been drawn from the Statistical Office of the Slovak republic data (portal.statistics.sk) and from Com. authors (1978 and 2004) books. When analysing the population characteristics, we consider the population distributed evenly within a municipality built-up area.

POPULATION DEVELOPMENT IN THE LEVOČA MOUNTAINS (LM)

When applying the approach of municipality cadastral area (COUT coefficient counting, for OUT population), we find that there is population-size decline in 1880-1921 and population growth in 1921-2011 (table 3). The 34% population growth in 2001-2011 was caused by the Javorina Military District termination. This does not mean that there are really 10,000 more people, but rather that the LM territory is now more open for human activities, such as agriculture, forestry, cottaging or settlements building. Thus more people would influence the mountains by their action. Not overnight, but gradually activity would increase.

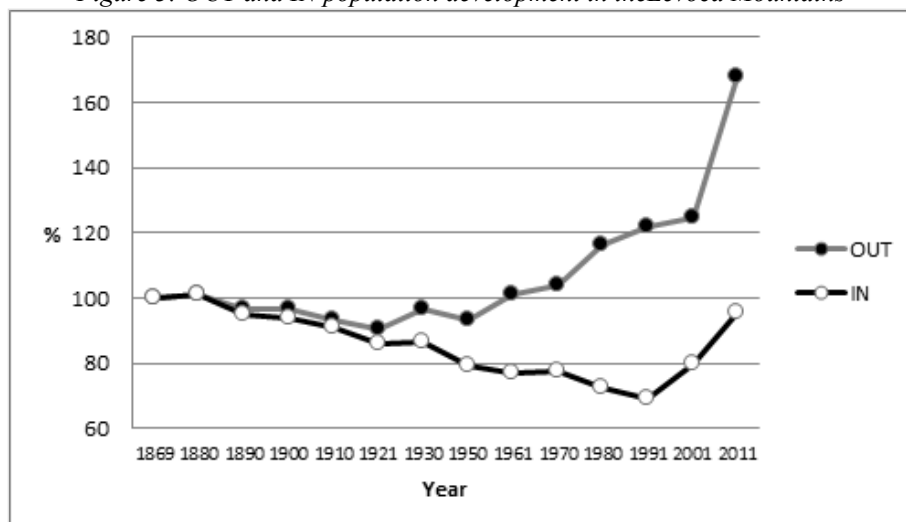
When applying the approach of municipality built-up area (CIN coefficient counting, for IN population), we find that there is 32% population-size decline in 1880-1991 and population growth in 1991-2011 (table 3). Population density of LM (calculated from IN population) was 20.2 people per km² in 2011. The comparison of IN and OUT population in LM is shown in figure 3.

Table 3: Development of OUT and IN population-size in Levoča Mountains.

Year	1869	1880	1890	1900	1910	1921	1930
OUT population-size	24,959	25,298	24,066	24,079	23,327	22,553	24,117
IN population-size	13,117	13,229	12,416	12,282	11,923	11,237	11,344
Population density	21.2	21.3	20.0	19.8	19.2	18.1	18.3
Year	1950	1961	1970	1980	1991	2001	2011
OUT population-size	23,239	25,186	25,986	28,956	30,357	31,164	41,851
IN population-size	10,394	10,060	10,134	9501	9076	10,456	12,517
Population density	16.8	16.2	16.3	15.3	14.6	16.9	20.2

Based on Statistical Office of the Slovak republic

Figure 3: OUT and IN population development in the Levoča Mountains



The OUT population growth is primarily related with urbanization at the border of mountains. The IN population growth in the last 20 years has been related with the very high birthrate of the Romany population. The IN and OUT population and the LM municipalities division into core, border and outer municipalities is shown in a map (figure 4).

The greatest number of IN inhabitants in LM was in the year 1880 (13,229) and the least in 1991 (9076). However, we assume there were even more people living there in the period 1869-1950 than IN population-size indicated, as many of OUT inhabitants used to farm the mountain area, especially in the summer time. The Javorina Military District formation in 1953 caused complete depopulation of the central part of the LM. In the LM in the last decades, we assume there were even fewer people than the IN population-size indicated, since farming in the mountain area has been replaced by the industrial work in towns and cities where many people commuted to work, while still being registered as permanent residents of the LM territory.

