UNIVERSITY OF NIŠ
FACULTY OF ECONOMICS

CIRCULAR ECONOMY: TRENDS AND PERSPECTIVES

Editors:

Vladislav Marjanović

Dejan Đorđević

Niš, October 18th, 2024

CIRCULAR ECONOMY:
TRENDS AND PERSPECTIVES

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P R E F A C E

On October 18, 2024, the Faculty of Economics of the University of Niš organized its traditional conference for the 55th time, this time dedicated to the current topic of the circular economy. Entitled "CIRCULAR ECONOMY: TRENDS AND PERSPECTIVES", the conference brought together 150 participants from 9 countries, from the fields of economics, ecology and social sciences.

The conference participants were addressed by Prof. Dr. Vladislav Marjanović, Dean, and Prof. Dr. Dejan Đorđević, Vice-Dean for Science, who in their welcoming speeches emphasized the importance of this topic in the context of the global challenges we face, such as climate change and resource scarcity, and wished all participants successful work and constructive discussion.

The conference was opened by keynote speakers of European renown. Mr. Michael Dell from Austria spoke about innovation as the driving force of the circular economy and sustainability. He presented numerous examples of companies that have successfully implemented circular business models and highlighted the importance of cooperation between academia, industry and government. The second keynote speaker at the conference, Professor Eleftherios Thalassinos from Greece, analyzed the connection between corporate governance, corporate social responsibility and financial and non-financial reporting using the example of a European country. He emphasized the importance of transparency and the company's responsibility towards society and the environment.

After the introductory presentations, a panel was held on smart and sustainable cities, which are key to the transition to a circular economy. The panel was moderated by Professor Emeritus Dr. Pavle Petrović, and the panelists were eminent experts from the country and abroad. The panel participants agreed that it is necessary to invest in infrastructure development, promote renewable energy sources and encourage citizens to behave responsibly. They also particularly emphasized the importance of regional cooperation in the field of environmental protection.

The conference continued with four parallel sessions, dedicated to different aspects of the circular economy. Participants discussed new concepts of development based on sustainability, the challenges faced by small and medium-sized enterprises in the transition to circular business models, as well as the role of finance and artificial intelligence in the modern economy. Special attention was paid to educating young people in circular entrepreneurship and developing new business models that are in line with the principles of the circular economy.

The conference participants agreed that the circular economy is the inevitable future and that urgent measures must be taken to reduce the negative

impact on the environment. They also emphasized the importance of international cooperation, knowledge exchange and best practices in this area. The conference was an excellent opportunity to exchange knowledge and ideas, and lectures by eminent experts from various fields provided a comprehensive insight into the latest trends and challenges in the circular economy. The 43 papers presented at the conference were fruitful and inspiring, opening new perspectives for research and application of circular principles in practice. As a result of this successful event, a collection of papers was printed (some of them selected for publication in the Faculty's journal “Economic Themes” and University's journal “Facta Universitatis”), which will serve as a valuable source of information for all those involved in this topic.

Editors

Vladislav Marjanović, PhD, Dean
Dejan Ž. Đorđević, PhD, Vice-Dean for Science

TABLE OF CONTENTS

SESSION 1

SESSION 2

SESSION 3

Faculty of Economics, University of Niš
18 October 2024

International Scientific Conference

CIRCULAR ECONOMY:
TRENDS AND PERSPECTIVES

Pregledni naučni rad

THE LEVEL OF SOCIAL SUSTAINABILITY MEASURED BY MULTIDIMENSIONAL POVERTY INDEX IN SERBIA, NORTH MACEDONIA, AND MONTENEGRO

Tabish Nawab*

Snežana Radukić[1]•

Abstract: *This paper explores multidimensional poverty among Serbia, North Macedonia, Montenegro, and their Roma settlements, highlighting the limitations of traditional income-based measures and the advantages of the Multidimensional Poverty Index (MPI). By analyzing recent studies utilizing Multiple Indicator Cluster Survey (MICS) data, the paper examines critical aspects of poverty, including health, education, and living standards. Findings reveal significant disparities in child school attendance, years of schooling, nutrition, and cooking fuel among selected Western Balkan countries, particularly in Roma populations. The review identifies gaps in the current research, such as insufficient longitudinal data for all Western Balkan countries and a lack of comparative analysis and comprehensive policy evaluations. The paper stresses that more evidence should be presented for the theoretical propositions regarding the nature of these disparities and ways of eliminating them in a sequence that could enhance the quality of life. The main recommendation is that there is a need to examine the relationship between poverty dimensions and policy impact or success to contribute to improving poverty policy initiatives*.

