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Dragica MIJANOVIĆ¹, Dusko VUJAČIĆ¹, Branka MANOJLOVIĆ¹, Mileva BRAJUSKOVIĆ POPOVIĆ¹, Velibor SPALEVIĆ*^{1,2}

POPULATION DYNAMICS IN THE MOUNTAINOUS AREAS OF MONTENEGRO: ECOLOGICAL TRANSITIONS AND DEMOGRAPHIC TRANSFORMATIONS IN PLJEVLJA SINCE THE BEGINNING OF THE 21ST CENTURY

SUMMARY

The paper deals with the demographic development of the northernmost municipality in Montenegro, with a special emphasis on migration trends, which have intensified since the second half of the last century. The municipality of Pljevlja is specific in this regard because it had the highest growth in emigration since the beginning of the 21st century in Montenegro, regardless of the fact that it has natural potentials, which, unfortunately, have not been adequately used, so the municipality is still classified as underdeveloped. The consequence of the weak economic development of the municipality is the continuous decline in the number of inhabitants, namely, Pljevlja's share in the total population of Montenegro decreased from 9.7% in 1961 to 4.2% in 2021. In the paper, we will look at the ecological transitions and demographic transformations of the municipality. By analyzing the demographic parameters, we will point out the consequences of migration, which are directly reflected in the further demographic development of the municipality. Analysis of the overall movement of the population (natural movement and migration), the age-gender structure of the municipality's population and rural population size will prove the set hypotheses.

Keywords: economy, ecology, demographic development, emigration, population structure, depopulation.

¹Dragica Mijanović, Dusko Vujačić, Branka Manojlović, Mileva Brajusković Popović, University of Montenegro, Faculty of Philosophy, Study program Geography, Niksic, MONTENEGRO,

²Velibor Spalević (corresponding author: velibor.spalevic@gmail.com), University of Montenegro, Biotechnical Faculty, Podgorica, MONTENEGRO

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INTRODUCTION

The correlation between human development and human mobility is a matter of intense debate and academic deliberation. A commonly held belief asserts that global migration primarily stems from disparities in wealth and developmental stages across regions. This perspective is mirrored in policy frameworks and media narratives, wherein the lack of development and the associated issues of poverty and conflict are generally attributed as significant, if not the primary, drivers for migration from less affluent to more prosperous nations, as well as for rural-to-urban migration within developing countries. Consequently, the mitigation of such disparities through the enhancement of economic growth in less privileged nations is often regarded as the most potent approach to mitigate or address the phenomenon of international migration (Böhning and Schloeter-Paredes, 1994; De Haas, 2007).

Depopulation and deagrarisation appeared as the main limiting factors for rural development in Montenegro, and thus for the Municipality of Pljevlja. These phenomena particularly came to the fore after the Second World War. Industrialization has caused migration from rural areas to the administrative and economic centres (Despotovic *et al.*, 2015).

The population matters and corresponding policies have witnessed significant transformations from the 20th to the 21st century. The swift expansion of the global population, which seemed uncontrollable in the latter half of the 20th century and was prominently addressed in population policies, has currently shown a deceleration in its annual growth rates. Undeniably, while the yearly surge in population numbers remains noteworthy, an average of 87 million individuals have been incrementally included in the global populace each year from 1981 to 2020 (United Nations, 2022).

The possibility of achieving zero population growth and reaching the peak population might emerge before the conclusion of this century, albeit this notion is presently under discussion (O'Sullivan, 2022). Despite rapid population growth still occurring in sub-Saharan Africa and some other regions (mainly a few countries in the Middle East and parts of South Asia, e.g., Yemen, Afghanistan, Pakistan), most of the world's population is now experiencing low fertility and, consequently, population aging (United Nations, 2022; Goldstone & May, 2022).

The global landscape is progressively undergoing urbanization. Moreover, an array of novel challenges has surfaced; encompassing matters like climate change, emerging pandemics, global migration, and the movement of refugees (Goldstone & May, 2022).

In addition to altering the emphasis, there has been a transformation in the broader formulation of population policies, transitioning from interventions rooted in demographics to the acknowledgment and promotion of reproductive rights (Bernstein *et al.*, 2022).

The interplay between demographic processes and the developmental stage of a specific region exhibits a causal relationship. Within this intricate web of interrelations, the needs and opportunities of the populace exert an influence on spatial advancement. Conversely, the inherent and ongoing functional traits of a given space exert an impact on shaping the trajectories of demographic processes. Among the array of contemporary demographic challenges, the uneven spatial dispersion of population stands out prominently. In the course of demographic or other types of polarization, the existence of one or more focal points of population or functions becomes imperative. More often than not, the capital city assumes the role of a dominant pole, steering the development of the entire territory. Frequently, the magnetic allure and potency of the capital outpace the capacities of the rest of the nation, resulting in pronounced imbalances in population and functionality. This resultant scenario not only exacerbates the propagation of adverse population trends but also engenders fresh economic and organizational predicaments (Filipovic *et al.*, 2022).

The municipality of Pljevlja is located in the northernmost part of Montenegro, with an area of 1,346 km², covering 9% of the country's territory and is the third largest municipality in Montenegro (MONSTAT, 2021). The average altitude of the municipality ranges from 1,000 to 1,200 m. An important characteristic of the municipality is its peripheral position in relation to the rest of the country, as evidenced by the fact that it is bypassed by all international road routes, and even internal roads and the main tourist routes in the country. Such position had a weighty impact on the economic development of the municipality, regardless of significant natural potentials and mineral resources, and it caused specific demographic trends, especially in the last decades of the 20th and the beginning of this century.

During the former SFR Yugoslavia, industrial development began in Pljevlja, which was one of the most underdeveloped municipalities in Montenegro. First, in 1953, the "Suplja Stijena" lead and zinc flotation mine was opened, a coal mine, then the agricultural enterprise PTK Pljevlja, the transporttourism company "Prevoz" - Pljevlja, the construction company "Gradjevinar", the knitwear and clothing industry "Tara" and forest-industrial plant "Velimir Jakic". For a short period of time (1975-1978), a cement factory worked as well, but was closed due to the environmental problems it caused. In 1982, the most important economic facility in the municipality, Thermal Power Plant Pljevlja, began operating, which today, along with the coal mine, is the sole carrier of economic development in the municipality.

The industrial development of the municipality in the second half of the last century, caused large-scale migration from rural areas to the city of Pljevlja thanks to the substantial demand for labor, which resulted in a significant decrease in the number of residents in rural areas on one hand, and a high growth in the number of residents in the city on the other. Regardless of the major industrial and economic development, there were still large-scale migrations out of the municipality, which the rates of natural increase could not compensate for, thus, since the 80s of the last century there has been a greater decrease in the number of inhabitants.

