YOUTH IN MONTENEGRO AND SLOVENIA: A COMPARATIVE ANALYSIS OF SOCIOPOLITICAL VALUES AND BEHAVIOUR

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This monograph is the result of work conducted within the research project *COVID-19 Aftermath in Slovenia: Vaccine Hesitancy, Democratic Engagement and Trust in Public Health Institutions* (J5-4579), funded by the Slovenian Research and Innovation Agency (ARIS), which also provided funding for the publication of this monograph. The editors and authors gratefully acknowledge this financial support.

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Introduction: Comparing youth attitudes and behaviours in post-Yugoslav countries – challenges and research agenda

Andrej Kirbiš

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The book *Youth in Montenegro and Slovenia: A Comparative Analysis of Sociopolitical Values and Behaviour* offers a comprehensive exploration of how young people in two post-Yugoslav societies navigate complex social, political, and cultural transformations. Since the dissolution of the former SFRY, Slovenia and Montenegro have shared historical legacies but followed divergent trajectories—Slovenia's EU membership and democratic consolidation contrast with Montenegro's ongoing transition and pursuit of European integration. Against this backdrop, the chapters in this volume examine how these pathways have shaped the values, aspirations, and behaviours of younger generations. Drawing on extensive empirical data, cross-national surveys, and in-depth comparative analyses, the book portrays youth not merely as passive recipients of social change but as active agents who influence and challenge the structures around them. Covering themes such as quality of life, education, value orientations, political participation, and environmental attitudes, the volume provides nuanced insights that extend beyond national borders and contribute to broader debates about youth in contemporary Europe.

In Chapter 1, Rade Šarović and Olga Radonjić (Faculty of Philosophy, University of Montenegro) examine the quality of life in rural areas of Montenegro and Slovenia. Their analysis highlights the demographic shifts,

urban migration, and socio-economic inequalities that have profoundly affected rural communities over recent decades. The authors argue that quality of life in rural settings depends not only on geographical location but also on broader socio-cultural factors, household characteristics, and subjective well-being. By comparing the rural populations of both countries, the chapter sheds light on the overlooked experiences of young people in depopulated and economically disadvantaged areas.

Chapter 2, authored by Miomirka Rakonjac and Predrag Živković (Faculty of Philosophy, University of Montenegro), focuses on life satisfaction among youth in Montenegro and Slovenia. Using data from the 2018 European Social Survey, the authors evaluate how young people perceive key aspects of their societies, such as the economy, education, healthcare, and democratic opportunities. Their findings show that Slovenian youth tend to express higher life satisfaction than their Montenegrin peers, yet remain critical of systemic challenges, particularly in education and healthcare. This comparative perspective reveals how different socio-political contexts shape the aspirations and expectations of young generations.

In Chapter 3, Goran Ćeranić and Nataša Krivokapić (Faculty of Philosophy, University of Montenegro) turn to the question of value orientations in Montenegro, Serbia, and Slovenia, using Schwartz's widely recognized theory of basic human values. Drawing on European Social Survey data, the authors uncover notable differences: while Montenegro retains a strong traditional and collectivist orientation, Serbia exhibits a shift toward individualism and openness to change, and Slovenia reflects a hybrid value structure that blends post-socialist legacies with Western European trends. These findings point to the diverse cultural pathways taken by post-Yugoslav societies in redefining shared values.

Chapter 4, written by Monika Lamot (Faculty of Arts, University of Maribor), explores the predictors of climate change attitudes among young people in Slovenia and Montenegro. Using regression analyses of European Social Survey data, the chapter underscores the central role of climate change

concern in fostering personal responsibility for environmental action. Interestingly, while institutional trust is particularly significant in Slovenia, populist attitudes in Montenegro—contrary to conventional assumptions—also appear to drive a sense of responsibility toward environmental issues. These findings challenge established narratives and underline the context-specific dynamics of climate engagement.

In Chapter 5, Marija Javornik (Faculty of Arts, University of Maribor) investigates the determinants of academic achievement among Slovenian and Montenegrin youth. Focusing on factors such as family environment, cultural capital, motivation, and study habits, the chapter shows that academic motivation is the strongest and most consistent predictor of success across both contexts. While Slovenian youth report higher average grades, Montenegrin youth demonstrate stronger intrinsic motivation and study habits, illustrating the interplay between individual drive and educational systems.

Chapter 6, authored by Maruša Lubej and Andrej Kirbiš (Faculty of Arts, University of Maribor), examines how social media use influences political information, efficacy, and participation among youth in Slovenia and Montenegro. Based on the FES Youth Study Southeast Europe 2018/2019, the chapter reveals that frequent social media use is associated with greater political interest and participation in both countries. However, its impact on political efficacy varies: internal efficacy increases in Montenegro, while external efficacy declines in Slovenia. This highlights the ambivalent role of digital media in shaping democratic engagement among young people.

In Chapter 7, Stefani Branilović and Andrej Kirbiš (Faculty of Arts, University of Maribor) explore the cognitive and affective dimensions of climate literacy as drivers of pro-environmental behaviour. Using cross-national data from the ISSP 2020 environment module, they find that while knowledge about climate causes and consequences is a strong motivator of action among Slovenian youth, affective factors such as concern and policy support also play a critical role. The chapter calls for educational and policy

interventions that combine information with emotional engagement to promote sustainable practices.

Chapter 8, also authored by Stefani Branilović and Andrej Kirbiš, takes a distinct approach within this volume by focusing on adults rather than youth as it explores the demographic and socioeconomic determinants of perceived ideological polarization in Slovenia. As the first comprehensive study of its kind in the country, it highlights education, income, and religiosity as significant predictors of perceived ideological divides, while age, gender, and urban residence are found to be non-significant. By uncovering how structural inequalities and socio-cultural factors shape perceptions of polarization, this chapter lays the groundwork for future research on polarization among younger generations and provides a valuable point of reference for comparative studies.

While the chapters in this volume provide a rich comparative perspective on the lives of young people in Montenegro and Slovenia, they also reveal enduring challenges that demand further research and policy attention. Issues such as rural depopulation, socio-economic disparities, and systemic weaknesses in education and healthcare continue to affect youth well-being and opportunities, as highlighted in the early chapters. The evolving value orientations (Chapter 3), digital engagement (Chapter 6), and environmental behaviours (Chapters 4 and 7) underscore the complexity of youth experiences in rapidly changing social contexts.

Taken together, the chapters in this monograph contribute to a forward--looking research agenda that emphasizes the need to integrate structural, cultural, and environmental perspectives in the study of youth. The volume underscores the value of interdisciplinary approaches and highlights the importance of evidence-based policy that recognizes young people not merely as subjects of research, but as active participants in shaping more democratic, inclusive, and sustainable societies.

CHAPTER 1
Comparative research of the life quality in rural areas of Montenegro and Slovenia

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Abstract

The past decades have brought Montenegro and Slovenia a series of turbulent events that significantly altered the demographic landscape and regional distribution of the population, especially in rural areas. Alongside the processes of devastation and depopulation of rural settlements, there has been an expansion of larger urban areas in both countries. These processes have ultimately resulted in the demographic emptying of mountainous regions and pronounced economic inequality. Due to these processes, insufficient attention has been paid to young people and their quality of life in rural areas, which served as the initial trigger for the exodus of the working-age population from rural communities. What most studies and development strategies have failed to consider as an important factor is that the quality of life for young people in rural areas is only partially determined by geographical location and place of residence. As such, it does not significantly determine a rural inhabitant's decision to stay or leave the countryside. Quality of life is almost always influenced by other socio-cultural characteristics of the environment, household features, personal innovative

traits of the individual, subjective satisfaction with one's life, and similar factors. These are the elements we aimed to operationalize into indicators in our research, through which we partially examined the quality of life for rural inhabitants in both countries. Since today only a small (non-representative) number of young people remain in rural areas, this comparative study focused on the overall rural populations of Montenegro and Slovenia.

Keywords: *countryside, quality of life, demography, development, youth, Montenegro, Slovenia*

1 Introduction

1.1 Historical context

After the violent breakup of Yugoslavia, both Montenegro and Slovenia followed their separate paths of the post-socialist transformation and reached different stages and goals (Lazić, 1994; Jović, 1995; Čalić, 2013). Slovenia, unlike Montenegro, pursued EU membership and achieved full membership in 2004. Apart from being the most economically developed of the ex-Yugoslav countries1, Slovenia was declared the most sustainable country in the world in 2017, a year the UN proclaimed as the International Year of Sustainable Tourism for Development. Slovenia won the title of "the most sustainable" as it fulfilled 96 out of 100 sustainability indicators directly related to environmental care, climate change, and biodiversity. Slovenian capital, Ljubljana, gained the title of Europe's greenest city in 2016 (European

1 GDP per capita calculation based on the results of Trading Economics clearly shows a significant difference in a material status of residents in the two surveyed countries and can be a potential indicator of the life quality in them. The highest GDP per capita is in Slovenia (48.109 USD), while in Montenegro it is 27.776 USD, and this clearly verifies the material status in the two ex-Yugoslav republics (Trading Economics, 2024). Similar results are seen in the minimum salary reports in both countries. In Slovenia it is 1.203.36 €, while in Montenegro it is 700 € (Eurostat, 2024).

Commission, 2016). These achievements impacted the lives of Slovenian residents of rural areas whose life quality is a subject of this research.

On the other hand, together with Serbia, Montenegro joined a union named the Federal Republic of Yugoslavia in 1992, facing international sanctions and experiencing extreme poverty, crisis, and war in neighboring countries (Lazić, 1994). After more than a decade, in the 2006 referendum, both Montenegro and Serbia declared their independence and began following the course of their more developed neighbors. Seventeen years later, Montenegro attempted to emulate Slovenia's path and attained candidate status for EU membership2.

Slovenia and Montenegro were part of one state for more than six decades, with brief interruptions. They shared a common ideology, shaped by similar cultural patterns, a Serbo-Croatian linguistic background, and a shared normative framework regarding rural areas and their development. Deagrarization, deruralization, and rural population aging are phenomena that affected both countries and shaped their future development (Vukićević, 2003; 2004; Parter, 2007; Šarović, 2012). Rural population decline led to increased transformations of villages into deserted settlements or tourist destinations, without farming as a primary industry. These trends are key factors shaping rural life in both countries and negatively affect their rural development.

2 Montenegro signed the Declaration on the Ecological State, becoming the first ecological state in the world 32 years ago, and is also a signatory to the Paris Agreement. However, reports on Montenegro's environmental state and the low economic standards of its population (including GDP and minimum salary) indicate that Montenegro, despite its pure and sustainable nature ideal for farming and livestock husbandry, is an ecological country only in name.

1.2 Background

Quality of life is a term frequently used in various professions as well as in everyday speech, which leads to diverse interpretations. During the first half of the 20th century, various material benefit indicators were used to assess quality of life, following the rule that better material status equates to better quality of life for residents. During the 1960s, the approach to quality of life expanded to include diverse indicators, as reflected in the so-called Social Indicators Movement. This process resulted in a broad application of the concept in social sciences, as well as in different areas of public life.

In the most general sociological sense (relevant to our research), quality of life can be defined as a set of life conditions assessed by satisfaction across various human needs, from biological to sociological (also see Mijić-Vučković, 2005: 249). Ljubinko Pušić emphasizes the necessity of differentiating between the normative and value sides of the term quality of life to fully understand it. In the first case, there are certain standards for universal human needs satisfaction, while in the second case, the cultural milieu role is emphasized in setting priorities for satisfying various needs of individuals and social groups. According to Pušić, quality of life is a relative term, which means it also involves subjective estimation, influenced not only by cultural background but also by personal affinities (Pušić, 1997: 395).

Today's studies of quality of life primarily focus on empirical assessments of individual, group, or national social prosperity as a whole. Prosperity is operationalized via numerous empirical indicators and their measurable variables, such as residence, education, employment, and use of new information technologies, etc. However, social indicators of quality of life studies can be objective or subjective.

Objective indicators, such as unemployment rate, infant mortality rate, working hours, and participation in public decision-making by residents living below the poverty line, reflect the conditions of a social community. Objective circumstances are relatively stable conditions that influence the

satisfaction of individual needs, such as material status, the environment, personal safety, and happiness, as well as life events relevant to personal goals. Subjective indicators are based on personal experience and valuation of social conditions, including life satisfaction, subjective health, income and job satisfaction, and perception of societal justice. Changes concerning these indicators are interpreted as enhancement or deterioration of a society's life quality.

However, satisfaction with quality of life is primarily conditioned by the difference between personal aspirations and realistic possibilities for achievement in a given social context. Numerous sociological studies indicate that the relationship between objective indicators and subjective assessments of personal quality of life is highly complex. Satisfaction does not arise solely from meeting basic needs or improving living standards and is not always directly correlated with quality of life. An individual's perception of their quality of life is shaped both by objective life conditions and by their personal characteristics, which influence how they view their experiences. The wholesome psychophysiological state of a person, their features, aspirations, wishes, possibilities, and values, set a basis for how the objective life conditions will be accepted.

This is why efforts to define the quality of life for rural populations in Montenegro and Slovenia often rely on a sociological analytical approach. Economic, political, cultural, and ecological factors typically provide the framework for understanding life conditions in a specific area. However, depending on the focus of a particular branch of sociology, research tends to emphasize specific indicators related to quality of life. It's important to remember that theory alone cannot fully determine where personal motives end and collective ones begin, nor whether people are more drawn to cities or pushed away from rural life.

1.3 Basic indicators of the research

The quality of life evaluation of farmers in Montenegro and Slovenia is a complex phenomenon that can be assessed based on the common parameters used in various EU countries. Regardless of state system (republic or monarchy), residence (urban or rural area), or economic situation (employment rates, professional qualifications, salaries, years of service), there are common parameters for quality of life assessment, including satisfaction with health, energy for daily life, self-satisfaction, and income satisfaction.

According to recent research3, and based on the Human Development Index (HDI) for 2021, Montenegro ranked 49th out of 191 countries, a relatively strong result compared to other countries in the region (shown by UNDP) (Helliwell J.F. et al., 2022). According to this report, Montenegro's HDI is .832, with an average life expectancy of 74.6 years, a gross national income of 12,249 USD, and an average of 14.4 years of formal education. On the other hand, Slovenia ranked 23rd on the HDI, highlighting a substantial difference between the two countries. HDI is an alternative to conventional measures of national development, incorporating national income, economic development rate, and three key dimensions: health, education, and income. On the UNDP list, Montenegro was behind Slovenia and Croatia, but ahead of Bosnia and Herzegovina (68th place), Serbia (60), and Macedonia (71) (Human Development Report, 2021–2022).

Here, we use several indicators to assess the quality of life in rural areas of Montenegro and Slovenia. For this research, we selected three subjective quality of life indicators: (1) subjective general health of respondents, (2) satisfaction with income, and (3) frequency of internet use. We analyzed the link between these indicators and the following five characteristics of

3 Research conducted in 2022, sponsored by the UN World Happiness Report, shows that the happiest people in the ex-Yugoslav area live in Slovenia, which ranked 22nd among 146 countries. Montenegro was ranked 75th, following China, Bolivia, Mongolia, and many other countries (Helliwell J.F. et al., 2022).

our respondents: rural versus urban residence, gender, age, marital status, and level of education.