Keywords: *Multidimensional Poverty Index (MPI), Health Disparities, Educational Access, Living Standards, Multiple Indicator Cluster Survey (MICS).*

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1. Introduction

Economic development means raising citizens' quality of life, health, literacy levels, and well-being in general. However, there is a clear correlation between poverty, vulnerability, and economic development. Poverty was measured in terms of income which has been well-known but not very comprehensive. This approach only focuses on one basic need and may miss other basic needs such as education, health, and housing status. As a result, income growth does not guarantee enhanced performance in these indicators, confirming the necessity of a multidimensional approach to poverty. Sen's Capability approach to the extent of poverty expands the concept and goes beyond income and thinks of a living standard as the capability to achieve valuable functioning. According to Sen (1992) poverty needs to be understood in terms of minimal capabilities such as education and health that a person needs to have. It has influenced the WTO, IMF, and other international development agendas, such as the UN's Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs), which encourage the use of measures of welfare that conform to the multidimensional approach.

To overcome the shortcomings mentioned above of income-based poverty measures, The United Nations Development Program (UNDP) has developed the Human Development Index (HDI) and the Human Poverty Index (HPI). However, these indices suffered from numerous of drawbacks, including the lack of information concerning poverty distribution across various types of deprivation and within the populations. In reply, the Oxford Poverty and Human Development Initiative (OPHI) and the UNDP developed the Multidimensional Poverty Index (MPI) in 2010. The MPI offers a broader approach to determining poverty since it comprises different dimensions such as health, education, and living standards (Alkire & Santos, 2014).

Primarily, selected countries of the Western Balkans (Serbia, North Macedonia, and Montenegro) appear to have significant cause to employ the MPI because the regions involve complicated history, politics, and economy. Ignoring these factors, these countries are trying to develop and still face the problem of poverty, particularly in the Roma population. Traditional income-based poverty measures cannot sufficiently capture this type since other aspects, such as access to services, social exclusion, and economic endowment, are very important in these regions. Roma communities, which are located in the Western Balkans countries, are one of the most affected, in the sphere of education, health care, and living conditions, and experience very drastic problems. Research shows that such communities remain in significantly low socioeconomic status, and most of the Roma people inhabit the ghettos that poorly provide living conditions and employment prospects (Varadzhakova, 2023). What had been identified by the MPI is that there exist high levels of poverty within these communities and showed that the income-based poverty rate fails to capture the accurate picture. That is why combating poverty in these countries should be aimed at improving the quality of life of all those who suffer from various sorts of deprivations mentioned earlier and are characterized as vulnerable populations. Therefore, the information gathered from the MPI should inform policies intended to address education, health, and living standards among such groups. Policies also have to enhance equal access to fundamental rights and counter discrimination. In this regard, the wrath of policies should fall on the Roma population, the majority of whom remain marginalized in mainstream societies. In conclusion, it can be stated that the MPI provides a valuable angle to poverty in the Western Balkans, especially in the case of the Roma population. That is why the evidence

from different dimensions of the MPI proves that developing and implementing localized policy interventions is necessary, as those people are in a very critical situation.

The MPI derived from the MICS dataset is the most pertinent poverty measurement framework that has been created to supplement the income-based poverty line. In MPI analysis, there are three dimensions including health, education, and living standards which further comprise ten indicators. This is especially true for the following MICS indicators that are closely connected to and critical for the attainment of the above-mentioned SDGs, namely, child mortality, child nutrition, drinking water, sanitation, multidimensional poverty –this is also known as MPI- and access to electricity targets. This analysis also assists in establishing the extent of deprivation of the Roma population in these dimensions and what policy interventions should be meet the SDGs and improve the quality of life of the Roma population in the Western Balkan countries.