Table 4: Houses in Levoča Mountains.

Year	1880	1890	1900	1910	1921	1930	1950
Number of houses	2091	2182	2389	2322	2442	2518	2379
IN population-size	13,229	12,416	12,282	11,923	11,237	11,344	10,394
People per house	6.3	5.7	5.1	5.1	4.6	4.5	4.4
Year	1961	1970	1980	1991	2001	2011	
Number of houses	1863	1862	1827	1747	1755	2141	
IN population-size	10,060	10,134	9501	9076	10,456	12,517	
People per house	5.4	5.4	5.2	5.2	6.0	5.8	

Based on Statistical Office of the Slovak republic and Retrospective lexicon of municipalities 1850-1970

AGE STRUCTURE OF THE LEVOČA MOUNTAINS POPULATION IN 2011

Among the 12,518 LM people in 2011, there were more male (50.5%) than female. There were 3920 people (31.3%) aged 0-14, 7259 people (58.0%) aged 15-59 and 1338 people (10.7%) aged 60 and over (table 5), which is very similar to the Slovak population age structure in 1920-1940. This is a progressive population with continuous growth in the number of children (figure 5).

Figure 5: The Levoča Mountains population in 2011 by the year of birth.

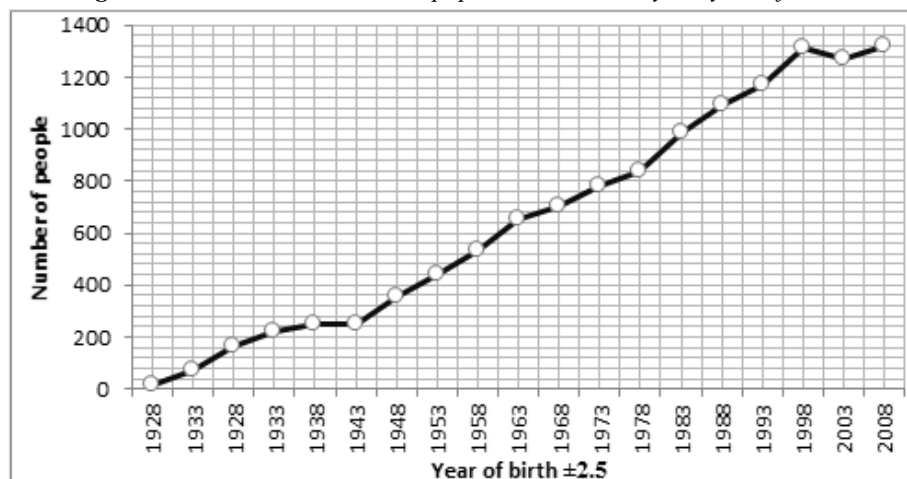


Table 5: Age structure of the Levoča Mountains population in 2011.

Population-size			Age group							
Total	Men	Women	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39
12,518	6320	6199	1326	1275	1319	1178	1100	993	846	789
Age group										
40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
706	662	538	447	358	252	255	220	166	72	15

Based on Statistical Office of the Slovak republic

ETHNIC STRUCTURE OF LEVOČA MOUNTAINS POPULATION IN 2011

According to the data from the national census, out of the 12,517 people 59.7% admitted to be of Slovak ethnicity, 30.2% of Roma ethnicity, 2.3% of Ruthenia ethnicity and 7.4% were undetected. However, our estimate (based on Com. autors, 2004) would suggest that the Roma ethnic group was in fact the majority (table 6).

Table 6: Ethnic structure of the Levoča Mountains population in 2011.

	Ethnic group	Slovak	Roma	Ruthenian	Another	Undetected	Total
According to the census	Number of	7474	3774	292	46	931	12,517
	%	59.7	30.2	2.3	0.4	7.4	100
Estimate	Number of	4610	7560	300	47	-	12, 517
	%	36.8	60.4	2.4	0.4	-	100

Based on Statistical Office of the Slovak republic and Atlas of Romany communities 2004

ECONOMIC ACTIVITY OF THE LEVOČA MOUNTAINS POPULATION IN 2011

Among the 12,517 inhabitants of LM there were 5156 (41.2%) belonging to the economically active population (EAP) group and 2221 people actually working. The unemployment rate among EAP was 55.0%. The share of employed in the overall population was only 17.1%. There are more details listed in table 7.