Through this empirical research, we aim to assess respondents' satisfaction with their current conditions in rural areas, providing a basis for discussing the revitalization of these regions. There are various reasons why people choose to stay in a certain area or feel "pushed" to migrate. This "push-pull" effect is commonly studied in sociology, especially in the context of rural-urban dynamics, where urban areas are assumed to "pull" people, and rural areas "push" them towards cities.

Considering theoretical foundations and previous empirical research, we propose several assumptions in this study that may guide the formulation of hypotheses in future, more extensive studies. There is a common assumption that rural populations follow a specific sociocultural pattern, developed over decades and centuries, as a defining feature of rural areas. For this reason, we also assume that the respondents' demographic and socio-economic features significantly impact their satisfaction and quality of life in rural areas. However, it is expected that the data from Slovenia and Montenegro show substantial differences due to varying levels of economic development in the two countries.

2 Method

European Social Survey (ESS) is an international survey that has been conducted biannually since 2001 in 38 European countries. Its goals are to monitor and analyze changes in public opinion and values in Europe, as well as their interaction with European institutions. Montenegro was the most recent participant in the survey, joining in 2018 when the first cycle was conducted. Slovenia, on the other hand, has participated in this study since 2002 (European Social Survey, 2021).

In 2021, round 10 of the survey involved Slovenia and Montenegro, together with 29 other countries. The survey uses a representative sample, with respondents selected through strict random selection at each stage. Our analysis focused on participants from Montenegro and Slovenia, all of whom were at least 15 years old, with a total of 4122 respondents. In Montenegro, there were 1278 participants (630 female and 648 male), while in Slovenia there were 1252 (661 female and 591 male).

3 Results

Research on these issues (Puljiz, 1974; Šuvar, 1999; Božović, 2010) has consistently concluded that, while rural infrastructure, institutions, and culture are not lagging behind those in urban areas, the demographic power of rural communities is deteriorating. Despite some differences among former Yugoslav countries, statistical yearbooks and sociological studies have shown that many rural areas in both Montenegro and Slovenia remain institutionally underdeveloped, falling well short of the desired level (Parter, 2012; Šarović, 2013).

3.1 Health as an indicator of life quality

Health is seen as the most universal human need and consistently ranks at the top of life value lists across cultures and periods. However, for centuries, farmers in Montenegro and Slovenia lived without any pensions or health insurance. Even when this improved, and they were able to get full health insurance and partial pensions, they remained at a disadvantage compared to urban residents. Health institutions were usually located in municipal centers, and poor transport infrastructure made it especially difficult for elderly and sick farmers to access care, creating significant challenges (Hodžić, 2002; Svirčić Gotovac, 2007; Božović, 2010; Šljukić 2015).

Large and well-equipped healthcare facilities are still a privilege of urban areas, and this will remain the case as the depopulation of rural areas increases. However, a network of health facilities has gradually spread into smaller towns, and from urban areas into larger nearby villages. In Montenegro, this expansion only began after the second half of the 20th century and continues today. Villages with regular doctors' visits were very rare in the first half of the 20th century, and it was even rarer for them to have regular primary care services. Hygiene and health conditions in these rural areas were often catastrophic (Mitrović, 1998: 319).

Within the stated social and political context, the focus of our research is subjective perceptions of general health. Early on, we observe a clear distinction between Slovenia and Montenegro, and between their urban and rural populations. In Montenegro, rural residents are more likely to rate their health as bad or very bad compared to those living in urban areas (14.1% of rural respondents versus 7.6% of urban respondents). The differences are also evident in subjective general health, with urban residents being significantly more positive about their health (33.7%), compared to rural residents (25%) ($p < .001$) (Table 1.1).

Table 1.1: Subjective general health in Montenegro

		Very good	Good	Fair	Bad	Very bad	Total
AREA	URBAN	305	325	207	65	4	906
		33.7%	35.9%	22.8%	7.2%	.4%	100.0%
	RURAL	73	93	85	37	4	292
		25.0%	31.8%	29.1%	12.7%	1.4%	100.0%
Total		378	418	292	102	8	1198
		31.6%	34.9%	24.4%	8.5%	.7%	100.0%

Source: European Social Survey (2021).

On the other hand, such statistical differences are not found in Slovenia, as shown in Table 1.2, where there are no significant differences between rural and urban populations.

Table 1.2: Subjective general health in Slovenia

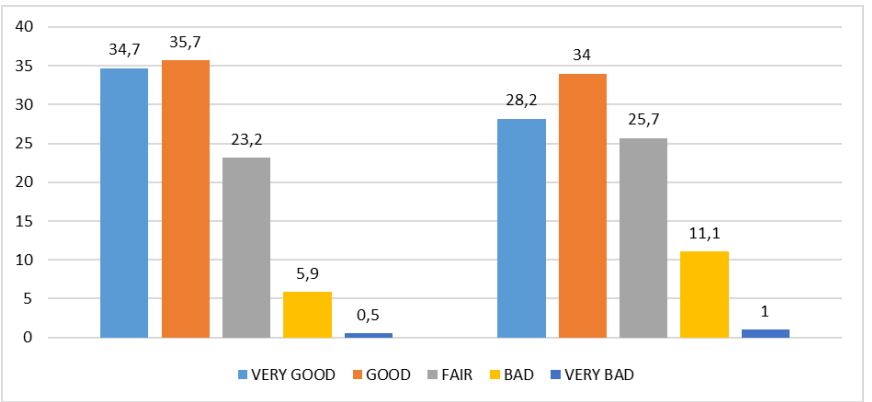
		Very good	Good	Fair	Bad	Very bad	Total
AREA	URBAN	137	271	162	40	8	618
		22.2%	43.9%	26.2%	6.5%	1.3%	100.0%
	RURAL	144	301	193	49	10	697
		20.7%	43.2%	27.7%	7.0%	1.4%	100.0%
Total		281	572	355	89	18	1315
		21.4%	43.5%	27.0%	6.8%	1.4%	100.0%

Source: European Social Survey (2021).

Montenegrin villages are today predominantly inhabited by elderly couples or unmarried individuals. The average age of rural residents is over 70, which represents a negative demographic trend. Based on our data, it is evident that the demographic and health outlook of Montenegrin rural inhabitants, burdened by aging-related issues, is poor, with very few chances for improvements. In contrast, Slovenia's higher level of economic prosperity has led to more balanced health outcomes for both rural and urban populations (Table 1.2).

When examining the personal features of our respondents, we study general subjective health by characteristics such as gender, marital status, age, and education level. These personal characteristics influence respondents' perception of their health. For the past few decades, the feminization of agriculture and the challenging living and working conditions for women in Montenegrin rural areas have resulted in significantly worse health outcomes for women compared to men. More than 12% of female respondents in Montenegro see their health as bad or very bad, compared to 6.5% of male respondents ($p = .003$), as shown in Figure 1.1.

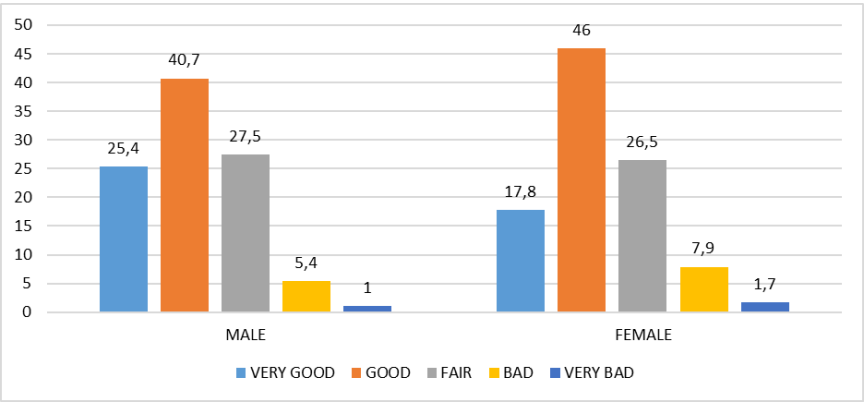
Figure 1.1: Subjective general health in Montenegrin rural areas compared by gender



Source: European Social Survey (2021).

The situation is similar in Slovenia (Figure 1.2), where 9.6% of women rate their health as bad or very bad, compared to 6.4% of men ($p = .004$). Our research does not clarify whether this difference is due to traditional masculine norms, where men are less likely to report experiencing health issues, or reflects greater sensitivity among female respondents. Regarding marital status, a positive subjective general health is more evident among single respondents. Generally, younger generations rate their health more positively compared to older, widowed, or divorced respondents. These patterns were consistent both in Slovenia and in Montenegro, with a very high degree of statistical significance ($p < .001$).

Figure 1.2: Subjective general health in Slovenian rural areas compared by gender



Source: European Social Survey (2021).

Young inhabitants represent demographic and physical potential of rural areas, and their participation is essential for future revitalization of rural areas in both Slovenia and Montenegro. This research has also shown that the subjective general health of younger rural residents is significantly better compared to their older neighbors, forming a foundation for future development strategies of rural areas. The result is once again consistent between Slovenia and Montenegro, with a very high degree of statistical significance ($p < .001$).

Finally, we examined the education level of the rural population in both countries in relation to health. The results of the young people who live in villages (and see their general health as good) are similar to the results of farmers with university degrees. Their attitude towards health is much more positive compared to farmers with only primary or high school education. More educated inhabitants of villages pay greater attention to their health as they are better informed, particularly through mass communication, and actively seek information from various sources. Based on this, they should be the main driving force, with their future work and commitment serving as a foundation for rural development in Montenegro and Slovenia. The

result is once again identical in both of the surveyed countries, with a very high degree of statistical significance.

By analyzing the health dimension in relation to gender, education, and partially residence, we have determined that the potential for rural development and family farms in Montenegro and Slovenia lies with young, educated farmers who envision their future in these areas. Their progress in farming represents revitalization of rural areas, giving an additional reason to focus more on this population in future studies.

3.2 Information technology use as an indicator of life quality

The technical and technological foundation of Yugoslav agricultural farms was predominantly traditional, relying on farmers' manual labor, cattle plowing, poorly equipped households, simple tools, and traditional production techniques. The metal plow, drawn by cattle, was the primary tool and farming methods relied on centuries-old farming knowledge and rural traditions. The modernization of farms, which was intended to foster economic and socio-cultural improvements, aimed to bring more modern forms of rural life. However, despite the significant and rapid changes in villages and family farms over the past few decades, these shifts failed to stimulate development in the rural areas. Instead, they resulted in regression, leaving them stagnating on the margins of urban centers (Šljukić 2015).

Modern information tools for households, leisure, and recreation have already become a part of everyday life in urban areas. Over the past few decades, the diffusion and adaptation of information innovations in rural areas have brought these communities closer to urban lifestyles. Implementation of modern technologies has had a significant impact on changes in the lifestyles of rural populations, by saving time on household chores, altering free time activities, and ensuring greater access to information and communication. As a result, the spread and adoption of these innovations is directly or indirectly contributing to the formation of a new rural culture (Đurić, 1975; Šljukić,

2015). Among these information tools, we focused specifically on internet usage, which serves as the foundation of modern technologies today.

In this case, the idea of economic prosperity emerges as a key factor in the differences between the two countries. Our research shows (Tables 1.3–1.5) that in Slovenia, the rural population use mass communication media at a similar rate as urban populations, with internet usage being the most common activity. The internet, which has transformed the world into a global village, is now a part of almost every household in rural Slovenia. Therefore, a similar result between urban and rural areas is not surprising. Statistically, there is no significant difference in the frequency of internet usage between urban and rural settlements of Slovenia, thus we can conclude that spatial distribution does not impact the consumption of information technology.

Table 1.3: Frequency of internet use by urban and rural residents in Slovenia

		Frequency of Internet use					Total
		Never	Only occasionally	A few times a week	Most days	Every day	
AREA	Urban	70	33	18	24	423	568
		12.3%	5.8%	3.2%	4.2%	74.5%	100.0%
	Rural	144	43	33	40	422	682
		21.1%	6.3%	4.8%	5.9%	61.9%	100.0%
Total		214	76	51	64	845	1250
		17.1%	6.1%	4.1%	5.1%	67.6%	100.0%

Source: European Social Survey (2021).

However, in Montenegro, we found a drastic difference in internet usage between rural and urban areas, which depicts a weaker demographic and economic foundation of Montenegrin rural settlements (Table 1.4). Respondents from rural areas who never use the internet are twice as many as those from urban areas (32.9% compared to 15.6%), while daily internet users in rural areas are half as many as those in cities (31.8% compared to 54.5%). These findings show lower social inclusion and a generally worse position for rural populations compared to urban counterparts.

Table 1.4: Frequency of internet use by urban and rural residents in Montenegro

		Frequency of Internet use					Total
		Never	Only occasionally	A few times a week	Most days	Every day	
AREA	Urban	141	70	44	157	493	905
		15.6%	7.7%	4.9%	17.3%	54.5%	100.0%
	Rural	96	22	21	60	93	292
		32.9%	7.5%	7.2%	20.5%	31.8%	100.0%
Total		237	92	65	217	586	1197
		19.8%	7.7%	5.4%	18.1%	49.0%	100.0%

Source: European Social Survey (2021).

Our research confirms the expected conclusion that young people use modern technologies more frequently, following generational trends. The internet is least used by those aged 65 and older in both countries. In Montenegro, 55.8% of respondents reported never using the internet, while in Slovenia the percentage is slightly higher at 62.4%. In Slovenia, the statistical significance of age differences in internet use is shown in Table 1.5. Similarly, for Montenegro, Table 1.6 illustrates the generational divide.

Table 1.5: Frequency of internet use in Slovenia compared between different age of users

		Frequency of Internet use in Slovenia					Total
		Never	Only occasionally	A few times a week	Most days	Every day	
AGE	up to 35 years old	2	2	8	10	250	272
		.7%	.7%	2.9%	3.7%	91.9%	100.0%
	from 36 to 50 years old	8	8	6	15	273	310
		2.6%	2.6%	1.9%	4.8%	88.1%	100.0%
	from 51 to 65 years old	35	27	21	24	205	312
		11.2%	8.7%	6.7%	7.7%	65.7%	100.0%
	over 65 years old	169	39	16	15	119	358
		47.2%	10.9%	4.5%	4.2%	33.2%	100.0%
Total		214	76	51	64	847	1252
		17.1%	6.1%	4.1%	5.1%	67.7%	100.0%

Source: European Social Survey (2021).