2. Literature Review

This paper examines the issue of poverty among Western Balkan countries, i.e. Serbia, North Macedonia, and Montenegro and Roma settlements in these countries. It reveals that the problems remain unsolved despite being recognized since the early 2000s: first, it finds that utilizing the conventional, income-based poverty indicators presents some limitations in the case of the countries in question. The Multidimensional Poverty Index (MPI), which considers three dimensions: health, education and standard of living, is a better framework since it encompasses poverty in its real sense (Alkire & Foster, 2011). Several surveys, like the Multiple Indicator Cluster Survey (MICS), have been useful for data collection to study the multidimensional poverty in these areas. This paper aims to present the findings and possible gaps and drawbacks of the recent literature.

According to studies, cross-sectional MICS data have been employed to analyze health and education inequalities, as well as housing disprities in the Roma community in the Western Balkans. In Serbia, for Roma communities, housing disparities are also evident, with seven out of ten families living in informal settlements (Vasić et al., 2021). These indicators point out the significance of expanding poverty measures beyond income, which includes multidimensional indicators to reflect challenges in a better way faced by marginalized populations, such as the Roma. Applying the MPI which includes education, health, and living standards, is essential for framing effective policies for these settlements (Alkire & Foster, 2011).

In many Western Balkan countries, many household-level surveys, such as MICS, have been instrumental in understanding multidimensional poverty. For example, Kováčová (2024) found significant health disparities among Roma children in Serbia, including higher levels of malnutrition rates in comparison to non-Roma children. While the study efficiently diagnoses these disparities, this study lacks longitudinal data to track trends over time. Similarly, Varadzhakova (2023) explored alarming gaps in maternal care and child nutrition among Roma people in North Macedonia, but the research did not go deeply into the systemic causes of health issues. In Montenegro, Vuković-Ćalasan & Đoković (2023) identified geographical barriers, and an insufficient healthcare system as a significant challenge for Roma people. While the study discloses the structural issues, it didn't thoroughly examine the policy failures behind these inequalities.

Roma communities have also been under-researched for mental health. Kostić et al. (2021) identified socioeconomic issues as a cause of psychological distress among Roma in Serbia, but the small sample size limits the generalizability of the findings. Similarly, Arsenijević et al. (2020) found lower primary healthcare usage among Roma across the Western Balkans but did not examine how cultural factors impact healthcare access.

Education is crucial for poverty reduction, yet Roma communities in the Western Balkans have limited access to quality education. MICS data indicates that Roma children in Serbia face barriers such as economic hardship and discrimination, though the study primarily focuses on primary education (Georgieva et al., 2022). In North Macedonia, Georgieva et al. (2022) revealed that high dropout rates among Roma students are driven by both economic and cultural factors, yet the study does not fully explore policy solutions to these issues. In Serbia, Marković et al. (2021) noted that school segregation exacerbates educational disadvantages for Roma students but did not propose robust policy recommendations. In Montenegro, Petrova et al. (2022) highlighted the negative impact of poor living conditions and teacher bias on Roma children's education, yet the study lacks a detailed analysis of teacher training programs. Stanojević et al. (2021) emphasized the importance of early childhood education, noting that limited preschool availability in Serbia negatively impacts Roma children's learning. While valuable, this study overlooks the role of parental involvement in early education.

Housing, access to essential services, and environmental factors are key indicators of living standards. Several studies have used MICS to assess these conditions in Roma settlements. Vasić et al. (2021) documented overcrowding in Roma households in Serbia, while Petreski & Mojsoska-Blazevski (2021) found that Roma in North Macedonia often live in slums with inadequate facilities. However, the latter study could have explored the legal barriers Roma face in accessing services. Branković (2022) highlighted the environmental hazards Roma communities face, though social and economic factors were not fully explored. Jovanović et al. (2021) observed that Roma in Serbia are often denied access to clean water and sanitation, but the study fails to provide actionable policy recommendations.