Since the second half of the last century, the population in the municipality has decreased from 46,677 in 1961 to 35,806 in 2003. In the period 1981-2003, the intensity of population decline has increased significantly compared to the previous period (1961-1981). By comparing the data for the rural and urban population, it is evident that the decrease in the population of the municipality is mainly a consequence of the decrease in the rural population from 35,200 to 14,448, while in the same period (1961-2003) the number of the urban population increased from 11,477 to 21,741. From the data on the number of inhabitants of

rural settlements, the urban settlements (the city of Pljevlja and Gradac) and the municipality as a whole, it is easy to conclude that internal rural-urban migration was significantly more intense than emigration outside the borders of the municipality, in which the municipality lost 8,871 inhabitants, because, in the same period, rural settlements lost 20,752 inhabitants, while urban settlements gained 10,264 inhabitants.

MATERIAL AND METHODS

Pljevlja is a city and seat of the municipality of the same name in Montenegro. It is located in the north of the country (Figure 1) in the center of the spacious Pljeval basin at the foot of the Golubinja hill. It lies on three rivers: Breznica, Ćehotini and Vezišnica. The city is the center of the energy potential of Montenegro, an important industrial, cultural and educational center.



Figure 1. Location of Pljevlja - Map showing major population centers in Montenegro as well as parts of surrounding countries and the Adriatic Sea. (Source: Google Earth; The World Factbook Washington, DC: Central Intelligence Agency, 2021)

While scrutinizing migration patterns and their ramifications in the Pljevlja municipality, conventional demographic techniques were employed. This encompassed analysis, synthesis, and the comparative approach to unveil the socio-economic dynamics of the region and the prevailing natural and environmental factors. Statistical indicators were presented and manipulated using mathematical and statistical methodologies. Microsoft Excel was utilized for generating tables and graphs, supplemented by a comprehensive examination of both international and domestic literature that delved into the intricacies of migration's causes and consequences.

We applied a SWOT analysis as a strategic planning tool to assess the internal and external factors affecting situation in the studied region. It provides a structured framework for evaluating the strengths, weaknesses, opportunities, and threats associated with a particular context. The primary purpose of conducting a SWOT analysis was to gain a comprehensive understanding of the current state of affairs, which can then guide decision-making and strategy development. It provides a concise overview of the key aspects that will be explored in more detail.

Based on the analyzed causes of intensive emigration from the municipality of Pljevlja, as well as the consequences it caused, the paper will prove the following hypotheses:

- •that as a result of increased emigration, there was a significant decrease in the number of inhabitants in the municipality, especially in rural areas;
- •that the economic collapse of the municipality since the 90s of the last century significantly strengthened emigration outside the municipality;
- •that rural-urban migration movements, which were particularly intense in the second half of the last century in the municipality, gained intensity at the end of the 20th and the beginning of the 21st century as a consequence of the economic decline and bad ecological situation in the municipality;
- that Podgorica and coastal municipalities are the most attractive for migrants;
- •that, due to the intensive emigration from the municipality as a whole, and especially from the rural area, there were accelerated changes in the age-gender structure of the population;
- •that as a result of emigration there was a demographic fragmentation of rural settlements.

Economic characteristics of the municipality today

The political events in the 90s of the last century, leading to the disintegration of the former SFR Yugoslavia, which included the former SR Montenegro, caused major changes both in the economic sphere and in other segments, which was reflected to a large extent in the demographic development of the municipality. The economic sanctions to which the state was exposed at the time caused tectonic changes in the economy, which was in crisis for many years,

resulting in the shutdown of a large number of industrial companies in Montenegro, which certainly did not bypass any of the less developed municipalities. Along with the decline of industrial companies in the so-called period of transition went the privatization of companies as well, which caused a rather chaotic situation, because capacity reductions and massive layoffs followed. As a result of all that, in the municipality of Pljevlja, out of a dozen economic entities in which, according to data from 1984, 14,000 residents worked, only the Pljevlja Coal Mine and the Thermal Power Plant are in operation today. Since then, Prevoz Pljevlja, Monter, Trikotaza, many agricultural enterprises, Cementara, Tara, Sloga, Ciglana, Gradjevinar and 1. Decembar have all been shut down. The unique Sumarstvo was divided. Some of the listed companies were given more modern names after privatization, such as Optel-Vektra, Castelo-Montenegro, Monterkod. New company names did not mean new production capacities, on the contrary" (https://tvpljevlja.me/). In the meantime, due to the closure of companies and privatization, which necessarily meant a reduction in the number of jobs, in 2020 the number of employees was 5,063 (https://tvpljevlja.me/), which is a little more than 1/3 of the employees from 80s of the last century.

A significant surplus of employees had been solved mainly by regular or early retirement, so the municipality came to a situation where it has a large number of retirees, 6,691 (https://tvpljevlja.me/), which exceeds the number of workers, presenting an additional burden on employees and their earnings, if we add to that a significant number of unemployed persons (over 3,100) and other dependents. These trends in economic development in the municipality also determined the course of demographic trends to a significant extent, which has been clearly reflected since the 80s of the last century, first in the population decline, the rates of natural migration and finally in significant changes in the age structure of the population.

Environmental characteristics of the Municipality

Pljevlja is the municipality in Montenegro whose water, air and soil are the most polluted. Moreover, according to the level of pollution, Pljevlja is the European record holder. One of the biggest polluters of Pljevlja, together with the Coal Mine, is the Pljevlja Thermal Power Plant, which was put into operation in the early eighties of the last century. The plant is the main producer of industrial waste. The total annual production of waste for the territory of Pljevlja amounts to about 571 thousand tons of waste, of which 280-300 thousand tons are ash, created by burning coal as an energy fuel for power plants. In 30 years of operation, the Thermal Power Plant burned about 35 million tons of coal, of which it deposited 12 million tons of ash and slag waste. The rest of the waste consists of waste, but require special handling. Numerous analyzes show an increased content of metals, fluorine and boron in relation to the maximum

allowed concentrations. Elevated values of radioactivity were also recorded, but they were below the maximum permissible limits. The Center for Ecotoxicological Research performed a characterization of the ash and it is classified as hazardous waste due to its high pH value, which is a parameter for determining the quality of drinking water, as well as surface water (Zagadjenje u opstini Pljevlja, Slucaj Termoelektrane, 2014).