Table 7: Economic activity of the Levoča Mountains population in 2011.

Category	Total	Employed (except ret.)	Working retired	Maternity leave	Parental leave	Unem-ployed	High school
Number	12,517	2141	80	60	288	2836	515
%	100.0	17.1	0.6	0.5	2.3	22.7	4.1
Category	Uni	At home	Retired	Up to 16	Another	Undetected	EAP
Number	164	138	1520	4152	53	581	5156
%	1.3	1.1	12.1	33.2	0.4	4.6	41.2

Based on Statistical Office of the Slovak republic

COMPUTER SKILLS OF LEVOČA MOUNTAINS POPULATION IN 2011

According to the 2011 census most LM people are able to work on the Internet (63% EAP) and the least are able to work with tables (41% EAP). One fifth of the population work with email and less than a quarter with word processing (table 8).

Table 8: Computer skills of the Levoča Mountains population in 2011.

	Working on the Internet	Working with word processing	Working with email	Working with tables
Number	3257	2883	2536	2124
% of population	26.0	23.0	20.3	17.0
% EAP	63.2	55.9	49.2	41.2

Based on Statistical Office of the Slovak republic

CORE MUNICIPALITIES OF THE LEVOČA MOUNTAINS

The category of the core municipalities category includes 15 LM municipalities, whose entire built-up areas are located on the LM territory. In 2011, 83% of the LM population were living in these municipalities. Following population development in 1910-2011, 1991-2001 and 2001-2011 they can be divided into two groups: municipalities with growing populations and municipalities with declining population (table 9). The most significant population decline was recorded in Pavľany village (77% in the last 100 years, or 30% in the last decade). On the other hand, the most significant population growth was recorded in Lomnička village (282% in the last 100 years, or 77% in the last decade). Comparison of population development of the increasing and decreasing municipalities is shown in figure 6. By 1961, the both categories have had similar trend. In the 1960s, the sudden change owing to the social development (urbanization, industrial growth) occurred.

Let us now consider relation of distance from the nearest town (measured using Google Maps) and population growth over the last 100 years hinted in Table 9. Generally, for the core municipalities it is true to say that the greater distance from the nearest town the smaller population growth in 1910-2011. Among 9 municipalities with the greatest distance from the nearest town (13 to 20 km), there are 8 with declining populations. On the other hand, among 6 municipalities with the shortest town distance (TD), there are 5 with growing population-size rate (figure 7).

Table 9: Population growth of the core municipalities in the Levoča Mountains.

Name of municipality	Population-size				Percentage growth			Increase/Decrease	TD (km)
	1910	1991	2001	2011	1910-2011	1991-2001	2001-2011		
Brutovce	526	260	221	197	-63	-15	-11	↓	22
Holumnica	535	694	777	872	63	12	12	↑	4
Hradisko	181	110	104	101	-44	-5	-3	↓	14
Ihľany	997	1075	1251	1432	44	16	14	↑	10
Jurské	309	543	758	1027	232	40	35	↑	8
Križová Ves	583	1387	1613	2008	244	16	24	↑	3
Lomnička	701	972	1516	2680	282	56	77	↑	4
Nižné Repaše	533	273	231	189	-65	-15	-18	↓	15
Ofšavica	808	372	327	291	-64	-12	-11	↓	20
Pavľany	252	138	83	58	-77	-40	-30	↓	16
Tichý Potok	612	387	393	348	-43	2	-11	↓	15
Torysky	886	470	416	354	-60	-11	-15	↓	16
Uloža	394	196	190	193	-51	-3	2	↓	7
Vlkovce	164	377	437	469	186	16	7	↑	16
Vyšné Repaše	398	160	128	107	-73	-20	-16	↓	12
Total	7879	7414	8445	10,326	31	14	22	↑	12

TD – Town Distance, distance from the nearest town

Based on Statistical Office of the Slovak republic

Figure 6: Population development of the increasing and decreasing LM core municipalities.