In summary, existing literature on multidimensional poverty in the Western Balkans, particularly concerning Roma communities, reveals significant disparities in health, education, and living standards. MICS data has been invaluable in identifying these challenges, but there is a need for longitudinal studies to assess the long-term effects of these deprivations. Future research should also focus on evaluating the effectiveness of policies aimed at reducing poverty in marginalized communities. Addressing these gaps is crucial to formulating more effective strategies to combat multidimensional poverty in the region.

3. Theoretical Explanation of Indicators

Multidimensional poverty is the concept that is closer to realizing what it means to be poor or not by using other dimensions such as; education, health, and living standards than income only. Years of schooling and child attendance embody human capital accumulation and the concerned household’s investment in the education of the next generations, which determines long-term knowledge and economic productivity. Child mortality rates are used to determine the health needs of the country, with a focus on inadequate health care and nutrition, availability of clean cooking fuel, and safe drinking water as crucial factors in combating respiratory and water-borne diseases. Housing factors such as floor type, light,

and property possessions affect the general health, reduction of infections, interaction, and financial solidity respectively.

4. Data and Methodology

To construct the Multidimensional Poverty Index (MPI), we employed a rigorous approach involving well-defined datasets, units of analysis, and a standardized method for measuring poverty. The MPI is designed to assess the quality of life, education, and health standards simultaneously experienced by households. For this purpose, we adopted the Alkire and Foster (2011) framework for measuring multidimensional poverty. The level of analysis used in the study is Household level and the data used in the study is the Multiple Indicator Cluster Survey (MICS).

Table. 1 The dimensions, indicators, deprivation cut-offs, and weights of the Multidimensional Poverty Index

Dimensions of poverty	Indicator	Deprived of…	Weight
Education	Years of Schooling	No household member has completed five years of schooling.	1/6
	Child School Attendance	Any school-aged child is not attending school up to class 8.	1/6
Health	Child Mortality	Any child has died in the family.	1/6
	Nutrition	Any child for whom there is nutritional information is malnourished.	1/6
Living Standard (LS)	Electricity	The household has no electricity.	1/18
	Improved Sanitation	The household's sanitation facility is not improved (according to MDG guidelines) or improved but shared with other households.	1/18
	Improved Drinking Water	The household does not have access to improved drinking water (according to MDG guidelines), or safe drinking water is more than a 30-minute walk from home, roundtrip.	1/18
	Flooring	The household has a dirt, sand, or dung floor.	1/18
	Cooking Fuel	The household cooks with dung, wood, or charcoal.	1/18
	Assets ownership	The household does not own more than one telephone, mobile phone, radio, TV, bicycle, motorcycle/ scooter, car/ truck or animal driven cart or refrigerator, agriculture land, or livestock (no cattle, no horse, less than two goats, or less than ten chicken).	1/18

Source: Alkire & Foster, 2011.

4.1. Sample

This research focuses on three countries in the Western Balkans: Serbia, North Macedonia, and Montenegro. These are countries that one would expect to have a lot in common and to have gone through similar socioeconomic phases –thus, a reasonable basis for comparison.

4.2. Data

The MICS is a multicounty demographic and health household survey system created by the United Nations Children's Fund, UNICEF, and the United Nations Development Program, UNDP. Said data is collected on mortality, nutrition, maternal mortality, adult mortality, child mortality, water and sanitation, reproductive health, child development, literacy and education, well-being, and socioeconomic indicators. MICS was also developed to track advancement in the achievement of the MDGs, and well-known benchmark SDGs.

We employed six Multiple Indicator Cluster Surveys (MICS) in these three countries. As a cross-sectional survey instrument, MICS is cross-nationally comparable and intended. for data collection at the household level.

The Serbia MICS (2019) sample was sourced from 8,101 households of 20,517 individuals with an 85% response rate. In Serbia, a survey was conducted only among the Roma settlements where 1,934 household members and 8329 individuals, including Roma people, participated in this survey with a 96.8% response rate. The North Macedonia MICS (2018-19) was conducted in 4,777 households and encompassed a population of 15,635 people, and the overall response rate was 89.7%. The survey of Roma settlements in the North Macedonia included 1,584 households and 6,249 people and the response rate was 94.2%. The Montenegro MICS (2018) sample consisted of 6,000 households and 13,391 individuals, with a response rate of 70.60%. Respondents in the Montenegrin Roma settlements comprised 1,165 households and 4,732 people. The survey covered an 80.9% response rate.