One of the biggest environmental problems in Pljevlja is the high degree of air pollution with floating particles. The measured concentrations of pollutants at the measuring point in the urban part of Pljevlja mostly reflect the influence of local sources, primarily collective boiler rooms. The state of the environment in that northern municipality is a consequence of the development of the economy, the exploitation of natural resources, the construction of settlements, roads, and other facilities. The analysis of its current state shows that mining and electricity production have a dominant influence, leading to large-scale degradation, pollution and changes in the configuration of the terrain and landscape. All of this causes major pollution of the air, surface and underground water, soil degradation and pollution, accumulation of waste, deterioration of the population's health, but also the destruction of flora and fauna in that area. Conducting a strategic environmental impact assessment ensures the compliance of the activities defined by the plan with the applicable legal regulations and state planning documents in Montenegro. It assessed possible negative impacts on the environment. The Spatial Plan of Montenegro and the National Strategy of Sustainable Development defined the preservation of the quality of the environment and the improvement of natural values, the uniqueness of the space, cultural and natural heritage of Montenegro, as well as general goals in the field of environmental protection (Izvjestaj o strateskoj procjeni uticaja na zivotnu sredinu za PUP Pljevlja, 2018.).

In Pljevlja, there are about 1,100 different individual boiler rooms within family houses, the power of which are approximately known and ranges from 20-50 kW for about 1,050 rooms to 50-100 kW for about 50 rooms, with an estimated annual consumption of about 8,000 tons of coal. It is estimated that there are about 2,500 individual fireplaces that use a stove, and for an average consumption of 3 tons of coal per household, the annual consumption amounts to 7,500 tons of coal. Furthermore, it is important to note that a significant number of households have switched to heating using pellets as fuel, but the number of these fireplaces is not yet known. Due to the high price of coal, many households use wood as fuel, for which there is no data on the amount consumed (source: Municipality of Pljevlja).

RESULTS AND DISCUSSION

In order to provide a snapshot of the situation, helping the audience understand the broader context and issues at hand we applied SWOT analyses in some segments with the idea to analyze complex information into a few key points, making it easier to grasp the main factors influencing the subject. The SWOT framework prompts strategic thinking by categorizing factors into internal (strengths and weaknesses) and external (opportunities and threats) aspects. The insights gained from the SWOT analysis can inform decision-making processes by identifying areas for improvement, potential growth, and potential challenges.

The SWOT Analysis for Economic Characteristics and Environmental Characteristics of the Municipality of Pljevlja are presented in the following presentation.

SWOT Analysis for Economic Chara	cteristics of the Municipality of Pijevija					
Strengths:	Weaknesses:					
Resource Utilization: Historically, the	Industrial Decline: The disintegration of					
municipality had a diversified industrial	the former Yugoslavia and subsequent					
base with several active economic	economic sanctions led to the closure of					
entities, including the Pljevlja Coal	numerous industries, resulting in a loss of					
Mine and Thermal Power Plant.	jobs and economic vibrancy.					
Industrial Legacy: The past presence	Lack of Diversification: Over-reliance on					
of various industries, including	a few key industries, such as coal and					
manufacturing and agriculture,	power, has left the municipality vulnerable					
highlights the region's potential for	to economic shocks.					
economic development.	Workforce Imbalance: The closure of					
Historical Resilience: The municipality	companies and privatization efforts has left					
survived the tumultuous political and	the municipality with a significant					
economic events of the 90s, displaying a	imbalance between retirees, unemployed					
degree of resilience in adapting to	individuals, and active workers.					
changes.						
Opportunities:	Threats:					
Rejuvenation Efforts: The decline of	Economic Instability: A heavy reliance on					
Rejuvenation Efforts: The decline of former industries provides an	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors,	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances,					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth.	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality.					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper strategies and incentives, the	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job prospects and economic opportunities may					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper strategies and incentives, the municipality can attract investment in	Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job prospects and economic opportunities may lead to a continued outmigration of					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper strategies and incentives, the municipality can attract investment in emerging industries, creating new job	 Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job prospects and economic opportunities may lead to a continued outmigration of working-age population, aggravating 					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper strategies and incentives, the municipality can attract investment in emerging industries, creating new job opportunities.	 Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job prospects and economic opportunities may lead to a continued outmigration of working-age population, aggravating demographic challenges. 					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper strategies and incentives, the municipality can attract investment in emerging industries, creating new job opportunities. Re-skilling Workforce: Reskilling and	 Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job prospects and economic opportunities may lead to a continued outmigration of working-age population, aggravating demographic challenges. Depopulation Spiral: Economic decline 					
Rejuvenation Efforts: The decline of former industries provides an opportunity to explore new sectors, fostering economic diversification and growth. Investment Attraction: With proper strategies and incentives, the municipality can attract investment in emerging industries, creating new job opportunities. Re-skilling Workforce: Reskilling and upskilling initiatives can equip the	 Economic Instability: A heavy reliance on a shrinking industrial base, coupled with unemployment and workforce imbalances, poses a threat to the economic stability of the municipality. Population Exodus: The lack of job prospects and economic opportunities may lead to a continued outmigration of working-age population, aggravating demographic challenges. Depopulation Spiral: Economic decline can lead to reduced services, infrastructure 					
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The economic characteristics of the Municipality of Pljevlja exhibit a complex interplay of strengths, weaknesses, opportunities, and threats. While the decline of key industries presents challenges, it also opens doors for renewal and diversification. Strategic efforts to attract investment, re-skill the workforce, and

diversify the economic base could help counteract the threats of depopulation and economic instability, paving the way for a more resilient and prosperous future.

SWOT Analysis for Environmental Characteristics of the Municipality of Pljevlja

с 1је у 1ја	
Strengths:	Weaknesses:
Awareness: The assessment clearly	Pollution Magnitude: Pljevlja is
highlights the severe environmental issues	recognized as a European record holder
faced by the municipality, creating	for pollution, indicating the seriousness
awareness for potential action.	of the problem.
Detailed Data: The analysis provides	Limited Clean Energy Use: The
specific data on pollutants, waste	prevalence of coal, oil, and other
production, and environmental impact,	pollutants in heating methods suggests a
offering a comprehensive understanding of	reliance on non-renewable energy
the situation.	sources, contributing to pollution.
Legal Framework: The existence of legal	Lack of Consumption Data:
regulations and state planning documents	Insufficient data on wood consumption
for environmental protection provides a	for heating complicates the assessment
foundation for addressing the issues.	of its impact on pollution.
Opportunities:	Threats:
Transition to Cleaner Energy: The shift	Health Implications: Pollution
towards using pellets as a fuel source	contributes to deteriorating population
presents an opportunity to reduce pollution	health, which can lead to increased
and improve air quality.	healthcare costs and decreased quality of
Strategic Environmental Impact	life.
Assessment: Conducting a comprehensive	Economic Impact: Ongoing pollution
assessment allows for identifying potential	may discourage tourism and investments
negative impacts and addressing them	due to concerns over environmental
before implementation.	conditions.
National Strategies: Alignment with the	Flora and Fauna: Environmental
National Strategy of Sustainable	degradation poses a threat to local
Development encourages efforts to	biodiversity, affecting both plant and
preserve environmental quality and	animal life in the area.
improve natural values.	