Table 1.6: Frequency of internet use in Montenegro compared between different age of users

		Frequency of Internet use in Montenegro					Total
		Never	Only occasionally	A few times a week	Most days	Every day	
AGE	up to 35 years old	2	11	12	27	297	349
		.6%	3.2%	3.4%	7.7%	85.1%	100.0%
	from 36 to 50 years old	1	25	15	53	210	304
		.3%	8.2%	4.9%	17.4%	69.1%	100.0%
	from 51 to 65 years old	23	54	27	92	149	345
		6.7%	15.7%	7.8%	26.7%	43.2%	100.0%
	over 65 years old	88	65	21	37	45	256
		34.4%	25.4%	8.2%	14.5%	17.6%	100.0%
Total		114	155	75	209	701	1254
		9.1%	12.4%	6.0%	16.7%	55.9%	100.0%

Source: European Social Survey (2021).

Next, our study revealed a strong correlation between the respondents' level of education and their internet use, especially in rural areas. Moreover, those with higher education spend significantly more time online ($p < .001$). Respondents with university degrees use the internet considerably more and connect to the internet daily. In Montenegro, 81.6% of respondents with higher education use the internet every day or almost every day, while in Slovenia this figure reaches 87.6%. This is shown in Table 1.7, which presents data for Montenegro, and Table 1.8, which presents the corresponding data for Slovenia. On the other hand, respondents with only primary school education use modern technologies far less.

Table 1.7: Frequency of internet use in Montenegro compared between different levels of education

		Frequency of internet use					Total
		Never	Only occasionally	A few times a week	Most days	Every day	
Diploma	Primary school	77	8	12	11	31	139
		55.4%	5.8%	8.6%	7.9%	22.3%	100.0%
	High school	134	68	41	158	351	752
		17.8%	9.0%	5.5%	21.0%	46.7%	100.0%
	University	27	15	12	44	195	293
		9.2%	5.1%	4.1%	15.0%	66.6%	100.0%
Total		238	91	65	213	577	1184
		20.1%	7.7%	5.5%	18.0%	48.7%	100.0%
		20.6%	8.1%	5.7%	5.3%	60.3%	100.0%

Source: European Social Survey (2021).

In 55.4% of cases, respondents with primary education in Montenegro never use the internet, and 47.9% in Slovenia, compared to a significantly smaller proportion of internet abstainers among high school-educated respondents in both countries.

Table 1.8: Frequency of internet use in Slovenia compared between different levels of education

		Frequency of internet us					Total
		Never	Only occasionally	A few times a week	Most days	Every day	
Diploma	Primary school	123	23	14	11	86	257
		47.9%	8.9%	5.4%	4.3%	33.5%	100.0%
	High school	128	72	47	40	407	694
		18.4%	10.4%	6.8%	5.8%	58.6%	100.0%
	University	20	11	14	18	299	362
		5.5%	3.0%	3.9%	5.0%	82.6%	100.0%
Total		271	106	75	69	792	1313

Source: European Social Survey (2021).

3.3 Satisfaction with income as an indicator of life quality

Farmers have long viewed equalization with non-farmers in terms of fundamental social rights and income as a key factor in deciding whether to stay in or leave rural areas. However, the results of our research show this expectation is unrealistic. Salaries from the real sector are consistently higher in urban areas than in rural ones, and significantly more rural residents lack income compared to urban residents. This suggests that social policies, including pensions and other social and welfare benefits may be more aimed toward urban populations.

When comparing the main income sources of urban and rural populations in Montenegro and Slovenia, there are statistically significant differences ($p < .001$ for Montenegro and $p < .006$ for Slovenia). The income of farmers is typically earned by selling agricultural products or engaging in informal work. On the other hand, inhabitants of urban areas most often rely on steady incomes from fixed monthly salaries or pensions from past employment. This result is expected and clearly shows the position farmers hold today in relation to state budget allocations and expenses in both countries.

Regarding income satisfaction, there is a noticeable difference between the two countries surveyed. A huge number of respondents from Montenegrin villages (47.6%) feel that it is difficult or very difficult to enable normal lives for themselves and their families with their current income (Table 1.9). In contrast, this is far less common in urban areas of Montenegro, with only 21% of respondents expressing similar concerns. Moreover, our respondents' attitude towards personal income can also be seen in data showing that 27.3% of urban residents feel their present income provides them with good quality and comfortable lives. However, this percentage is significantly lower among rural respondents, with only 10.3% feeling their income affords them a good standard of living.

Table 1.9: Comparison of income satisfaction between urban and rural areas in Montenegro

		Satisfaction with current household's income				
		Living comfortably on present income	Coping on present income	Difficult on present income	Very difficult on present income	Total
AREA	URBAN	245	466	130	58	899
		27.3%	51.8%	14.5%	6.5%	100.0%
	RURAL	30	122	74	64	290
		10.3%	42.1%	25.5%	22.1%	100.0%
Total		275	588	204	122	1189
		23.1%	49.5%	17.2%	10.3%	100.0%

Source: European Social Survey (2021).

In Slovenia, due to a more stable economic system the country provides, respondents show minimal differences in satisfaction with income and personal lives. Notably, in Slovenia, there is no significant statistical difference in economic perception between the inhabitants of rural and urban areas ($p < .097$), suggesting that the economic resources are equally distributed throughout the community (Table 1.10). While there is a slight variation indicating a higher perceived life quality among urban residents (11.2% of urban respondents report dissatisfaction with life quality compared to 15.8%

in rural areas), this disparity is far less pronounced than the differences observed in Montenegro.

Table 1.10: Comparison of income satisfaction between urban and rural areas in Slovenia

Crosstab

		Satisfaction with current household's income				
		Living comfortably on present income	Coping on present income	Difficult on present income	Very difficult on present income	Total
AREA	URBAN	327	219	47	22	615
		53.2%	35.6%	7.6%	3.6%	100.0%
	RURAL	336	247	76	33	692
		48.6%	35.7%	11.0%	4.8%	100.0%
Total		663	466	123	55	1307
		50.7%	35.7%	9.4%	4.2%	100.0%

Source: European Social Survey (2021).

Regarding the given data, what was once unlikely, full gender equality and equalization in terms of shared household incomes has now become a prominent reality. This trend suggests that the range of rural interests has expanded beyond traditional farm work to occupations less connected to agriculture. Respondents from Montenegrin villages with primary, high school, and university diplomas all agree on one matter: income based on farm-related works cannot ensure a good life quality but merely cover basic needs. This economic fragility paints a concerning picture of rural Montenegro's future, especially considering the need to sustain and revitalize these areas.

4 Conclusion

For rural areas, such as villages and family farms in Montenegro and Slovenia, we conclude that they reflect the social conditions and circumstances in which these societies have existed for the past two decades. The risks associated with farming, combined with post-socialist transformations, have

led to limited resources at the individual and family levels. In this social context and due to different development potentials, it is not surprising to see a decrease in the number of family members in rural households in both countries (Perpar, 2007; Božović, 2010; Perpar and Udovč, 2012).

Sociological studies on this topic, show that in terms of social and biological reproduction, the workforce represents a key limiting factor for the development and revitalization of farms. Meanwhile demographic abandonment and rural aging represent basic population trends, particularly in Slovenia and Montenegro. In addition, secondary data show that the health and demographic status of the rural populations in Montenegro and Slovenia is highly unfavorable. This is because the intensive process of demographic aging of both working-age4 and total rural population has negative implications, which are likely to persist due to demographic inertia5. These demographic trends significantly impact the life quality of rural areas and heighten the risk of rural abandonment.

Given the demographic situation, it seems paradoxical that innovative processes and modernized village households are present in these areas of both countries, almost at the level of urban centers. As expected, the intensity of these processes is detersmined by the demographic, socio-economic, and cultural features of individual households. Our research shows, that in Montenegro there is a notable difference in the life quality between rural and urban inhabitants, compared to Slovenia. This difference is evident in rural inhabitants' subjective perceptions of their areaof living, health, and income.

Concerning technical modernization, rural households in Montenegro are almost on the same level as urban areas and show similar results to those

4 The working-age population refers to individuals typically aged between 15 and 64 who are considered capable of employment and constitute the primary labor force.

5 Demographic inertia is the tendency of a population to continue growing or declining after changes in fertility or mortality rates have occurred. This momentum arises due to the age structure of the population and the time it takes for changes in demographic trends to ripple through successive generations.

found in Slovenia. More vital households in rural areas of Montenegro and Slovenia, with younger and more educated members, have all the features of urban families and the potential to adjust their work and lifestyle to the needs of modern farming, creating a healthy future for their children and themselves. In contrast, regressive households, reaching the end of their working careers, have implemented minimal modernization, and show little desire for innovations that could improve their work and living conditions.

Our analysis can be used as an indicator for future research in both countries, highlighting the need for further attention to this issue. The role of the country is crucial in this process, but the primary responsibility lies with those who stayed in rural areas, or plan to move there. The future of the family farms and their quality of life depends on their activism, by empowering networks they belong to in a given social context.

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CHAPTER 2
Satisfaction with life in Montenegrin and Slovenian societies from the perspective of the youth

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Abstract

The focus of the present chapter is on the category of satisfaction expressed by young people regarding life in Montenegrin and Slovenian societies. To determine the level of satisfaction among youth in these societies, we took into account the following spheres: economy, education, and healthcare, as well as the democratic nature of both societies viewed through the prism of equal opportunities that young people have when selecting a school and participating in the labour market. In the past, both societies were part of the former SFRY, but after its dissolution, a different socio-historical development path followed. One notable difference is that Montenegrin society has not yet become part of the EU, whereas Slovenian society joined it in 2004. This has significantly influenced the developmental trajectories of both societies and shaped the quality of life of young people. In this chapter, we compare the data obtained from the 2018 European Social Survey to assess the extent to which these societies represent a prospective place for the lives of young people. We found,

among other things, that young people in Slovenia express a higher degree of satisfaction with life than young people in Montenegro. However, Slovenian youth also exhibit a critical perspective, particularly concerning the education and healthcare systems and the need for improved equal opportunities in the labour market.

Keywords: *Montenegrin society, Slovenian society, young people, level of satisfaction, economy, education, healthcare, democracy.*

1 Introduction

When examining the category of satisfaction with life in Montenegrin and Slovenian societies from the perspective of the youth, we must first clarify the concept of the youth. The sociological literature defines youth as a transitional phase to adulthood, during which individuals prepare to meet societal challenges, with society defining youth status through both explicit and implicit norms (Čičkarić, 2006). According to the 2011 census, young people aged 15–29 comprised (21.4%) of Montenegro's population (132,702 out of 620,029) (National Youth Strategy, 2023–2027). In Slovenia, youth aged 15–29 make up (15.5%) of the population, with projections indicating a decline to (14.8%) by 2030 (OHCHR, 2023).

Following the prevailing definition of youth in modern society, this chapter considers respondents aged up to 35 years. Youth is a life phase marked by increasing individualization, during which knowledge and experiences shaped by different social influences are systematized. This marks the emergence of a self-reflective and personally shaped biography, involving decisions about education, career, residence, and family (Beck, 2001). The social, cultural, and historical context defines the conditions in which young people live and develop their potential.

Considering the shift from real socialism to post-socialism and the extended transformation period of Montenegro's early 21st century, two opposing

value systems coexist: collectivist patterns rooted in patriarchal and socialist traditions and emerging individualistic values (Petrović, 2014). Consequently, traditional value patterns are not disappearing but are gradually transformed into values typical of modern societies. On the other hand, the openness towards the West, the effort to become part of the European community, the mobility of the population, and the exchange of experiences among members of different cultures all influence the redefinition and innovation of existing traditional value patterns (Lučić, 2018).

The social climate in Montenegrin society is characterized by political, institutional, and economic instability, creating an environment where corruption, nepotism, and mediocrity are often viewed as justified means of achieving goals. In such a social climate, securing jobs through political activism, corruption, or nepotism is common, as social mobility and advancement are often seen to depend more on political connections and power than on knowledge and effort (Đukanović, 2019).

Due to insecurity in the social environment, young people in Slovenia lean towards the family environment, as it provides both security and comfort. At the same time, politics is not among their primary interests (Mencin Čeplak, 2006). They focus on the private sphere of personal life, which can be interpreted from a sociological perspective as an escape from the uncertainty caused by the processes of globalization and detraditionalization (Beck, 2001; Giddens, 1998). Slovenian Youth Studies indicate that youth often prioritize personal stability over active political engagement. Older studies reveal a general shift among young people from outward-focused social concerns to a more inward-looking approach. In Slovenia, there was a shift from abstract, ideology-driven value systems toward more tangible values, emphasizing interpersonal relationships and everyday quality of life. Interest in politics, the military, and religion dropped significantly. Socially, young Slovenians prioritize stability and a clean environment, while on a personal level, they value family life, friendships, professional and academic success, and high levels of individual freedom (Lavrič and Rutar, 2021: 37–39).

A common feature of Montenegrin and Slovenian societies is the aspiration of young people toward formal education. In Montenegrin society, 26.8% of young people are enrolled in primary or secondary school, 28.8% in bachelor programs, 8.2% in postgraduate studies, and 2.6% in other education or training (Đukanović, 2019: 55). Between 2000 and 2021, the share of individuals aged 25–34 with a high level of education increased by an average of 21% in OECD countries. In Slovenia, this figure rose by 29% (from 19% in 2000 to 48% in 2021), making tertiary education the most common achievement level for this age group (OECD, 2022).

Employment among young people in Montenegrin society remains low: only 11.2% have permanent jobs, 23% have temporary contracts, and 43.8% are unemployed (Đukanović, 2019: 13). High unemployment among young people in Montenegrin society leads to economic insecurity, family dependence, deprivation, difficulty achieving independence, and dissatisfaction.

In this chapter, we examine the satisfaction and opportunities young people experience or could potentially realize in Montenegrin and Slovenian societies. Subjective and objective dimensions are inherent in the category of satisfaction. The subjective dimension of satisfaction refers to personal experiences and perceptions of the environment. The objective dimension reflects the influence of society on an individual's quality of life. Here, we focus on the objective dimension of satisfaction.

Education is a key factor in the development of society and the economy as a whole. Thus, as a strategically important goal for its development, there is the requirement to provide each individual with quality education through acquiring knowledge, skills, and competencies that will enable personal and professional development. This reflects not only on individual satisfaction but also on overall social development. More than ever, contemporary educational trends indicate that education is inevitable and that permanent changes occurring in various areas of social life drive the need for constant innovation and lifelong learning.

Innovations that once took multiple generations to develop now unfold within the span of a single generation, creating a world where people face rapid physical, intellectual, and moral transformations. These changes are so profound that traditional explanations and approaches are no longer adequate (Langran, 1976: 10). This concept of society accompanied by permanent changes required in education is described by Polish sociologist Zygmunt Bauman as a society of "fluid modernity". Such a society is characterized by the conditions that evolve so quickly, that individuals barely have time to establish habits or routines, before new changes demand adaptation (Bauman, 2009: 9).

2 Research objective

The research objective is to compare the overall satisfaction of youth with their quality of life and opportunities for achieving goals in Montenegro and Slovenia. We analyse how individual factors, such as the economy, education, health, equal opportunities in education, and employment, contribute to youth satisfaction in Montenegrin and Slovenian societies.