5. Results and Discussion

Table 2 compares MPI with its related indices – Poor Population and Intensity – for Serbia, North Macedonia, and Montenegro with rural and urban area.

Table 2. Multidimensional Poverty Index (MPI) and its Indices across Countries

Country	MPI			Poor Population (%)			Intensity (%)		
	Overall	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**
Serbia	0.22	0.33	0.10	0.62	0.92	0.30	35.82	36.19	34.55
North Macedonia	0.45	0.31	0.57	1.11	0.78	1.40	40.14	39.28	40.55
Montenegro	0.24	0.34	0.15	0.71	1.00	0.45	34.02	34.37	33.33

Source: Authors calculations

In North Macedonia, MPI, and the percentage of the poor population stood highest 0.45, and 1.11% respectively. Interestingly, North Macedonia compared to Serbia, and Montenegro, and its rural settings have higher multidimensional deprivations. In addition, poverty intensity in rural areas is 39.28%, and almost a quarter of the poor population is deprived in total weighted indicators, such as education, health, and living standards. There is an unresolved issue with poverty in North Macedonia's urban areas and MPI for urban areas is slightly higher and it stands at 0.57 than in the rural area (UNDP Human Development Report, 2021). However, the collected data of the 2018-2019 MICS is consistent with these trends and has analogous patterns of urban-rural differences and, therefore, supports the necessity of interventions aimed at achieving the SDGs (UNDP Human Development Reports, 2021).

Table 3. Multidimensional Poverty Index (MPI) and its Indices across Countries for Roma Settlements

	MPI			Poor Population (%)			Intensity (%)		
	Overall	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**
Serbia (Roma Settlements)	3.95	4.27	3.79	10.11	10.80	9.74	39.13	39.52	38.91
North Macedonia (Roma Settlements)	2.39	1.54	2.44	6.25	3.71	6.40	38.28	41.43	38.17
Montenegro (Roma Settlements)	6.26	1.79	7.12	13.51	5.36	15.07	46.34	33.33	47.22

Source: Authors calculations

MPI for Roma Settlements in Serbia, North Macedonia, and Montenegro in Table 3 found significant disparities not only overall but also across rural and urban areas. Montenegro has the highest value of MPI 6.26, whereas its urban areas deal with high MPI figure 7.12. In Serbia, the MPI stands at 3.95, with rural regions experiencing slightly worse conditions than urban settlements. North Macedonia stands out at the lowest MPI with 2.39, though urban areas still face higher deprivation compared to rural areas. Furthermore, the proportion of the population living in poverty is highest in Montenegro at 13.51%, where interestingly its urban population faces around three times more multidimensional poverty than its rural areas. In addition, the intensity of poverty which measures the depth of deprivation among all indicators reaches 46.34% in Montenegro, compared to 39.13% in Serbia and 38.28% in North Macedonia.

The present study's findings are compared with the data collected during the MICS survey in 2018-2019, which shows the following inequality between the Roma and non-Roma populations of these countries. The poverty and its related deprivations are more severe in the Roma settlements compared to the general population in the countries. It is important to note that the rural-urban divide exists across all three countries and yet, the intensity of poverty seems to be worse among Urban Roma, particularly those in Montenegro and North Macedonia. The latest data support that the need for interventions in the direction of poverty

reduction under SDG 1 is vital and most relevant to the inhabitants of the settlements with a predominant Roma population, which remain rather disadvantaged.