The SWOT analysis conducted on the environmental characteristics of the Municipality of Pljevlja reveals a complex web of challenges and opportunities that require immediate attention. The strengths lie in the heightened awareness generated by the assessment, shining a light on the pressing environmental concerns that demand action. The presence of detailed data and a legal framework for environmental protection serves as a foundation for addressing these issues effectively.

However, the weaknesses underscore the gravity of the situation. Pljevlja's reputation as a European record holder for pollution emphasizes the urgent need for intervention. Reliance on non-renewable energy sources and the lack of consumption data for certain fuels only amplify the challenges at hand.

The opportunities present a ray of hope amidst these challenges. The potential transition to cleaner energy sources, such as pellets, offers a chance to mitigate pollution and enhance air quality. The significance of conducting strategic environmental impact assessments cannot be underestimated, allowing proactive identification and mitigation of negative consequences. Aligning with national sustainable development strategies further reinforces the commitment to preserving environmental quality and natural values.

Nonetheless, threats loom large, warning of the consequences of inaction. Pollution's adverse effects on public health, including increased healthcare costs and diminished quality of life, are a stark reminder of the urgency. Economic repercussions, including reduced tourism and investment due to environmental concerns, cannot be ignored. Equally important is the threat posed to local flora and fauna, underscoring the delicate balance that has been disrupted by environmental degradation.

In sum, this SWOT analysis illuminates the intricate interplay of forces shaping Pljevlja's environmental landscape. It underscores the need for a collective effort to harness strengths, address weaknesses, capitalize on opportunities, and counter threats. Only through a comprehensive and coordinated approach can the municipality pave the way toward a more sustainable and resilient future, where both the environment and its inhabitants thrive.

Characteristics of demographic development since the beginning of the 20th century

The trend of population decline that intensified since the 1980s continued at the beginning of this century, with a slightly lower intensity (table 1). According to the population estimate data for 2021³, there were 25,917 inhabitants in the municipality of Pljevlja, which indicates the presence of emigration and the continuation of the growing trend of negative rates of natural increase. In comparison to the previous period, a slightly lower intensity of the decline in the rural population, but also a major decline in the urban population are visible, which is an indicator that the bad economic situation in the municipality and city caused the intensification of emigration from the urban area to other municipalities and beyond the borders of the country. As seen from the data in the table, the rural population dropped to only 31.7% compared to the second half of the last century (1961), thus the rural areas are already demographically emptied with mostly elderly households, causing lower intensity of population decline.

Mobility is one of the basic characteristics of the population. Migration has been present in the territory of the municipality of Pljevlja since ancient times.

³ Monstat, Table: Estimated number of inhabitants in the middle of 2021.

Depending on the historical, political and economic conditions, sometimes there was stronger emigration, sometimes immigration.

		1961	1981		20	03	2011	
	Settlement	Number	Number	Index	Number	Index	Number	Index
Urban	Gradac	925	637	68,9	364	57,1	295	81
Urban	Pljevlja	10552	17440	165,3	21377	122,6	19327	90,4
Total u	ban	11477	18077	157,5	21741	120,3	19622	90,3
Rura	1	35200	25239	71,7	14065	55,7	11164	79,4
Municip	ality	46677	43316	92,8	35806	82,7	30786	86,0

Table 1: Population trends of the municipality of Pljevlja in the period 1961-2011

Source: Base study for the needs of PPCG Demographic Development, 2018; page 7; 26; calculations

Today's migration on the territory of the municipality is mostly economic in nature. There are fewer and fewer internal rural-urban migrations, and more and more those outside the borders of the municipality and even the country. Mostly young or younger middle-aged population leaves off for a better life because the rather bleak economic situation in the municipality does not offer them basic living conditions. Due to the impossibility of employment, they are unable to form a family which is reflected in other segments of demographic development.

Due to the lack of adequate data⁴, the only way to find out the number of emigrants from the municipality is through the overall movement of the population and natural increase. The disadvantage of this method is that it is not possible to analyze the types or patterns of migration. According to the results of the recalculation (Table 2), the municipality of Pljevlja has lost 30,293 inhabitants through emigration since the second half of the last century, of which 6,287 in the period 2003-2021.

 Table 2: Migration balance of the municipality of Pljevlja in the period 1961-2021

		1961-1981	1981-2003	2003-2021
Municipality	Total movement	-3361	-6403	-9889
Pljevlja	Natural increase	9955	4287	-3602
	Migration balance	-13316	-10690	-6287

Source: Base study for the needs of PPCG Demographic Development, 2018; page 16; Table - estimated population size in 2021: Statistical yearbook for 2021, recalculations

Unfortunately, our statistical office does not have records of external migration (outside the country's borders), so we also arrive at the number of

⁴ The last official census in 2011 did not process migrations, and Monstat - the Public Statistical Office only has records of internal migration in Montenegro since 2008, while we do not have any official data for external migration, so it is impossible to carry out serious analyses.

emigrants since the last census in 2011 by calculation, thanks to the fact that internal migration has been recorded since 2011. By recalculating the ratio of the total movement of the municipality's population from 2011 to 2021 (-4,869), the natural increase (-2,402)⁵ in that period and the migration balance of internal migration (-1,647), we arrived at the data that the total migration balance of the municipality is -2 467 inhabitants. This indicates that 820 inhabitants of the municipality of Pljevlja left the country, which means that the volume of internal migration to other municipalities in Montenegro is significantly larger. In the observed period, 2,730 inhabitants migrated to other municipalities in the country. The largest number of migrants from Pljevlja moved to the capital Podgorica (1,628) and to the coastal municipalities: Budva, Bar, Herceg Novi, Kotor, Tivat and slightly less to Ulcinj. When it comes to continental cities, Niksic and Danilovgrad were most attractive for migrants after Podgorica. Cities from the surrounding areas, that is, from the northern region of the country, to which this municipality also belongs, were least attractive to migrants (Table 3).