2.1 Hypotheses

H1: We predict Montenegrin youth express low levels of satisfaction with the quality of life in Montenegrin society (since it has been shaken by a political, economic, institutional, and spiritual crisis for the last four decades).

H2: The youth in Slovenia show a higher level of satisfaction with the quality of life than youth in Montenegro (the accession of Slovenia to the EU in 2004 has enabled a greater degree of mobility, education, and employment within and outside of the country, as well as numerous other material benefits that are important in the lives of young people).

H3: We expect that Slovenian youth are more satisfied with the state of the economy than Montenegrin youth.

H4: We predict that young people in Montenegro show low levels of satisfaction with the education system, (indicating that the material and human resources in the educational sector should be improved and made more competitive and receptive to youth).

H5: We expect that young people in Slovenian society show a high level of satisfaction with the education system compared to Montenegrin youth (since the standards and practices of the education system are adapted to the practice of developed EU countries).

H6: We predict that young people in Montenegrin society have lower satisfaction with the health system (since they do not enjoy benefits that would motivate them to have regular health check-ups and encourage health prevention to become a part of a young person's life, unlike young people in Slovenia).

H7: We predict that democracy in achieving the desired level of education and finding a job is inherent to a greater extent in Slovenian society than in Montenegro.

3 Research method

The European Social Survey is academic international survey research that has been conducted every two years across Europe since 2001 (ESS, 2023). The primary goal of this research is to monitor, analyse, and interpret the attitudes, beliefs, patterns of behaviour, and values of the European population, as well as their interaction with European institutions. Here, we focus specifically on the results related to Montenegro and Slovenia. It should be emphasized that Montenegro joined this research project in 2018.

3.1 Sample

The sample is stratified according to age and country of residence, with respondents selected through strict methods of random selection at each stage. In this chapter, we included respondents from Montenegro and Slovenia who participated in the survey in 2018, aged 15 to 35 (European Social Survey, 2018). A total of 1200 respondents from Montenegro participated in the survey, of which 334 respondents (27.8%) fall in the category of young people, while a total of 1318 respondents from Slovenia participated in the survey, of which 358 (27.2%) are in the category of young people.

3.2 Instruments

The measuring instrument used in this research is a questionnaire (round 9: 2018/2019) created as part of the European Social Survey, which has been conducted across Europe since its foundation in 2001 and is implemented in a large number of European countries (European Social Survey, 2023). The research includes questions concerning various social topics (social values and ideological orientations, cultural and national values and orientations, social structures) (Institut za sociološka istraživanja, 2025). Data collection during the research is standardized and takes place within each country individually, with the questionnaire adapted to the national, cultural, ethnic, linguistic, and other specificities of each of the countries in which the research is carried out. Data collection is done through face-to-face surveys on representative samples of the population over 15 years old (ibid.).

In our work, we focused on the population of young people aged 15–35, and in this regard, we took into account the fundamental part of the ESS questionnaire, which measures citizens' satisfaction with life as a whole, the state of the economy, the education system, the health system, as well as the part that measures equal chances in terms of the opportunity to acquire the desired level of education and obtain the desired job. The questions were: "All things considered, how satisfied are you with your life as a whole nowadays?

Please answer using this card, where 0 means extremely dissatisfied and 10 means extremely satisfied.", "On the whole, how satisfied are you with the present state of the economy in [country]?", "Now, using this card, please say what you think overall about the state of education in [country] nowadays?", and "Still using this card, please say what you think overall about the state of health services in [country] nowadays?" (0 = extremely bad; 10 = extremely good); "To what extent do you think this statement applies in [country]? Overall, everyone in [country] has a fair chance of achieving the level of education they seek.", and "Overall, everyone in [country] has a fair chance of getting the jobs they seek." (0 = Does not apply at all; 10 = Applies completely).

The task of the respondents was to assess how much a certain statement applies to them personally by rounding the value with which they perceive satisfaction/dissatisfaction with the way certain segments of the social structure function, as well as values related to the perception of equal chances in the domain of obtaining the desired level of education and the possibility of getting a job based on their own self-assessment.

We used the aforementioned parts of the questionnaire with the aim of determining the level of satisfaction of young people with certain segments of social functioning, as well as which segments of the social structure require additional attention in terms of improvement and change.

4 Results

In a general sense, satisfaction with life can be defined as a cognitive, global assessment of life as a whole, and one of the most reliable indicators of happiness, well-being, and positive functioning among young people (Proctor and Linley, 2014: 199). Satisfaction with life refers to how individuals evaluate the overall quality of their lives, as well as how they feel about specific areas such as work, relationships, or health (Handa et al., 2023: 1553). Life satisfaction varies across different life stages due to differences in wealth

accumulation and social circumstances, meaning that absolute satisfaction levels change over the lifetime (Handa et al., 2023: 1551). For determining satisfaction with life, it is necessary to consider the existing social conditions that allow individuals to achieve their aspirations in different segments of social life, which reflect the subjective experience of happiness. The Cantril Ladder, a commonly used life satisfaction measure, asks respondents to rate their satisfaction on a scale from 0 to 10, where 0 indicates the lowest level of satisfaction and 10 the highest (Handa et al., 2023: 1553). Accordingly, our study employs the question from the European Social Survey from 2018, to test the satisfaction of young people in Montenegrin and Slovenian societies: "How satisfied are you with your life as a whole, taking everything into account?".

Examining the age groups 15–18, 19–24, 25–29, and 30–35, it is evident that young people in the 15–18 age cohort show the highest level of satisfaction (Table 2.1). Looking at the responses that selected the values from seven to ten, we see that the level of satisfaction of young people in Montenegrin society decreases as age increases. This is also reflected in the data, which show that young people aged 15–18 are very satisfied with life in Montenegrin society, while respondents in the 19–24 and 25–29 age categories select value eight. Respondents aged 30–35 select value seven to assess their satisfaction with life in Montenegrin society. Based on the average values (15–18 years – 8.55; 19–24 years – 7.72; 25–29 years – 7.45; 30–35 years – 7.13), the same trend can be identified, confirming a decline in life satisfaction among Montenegrin youth with increasing age.

Some of the reasons may be that young people strive to become independent as they get older and face numerous social challenges intensified by political, economic, and institutional crises and overall social instability. This leads to many implications, such as difficulty in finding a job, instability of the source of income, problems in achieving autonomy from one's parents, and organizing free time.

Table 2.1: Satisfaction with life as a whole in Montenegrin society

Age	Very dissatisfied	2	3	4	5	6	7	8	9	Very satisfied	Total	Mean
15-18	0%	0%	1.8%	1.8%	5.5%	1.8%	3.6%	23.6%	27.3%	34.5%	100%	8.55
19-24	0%	2.6%	1.3%	1.3%	5.3%	9.2%	19.7%	22.4%	21.1%	17.1%	100%	7.72
25-29	2%	1%	4.1%	0%	8.2%	9.2%	18.4%	23.5%	18.4%	15.3%	100%	7.45
30-35	2%	1%	2%	7.8%	10.8%	9.8%	20.6%	14.7%	14.7%	16.7%	100%	7.13
df=27; x^2=44,138; p=.02												

Source: European Social Survey (2018).

Based on the results presented in Table 2.2, it can be observed that young people in Slovenia in the 15–18, 19–24, and 30–35 age categories select value eight to assess their satisfaction with life in Slovenian society, while the 25–29 age category selects value nine, indicating a very high level of satisfaction. Considering the average values, deviations among age categories are minimal, and all age categories demonstrate a high level of satisfaction. This suggests that Slovenian society largely meets the needs of young people and provides opportunities for achieving both personal and collective aspirations. According to the World Happiness Report 2020, it is emphasized that the population will experience a high level of satisfaction with life only if people are prosocial, healthy, and prosperous (Helliwell et al., 2023). Also, in the World Happiness Report 2023, Slovenia is ranked 22nd in the world, and Montenegro is ranked 67th. Taken together, we can confirm our first and second hypotheses.

Table 2.2: Satisfaction with life as a whole in Slovenian society

Age	Very dissatisfied	2	3	4	5	6	7	8	9	Very satisfied	Total	Mean
15-18	0%	0%	0%	0%	4.8%	4.8%	16.7%	29.8%	27.4%	16.7%	100%	8.20
19-24	0%	0%	1.3%	0%	5.1%	5.1%	21.5%	29.1%	17.7%	20.3%	100%	8.03
25-29	0%	0%	4.2%	0%	4.2%	5.6%	9.9%	26.8%	28.2%	21.1%	100%	8.15
30-35	0%	.8%	1.6%	1.6%	6.5%	5.7%	16.3%	31.7%	22.8%	13%	100%	7.83
x^2=18,762; df=24; p=.76												

Source: European Social Survey (2018).

Historical and social facts indicate that Montenegrin society, like many other post-socialist societies, follows a capitalist mode of production based on the original accumulation of capital. The negative influence of such a social matrix produces a whole series of social and political consequences (Kovačević, 2011). Analysts argue that many well-functioning companies were unwisely sold during the nearly three-decade transition from social ownership, leaving primarily businesses that had already faced challenges in the previous system (Kovačević, 2011: 177). The process of privatization and the closure of companies that faced operational difficulties during the socialist period, as well as those that encountered similar problems in the post-socialist period, have deprived young people of the possibility of existential security. Furthermore, according to young people, the most important factors leading to employment are connections with individuals in positions of power (64.5%), acquaintances and personal connections (62.8%), and party affiliation (57.2%). Expertise and knowledge are only ranked as the fourth factor, as indicated by respondents (52.6%). In the opinion of young people, happiness is considered more important than education (49.7% compared to 48.7%) (Đukanović, 2019: 50). The data confirm that nepotism, politically driven employment practices, and the dominance of personal interests demotivate young people and prevent them from planning and shaping their social lives in a meaningful way. In

such a challenging daily environment, the first essential step is to establish conditions that support a quality of everyday life. This means ensuring a consistent and adequate fulfillment of various human needs, in line with current cultural and civilizational standards.

Based on the data shown in Table 2.3, the level of satisfaction with the economy in Montenegrin society among young people varies by age. In the 15–18 age category, the most frequently selected value is five, indicating that respondents are neither satisfied nor dissatisfied with the economy. In the 19–24 age category, the most frequently selected values are three and four, suggesting a tendency towards dissatisfaction with the state of the economy in Montenegrin society. In the 25–29 age category, values five and six are most frequently selected, indicating a tendency towards satisfaction. Finally, in the 30–35 age category, the most frequently selected value is five on a scale from 0 to 10, reflecting partial satisfaction with the economy in Montenegrin society.

We assume that the respondents in the 15–18 age cohort participate actively in the educational process, are not yet working, and are dependent on parental support, which may limit their objectivity in evaluating the economic situation. However, we can assume that the respondents in the 19–24, 25–29, and 30–35 age cohorts are working or are looking for employment, so they are more objective in assessing their economic state. Since these cohorts express partial satisfaction with the state of the economy in Montenegrin society, if we exclude the 19–24 category, which indicates dissatisfaction, it suggests that this area requires improvement, both in economic development and in the quality of the approach towards managing human resources that influence its development.

Based on the arithmetic mean values (15–18 years – 4.85; 19–24 years – 4.00; 25–29 years – 4.56; 30–35 years – 3.97), it can be concluded that the level of satisfaction with the functioning of the economy in Montenegrin society decreases with increasing age.

Table 2.3: Satisfaction with the current state of the economy in Montenegrin society

Age	Very dissatisfied	1	2	3	4	5	6	7	8	9	Very satisfied	Total	Mean
15-18	9.4%	1.9 %	9.4 %	9.4%	5.7%	22.6 %	11.3 %	15.1 %	11.3 %	1.9 %	1.9%	100 %	4.85
19-24	9.3%	8%	9.3 %	16%	18.7 %	12%	9.3%	6.7%	9.3%	0%	1.3%	100 %	4.00
25-29	11.1%	3%	9.1 %	10.1 %	10.1 %	19.2 %	14.1 %	9.1%	8.1%	3.0 %	3%	100 %	4.56
30-35	12.6%	5.8 %	8.7 %	16.5 %	9.7%	22.3 %	7.8%	4.9%	6.8%	3.9 %	1%	100 %	3.97
df=30; x^2=26,957; p=.62													

Source: European Social Survey (2018).

Based on the data shown in Table 2.4, the level of satisfaction with the economy in Slovenian society among young people is generally satisfactory, though there remains room for improvement in the economic sphere. In the 15–18 age category, the most frequently selected values are six and seven; in the 19–24 age category, five, six, and seven; in the 25–29 age category, five and seven; and in the 30–35 age category, five and six, all on a scale from 0 to 10. As the results confirm, the most frequently selected values fall within the values of five, six, and seven, indicating that all age groups perceive the state of the economy as satisfactory, with a tendency and possibilities for improvement. The need to improve the state of the economy is further emphasized by the frequencies in the "very satisfied" category. The arithmetic mean values (15–18 years – 5.79; 19–24 years – 5.51; 25–29 years – 5.38; 30–35 years – 5.46) confirm a consistent trend in satisfaction with the state of the economy in society.

By comparing the Montenegrin and Slovenian societies, we found that satisfaction with the economic position of young people in Slovenia is somewhat better than in Montenegro. Hence, we partially confirm the hypothesis which proposed that young people in Slovenia express a higher degree of satisfaction with the economic situation than the ones in Montenegro. This suggests that the current state of the economy should be improved, and young people should be encouraged to organize their lives in the society they were born into, and thus continuously contribute to its growth and development.

Table 2.4: Satisfaction with the current state of the economy in Slovenian society

Age	Very dissatisfied	1	2	3	4	5	6	7	8	9	Very satisfied	Total	Mean
15-18	1.2%	1.2%	1.2%	6.1%	12.2%	15.9%	24.4%	22%	13.4%	2.4%	0%	100%	5.79
19-24	1.3%	1.3%	5.1%	10.3%	6.4%	21.8%	20.5%	20.5%	9%	2.6%	1.3%	100%	5.51
25-29	2.8%	0%	8.5%	11.3%	11.3%	19.7%	11.3%	19.7%	7%	2.8%	5.6%	100%	5.38
30-35	1.6%	1.6%	4.1%	8.2%	10.7%	25.4%	19.7%	13.9%	11.5%	2.5%	.8%	100%	5.46
x^2=27,430; df=30; p=.60													

Source: European Social Survey (2018).

The satisfaction with the education system, which ideally should evolve with these rapid changes, is assessed differently by respondents from different cohorts, as seen in Table 2.5. When assessing their satisfaction with the education system, the 15–18 age cohort most frequently selected value six (on a scale from 0 to 10), with the percentage of 19.6%. The respondents in the 19–24 age cohort most commonly picked value three and assess the

education system in Montenegro as bad. The respondents in the 25–29 age cohort, in the highest percentage of 21.2%, chose the value seven, and in the 30–35 age cohort, the highest percentage of 19.4% selected value six. Those two groups indicate relative satisfaction but also leave room for improvement in educational practice. However, the respondents aged 19–24 specifically suggest that the education system needs to be revitalized.