Table 4. Contribution of Dimensions and Indicators to MPI across Countries (in percentage)

	Serbia			North Macedonia			Montenegro		
MPI Indices	**Overall**	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**
Education Dimension	**52.21**	**53.33**	**48.24**	**46.92**	**21.37**	**58.59**	**48.99**	**48.49**	**50.00**
Child School Attendance	9.06	11.61	0.00	12.00	0.00	17.48	0.00	0.00	0.00
Years of Schooling	43.16	41.72	48.24	34.92	21.37	41.11	48.99	48.49	50.00
Health Dimension	**31.01**	**26.14**	**48.24**	**44.00**	**70.08**	**32.09**	**22.69**	**9.04**	**50.00**
Child Mortality	2.46	3.15	0.00	28.12	52.61	16.93	0.00	0.00	0.00
Nutrition	28.55	22.99	48.24	15.88	17.47	15.16	22.69	9.04	50.00
Living Standard Dimension	**16.78**	**20.53**	**3.51**	**9.08**	**8.55**	**9.32**	**28.32**	**42.46**	**0.00**
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Improved Sanitation	0.00	0.00	0.00	0.28	0.89	0.00	8.77	13.15	0.00
Improved Drinking Water	4.24	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flooring	2.16	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooking Fuel	9.26	10.89	3.51	6.40	7.66	5.83	10.78	16.16	0.00
Assets Ownership	1.13	1.44	0.00	2.40	0.00	3.49	8.77	13.15	0.00

Source: Authors calculations

Table 4 shows that Serbia has the highest contribution from the Education dimension at 52.21% and has significant rural deprivation. In addition, North Macedonia comes up next with 46.92%, but its urban settlements face more problems, particularly in child school attendance indicator, which adds 17.48%, the highest across all countries. On the other hand, Montenegro, shows the highest overall deficiency in the health dimension, especially in urban zones where health contributes 50% to multidimensional poverty, which highlights the critical healthcare problems. The living standards dimension also has notable differences, with Montenegro leading in this area at 28.32%, reflecting challenges in access to basic facilities such as clean cooking fuel and drinking water, particularly in rural regions.

In comparison with the recent SDGs data and the 2019 MICS reports, these inequalities align with ongoing issues in achieving particular targets in health and education. For example, North Macedonia continues to face significant nutrition-related challenges (North Macedonia MICS, 2018-19), which underscores the gaps in SDGs achievement, especially in Roma settlements (UNICEF, 2023; The United Nations in Serbia, 2023). Similarly, Serbia's differences in school attendance and health results need more serious interventions in rural and urban poverty reduction efforts.

Table 5. Contribution of Dimensions and Indicators into MPI across Countries for Roma Settlements (in percentage)

	Serbia *(Roma Settlements)*			North Macedonia *(Roma Settlements)*			Montenegro *(Roma Settlements)*		
MPI Indices	**Overall**	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**
Education Dimension	**40.78**	**33.48**	**45.07**	**58.28**	**69.54**	**57.87**	**43.62**	**50.00**	**43.32**
Child School Attendance	12.42	7.71	15.19	20.82	29.31	20.51	11.48	0.00	12.03
Years of Schooling	28.36	25.76	29.88	37.46	40.23	37.36	32.14	50.00	31.28
Health Dimension	**39.65**	**39.60**	**39.68**	**28.43**	**0.00**	**29.48**	**34.44**	**0.00**	**36.10**
Child Mortality	15.15	11.80	17.13	8.43	0.00	8.74	17.60	0.00	18.45
Nutrition	24.50	27.81	22.55	20.00	0.00	20.73	16.84	0.00	17.65
Living Standard Dimension	**19.57**	**26.92**	**15.25**	**13.29**	**30.46**	**12.66**	**21.94**	**50.00**	**20.59**
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Improved Sanitation	3.31	5.18	2.20	2.69	13.41	2.29	5.36	16.67	4.81
Improved Drinking Water	0.86	2.32	0.00	0.57	0.00	0.59	0.00	0.00	0.00
Flooring	2.19	3.50	1.43	0.00	0.00	0.00	1.28	0.00	1.34
Cooking Fuel	10.77	12.96	9.48	8.21	13.41	8.02	7.65	16.67	7.22
Assets Ownership	2.44	2.96	2.14	1.81	3.64	1.75	7.65	16.67	7.22

Source: Authors calculations

Table 5 reveals unique inequalities in education, health, and living standards, contributing differently to poverty levels. Roma settlements in North Macedonia excel in education deprivation, especially in rural areas. In addition, education deprivation is highest not only among other dimensions and their indicators but also among other countries. The recent investigations stress education's critical role in reducing poverty (World Bank, 2022). Serbia's urban areas are identified with improved educational facilities, but rural regions still face significant challenges, according to the Roma Inclusion Index (2019).