Registration				Der	egistrat	ion mu	nicipalit	y of Plj	evlja			
municipality	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2011- 2021
Andrijevica					1	2						3
Bar	27	25	27	29	23	24	14	36	19	18	6	248
Berane	4	5	2	1	3	1	1	1	2	2	3	25
Bijelo Polje	8	2	2	6	8	3	1	3	4	3	6	46
Budva	17	7	15	24	33	28	26	32	46	11	15	254
Cetinje			2	2					3	1		8
Gusinje												0
Danilovgrad	3	1	7	7	2	6	5	9	5	4		49
Herceg Novi	21	11	3	5	11	12	7	19	13	5		107
Kolasin			1	1		1			1		1	5
Kotor	3	6	2	4	9	11	14	15	13	5	8	90
Mojkovac			1	1	1	3	4	2			3	15
Niksic	6	10	5	4	6	8	10	5	6	4	2	66
Plav									2		1	3
Pluzine			1	1						1		3
Petnjica								1				1
Podgorica	138	138	164	136	122	147	155	229	194	158	47	1628
Rozaje				2			3	1			2	8
Savnik					1	2		1				4
Tivat	1	5	4	4	3	10	13	18	9	12	5	84
Tuzi										1		1
Ulcinj	2		3	2	1	5		2	5	1	3	24
Zabljak	12	5	6	3	7	3	3	5	3	9	2	58
Total	242	215	245	232	231	266	256	379	325	235	104	2730

Table 3. Migration from the municipality of Pljevlja to other municipalities in the period 2011-2021

Source: Monstat – Tables: Internal migration in Montenegro in: 2011, 2012, 2013, 201, 2015, 2016, 2017, 2018, 2019, 2020 and 2021

⁵ Data from statistical yearbooks in 2016 and 2021

Such directions of internal migration are quite understandable because the population, as already emphasized, today mainly migrates for economic reasons, and the most economically developed part of Montenegro, besides the municipality of Podgorica, are the coastal municipalities.

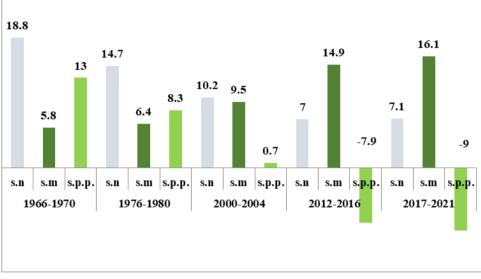
Internal migration in the opposite direction - towards the municipality of Pljevlja was significantly smaller in volume (1,083 inhabitants) in the observed period (2011-2021). The largest number of migrants towards Pljevlja is from the municipality of Podgorica (545), then from the coastal municipalities: Budva, Bar, Herceg Novi and Kotor. The continental municipalities, Niksic and Bijelo Polje had a slightly higher number of migrants towards the municipality of Pljevlja (Table 4). We do not have data on whether these are seasonal migrants (migrants who spent a part of the year in other municipalities for work), or whether they are returnees to their birthplace who spent their working life in another place, and are returning to their home as retirees, so we cannot provide detailed analyses.

Deregistration					Registrat	ion muni	cipality o	f Pljevlja	L			
municipality	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2011- 2021
Andrijevica					2	1						3
Bar		8	9	5	8	4	5	6	5	4	26	80
Berane	10		1	1	1			2	1	2		18
Bijelo Polje	8	4	6	3	6	4	3	6		3	5	48
Budva	3	4	3	9	7	6	5	12	10	8	41	108
Cetinje	3	1	1	1	2				1	1	1	11
Gusinje												0
Danilovgrad		1			1	1	1		1	1	5	11
Herceg Novi	3	3	8	2	5	9	2	2	3	2	12	51
Kolasin		1			2	1		2				б
Kotor	1	3	3	1		2	3	3	5	2	6	29
Mojkovac	1	1	3	1	1	1	1	1				10
Niksic	7	1	4		4	6	2	3	1	8	8	44
Plav	1	1	1	1				1				5
Pluzine											1	1
Petnjica												0
Podgorica	33	27	21	24	45	46	44	39	43	36	187	545
Rozaje	1					2		4	1		3	11
Savnik	1	1						1	1			4
Tivat				8				5			9	22
Tuzi									1		1	2
Ulcinj	1			1	1		2	5	1	2	5	18
Zabljak	4	6	8	4	4	3	1	5	4		17	56
Total	77	62	68	61	89	86	69	9 7	78	69	327	1083

Table 4. Migration from other municipalities to the municipality of Pljevlja in the period 2011-2021

Source: Monstat – Tables: Internal migration in Montenegro in: 2011, 2012, 2013, 201, 2015, 2016, 2017, 2018, 2019, 2020 and 2021

Birth rates in the municipality declined from moderate in the period 1966-1970 down to low levels in the period 2017-2021, while mortality rates in the same period rose from low to very high, resulting in negative rates of natural increase even in the first years of 21st century with a tendency of significant growth (graph). As a consequence of this trend, we observe a decrease in population in the municipality on two grounds - natural movement and emigration, which threatens further demographic development, especially in rural areas, and leads to their complete depopulation.



Graph 1: Rates of natural population movement of the municipality of Pljevlja in the period 1966-2021 (Data source: Basic study - Demographic development, page 12, Statistical yearbook for 2021)

There were significant changes in the age-gender structure of the municipality's population from the second half of last century to the end of the first decade of this century. The gender structure of the population as a whole was satisfactory in both observed periods, however, as observed in larger age groups, there is a noticeable difference in the middle-aged population group in the two observed periods. In the first period in 1961, due to the consequences of the World War II, the rate of masculinity was slightly lower (89.6), while in the second observed period it was significantly higher compared to the previous period and even higher than the rate of femininity. This is a consequence of migration movements from rural areas where, as a rule, more of the male workforce remains, while the female population moves out. This problem is present in all Montenegrin villages, which significantly affects the reproduction of the population, because in the villages, on family estates, mostly male workforce remains, which, due to the lack of female population, is unable to form a family.

Rates of masculinity		1961			2011			
Municipality of	Total population	0-19	20-59	60+	Total population	0-19	20-59	60+
Pljevlja	95,9	103	89,6	90,9	96,4	101,7	107,8,	72,2

Table 5. Masculinity rates of municipality of Pljevlja in 1961 and 2011

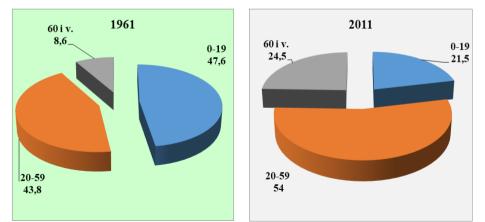
Source: Base study for the needs of PPCG Demographic Development, 2018; page 39.

Apart from gender, significant changes also occurred in the age structure of the population. In the sixties of the last century, the population of the municipality was categorized as particularly young, with as many as 47.6% young and 8.65% old. Thanks to the large emigration that affected the decrease in the birth rates and the increase in the mortality rates, resulting in negative rates of natural increase, the age structure underwent significant changes, so in 2011 the share of young people amounted to only 21.5%, while the share of old increased to 24.5%, which indicates the old demographic age of the population. It should be emphasized that the age structure of the female population of the municipality is less favorable than that of the male population, which is a consequence, as already mentioned, of the greater emigration of the female population.