Table 2.5: Satisfaction with the current state of education in Montenegrin society

Age	Extremely bad	1	2	3	4	5	6	7	8	9	Extremely good	Total
15-18	5.4%	0%	16.1%	7.1%	7.1%	8.9%	19.6%	10.7%	7.1%	8.9%	8.9%	100%
19-24	3.9%	3.9%	11.8%	19.7%	9.2%	13.2%	7.9%	15.8%	5.3%	6.6%	2.6%	100%
25-29	7.1%	5.1%	9.1%	14.1%	8.1%	6.1%	7.1%	21.2%	12.1%	4%	6.1%	100%
30-35	7.8%	4.9%	7.8%	9.7%	10.7%	16.5%	19.4%	6.8%	8.7%	5.8%	1.9%	100%
df=30; x^2=44,329; p=.04												

Source: European Social Survey (2018).

Young people in Slovenia hold a critical attitude towards the education system. Accordingly, the highest percentage of the respondents in the 15–18 (28.6%), 19–24 (22.8%), and 30–35 (18%) cohorts selected number seven (on a scale of 0–10), while the respondents from the 25–29 (17.4%) cohort chose number five (Table 2.6). Respondents' satisfaction with the education system is relatively good, with the possibility of improvement. The research Education at a Glance 2022 by OECD confirms that higher education is a significant factor in the quality of life of young people. It notes that educational attainment is rising across the OECD, especially at the tertiary level. In Slovenia, the share of individuals with tertiary education

increased at an even faster pace, rising by 29% from 19% in 2000 to 48% in 2021. Slovenia is one of 24 OECD countries where tertiary education is the most common achievement between the ages of 25–34 (OECD, 2022).

The assessment of education from the perspective of young people of different ages is reflected in the quality of their knowledge and competencies they acquire through the education process. These qualities contribute to personal development, enhance market competitiveness, facilitate access to quality jobs, promote personal autonomy, and contribute to overall social development. Over the last 50 years, the expansion of education throughout the EU, including Slovenia, has been remarkable and represents one of the biggest social changes. Education has become an integral part of the life cycle for many Slovenians, similar to the average European. This growth is closely linked to modernization, but also reflects a trend of young people delaying their entry into the labour market. In this context, education and knowledge are regarded as the fundamental determinants of modern civilization, highlighting the emancipatory aspect of education and its critical importance (Flere and Tavčar Krajnc, 2010: 99). By comparing the Montenegrin and Slovenian societies, we found that satisfaction with education among young people in Slovenia is on a higher level than in Montenegrin society, which partially confirms our hypothesis. However, there is room for improvement in both countries.

Table 2.6: Satisfaction with the current state of education in Slovenian society

Age	Extremely bad	1	2	3	4	5	6	7	8	9	Extremely good	Total
15-18	0%	2.4%	0%	4.8%	4.8%	6%	21.4%	28.6%	19%	9.5%	3.6%	100%
19-24	1.3%	2.5%	3.8%	8.9%	10.1%	10.1%	13.9%	22.8%	12.7%	7.6%	6.3%	100%
25-29	4.3%	1.4%	10.1%	7.2%	10.1%	17.4%	13%	8.7%	15.9%	4.3%	7.2%	100%
30-35	2.5%	.8%	2.5%	9.8%	9.8%	15.6%	18%	18%	16.4%	4.1%	2.5%	100%

x^2=43,126; df=30; p=.05

Source: European Social Survey (2018).

Health care and health prevention are closely related to the quality of life that citizens, particularly young people, have in a certain society. As societies have developed economically, so has the health system, providing better health care to its citizens. Here, we analysed the satisfaction with the current state of healthcare among young people in Montenegrin society (Table 2.7). Young people in Montenegro have a divided attitude towards the healthcare system. Accordingly, the highest percentage of respondents in the 15–18 age cohort (20%) selected the value five; in the 19–24 age cohort, the highest percentage (14.5%) selected value seven (on a scale from 0 to 10); while in the 25–29 cohort, the highest percentage of respondents (16.2%) indicate that the healthcare system is functioning poorly. Respondents aged 30–35 most frequently select value six (17.5%). Based on the obtained data, the respondents' satisfaction with the health system in Montenegrin society varies from extreme dissatisfaction to relative satisfaction. This variability suggests that the social elites that regulate politics in the country should prioritize education and healthcare, as these systems are the key to social development and keeping young people in Montenegro.

A study conducted by UNICEF in 2017, which refers to the adolescent population, confirms that the health system in Montenegrin society should be improved. It decisively points out that there is a lack of cooperation among health, educational, and social protection institutions, which are not systemically organized, and lack a clear division of responsibilities and duties (Jovanović et al., 2017: 20).

Table 2.7: Satisfaction with the state of healthcare in Montenegrin society

Age	Extremely bad	1	2	3	4	5	6	7	8	9	Extremely good	Total
15-18	5.5%	10.9%	7.3%	7.3%	5.5%	20%	7.3%	12.7%	9.1%	9.1%	5.5%	100%
19-24	9.2%	7.9%	10.5%	13.2%	11.8%	13.2%	7.9%	14.5%	7.9%	1.3%	2.6%	100%
25-29	16.2%	3%	11.1%	5.1%	5.1%	12.1%	14.1%	14.1%	8.1%	7.1%	4%	100%
30-35	8.7%	5.8%	12.6%	15.5%	10.7%	9.7%	17.5%	6.8%	7.8%	2.9%	1.9%	100%
df=30; x^2=37,976; p=.15												

Source: European Social Survey (2018).

According to Barbara Zupanc Terglav and colleagues, the most significant factors of satisfaction with the health system are the quality of health services, the care process, and health outcomes (Zupanc Terglav et al., 2019: 38). The study conducted in 2019 at the Faculty of Medicine in Ljubljana confirms the respondents' dissatisfaction with the existing health system with a low average score (M=2.86) on a scale of 1 to 5 (1 indicating "I do not agree at all", and 5 "I completely agree"), and that the health system needs changes (M=4.32) (Zupanc Terglav et al., 2019: 39).

Data from the European Social Survey used for this study further illustrates that satisfaction with healthcare in Slovenian society varies across age cohorts, with a statistically significant difference. Young people in the 15–18 and

19–24 age cohorts indicate a selected value of six and seven to evaluate their satisfaction with the health system, which indicates a partially high level of satisfaction (on a scale of 0 to 10), but this level of satisfaction declines as age increases (Table 2.8). Respondents aged 25–29 assess their satisfaction with the healthcare system by selecting value five, while those in the 30–35 age group select value six. The findings from Zupanc Terglav and colleagues, which indicate that satisfaction with the health system decreases with age, align with the results of the European Social Survey, making this a general trend. The above also indicates that the health system does not satisfy the needs of young people in both countries, and it should be improved and adapted to their needs.

Table 2.8: Satisfaction with the state of healthcare in Slovenian society

Age	Extremely bad	1	2	3	4	5	6	7	8	9	Extremely good	Total
15-18	1.2%	0	2.4%	3.6%	4.8%	13.3%	20.5%	27.7%	15.7%	9.6%	1.2%	100%
19-24	1.3%	3.8%	3.8%	13.9%	12.7%	10.1%	19%	16.5%	8.9%	5.1%	5.1%	100%
25-29	7%	4.2%	11.3%	14.1%	7%	19.7%	8.5%	11.3%	7%	4.2%	5.6%	100%
30-35	.8%	7.4%	9%	11.5%	14.8%	13.1%	18%	11.5%	9%	3.3%	1.6	100%
x^2=60,965 df=30; p=.001												

Source: European Social Survey (2018).

In order to assess the factors that influence the satisfaction level in Montenegrin society, we examined the equal chances people have when achieving the desired level of education and access to the labour market. When analysing the principle of equality in achieving the desired level of education in Montenegrin society on a scale of 0–10 (with 0 indicating "it does not apply to me at all", and 10 "it totally applies to me"), differences

emerged across age cohorts (Table 2.9). In the 15–18 age cohort, 22.2% of the respondents assessed their opportunity for achieving the desired level of education with value ten. Responses in the 19–24 age cohort varied, with the highest percentage (17.6%) ranking equal opportunities with value ten, while a slightly smaller percentage (12.2%) picked number five. In the 25–29 age cohort, 23.5% of the respondents predominantly chose value ten, while 17.3% chose value six. Lastly, in the 30–35 age cohort, value five and ten were selected by an equal percentage of the respondents (20.8%). In this segment of the analysis, no statistically significant difference between the cohorts is confirmed, suggesting a generally shared perception of educational opportunity across these age groups.

Based on the data analysis, we conclude that the respondents who rank the equality of opportunities for achieving the desired level of education with values five and six feel that these opportunities are only partially accessible to them. In contrast, those who rank the mentioned opportunity as ten think these represent an inherent part of their life and social experience.

Table 2.9: Relationship between age and opportunities for achieving the desired level of education in Montenegrin society

Age	"Compared to other people in Montenegro, I had a fair chance to achieve the level of education I wanted."											
	It does not apply to me at all	1	2	3	4	5	6	7	8	9	It totally applies to me	Total
15-18	1.9%	1.9%	1.9%	5.6%	7.4%	20.4%	9.3%	5.6%	13%	11.1%	22.2%	100%
19-24	5.4%	4.1%	8.1%	9.5%	12.2%	10.8%	10.8%	9.5%	5.4%	6.8%	17.6%	100%
25-29	4.1%	1%	3.1%	8.2%	13.3%	17.3%	12.2%	7.1%	6.1%	4.1%	23.5%	100%
30-35	1%	1%	3%	9.9%	10.9%	20.8%	12.9%	5.9%	7.9%	5.9%	20.8%	100%
df=30; x^2=22,789; p=.82												

Source: European Social Survey (2018).

Considering the obtained results, young people in Slovenia show a high level of satisfaction with the equality of opportunities for achieving the desired level of education (Table 2.10). Respondents in the 15–18, 19–24, and 30–35 age categories believe they have full access to equal educational opportunities, as confirmed by the highest percentage of respondents identifying with the category "it totally applies to me". A slight deviation is observed in the 25–29 age category, indicating a high level of satisfaction with equal opportunities to attain the desired level of education, although slightly lower compared to respondents from other age categories, as they select the value eight. That confirms that Slovenian society values education and provides equal participation in the education process according to their affinities.

We should bear in mind the results presented in the Education at a Glance 2022 by OECD Indicator for Slovenia, which point to gender inequality regarding the chosen fields of study. They show that in Slovenia, women

represent 23% of new students in engineering, production, and construction studies and only 16% in information and communication technologies. In contrast, women represented 86% of participants in the field of education, a sector traditionally dominated by women. Conversely, men represent 22% of teachers, compared to an average 30% in OECD countries (OECD, 2022). Therefore, unlike Montenegrin society, the possibility of equal access to education is more pronounced in Slovenia. These data implicitly confirm the higher level of the democratic character of Slovenian society compared to Montenegro, which confirms our seventh hypothesis.

Table 2.10: Relationship between age and opportunities for achieving the desired level of education in Slovenian society

	"Compared to other people in Slovenia, I had a fair chance to achieve the level of education I wanted."											
Age	It does not apply to me at all	1	2	3	4	5	6	7	8	9	It totally applies to me	Total
15-18	1.2%	1.2%	1.2%	0%	7.1%	9.5%	3.6%	20.2%	20.2%	13.1%	22.6%	100%
19-24	1.3%	2.5%	2.5%	6.3%	11.4%	8.9%	6.3%	12.7%	15.2%	11.4%	21.5%	100%
25-29	4.3%	2.9%	7.1%	2.9%	5.7%	8.6%	10%	11.4%	20%	8.6%	18.6%	100%
30-35	2.5%	.8%	7.4%	6.6%	8.2%	12.3%	8.2%	15.6%	12.3%	7.4%	18.9%	100%
	df=30; x^2=28,146; p=.56											

Source: European Social Survey (2018).

Apart from education, access to the labour market is a significant factor in ensuring existential security, independence, and personal autonomy. The transition from education to employment is most often considered crucial among the transitions of young people's life paths (Kovacheva, 2001; in Mojić, 2012: 111). In recent decades, young people have faced numerous changes in the labour market driven by the process of technologization, automation, and changed working conditions. All of this requires constant learning and

improvement to maintain their jobs. The employment situation is very complex in the countries of delayed transformation, like Montenegro. This is due to quasi-requirements imposed on young people, such as political party suitability and nepotism. Challenges are further compounded by the social climate, which is characterized by economic regression, institutional, and political instability, and cultural and spiritual crisis. Thus, during the job search, traditional criteria such as education, skills, and desire to improve are often deprioritized.

Analysing the data obtained by the European Social Survey shows that in every cohort, except the 15–18 age cohort, the majority of young people think that they do not have equal employment opportunities compared to others (Table 2.11). Respondents in the 15–18 age cohort select values five and six, suggesting their perception of employment opportunities and equal chances is partially optimistic. The 19–24 age cohort selects value three, indicating a very poor perception of employment opportunities. Respondents in the 25–29 age category select the value five, but a large percentage (18.4%) state that such opportunities do not apply to them at all. Finally, respondents aged 30–35 indicate that the possibility of equal employment opportunities does not apply to them at all. From this arises the problem of disintegration of the youth and their need to be a part of society that will provide equal rights, meeting a range of essential needs, starting from the need for security to the need for self-expression and personal autonomy (Maslow, 1954).

Research by Mojić similarly highlights that countries with comparable social and historical contexts face similar challenges and resulting consequences. Mojić's findings indicate that employment status also affects the integration of young people into our society; unemployed young people think about going abroad much more often than their employed peers. The lack of family resources, diminishing significance of education as an individual resource to find employment (noted in post-socialist Serbia and extending to Montenegro), and limited expectations of societal improvement push many young people, particularly those unemployed, to consider integration into foreign societies (Mojić, 2012: 126). Additionally, the Youth Study

Montenegro from 2018, based on a randomized, stratified, and representative national sample of 711 respondents aged 14 to 29, formed by the CeSID research team, reports the percentage of young people who are unemployed is 43.8% (Đukanović, 2019: 49).

Table 2.11: Relationship between age and opportunities for getting the desired job in Montenegrin society

Age	"Compared to other people in Montenegro, I would have a fair chance of getting the job I am looking for."											
	It does not apply to me at all	1	2	3	4	5	6	7	8	9	It totally applies to me	Total
15-18	10.6%	14.9%	2.1%	14.9%	12.8%	17%	17%	2.1%	2.1%	2.1%	4.3%	100%
19-24	16%	5.3%	13.3%	17.3%	12%	16%	5.3%	2.7%	1.3%	2.7%	8%	100%
25-29	18.4%	3.1%	7.1%	11.2%	12.2%	21.4%	6.1%	5.1%	4.1%	2%	9.2%	100%
30-35	20.6%	8.8%	7.8%	19.6%	10.8%	16.7%	3.9%	5.9%	2%	2.9%	1%	100%
df=30; x^2=36,373; p=.19												

Source: European Social Survey (2018).