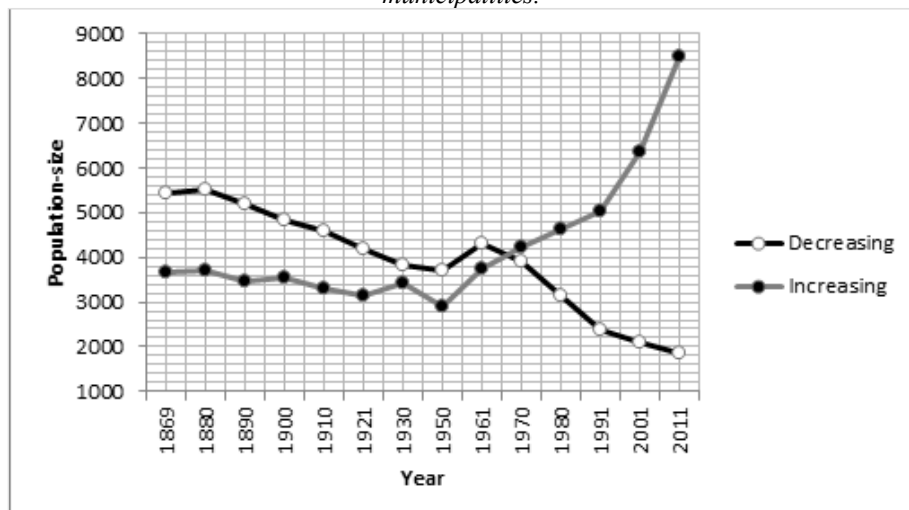
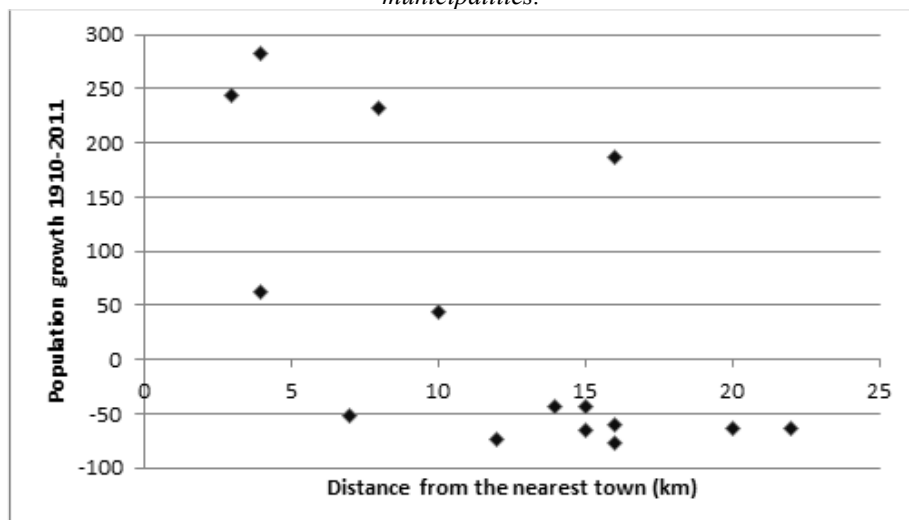


Figure 7: Relation of the town distance and population growth in the LM core municipalities.



DECREASING CORE MUNICIPALITIES OF THE LEVOČA MOUNTAINS

There are 9 decreasing core municipalities in LM: Brutovce, Hradisko, Nižné Repaše, Olšavica, Pavľany, Tichý Potok, Torysky, Uloža and Vyšné Repaše. In the last 100 years the population-size has decreased by 2.5 times and the number of houses 1.2 times. Many houses are abandoned and there were on average 2.3 people per house in 2011 (table 10).

Table 10: Population, houses and flats development in decreasing core municipalities of Levoča Mountains.