Table 6. Age structure of the population of the municipality of Pljevlja in the period 1961-2011

	1961			1981			2003			2011			
	Gender	0-19	20- 59	60+									
	Total	47,6	43,8	8,6	33,6	54,6	11,8	24,5	52,6	22,9	21,5	54	24,5
Municipality of Pljevlja	М	49,4	42,3	8,3	34,8	54,4	10,8	25,3	55	19,7	22,1	56,9	72,2
orrijevija	F	46	45,2	8,8	32,5	54,8	12,7	23,7	50,3	26	20,9	51	27,9

Source: Base study for the needs of PPCG Demographic Development, 2018; page 50.



Graph 2: Population of the municipality of Pljevlja by larger age groups in 1961 and 2011

The fact that the municipality of Pljevlja is among the oldest municipalities in Montenegro, with an average population age of 41.8 years and an age index value of 113.9, speaks volumes that the situation in the age structure of the population is alarming, that is, it is high time to take measures of appropriate demographic-population policies, otherwise a large part of the northern region, to which the municipality of Pljevlja belongs, will lose all inhabitants in the coming decades.

	0 1	-		<i>,</i>				
Municipality	Average age	Younger than 20 in %	Younger than 40 in %	Older, 60+ in %	Index of ageing			
	Northern region							
Andrijevica	39,9	24,9	48,8	22,5	90,4			
Berane	36,4	29,3	46,3	15,6	64			
Bijelo Polje	36,1	28,6	56,4	17,4	60,8			
Kolasin	40,1	23,3	48,7	22,4	96,3			
Mojkovac	38,4	25,3	51,2	19,3	75,7			
Plav	36	21,7	39,4	12,2	56,1			
Pljevlja	41,8	21,5	45	24,5	113,9			
Pluzine	43,7	20,2	41,8	29	143,6			
Rozaje	31,7	35,4	64,4	11,7	33,2			
Savnik	42,5	20,9	44,2	27,5	131,7			
Zabljak	41,9	21,2	45,2	26,3	124			
	Ce	ntral region						
Podgorica	35,7	27,4	57,9	15,8	57,9			
Cetinje	40,3	20,9	48,9	22,3	106,6			
Niksic	37,8	25,7	53,6	19,1	74,3			
Danilovgrad	38,1	24	53,5	19,6	81,7			
	Co	astal region						
Bar	37,9	25,2	52,9	18,9	75			
Budva	36,5	24,5	56,1	19,3	62,8			
Herceg Novi	40	22,6	48,9	21,7	96			
Kotor	39,5	22,7	49,7	20,9	92,1			
Tivat	38	24,2	52,8	18,5	76,4			
Ulcinj	37,8	26,6	53,3	19,7	74,2			

Table 7. Demographic age index of population of Montenegro

Source: Base study for the needs of PPCG Demographic Development, 2018; page 52.

In the middle of the last century, share of rural population amounted to as much as 75.4% in the total population of the municipality, and by 2011, according to the results of the last census, its share fell to 37.2%. This decline is a consequence of mass rural-urban migration caused by the industrialization of the municipality after the 1960s. Another significant consequence of this process is population fragmentation of villages. In 1961, there were no settlements without inhabitants in the municipality, while in 2011 there were 5. As can be seen from

table no.8, from 1961 to 2011, the number of settlements with the smallest number of inhabitants (0-25) had the greatest growth, from 1 to 53, then the number of settlements with 26-50 inhabitants from 4 to 29 and the number of settlements with 50-100 inhabitants from 29 to 39. Therefore, the category of settlements with less than 100 inhabitants increased its share from 21.6% to 80.3%. In the same period, the number of medium-sized settlements (category of settlements 101-200 inhabitants and 201-300 inhabitants) decreased from 49 to 26, i.e. from 36 to 6, and their share from 54.1% to 20.4%.

	1	961	2011		
	Number	%	Number	%	
Desolate	0	0	5	3,2	
0-25 inhabitants	1	0,6	53	33,8	
26-50 inhabitants	4	2,5	29	18,5	
51-100 inhabitants	29	18,5	39	24,8	
101-200 inhabitants	49	31,2	26	16,6	
201-300 inhabitants	36	22,9	6	3,8	
301-500 inhabitants	23	14,6	2	1,3	
501-1000 inhabitants	15	9,6	2	1,3	
over 1 000	0	0	0	0	

Table 8. Population size of villages in the Pljevlja municipality in 1961 and 2011

Source: Monstat- Census 2003- comparative overview of population size in 1948, 1953, 1961, 1971, 1981, 1991 and 2003, data by settlements, vol. 9; First census results in 2011

GAP, Trend, PESTEL and SWOT Analysis for the Demographic Development in Pljevlja

Based on the inputs and initial results of our research we conducted GAP, Trend, PESTEL and SWOT Analysis for the Demographic Development in Pljevlja. Findings are summarized and presented in the following chapters: GAP Analysis, Trend Analysis, PESTEL Analysis, SWOT Analysis for the Demographic Development in Pljevlja.

GAP Analysis

Goal was to analyze the demographic development of the municipality of Pljevlja and identify gaps between current trends and desired outcomes for population dynamics, economic growth, and environmental sustainability.

1.Demographic Development Gap:

Current Situation: The population of Pljevlja has been declining, particularly in rural areas, due to emigration driven by economic challenges and an ageing population. The gender and age structure of the population has shifted unfavorably, impacting future demographic trends.

Desired Outcome: Stabilize and potentially increase the population by implementing measures to attract and retain young individuals and families.

Address the gender imbalance and create a more balanced age distribution for sustainable growth.

2.Economic Diversification Gap:

Current Situation: Economic reliance on a few industries, notably mining and power generation, has led to job losses, limited opportunities, and economic stagnation. The closure of various companies and lack of innovation have hindered economic growth.

Desired Outcome: Diversify the local economy by promoting entrepreneurship, investing in new industries, and creating a business-friendly environment. Encourage innovation and skill development to generate diverse employment opportunities.

3.Environmental Sustainability Gap:

Current Situation: High levels of pollution from industrial activities, particularly the thermal power plant, have degraded the environment and impacted residents' health. The municipality's heavy reliance on resource-intensive industries contributes to environmental degradation.

Desired Outcome: Implement stricter environmental regulations; invest in pollution control technologies, and transition towards cleaner and more sustainable economic activities. Improve air and water quality to enhance residents' quality of life and attract potential newcomers.

4.Infrastructure and Technology Gap:

Current Situation: Insufficient technological advancements in the municipality have hindered economic growth and discouraged young people from staying. Limited technological infrastructure has contributed to the lack of diversified industries.

Desired Outcome: Invest in digital infrastructure, provide access to modern technologies, and offer training programs to develop a skilled workforce. Foster innovation and technological progress to attract tech-savvy individuals and industries.

5. Policy and Governance Gap:

Current Situation: Lack of effective demographic-population policies and poor governance has contributed to migration, economic decline, and environmental challenges. Fragmented policies hinder holistic solutions.