Health disparities are higher in Serbia's Roma settlements and in both urban and rural regions, where a lack of healthcare services deepens poverty. These results are aligned with the European Union Agency for Fundamental Rights (FRA, 2020), which identifies the continuous health inequalities for Roma populations in Serbia. Furthermore, Montenegro tackles high child mortality rates as compared to its rural settlements in urban areas, signaling systemic health risks (UNDP, 2021).

In regards to disparities in living standards, rural Montenegro outperforms North Macedonia and Serbia, particularly in access to improved sanitation, likely facilitated by recent infrastructure investments (UNDP, 2022). Adding to this, the Roma population in North Macedonia lags, particularly in sanitation and cooking fuel, consistent with European Commission findings (2021).

6. Conclusion

The concluding remarks of this research focus on the critical rural-urban division in multidimensional poverty across Western Balkan countries: Serbia, North Macedonia, and Montenegro, with Roma settlements being disproportionately affected. Serbia has improved and progressed in urban areas but continues to fight with deprivations in education and healthcare dimensions in rural and Roma settlements. These results are aligned with SDG 1 (No Poverty) and SDG 4 (Quality Education), which particularly emphasize the need for equitable educational access and poverty reduction, are more focused on marginalized populations (World Bank, 2022; Roma Inclusion Index, 2019).

This study underscores the importance of targeted, culturally relevant interventions. The MICS dataset confirms that multifaceted, cross-sectoral policies are significantly important in multidimensional poverty reduction in Roma communities, predominantly in health, education, and living standards (World Bank, 2023).

The analysis of this study is limited because of the unavailability of the MICS datasets for the other Balkan countries. Thus this study prevents us from doing a comprehensive comparison across the region. Furthermore, the absence of comparable survey datasets for other EU countries hinders establishing a broader context for the measurements and findings. Future research should prioritize when it comes to collecting consistent data for all Western Balkan countries, allowing a more robust analysis and comparison with neighboring EU member states like Croatia, Romania, and Bulgaria.

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NIVO DRUŠTVENE ODRŽIVOSTI MEREN MULTIDIMENZIONALNIM INDEKSOM SIROMAŠTVA U SRBIJI, SEVERNOJ MAKEDONIJI I CRNOJ GORI

***Rezime**: Ovaj rad istražuje višedimenzionalno siromaštvo u Srbiji, Severnoj Makedoniji, Crnoj Gori i njihovim romskim naseljima, naglašavajući ograničenja tradicionalnih mera zasnovanih na prihodu i prednosti Multidimenzionalnog indeksa siromaštva (MPI). Analizom nedavnih studija koje koriste podatke Ankete višestrukih klaster indikatora (Multiple Indicator Cluster Survey - MICS), ovaj rad ispituje ključne aspekte siromaštva, uključujući zdravlje, obrazovanje i životni standard. Rezultati pokazuju značajne razlike prema pokazatelju da li deca idu u školu, godinama školovanja, ishrani i gorivu za kuvanje među odabranim zemljama Zapadnog Balkana, posebno u romskoj populaciji. U radu su identifikovani nedostaci u trenutnom istraživanju, kao što su nedovoljni longitudinalni podaci za sve zemlje Zapadnog Balkana i nedostatak komparativne analize i sveobuhvatne evaluacije politike. Takođe, u radu se naglašava da bi trebalo dati objašnjenje u vezi sa prirodom ovih disparitеta i načinima njihovog otklanjanja da bi se poboljšao nivo kvaliteta života. Glavna preporuka je da postoji potreba da se ispita odnos između dimenzija siromaštva i uticaja ili uspeha politike kako bi se doprinelo poboljšanju mera politike za smanjenje siromaštva.*

***Ključne reči:** višedimenzionalni indeks siromaštva (MPI), zdravstveni disparitеti, pristup obrazovanju, životni standard, Anketa višestrukih klaster indikatora (Multiple Indicator Cluster Survey - MICS).*