Year	1869	1880	1890	1900	1910	1921	1930	1950	1961	1970	1980	1991	2001	2011
Population-size	5432	5530	5211	4813	4590	4174	3810	3703	4318	3893	3147	2366	2093	1838
Number of houses	-	893	931	989	937	939	917	874	830	790	752	664	609	784
Number of flats	-	-	-	-	-	-	-	-	-	805	786	698	644	526
People per house	-	6.2	5.6	4.9	4.9	4.4	4.2	4.2	5.2	4.9	4.2	3.4	3.4	2.3
People per flat	-	-	-	-	-	-	-	-	-	4.8	4.0	3.4	3.3	3.5

Based on Statistical Office of the Slovak republic and Retrospective lexicon of municipalities 1850-1970

There were 1838 people living in these municipalities in 2011. In the 0-14 age group were 14.4% inhabitants, 58.5% ranged in age between 15-59 and 26.6% were aged 60 and over. The age structure of these people is shown in figure 8. It is a regressive population. Among ethnic groups the Slovak population is most dominant (over 80%), followed by Ruthenian (15%) and Romany ethnic group (2%), see table 11.

Table 11: Ethnic structure in decreasing core municipalities of Levoča Mountains in 2011.

Ethnic group		Slovak	Roma	Ruthenian	Another	Undetected	Total
According census	Number of	1480	7	266	6	79	1838
	%	80.5	0.4	14.5	0.3	4.3	100
Estimate	Number of	1520	36	275	7	-	1838
	%	82.7	2.0	15.0	0.4	-	100

Based on Statistical Office of the Slovak republic and Atlas of Romany communities 2004

Now we shall consider the population's highest level of education attained - 98.6% of those aged 15 years and older completed primary school and 73.1% of those aged 20 years and older completed high school. There are 10.2% people in the 25+ age group, who graduated from university. Regarding computer skills, 46.4% of inhabitants are able to work on the Internet (110% of EAP) whereas only 37.5% of people (89% EAP) were able to work with email. The number of EAP is 776 (42%). EAP unemployment rate is 21.6% and there are many of retired people (28%). All over the declining municipalities population the third is employed (table 14).

INCREASING CORE MUNICIPALITIES OF THE LEVOČA MOUNTAINS

There are 6 increasing core municipalities in LM: Holumnica, Ihľany, Jurské, Križová Ves, Lomnička and Vlkovce. Over the last 100 years the population-size has increased 2.6 times and the number of houses 1.37 times. There were many people and only a few houses in 2011 – over 9 people lived per house (table 12).

Table 12: Population, houses and flats development in increasing core municipalities of the Levoča Mountains.

Year	1869	1880	1890	1900	1910	1921	1930	1950	1961	1970	1980	1991	2001	2011
Population-size	3676	3720	3465	3540	3289	3156	3438	2896	3745	4233	4618	5048	6352	8488
Number of houses	-	550	529	647	662	695	739	684	683	701	700	722	788	905
Number of flats	-	-	-	-	-	-	-	-	-	763	813	847	990	1008
People per house	-	6.8	6.6	5.5	5.0	4.5	4.7	4.2	5.5	6.0	6.6	7.0	8.1	9.4
People per flat	-	-	-	-	-	-	-	-	-	5.5	5.7	6.0	6.4	8.4

Based on Statistical Office of the Slovak republic and Retrospective lexicon of municipalities 1850-1970

In 2011, 8488 inhabitants lived there, 37% of which match the age group 0-14, 57% were aged 15-59 and only 6% were 60 or over. The age structure of these people is shown in figure 8. It is a progressive population. In accordance with the census data, the Romany population comprise 3550 people (42%) and less than a half were Slovaks. However, we have estimated there is in fact a majority of the Romany ethnic group with 68%, while the Slovak ethnicity accounts for only about 31% of the population (table 13).

Table 13: Ethnic structure in increasing core municipalities of Levoča Mountains in 2011.

Etnic group		Slovak	Roma	Ruthenian	Another	Undetected	Total
According census	Number of	4192	3550	21	29	696	8488
	%	49.4	41.8	0.2	0.3	8.2	100
Estimate	Number of	2663	5800	10	15	-	8488
	%	31.4	68.3	0.1	0.2	-	100

Based on Statistical Office of the Slovak republic and Atlas of Romany communities 2004

Figure 8: Share of population in decreasing and increasing core municipalities of Levoča Mountains in 2011 by the year of birth.