Desired Outcome: Develop comprehensive demographic-population policies that address economic, social, and environmental aspects. Enhance local governance to implement and enforce policies effectively, fostering collaboration among stakeholders.

6.Social and Cultural Gap:

Current Situation: Changing cultural values and perceptions, along with an ageing population, have contributed to migration trends. The decline in rural populations and changes in community dynamics are affecting social cohesion.

Desired Outcome: Promote the value of rural life, offer incentives for families to stay or relocate, and invest in community development. Nurture a sense of pride in local culture, history, and traditions to foster community bonds.

The GAP analysis reveals significant disparities between the current state of population dynamics, economic conditions, and environmental sustainability in Pljevlja and the desired outcomes. To bridge these gaps, the municipality must adopt a multidimensional approach that integrates economic diversification, environmental protection, infrastructure development, policy reform, and community engagement. This comprehensive strategy aims to create a more balanced and sustainable future for Pljevlja, focusing on attracting and retaining a diverse and vibrant population while ensuring economic prosperity and ecological well-being.

Trend Analysis

Demographic Trends:

Population Decline: The population of Pljevlja has shown a consistent decline over the years. From 1961 to 2021, the municipality's share in Montenegro's total population dropped from 9.7% to 4.2%.

Rural-Urban Shift: The demographic landscape has shifted from predominantly rural (75.4% rural population in 1960s) to urban dominance (37.2% rural population in 2011), resulting in rural depopulation.

Age Structure Changes: The age structure has transitioned from a particularly young population in the 1960s (47.6% young, 8.65% old) to an ageing population with reduced share of young individuals (21.5% young, 24.5% old in 2011).

Economic Trends:

Industrial Development: Industrialization efforts in the mid-20th century led to significant growth in Pljevlja, with the establishment of lead, zinc, coal, and power industries. However, economic challenges arose post-1990s due to the collapse of former Yugoslavia and economic sanctions.

Economic Decline: The economic collapse in the 1990s and the transition period led to the shutdown of several companies and industries. The municipality's workforce reduced from around 14,000 in the 1980s to 5,063 employees in 2020.

Environmental Trends:

Environmental Degradation: The intensive industrial activities, especially from the coal mine and thermal power plant, have caused significant environmental degradation. High levels of pollution have led to poor air quality, water contamination, and health concerns.

<u>Resource Intensity</u>: The continued reliance on coal as an energy source has contributed to substantial waste generation, including ash and slag. Pollution from these sources has contributed to environmental problems.

<u>Migration Trends</u>: *Internal Migration*: The industrialization phase led to rural-urban migration, causing shifts from rural areas to the city of Pljevlja. However, this internal migration was more intense than emigration outside the municipality.

<u>Émigration</u>: Since the second half of the 20th century, there has been significant emigration from the municipality, particularly due to the economic

decline. Podgorica and coastal municipalities are the most attractive destinations for migrants.

Natural Increase Trends:

Decline in Birth Rates: Birth rates have declined over the years, particularly evident from the 1960s to the 2010s. The declining birth rates, coupled with increasing mortality rates, have resulted in negative rates of natural increase.

Age-Gender Structure Trends:

Gender Imbalance: Migration patterns have contributed to a higher gender imbalance, with more male population remaining due to work opportunities, leading to a higher masculinity rate.

Ageing Population: The age-gender structure has shifted towards an ageing population, with a significant decrease in the proportion of young individuals and an increase in the proportion of older individuals.

Spatial Distribution Trends:

 $\overline{Population \ Fragmentation}$: The population distribution has experienced fragmentation, with a decline in medium-sized settlements (101-300 inhabitants) and an increase in settlements with fewer than 100 inhabitants.

Economic Diversification Trends:

Dependency on Industries: Economic diversification has not been achieved, resulting in over-reliance on a few industries like mining and power generation. The closure of various companies has hindered economic growth and opportunities. These trends highlight the complex interplay between demographic changes, economic shifts, environmental degradation, and migration patterns in Pljevlja. Analyzing these trends helps identify the root causes of the challenges faced by the municipality and inform potential strategies for addressing them.

PESTEL Analysis

Taking into account the aforementioned analyses, results and previous discussions, the following PESTEL analysis was performed.

Political factors:

National Policies: Montenegro's national policies on economic development, infrastructure, and migration greatly impact the demographic changes in Pljevlja. Government decisions regarding incentives for businesses, investment, and regional development can influence migration patterns.

Local Governance: The policies and strategies of Pljevlja's local government regarding economic diversification, job creation, and infrastructure development can affect population trends. Effective governance can encourage people to stay in the area.

Economic factors:

Industrial Decline: The closure of numerous industrial companies in the municipality, including factories and mining operations, has led to job losses and decreased economic opportunities. This has contributed to migration, particularly of young and skilled workers seeking employment elsewhere.

Economic Opportunities: The lack of diverse economic opportunities, including industries beyond mining and power generation, affects the attractiveness of the municipality for residents. A lack of job prospects can drive people to migrate to more economically vibrant areas.

Sociocultural factors:

Migration Trends: Changing cultural values and perceptions about quality of life, education, and healthcare can influence migration. A preference for urban living and better amenities in other regions may encourage migration away from Pljevlja.

Ageing Population: The increasing proportion of elderly individuals in the population can impact community dynamics, healthcare services, and social support systems. Aged populations often experience lower birth rates and higher dependency ratios.

Technological factors:

Limited *Technological* Advancements: Insufficient technological development and innovation in the municipality can lead to reduced economic opportunities and hinder the creation of new industries. Lack of technological infrastructure might also discourage younger individuals from staying.

Environmental factors:

Pollution and Health Concerns: High levels of pollution, including air and water pollution, can lead to health problems and negatively affect residents' quality of life. Environmental degradation can make the municipality less attractive for families and young people.

Natural Resource Dependence: Economic reliance on industries like mining and power generation can degrade the environment, contributing to pollution and resource depletion. Transitioning to more sustainable economic activities could alleviate this issue.

Legal factors:

Environmental Regulations: Strict or relaxed enforcement of environmental regulations can impact industrial operations, pollution levels, and health outcomes. Stringent regulations can lead to closures or relocations of polluting industries, influencing migration patterns.

Migration Policies: National and regional migration policies can impact the ease of movement for individuals within the country. Favorable migration policies could encourage skilled individuals to stay or return to Pljevlja.

The population dynamics in the mountainous areas of Montenegro, particularly in Pljevlja, are influenced by a complex interplay of political, economic, sociocultural, technological, environmental, and legal factors. The municipality's history of industrial decline, pollution, and limited economic diversification has led to population decline and migration. To address these challenges, a holistic approach is required, including economic diversification, job creation, environmental remediation, and infrastructure development. Limiting factors for the development of rural areas are depopulation and deagrarization (Despotovic et al., 2020). A comprehensive demographicpopulation policy should aim to retain and attract residents, especially young individuals, while balancing the needs of an ageing population.