According to the research from 2006 on the example of Slovenia, the unemployment rate for young people in the 15–24 age category is very high, higher than in other age groups, while the rate among those aged 25–29 aligns more closely with the rest (Mencin Čeplak, 2006). This study notes that unemployment is a significant cause of dependence on others, primarily parents, leading to increased insecurity and self-doubt, and can extend a longer stay in the family home. Those over 25, who still live with their parents, have a high level of autonomy but partial economic dependence and strive towards complete independence (Mencin Čeplak, 2006: 298). The youth unemployment rate in Slovenian society at the beginning of 2017 was 13.2%, which is notably above the national average of 7.8%. Also, traditional

forms of permanent employment are part of the past, which means that fluidity and uncertainty are more common in young people's position in the labour market in Slovenia, and the fear of unemployment is constantly increasing (Naterer, 2019: 57).

The European Social Survey data reveal notable age-based differences in perceived equality in the Slovenian labour market (Table 2.12). On a scale from 0–10 (0 meaning "it does not apply to me at all", and 10 "it totally applies to me"), respondents in the 19–24 age cohort in the highest percentage (21.8%) assess the opportunity for equal participation in the labour market with the value three, while the respondents aged 30–35 in the highest percentage (21%) most frequently select value two. By contrast, respondents aged 15–18 most frequently select value seven (20.7%), while those aged 25–29 most frequently select value six (21%). The difference in the perception of equal participation in the labour market is also indicated by the existence of a statistically significant difference of $p < .05$.

According to the report Education at a Glance 2022 by OECD Indicator, gender inequality in employment is indicative. Namely, young women are less likely to be employed than young men, especially those with a lower level of education. In Slovenia, only 42% of women aged 25–34 with lower secondary education were employed in 2020 compared to 62% of men. However, this gender gap is smaller than the average in OECD countries, where 43% of women and 69% of men with lower secondary education are employed (OECD, 2022). Comparing youth unemployment rates between Montenegrin and Slovenian societies also reflects differences in existential security and autonomy levels. With youth unemployment at 43.8% in Montenegrin (Đukanović, 2019) versus 13.2% in Slovenian society (European Commission, 2025), Slovenian young people generally experience greater stability and independence, positioning them better for a secure transition into adulthood.

Table 2.12: Relationship between age and opportunities for getting the desired job in Slovenian society

Age	"Compared to other people in Slovenia, I would have a fair chance of getting the job I am looking for."											
	It does not apply to me at all	1	2	3	4	5	6	7	8	9	It totally applies to me	Total
15-18	3.7%	1.2%	4.9%	7.3%	13.4%	17.1%	15.9%	20.7%	9.8%	1.2%	4.9%	100%
19-24	5.1%	1.3%	11.5%	21.8%	12.8%	14.1%	9%	9%	10.3%	1.3%	3.8%	100%
25-29	11.4%	5.7%	8.6 %	11.4%	12.9%	15.7%	18.6%	7.1%	2.9%	1.4%	4.3%	100%
30-35	7.3%	2.4%	16.9%	10.5%	15.3%	21%	12.9%	6.5%	4%	.8%	2.4%	100%
	df=30; x^2=44,636; p=.04											

Source: European Social Survey (2018).

5 Discussion

This chapter focuses on the satisfaction of young people with life in Montenegrin and Slovenian societies, focusing on key factors: the economy, education, health, equal opportunities in education, and participation in the labour market. We decided on these areas that affect the level of young people's satisfaction with life because we believe they play a key role when it comes to the attitude towards life as a whole. Empirical research supports this notion that life satisfaction is positively related to a wide range of positive personal, psychological, behavioural, social, interpersonal, and intrapersonal outcomes (Proctor and Linley, 2014: 199). Our findings indicate that in Montenegrin society, the level of satisfaction of young people decreases with increasing age, while young people in Slovenia in all age groups show a high level of satisfaction. This means that Slovenian society largely satisfies the

needs of young people and offers opportunities for achieving their personal and collective aspirations.

The economic situation plays a significant role in determining the standard of living of young people and reflects on different segments of life like family dynamics, business opportunities, and social engagement. Given its importance, we assessed whether young people in Montenegrin and Slovenian societies are satisfied with the economic situation. By comparing the results between the two countries, we can emphasize that young people in Slovenia show a significantly higher level of satisfaction with the economic state, choosing values five, six, and seven across all cohorts. In contrast, young people in Montenegro rated their satisfaction with the economy with numbers three, four, five, and six, except for the 15–18 age cohort who chose the value seven.

The next important segment we considered is satisfaction with the education system in Montenegrin and Slovenian societies. According to the obtained data, the perception of satisfaction with education in Montenegrin society is divided based on the age cohorts. The respondents in the 19–24 age cohort rate it as bad, while the respondents in the other cohorts most commonly selected values six and seven, which means relatively good. In Slovenia, young people are critically oriented towards the education system, which is confirmed by the majority choosing values five and seven. This critical approach reflects the fact that they are aware of the limitations in the education system and desire its improvement.

The importance of education is also indicated by the growing trend of young people in both Montenegrin and Slovenian societies, who view it as essential capital that will provide a higher level of existential security in today's risk-prone society (Đukanović, 2019; OECD, 2022). However, sociologist Ulrich Beck highlights that in the modern risk society, educational attainment does not guarantee career predictability or security. Beck suggests that as economic uncertainties grow, young people can no longer plan long-term careers with the same confidence, with the labour market crisis

representing a shift away from stable, high-status roles to more uncertain and less calculable career paths (Beck, 2001: 263).

The way the health system functions and the quality of services it provides are equally crucial aspects that determine the satisfaction of young people in society. We conclude that current levels of satisfaction with the health system in Montenegrin and Slovenian societies require improvements of strategies and policies to better serve young populations and enhance overall well-being.

Next, we also examined the democratic character of society through the prism of equal opportunities that citizens, especially young people, have when choosing a school and participating in the labour market. By comparing Montenegrin and Slovenian society in terms of equal opportunities for participation in the education process, it is evident that there is stratification in Montenegrin society. This means that there is a part of the respondents who notice the presence of inequality in the opportunities to achieve the desired level of education, while others believe that equal access to education is an integral part of the experience during the educational process. In contrast, in Slovenian society, young people show a high level of satisfaction with the opportunity to independently choose and decide on the school and faculty they enrol in.

Furthermore, we looked at the level of equality in labour market opportunities in Montenegrin and Slovenian societies. The general conclusion is that young people in both societies do not express a high level of satisfaction. Except for the 15–18 age cohort in Montenegro, the other age cohorts indicate a critical attitude towards the democratic character of society in the domain of equal opportunities in the labour market. In Slovenia, the divided perception of the respondents prevails, which is confirmed by the different levels of ranking between the age cohorts. The opportunity for getting a job is highly ranked in the 15–18 and 25–29 age cohorts, while the same opportunity is ranked low in the 19–24 and 30–35 age cohorts.

6 Conclusion

All in all, we conclude that young people in Slovenia express a higher degree of satisfaction with life than the young people in Montenegro. However, Slovenian youth also exhibit a critical perspective, particularly concerning the education and healthcare systems and the need for improved equal opportunities in the labour market. This desire for reform and enhancement of public systems reflects an awareness and aspiration for better institutional support, emphasizing the value young Slovenians place on societal progress and personal development.

7 References

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CHAPTER 3
Comparison of value structures in Montenegro, Serbia and Slovenia from the perspective of Schwartz's theory

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Abstract

This chapter presents a comparative analysis of value structures in Montenegro, Serbia, and Slovenia, using Schwartz's theory of basic human values as the analytical framework—one of the most widely applied and empirically supported models for understanding value orientations across cultures. According to Schwartz, values are beliefs about desirable end states that guide behavior and indicate what is considered more or less important within a society. Drawing on data from the ninth round of the European Social Survey, we examined the latent structure of ten motivational value types across the three countries, applying principal component analysis to identify underlying dimensions. The findings revealed that respondents from Montenegro maintained a relatively coherent traditional and collectivist value structure, consistent with historical continuity; Serbia exhibited a more individualistic orientation with increasing openness to change, while Slovenia showed a hybrid pattern reflecting both post-socialist transformation and alignment with Western European value

trends. These results suggest that although rooted in a shared socialist legacy, the three countries diverge in their current value configurations, reflecting distinct paths of social and political development.

Keywords: *Schwartz's theory of values, self-enhancement, self-transcendence, openness to change, conservation, Montenegro, Serbia, Slovenia*

1 Introduction

In the last thirty years, just like other post-socialist societies, the former Yugoslav countries have seen significant social changes, such as the collapse of socialism, the disintegration of the common state, and the transition from one social system to another. All of these are standard problems of a comprehensive social transformation. A systemic change implies a complete change in shaping social life and thus affects all its related spheres. Such major social changes certainly affected the consciousness of people, their values, and thus the specific forms of behaviour of individuals and social groups seeking to adapt to the new social circumstances (Đukanović and Bešić, 2000; Lazić, 2010; 2011).

Values represent what is desirable and valued and, at the same time, what influences the choice of goals and means of action. They are general dispositions that affect attitudes related to specific objects (Sekulić, 2012). Values, therefore, represent the main landmarks of behaviour, opinions, and actions of individuals and social groups. They guide us on what we should dedicate ourselves to and what we should strive for, what our priorities are, and what we should encourage in ourselves and other people. Values determine how key life decisions are made and how goals and means for their realization are selected. It is clear that values are not only individual but also social creations, which is supported by the fact that in the conditions of extensive social changes, the value patterns also change. They are imbued with events that characterize an epoch, a social system, and corresponding

social movements, which makes them very important for explaining complex social phenomena.

However, regardless of the fact that social transformations affect the change of value systems, stability is one of their most significant features. In other words, values are not immutable or completely stable, but neither are they completely unstable and easily variable (Rokeach, 1973). The ongoing change of social circumstances does not mean that the same will happen with values; it takes a long time for them to be constituted, but also to be changed. Social stability would not be possible if values were subject to easy change. Instead, values are deeply rooted in the structure of society. They are a product and an integral part of that structure, but at the same time, they produce it and influence its character (Ćeranić, 2018).

The majority of value researchers have an undivided opinion that structural changes in society inevitably lead to changes in value patterns. However, there is no agreement amongst them when it comes to the cause-and-effect relationship between the structural and value changes. Some argue that value changes occur as a product of socio-structural transformations, while others believe that this is a two-way process, i.e., values change under the influence of fundamental social relations in a society, but they themselves can also impact social change (Janković, 2016: 8). For instance, Ronald Inglehart (2007), in his highly influential theory of modernization, argues that socio-economic development contributes to certain cultural and value changes. Namely, the modernization of the value system, which he sees as the dominance of post-materialist values, arises as a result of changes in the social circumstances.

Furthermore, the social security created by welfare societies after World War II contributed to the activation of post-materialist values, which represent a hierarchically higher level of values according to Maslow's theory of needs. In a similar way, Duško Sekulić observes the interdependence of social circumstances and values, but he believes that although values are conditioned by social changes, they can also anticipate them (Sekulić, 2011).

Mladen Lazić (2011) emphasizes that this mutual dependence between social circumstances and values became even more pronounced. In his theory of value-normative dissonance, he states that values are formed under the influence of the predominant system of social relations, but proposes that for the existing social system to change, value patterns that encourage the establishment of a new social order are necessary.

1.1 Social context as a determinant of value patterns

In the present chapter, we pay special attention to the value changes that have occurred in the areas of former socialist countries, especially the former SFRY, i.e. the three republics of the former Yugoslavia - Montenegro, Serbia, and Slovenia. Each society has its own specificities, and in order to understand the events within them, one should take into account their cultural and historical features, traditional patterns of behaviour, religion, type of social system, and other national specificities that may shape dominant value orientations.

Although socialism, from a historical perspective, lasted a very short time, numerous studies (Pantić, 1977; Lazić, 2011; Sekulić, 2012) show that it has left its mark on values and value patterns. The dominant value system in the former Yugoslavia contained elements of both modern and traditional value patterns. To reduce the influence of traditional heritage, the communist regime initiated many modernizing processes. These were primarily focused on the growth of education levels, more open social structure (especially regarding upward mobility), promoting secularization, suppression of national identity, and greater representation of women in the workforce and public life, thereby contributing to a higher level of gender equality.

On the other hand, some values that are characteristic of traditional societies have been strengthened. Notably, collectivist, egalitarian, and authoritarian value patterns became more pronounced. The reasons for this should be sought in the ideological patterns socialism was based on, which

are largely similar to the traditional ones. Namely, as Kuzmanović (2003) states, the communist political culture emphasized the cult of leadership (especially the supreme leader), hierarchical relations, party discipline (within the only allowed party), obedience, and monolithism – attributes that make up the source of authoritarian consciousness. Thus, the socialist political culture was grafted onto traditional patterns, creating a unique social and political amalgam.

The significant social changes that occurred in the 1990s in the political, economic, and overall social spheres in this region inevitably influenced value patterns. The events that marked this period generally had a negative impact on the modernization processes. The transformation from one social system into another, amid the disintegration of the common state, the emphasis on national issues, and the long-lasting civil war, severance of economic and all other ties with foreign countries due to the UN sanctions against Serbia and Montenegro, and the dramatic decline of social standard – all these factors inevitably led to the collapse of material and existential security, and certainly determined the value patterns in these societies.

In most post-socialist societies, the transformation processes have been marked by a crisis, whether of an economic, social, or political nature. Of course, the intensity of the crises was not the same in all the societies and they differed greatly. According to Lazić (2000), the so-called "blocked" or slowed-down transformation was characteristic of post-socialist Serbia, and it had a similar pattern in Montenegro. The modernization elements of transformation initiated during the socialist period have been thwarted by constant crises in the post-socialist period. All this has contributed to the fact that the intensity and the direction of changes have taken different paths in different societies, even in terms of value patterns.

With the transition from one social system to another, value inconsistency can inevitably occur (Lazić, 2011). During this process of change, new social mechanisms emerge, which produce new social relations. On the other hand, the old system of social relations, which, was formed under

socialism, has persisted long after the collapse of the social system. Such social circumstances produce value inconsistencies within the population, more precisely, resulting in what can be described as value confusion. This phenomenon, characterized by widespread support for different, sometimes even conflicting values, is what we call value inconsistency (Lazić, 2011).

1.2 Theoretical approaches in the study of values

Speaking of values, i.e. changes that take place in the structure of the value system, researchers' focus has always been on the relationship between the old and the new values, the traditional and modern ones. The theory of modernization, which is the foundation of what we today call classical sociology (Sekulić, 2012), sees modernization as a process that inevitably pulls society forward, while traditionalism is an obstacle that must be overcome. Specifically, the modernization paradigm in the social sciences is based on the evolutionary theory of social development, according to which social progress results from the constant and complex differentiation of social structure, which drives their progressive transformation in all segments, including in the area of social values.