Let us now consider education. Among those aged 15 years and older, 95.1% completed primary school. Among those aged 20 years and older, 40.3% completed high school. There are 6.7% of people in the 25+ age group, who graduated from university. There are 17% of inhabitants, who are able to work on the Internet (43% of EAP), with just 12.5% of people (31% EAP) using email. The number of EAP is 3385 (40%), EAP unemployment rate is 70.5% and there are only a few retired (7.7%). All over the increasing municipalities less than the fifth of the population does work (table 14).

Table 14: *Economic activity of the decreasing and increasing core municipalities population of the Levoča Mountains in 2011.*

	IN population		Decreasing core municipalities		Increasing core municipalities	
	Number	%	Number	%	Number	%
Population-size	12,517	100	1838	100	8488	100
Economically active population (EAP)	5114	41.2	776	42.2	3385	39.9
Share of employed in the population	2221	17.7	608	33.1	961	11.3
EAP unemployment rate	2836	55.0	168	21.6	2388	70.5
Childcare and home	486	3.9	45	2.5	353	4.2
Pensioners	1520	12.1	516	28.1	650	7.7

Based on Statistical Office of the Slovak republic

VLKOVCE MUNICIPALITY

Vlkovce village is ranked among the core municipalities of the Levoča Mountains. The whole of its cadastral area falls to the LM territory. It is the only core municipality of LM with a growing population despite the fact that there is no-one of Romany ethnic group. The 16-km distance from the nearest town (Kežmarok) does not appear to be an obstacle to growth. There were 469 inhabitants in 2011 and 50.7% were male. The 0-14 age group included 23.7% people, the 15-59 age group 63.6% and there were 12.6% people aged 60 or over. EAP category included 206 people (44%). There were 37.9% of inhabitants working and EAP unemployment rate was 15%.

LOMNIČKA MUNICIPALITY

Similarly as with the former municipality mentioned, Lomnička village is a core municipality of Levoča Mountains with a growing population. About 99.5% of people are Romany. The distance from the nearest town (Podolíneč) is only 4 km. There were 1516 inhabitants in 2001 and 2680 in 2011, which is an enormous growth of 76.8% of people in just 10 years! Considering the same population increase in the future, Lomnička village would have 4737 inhabitants in 2021, 8375 in 2031, 14,806 in 2041, 26,174 in 2051 and an unimaginable number of over 400,000 inhabitants in 2100, what is very unlikely. There were 50.8% of male in 2011. The 50.4% of people were in the 0-14 age group, 47.7% in the 15-59 age group and only 1.9% aged 60 or above. The EAP category included 836 people (31%). There were only 2.9% of

inhabitants working and the EAP unemployment rate was over 70%. There is no doubt it is unsustainable (figure 9). The reduction of poverty in the context of sustainable development is here essential.

Figure 9: Life motivation of Lomnička inhabitants

19/20 century	20/21 century
money = farming children = help with farming	money = having children children = money from government

CONCLUSION

In this article we provided the basic statistical characteristics of the inhabitants of the Levoča Mountains, which despite their limited accuracy and reliability help us to have a better understand of the LM population. While the LM population grows in number, it falls economically. So-called autochthonous inhabitants of LM have been decreasing since 1869 to this very day. Conversely, allochthonous inhabitants of LM have strongly increased in the last decades, because they are relying on the governments benefits for children taken monthly from nearby towns. The population-size of the central part of the mountains has been declenaning not only because of the existence of Javorina Military District in period 1953-2010, but also because of three more reasons: farming in mountainous area was replaced with industrial work in towns, it is quite far to travel to a town from there and there are no allochthonous inhabitants.

There are several opportunities for Levoča Mountains development: in the military region (forest management, tourism, cottaging etc.), but especially in the Romany ethnic region development (quality education, jobs creation, local business development, gardening, Romany culture tourism etc.).

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Acknowledgment

The work was supported by the Agency of Ministry of Education, Science, Research and Sport of the Slovak Republic, the project ITMS: 26110230100.