SWOT Analysis for the Demographic	
Strengths: <u>Natural Resources</u> : Pljevlja possesses significant natural resources, including mineral deposits (lead, zinc, coal) that	Weaknesses: <u>Economic Dependence</u> : Overreliance on a few industries has made the municipality vulnerable to economic fluctuations and
mineral deposits (lead, zinc, coal) that historically supported industrial growth. <u>Strategic Location</u> : Despite its peripheral position, Pljevlja's location offers potential for tourism, with its mountainous terrain and natural landscapes. <u>Historical Industrial Base</u> : The presence of industries like coal mining and power generation has historically provided employment opportunities. <u>Educational Institutions</u> : Presence of educational institutions can potentially contribute to human capital development.	crises. <u>Environmental Degradation:</u> Heavy industrial activities have led to severe environmental pollution, affecting air, water, and soil quality. <u>Demographic Ageing:</u> A shift towards an ageing population with a declining birth rate poses challenges for future population sustainability. <u>Lack of Economic Diversification:</u> Closure of companies and limited economic diversification have resulted in reduced job opportunities and economic decline. <u>Limited Infrastructure:</u> Lack of modern infrastructure and transportation
Opportunities:	connections has hindered economic growth and development. Threats:
<u>Tourism Potential:</u> Utilizing the natural landscapes for eco-tourism and outdoor activities could attract visitors and generate income. <u>Renewable Energy:</u> Transitioning towards renewable energy sources could create new industries and job opportunities. <u>Environmental Remediation:</u> Addressing environmental degradation can improve quality of life, attract investment, and promote sustainable growth. <u>Education and Innovation:</u> Enhancing educational institutions can contribute to skilled workforce development and innovation. <u>Regional Collaboration:</u> Collaborating with neighboring municipalities and regions can lead to joint initiatives for economic development.	 <u>Emigration and Brain Drain:</u> Ongoing emigration, especially of the younger population, can lead to a shrinking workforce and reduced economic activity. <u>Economic Decline:</u> Economic downturns or global economic shifts can exacerbate the existing economic challenges. <u>Unsustainable Resource Use:</u> Continued reliance on non-renewable resources without sustainable practices could deplete resources and worsen environmental issues. <u>Environmental Regulations</u>: Stricter environmental regulations could impose additional costs on industries and limit economic activities. <u>Competition from Other Regions:</u> Migration patterns towards more economically developed regions may persist, further depleting the workforce.

SWOT Analysis for the Demographic Development in Pljevlja

While natural resources and historical industries have been strengths, the environmental degradation and economic dependence pose significant challenges. To address these issues and leverage opportunities, a comprehensive approach is needed, including economic diversification, environmental remediation, infrastructure development, and collaboration with neighboring regions. This analysis underscores the need for sustainable strategies to ensure a balanced and prosperous demographic future for Pljevlja.

CONCLUSIONS

The paper presents the impact of economic and environmental events on population migration from Pljevlja since the beginning of the 21^{st} century. We started from the hypothesis that the economic collapse of the municipality in the 90s of the last century and the worrying ecological situation in the municipality significantly influenced the increased emigration outside the borders of the municipality, resulting in the fact that the number of inhabitants of the municipality of Pljevlja has almost halved since the second half of the last century – to be exact, only 55.5% of the population from 1961 lives on the territory of the municipality today.

The main cause for this alteration in the number of inhabitants in the municipality is migration, which caused major negative changes in further demographic development. Emigration of the young and younger middle-aged population resulted in a sudden drop in the rate of natural increase, acquiring negative values at the century's beginning with a tendency for further drop, which has a negative impact on the reproduction not only of the rural population, (which is certainly significantly more endangered) but also of the municipality as a whole.

Since the second half of the last century, in the municipality of Pljevlja, as well as, indeed, whole Montenegro, there have been substantial changes in the relationship between the rural and urban population, i.e. the transformation of the agricultural population into a non-agricultural population, which had positive effects in the initial phase - however, today, due to the spontaneity of that process, the agricultural population was reduced to mostly elderly households.

It is about time for the state to start implementing an appropriate demographic-population policy, which would introduce measures to stop emigration, raise the birth rates, especially in the municipalities of the North and a large part of the Central region, and, ultimately, spatially redistribute the population more evenly, thus relieving the overpopulated parts of the country on the one hand (Podgorica and the Coastal region), and retaining the nowadays very questionable reproductive base in the Northern region on the other.

We stand at a pivotal juncture in the demographic trajectory of Pljevlja, a municipality rich in history, resources, and potential. The challenges that have beset us are formidable, but within these challenges are opportunity to transform municipality into an example of sustainable growth, resilience, and prosperity. It is time for coordinated, strategic, and proactive action. The interplay of economic forces, environmental concerns, and migration patterns necessitates a comprehensive approach that transcends short-term fixes. The government/s and local authorities should work hand in hand, with foresight and determination, to drive forward a holistic agenda for Pljevlja's demographic rejuvenation.

1. Economic Diversification and Innovation: The time has come to break free from the chains of mono-industrial dependence. The government should foster an environment that encourages entrepreneurship, innovation, and diversification. Support for small and medium-sized enterprises, investment in emerging sectors like eco-tourism and renewable energy, and collaboration with educational institutions can catalyze a new era of economic vibrancy.

2. Environmental Restoration and Sustainability: The ecological degradation that Pljevlja faces cannot be ignored any longer. The government's commitment to stringent environmental regulations, investment in green technologies, and remediation efforts are paramount. Local authorities should champion projects that restore natural resources, promote responsible resource use, and create a healthier environment for our residents.

3. Educational Empowerment and Human Capital Development: Education is the cornerstone of progress. Both the Government/s and local authorities should prioritize the enhancement of educational institutions, skills training, and knowledge dissemination. Equipping youth with the skills to navigate modern challenges is not just an investment in individuals, but a catalyst for communitywide development.

4. Collaboration and Regional Synergy: Pljevlja does not exist in isolation. Collaboration with neighboring municipalities and regions to develop integrated strategies for growth is needed. Joint initiatives can harness shared resources, boost economic activity, and create a stronger collective impact.

5. Long-Term Vision and Inclusive Decision-Making: Government policies and local decisions must be grounded in long-term planning, encompassing the well-being of both present and future generations. Inclusivity in decision-making, involving residents, businesses, and civil society, will strengthen ownership and ensure that policies are reflective of our community's needs.

Transformative actions will shape Pljevlja to be the place where economic vitality, environmental stewardship, and social progress converge for the betterment of all in Montenegro and the neighboring region.

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