While most authors share a general view of how modernization processes impact the sphere of values, they differ in the specifics of identifying particular value patterns. One of the most influential theories that considers this phenomenon is Inglehart's theory of value change, which was formulated to show the value changes that occur during the transition from an industrial to a post-industrial society. According to Inglehart (1997), this change can best be described through two dimensions, one being the contrast between the traditional and the secular-rational values, and the other the polarization between survival and self-expression values.

Modernization, according to Inglehart (1997), represents a shift from the traditionalist to the secular-rational mode, while post-modernization involves a transition from the values of survival to those of self-expression.

Economic progress and material prosperity in both phases lead to the growth of existential security, which has a stimulating effect on both the secular-rational and self-expression values. However, although the pursuit of existential security is a common feature of both the industrial and post--industrial periods, they differ in the levels of development of individual autonomy. The essential difference is seen in the attitude towards authority: "The industrial phase of modernization brings the secularization of authority, whereas the post-industrial phase leads to emancipation from authority" (Inglehart and Welzel, 2005: 25).

The growth of existential security contributes to the shift of value priorities from collective discipline to individual freedoms and the emphasis on diversity over conformity. This individualized organization of human activity, along with increased individual autonomy in society, leads to greater acceptance of the value of self-expression. As Inglehart and Welzel (2005) state, this process reflects the humanistic transformation of modernization because a higher level of acceptance of the self-expression value has become a key indicator of modernization. The freedom of human choice and emancipation are the leading topics in all areas of life, from politics, to work and civic activism, with the goal of shaping one's life based on personal, autonomous choices (Pavlović, 2009).

However, it should be emphasized that in his revised theory of modernization, Inglehart abandons one of the basic modernist principles: the linearity of change. Namely, if the social circumstances change due to the reduction of life security, the value priorities will also change, that is, the focus of interest will move from the post-materialist back to the materialist values.

Besides Inglehart, Shalom Schwartz is one of the authors who, relying on Rokeach's research, made a significant contribution to the study of values. Schwartz's theory of values is one of the most influential and most frequently applied theories on the expression of values in recent years. Schwartz sees values as beliefs that are related to desirable end-goals, states, or behaviours. As such, they are the most significant element of a culture because they

show us what is desirable in a society and are reflected onto the institutional framework and the norms that shape the rules of behaviour in everyday life.

Schwartz sets off from the assumption that values are goals related to three universal human needs: biological needs, social interaction needs, and group survival and welfare needs. From these three basic needs, he draws ten value types which, when graphically represented, produce a form of a circle: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-direction (Schwartz and Bardi, 2001). According to Schwartz, this model is valid for all cultures because they are all based on one or more of the three universal requirements of human existence: the primary needs of individuals as biological organisms, established social interactions, and the collective social needs.

However, people have these values expressed in different degrees, creating distinct value hierarchies across different value systems. Value systems reflect differences in the value priorities between individuals, reflecting the varying importance that individuals attach to certain types of values. Each individual has a characteristic hierarchy of values that determines his or her behaviour. In Swartz's schematic circular value model, the values that are compatible in terms of motivational goals are placed next to each other (e.g. tradition, security, conformity), while motivationally opposed values are placed opposite each other (e.g. tradition is opposed to stimulation). It should also be emphasized that with a greater distance among the value positions in the circle, their motivational similarity decreases (e.g., there is a greater similarity between conformity and security than between conformity and independence).

Taking into account the ten aforementioned values, the author proposes a dynamic relationship between them, resulting in a two-dimensional model with following dimensions:

1. **Self-transcendence** (encompasses universalism and benevolence and reflects the acceptance of others and concern for their well-being) versus

self-enhancement (encompasses achievement, power, and hedonism, and signifies the attainment of personal success and domination over others) (Ferić, 2007).

2. **Openness to change** (related to the values of independence, stimulation, and hedonism, which implies freedom of thought, and readiness for change) versus **conservatism of traditional relations** (aligns with values of security, conformity, and adherence to traditional practices) (Ferić, 2007).

According to Schwartz, this relationship of conflict and compatibility in the structure and content of different value types always remains the same, which is the reason he refers to the as theory having a universal character. This was confirmed by numerous cross-cultural studies of various social groups, representing over 95% of participants from more than 40 countries (Schwartz, 1994). The only deviation was observed in the countries of Eastern Europe, where the values depicting "universalism" (world peace, social justice, and equality) are highly compatible with the values belonging to "security" (social order and national security). These results deviated significantly from previous research, which did not detect the connection between universality and security. Given that compatibility between the above value patterns has been demonstrated only in Eastern European countries, the author assumes that it is caused by specific socio-political circumstances. Namely, Schwartz believes that this value structure in these societies may stem from the influence of communist regimes, which shaped the cultural formation of this type of value structure (Ferić, 2007). Montenegro, as well as other Eastern European countries, provides a relevant setting for examining these theoretical propositions. Having in mind the turbulent changes that have taken place at a high speed in all segments of its society, it is necessary to assess the impact of these shifts on its value system.

1.3 Research objective

In this chapter, we compare the factor structure of values and the value priorities among the inhabitants of Montenegro, Serbia, and Slovenia. The value structure of Montenegrin citizens is the central research problem of this study, primarily due to the lack of domestic research related to this phenomenon. Therefore, we try to provide a better description of the value patterns represented in Montenegrin society. Namely, although Schwartz's theory is one of the most influential and most frequently applied theories of values, there have been no studies in Montenegro that have tried to test the basic assumptions of this theory. This was certainly one of the reasons why Montenegro had not been a part of the European Social Survey (ESS) until 2018. Therefore, for the first time in Montenegro, we examine the representation of value types according to Schwartz's questionnaire and check whether they correspond to the theoretically established universal relations or exhibit certain deviations.

We also compare Montenegro's values with those in other societies that had a relatively similar development path, during certain historical stages. Serbia is included as a country that can likely have similar results given its shared history (the two countries were a part of a common state for a long time), language, customs, and religion. This was previously confirmed by comparative research and some other value patterns (Ćeranić, 2018; Petrović, 2018).

In contrast, we include Slovenia, where we expect to observe different results from those in Serbia and Montenegro. Although Slovenia once formed a joint state with Serbia and Montenegro, its pre-socialist as well as post-socialist paths of development have been different. Slovenia has largely avoided the post-socialist problems faced by Serbia and Montenegro and has been more successful in overcoming the difficulties faced by other post-socialist societies. Therefore, we expect that these differences will be reflected in Slovenia's value structure.

2 Method

2.1 Sample

The European Social Survey (ESS) is an international survey conducted in 38 European countries every other year since 2001. Its objectives are to monitor and interpret changing attitudes and values in Europe, as well as to explore their interaction with European institutions. Montenegro became a part of this research project in 2018, the last cycle of research so far. Due to the COVID-19 pandemic, the research cycle scheduled for 2020 was postponed.

The sample is representative and includes all age groups over the age of 15, with no upper age limit. Participants were selected by a strict random selection method at each stage. The study analysed value patterns among residents of Montenegro, Serbia, and Slovenia aged 15 and above, based on data collected in 2018. A total of 1,200 participants from Montenegro (592 females and 608 males), 2,043 from Serbia (1,058 females and 985 males), and 1,318 from Slovenia (708 females and 610 males) participated in the study (European Social Survey, 2018).

2.2 Instruments

In analysing the value patterns in the given societies, we used a part of the data collected from the European Social Survey (ESS) from 2018. Besides the questions related to socio-demographic characteristics, we predominantly used the respondents' answers to questions about human values. On this occasion, Schwartz's theoretical model was used, consisting of 21 statements and testing the following ten variables: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-direction. The responses range from Very much like (1) me to Not like me at all (6).

The List of statements:

1. Thinking up new ideas and being creative is important to her. She likes to do things in her own original way.

2. It is important to her to be rich. She wants to have a lot of money and expensive things.

3. She thinks it is important that every person in the world should be treated equally. She believes everyone should have equal opportunities in life.

4. It's important to her to show her abilities. She wants people to admire what she does.

5. It is important to her to live in secure surroundings. She avoids anything that might endanger her safety.

6. She likes surprises and is always looking for new things to do. She thinks it is important to do lots of different things in life.

7. She believes that people should do what they're told. She thinks people should follow rules at all times, even when no-one is watching.

8. It is important to her to listen to people who are different from her. Even when she disagrees with them, she still wants to understand them.

9. It is important to her to be humble and modest. She tries not to draw attention to herself.

10. Having a good time is important to her. She likes to "spoil" herself.

11. It is important to her to make her own decisions about what she does. She likes to be free and not depend on others.

12. It's very important to her to help the people around her. She wants to care for their well-being.

13. Being very successful is important to her. She hopes people will recognise her achievements.

14. It is important to her that the government ensures her safety against all threats. She wants the state to be strong so it can defend its citizens.

15. She looks for adventures and likes to take risks. She wants to have an exciting life.

16. It is important to her always to behave properly. She wants to avoid doing anything people would say is wrong.

17. It is important to her to get respect from others. She wants people to do what she says.

18. It is important to her to be loyal to her friends. She wants to devote herself to people close to her.

19. She strongly believes that people should care for nature. Looking after the environment is important to her.

20. Tradition is important to her. She tries to follow the customs handed down by her religion or her family.

21. She seeks every chance she can to have fun. It is important to her to do things that give her pleasure.

3 Results

To determine the value structure of respondents in the societies that were the subject of our analysis, we used factor analysis, as this technique highlights latent dimensions (factors) that allow the observed phenomena to be analysed at a general level. First, by grouping the initial 21 statements according to Schwartz's theoretical model, we identified 10 variables, each composed of two statements, except for universalism, which consisted of three statements. The variables were named: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-direction. Following this, factor analysis was performed on the aforementioned 10 variables to determine whether they fit their alignment with Schwartz's model of universal content and value structure. We first determined the factor structure for Montenegro and repeated the process for Serbia and Slovenia.

Before applying the factor analysis to the obtained results, we tested its preconditions. The Kaiser-Meyer-Olkin measure of sample adequacy was at a satisfactory level for all three examined countries (Montenegro = .787, Serbia = .757, Slovenia = .704), and the Bartlett test proved to be significant for all cases. These results support the use of factor analysis on the samples and data obtained.

We undertook the principal component analysis, followed by Varimax rotation to obtain the simplest possible factor structure, which enables a better interpretation of the value structure. Using the Kaiser-Guttman criterion for factor extraction on a sample from Montenegro, two factors were singled out that together explain 64.3% of the variance. In doing so, the first factor explains 33.27% and the second 31.06% of the variance. In Table 3.1, we see the factor structure of claims among respondents from Montenegro.

The first factor encompasses the claims relating to *self-transcendence* and *conservatism* of traditional relations. It includes traditional, conformist, and universal values, as well as benevolence and security. The second factor

predominantly consists of claims related to *self-enhancement* and *openness to change*. It contains the values of achievement and power, as well as those of contentment, excitement, and freedom. The structure identified in the Montenegrin sample aligns with Schwartz's theory of universal content and value structure. These findings confirm the assumption that the respondents from Montenegro still distinguish the values based on the collectivist and individualistic principles and that collectivist values still display a stronger presence than the individualist ones.

We anticipated this sort of result given that collectivist values are a part of traditional patterns that are very strongly grounded in both the pre-socialist and socialist eras, with many studies showing their prominence in the post-socialist development (Gredelj, 1994; Kuzmanović, 1994; Đukanović and Bešić, 2000). Notably, for the Montenegrin respondents, it is still more important to have good interpersonal relationships, to belong to the community, and to show socially desirable behaviours than to progress individually and have power. Given the results we obtained, we can conclude that the social changes in Montenegro have not contributed to the transformation of values but have only strengthened the old value structure.

Table 3.1: The values of factors extracted by means of the principal component analysis, with Varimax rotation for the sample from Montenegro

Values	Factors	
	Factor I	Factor II
Universalism	.893	
Benevolence	.819	
Security	.800	
Tradition	.719	
Conformity	.647	
Stimulation		.869
Hedonism		.842
Achievement		.797
Power		.704
Self-direction		.672

Source: European Social Survey (2018).

For the data from Serbia, we also used the Kaiser-Guttman factor extraction criterion, but in this case, we got three factors that explain 66.82% of the variance. The first explains 30.39% of the variance, the second 26.35%, and the third 10.07% of the variance. In Table 3.2, we present the factor structure of value patterns for the respondents from Serbia.

The first factor brought together 4 claims related to *openness to change* and *self-enhancement*, although, in Schwartz's theory of universal content and value structure, *self-enhancement* consists of claims related to achievement and power. However, in this case, the results showed that power emerged as an independent third factor. The second factor is made up of five claims related to *self-transcendence* and *conservatism*. For the Serbian sample, we obtained a different value matrix compared to the one for Montenegro; namely, individualistic values (stimulation, achievement, hedonism, self-direction)

showed a stronger structure than the traditional, collectivist values that have deep-rooted historical significance in this area.

The socio-political changes that have taken place in Serbia have largely stimulated a change in both lifestyle and life circumstances, which have notably encouraged a change in the value structure and value priorities of its citizens. Some earlier studies support this trend, showing a tendency of reduction in the collectivist orientations and growth in the utilitarian-hedonistic values that emphasize individual benefit (Kuzmanović et al., 1995). It is interesting to note that the third factor consists of only one variable, and that is power, which is not related to other variables connected to self-enhancement.

Table 3.2: The values of factors extracted by means of the principal component analysis, with Varimax rotation for the sample from Serbia

Values	Factors		
	Factor I	Factor II	Factor III
Stimulation	.793		
Achievement	.774		
Hedonism	.758		
Self-direction	.748		
Universalism		.773	
Tradition		.753	
Conformity		.681	
Benevolence		.646	
Security		.643	
Power			.634

Source: European Social Survey (2018).

Lastly, by using the same procedure, we determined the factorial structure of the respondents from Slovenia, presented in Table 3.3. Similarly to the results from Serbia, three factors were identified which support 60.46% of the variance: the first factor accounts for 28.17% of the variance, the second for 18.84%, and the third for 13.44% of the variance.

The first factor consists of the statements found on the scale of self--*enhancement* and includes stimulation from the scale of *openness to change.* The second factor is related exclusively to *conservatism*, while the third one encompasses the statements from the *self-transcendence scale*, along with self-direction from the *openness to change* scale. This sort of result may indicate a change in the understanding of certain value priorities that occurred during the period of post-socialist transformation. The traditional patterns seem to have lost their structural coherence, while the values from the self-enhancement and openness-to-change scales exhibit a stronger structure.

These results align with Slovenia's successful navigation of the transition period, marked by EU membership and a more stable socio-political environment compared to other former socialist states. It is evident that those changes in social circumstances have had an impact on the value structure of its citizens, strengthening individualistic and progressive orientations over traditional collectivist patterns.

Table 3.3: The values of factors extracted by means of the principal component analysis, with Varimax rotation for the sample from Slovenia

Values	Factors		
	Factor I	Factor II	Factor III
Stimulation	.800		
Power	.746		
Achievement	.717		
Hedonism	.710		
Conformity		.813	
Tradition		.686	
Security		.582	
Universalism			.772
Benevolence			.656
Self-direction			.496

Source: European Social Survey (2018).

The analysis of correlations among the ten motivational types of values for the respondents from Montenegro (Table 3.4) showed partial compliance with the assumptions of Schwartz's theory. For convergent values, all correlations are positive and statistically significant. The values that make up the value set of *conservatism* (conformity, tradition, security) have a very similar correlation, ranging from .41 to .42, indicating consistency within this value cluster. The values from the set *openness-to-change* (independence, stimulation, hedonism) showed an even higher level of correlation, ranging from .45 to .78. The values belonging to *self-transcendence cluster,* universalism and benevolence, showed a high level of correlation, i.e. .72. In the *self-enhancement* cluster (achievement, power, hedonism) values correlate positively in a very uniform

range from .50 to .55. The direction and intensity of the correlation of these convergent values generally align with the assumptions of Schwartz's theory.

However, when examining the values which are theoretically opposed, the findings diverge slightly from Schwartz's expectations. We found a negative correlation (p=-.04) between the values belonging to the cluster of conservatism and openness to change, but it is not at the level of statistical significance. Additionally, results show a positive correlation between the value sets of self-transcendence and self-enhancement, but also not statistically significant (p=.06). These results are not uncommon and do not deviate from some earlier findings that indicate a lower degree of positive correlation among the opposing values than Schwartz's model might predict (Hinz et al., 2005).

Table 3.4: Correlations of value patterns from Schwartz's value scale for Montenegro

	2	3	4	5	6	7	8	9	10
1	.422**	.387**	.455**	.152**	-.148**	-.151**	.084*	.010	.438**
2		.465**	.582**	.083*	-.277**	-.242**	.038	-.226**	.408**
3			.717**	.339**	-.056	-.087*	.205**	-.047	.594**
4				.333**	-.089*	-.086*	.196**	-.193**	.685**
5					.478**	.459**	.537**	.198**	.268**
6						.781**	.543**	.530**	-.110**
7							.502**	.497**	-.075*
8								.551**	.223**
9									-.023

Source: European Social Survey (2018).
Notes: * significant at level <.05; ** significant at level <.01. Correlations are expressed by Pearson's correlation coefficient (r). 1 – Conformity, 2 – Tradition, 3 – Benevolence, 4 – Universalism, 5 – Self-direction, 6 – Stimulation, 7 – Hedonism, 8 – Achievement, 9 – Power, 10 – Security.

The correlations between motivational types for the respondents from Serbia are given in Table 3.5. In this sample, the results again largely align with the Schwartz's theoretical model. The values belonging to the same value type show a positive statistically significant correlation. The correlation between the values belonging to conservatism cluster, range from .26 to .52, indicating a much wider range than for the respondents from Montenegro.

Openness to change, as a value cluster that brings together independence, stimulation, and hedonism, showed an even higher level of correlation ranging from .51 to .72. The benevolence, and universalism values, which belong to the set of *self-transcendence*, correlation at r=.56. Achievement, power, and hedonism, which make up the value cluster of *self-enhancement*, exhibit correlation ranges from r=.37 to r=.55.

In contrast to the sample from Montenegro, the respondents from Serbia showed compliance with Schwartz's theoretical model for one of the value types which are situated at the opposite ends. Namely, the correlation between conservatism and openness to change, which are theoretically opposed, proved to be statistically significant negative. Oppositely, the connection between the other two opposing sets of values, self-transcendence and self--enhancement, show a statistically significant positive correlation, deviating from the theoretically expected negative correlation.

Table 3.5: Correlations of value patterns from Schwartz's value scale for Serbia

	2	3	4	5	6	7	8	9	10
1	.373**	.089**	.143**	-.095**	-.035	-.088**	.098**	.259**	.291**
2		.264**	.228**	-.037	-.075*	-.062*	.042	-.029	.359**
3			.385**	.196**	.232**	.206**	.236**	-.047	.241**
4				.254**	.123**	.129**	.191**	-.124**	.269**
5					.406**	.312**	.263**	.113**	.130**
6						.582**	.428**	.413**	.057
7							.364**	.303**	.142**
8								.485**	.244**
9									.103**

Source: European Social Survey (2018).
Notes: * significant at level <.05; ** significant at level <.01. Correlations are expressed by Pearson's correlation coefficient (r). 1 – Conformity, 2 – Tradition, 3 – Benevolence, 4 – Universalism, 5 – Self-direction, 6 – Stimulation, 7 – Hedonism, 8 – Achievement, 9 – Power, 10 – Security.

The answers of the respondents from Slovenia also confirm Schwartz's theoretical assumptions, however, in this case, the correlations between the compatible values, although statistically significant, are on average lower than in Montenegro and Serbia (Table 3.6).

Conservatism, a set of values that consists of conformity, tradition, and security, had a correlation range from .29 to .37, which is significantly lower compared to Serbia and even to Montenegro. Independence, stimulation, and hedonism, which build up a cluster of *openness to change,* have a slightly higher level of correlation, but on average it is lower than for the two other countries. *Self-transcendence* composed of benevolence and universality has a level of correlation of .38, which is significantly lower compared to Serbia (.56) and Montenegro (.72). Achievement, power, and hedonism, which form the value set of *self-enhancement*, correlate in the range of .30 to .48.

When examining the relationship of the opposed value clusters, we can notice a deviation from Schwartz's model, in a way similar to the sample of respondents from Montenegro. More specifically, we see a negative correlation between the value sets of conservatism and openness to change that lacks statistical significance, indicating only a weak opposition. Additionally, between the clusters of self-enhancement and self-transcendence, there is a statistically significant positive correlation, which completely deviates from Schwartz's theoretical assumptions. These deviations may reflect an intertwining of opposing value types, likely due to Slovenia's ongoing socio-political transformations. Such overlap is often observed in societies undergoing structural shifts, where values can become intertwined, reflecting an evolving or inconsistent value landscape.

Table 3.6: Correlations of value patterns from Schwartz's value scale for Slovenia

	2	3	4	5	6	7	8	9	10
1	.516**	.240**	.386**	-.091**	-.181**	-.222**	.008	.065*	.261**
2		.340**	.454**	.090**	-.153**	-.170**	-.040	-.136**	.305**
3			.564**	.222**	.128**	.099**	.178**	.024	.436**
4				.222**	.059	.012	.186**	-.053	.498**
5					.515**	.488**	.489**	.307**	.082**
6						.717**	.495**	.370**	-.009
7							.416**	.374**	.010
8								.552**	.158**
9									.086**

Source: European Social Survey (2018).
Notes: * significant at level <.05; ** significant at level <.01. Correlations are expressed by Pearson's correlation coefficient (r). 1 – Conformity, 2 – Tradition, 3 – Benevolence, 4 – Universalism, 5 – Self-direction, 6 – Stimulation,
7 – Hedonism, 8 – Achievement, 9 – Power, 10 – Security.

Emphasizing the universality of value types, Schwartz points to a certain cross-cultural consistency in determining the importance of individual value sets. Relying on a very large sample of respondents from different societies and different cultures, he concludes that the hierarchy of their value priorities is very similar. Benevolence, self-direction, and universalism are constantly the most valued; power, tradition, and stimulation are at the bottom of the priority list, while security, conformity, achievement, and hedonism fall between these two groups of values (Schwartz and Bardi, 2001). This hierarchical structure of values can be explained as a reflection of three basic needs that are necessary for the successful functioning of society: establishing cooperative social relations, encouraging productive and innovative performance of tasks, and meeting individual needs and desires (Pavlović, 2019).

Based on these theoretical assumptions, we analysed the value priorities in the samples from the three countries (Table 3.7). We compared the rankings of individual value types, as well as the scores of arithmetic means. At first glance, we notice a very high positioning of the *security* value in all three examined countries, which deviates from Schwartz's theoretical scheme. In Montenegro, it is even treated as a value of the greatest importance (ranked as 1), while in Serbia and Slovenia, it occupies the second position, with very high scores on the arithmetic mean (Serbia 5.12, Slovenia 5.07). The reasons behind such results are likely due to the turbulent events that took place in this area in the period of the post-socialist transformation, especially in Montenegro and Serbia, which endured great challenges to material and existential security. Additionally, the global crisis of the capitalist system, which has been re-emerging since 2008, may have further contributed to the fact that security is highly positioned in these three countries, particularly given their shared history as part of a common socialist state where security was highly valued. Similar deviations for Eastern European countries were also observed in Schwartz's research.

Table 3.7: Rank order and scores of arithmetic means for ten motivational types of values in the three countries compared - Montenegro, Serbia, and Slovenia

	Montenegro	Serbia	Slovenia
Benevolence	3* (4.65)**	1 (5.12)	3 (5.07)
Self-direction	4 (4.49)	5 (4.42)	4 (4.90)
Universalism	2 (4.74)	3 (4.88)	1 (5.12)
Security	1 (4.85)	2 (5.10)	2 (5.09)
Conformity	6 (4.32)	6 (4.36)	7 (4.39)
Achievement	7 (4.07)	7 (4.16)	6 (4.51)
Hedonism	8 (3.65)	8 (3.60)	8 (4.39)
Power	10 (3.34)	10 (3.28)	10 (3.48)
Tradition	5 (4.43)	4 (4.63)	5 (4.85)
Stimulation	9 (3.51)	9 (3.39)	9 (3.89)

Source: European Social Survey (2018).
Notes: Values on the left represent rank orders. Values in parenthesis indicate arithmetic mean values.

In contrast to *security*, *self-direction* is ranked lower than what Schwartz's model envisions. In all three samples, *security* and *self-direction* essentially switch places compared to the theoretical model. Self-direction, which, along with stimulation, belongs to *openness to change*, in this framework implies an original and creative approach to solving problems, as well as independence in making one's own decisions. This value corpus, however, is more appropriate for those societies in which liberal orientation prevails than for countries that had an undemocratic system, such as the socialist one. Although the efficiency of the transition process in the post-socialist stage of development differs significantly in the three surveyed societies, especially when comparing Montenegro and Serbia versus Slovenia, we can assume that almost half a century of co-existence under a socialist

regime (that was not recognized for encouraging free and independent decision-making) left a significant mark when it comes to the representation of this value pattern. Admittedly, we can see that the score of self-direction is still significantly higher among the respondents from Slovenia (4.90) than among the respondents from Montenegro (4.49) and Serbia (4.42), but its relative ranking remains consistent across the three samples (Slovenia 4th, Montenegro 4th, Serbia 5th).

Deviations from Schwartz's model also occurred in the values gathered around the cluster of t*radition*, in all three examined samples. Tradition is positioned fourth (Serbia and Montenegro) and fifth (Slovenia), while according to the theory, it should be ranked among the three least important values. In a way, such a high appreciation for tradition was expected in Montenegro and Serbia, because numerous studies (Gredelj, 1994; Kuzmanović, 1994; Đukanović and Besić, 2000) showed that in these two societies, the trend of re-traditionalization was very pronounced in the 1990s, which contributed to the fact that certain traditional values are significantly more represented than was the case in the socialist period. Also, in some later research, the still strong presence of traditional values in this area was confirmed (Lazić, 2011; Petrović, 2014; Ćeranić, 2018). On the other hand, the high ranking of tradition in Slovenia, with an unexpectedly high arithmetic mean value of 4.85, was surprising. This score is even higher than those recorded in Serbia (4.63) and Montenegro (4.43). However, similar findings have been reported in other studies (Selimović, 2014).

In another deviation from Schwartz's theory, when it comes to the values related to hedonistic behaviour, the theoretical model suggested that hedonism is positioned in the middle of the value spectrum, while in this research it occupies the eighth position. This was observed in all three surveyed societies. Interestingly, the distribution of the last five places on the hierarchical scale of values is almost identical for all three countries.

If we compare the factorial structure of values for these three samples and the level of expression of certain value patterns, we can notice that consistency

exists only in respondents from Montenegro. Here, the value patterns that have the strongest structure usually score higher on the arithmetic mean scale. On the other hand, respondents from Serbia and Slovenia show a significant deviation, as the values belonging to the cluster of *self-enhancement* and *openness to change* show the strongest structure, but the lowest arithmetic mean scores. This discrepancy highlights another value inconsistency that characterizes societies in the process of social transformation.

4 Conclusion

In a period of rapid social change, social values are influenced by many different factors. New social mechanisms emerge in the process of transformation, producing new types of social relations. At the same time, the system of social relations that has been built for decades has not yet completely disappeared from the socio-historical scene. This dynamic aspect of society inevitably affects the evolving social values.

The social values in transition imply two types of values that correspond to two social models. One model represents the values that are typical of a traditional society, i.e. predominantly collectivist, while the other represents a modernization model with predominantly individualistic value patterns. By analysing value patterns in different societies, we can see the extent to which these new social mechanisms have managed to suppress the old, as well as the social relations they created. For this purpose, we used Schwartz's theoretical framework of values, which allowed us to clearly identify the forms of value patterns that are dominant in individual societies. Comparing Montenegro, Serbia, and Slovenia, we tried to determine the prevalence of certain values within these countries.

We used factor analysis to determine the structural strength of certain value patterns in each surveyed society. It turns out that in Montenegro, collectivist value patterns dominate from the aspect of internal compatibility and cohesion. The obtained results can be explained by the fact that these

values, which have been built for decades, had a significant place not only in socialism but also drew on traditional value patterns that are very much present in this society. These results indicate that the changes in social circumstances that took place in Montenegrin society in the post-socialist era were not followed by transformations of value orientations typically recognized as modernizing, and that the value patterns of the "old" society are still dominant. Quantitatively, the values that belong to this corpus proved to be among the most pronounced ones.

Given decades of coexistence in a common state, but also a common history, language, and religion, as well as similar post-socialist experiences, we expected that the value patterns of respondents from Montenegro and Serbia would be very similar, but this was not the case. In contrast to the Montenegrin sample, the respondents from Serbia displayed the strongest structures for individualistic values, such as stimulation, achievement, hedonism, and self-direction. The changes that took place in the social structure were also reflected in the value structure. The transformation of the social system, despite the turbulent events, has contributed to the constitution of value patterns that are characteristic of the societies we define as modernizing. It is interesting that although these values dominate in quality, representing internal compatibility and cohesion, when it comes to quantity, values such as security and tradition showed significantly higher scores on the arithmetic mean scale than those variables that proved to be structurally homogeneous. This inconsistency should not be surprising because it is not uncommon for societies in which significant transformations and the transition from one social system to another have taken place to exhibit value mismatch expressed in this way.

It is well-known that Slovenia belongs to the group of post-socialist countries that have most successfully overcome the difficulties of transition from one social system to another, and that it very quickly managed to stabilize. We expected that this would have an impact on the country's value structure, which was confirmed by this research. Hence, variables that belong to the cluster of self-enhancement and openness to change displayed the strongest

structure, surpassing those belonging to the set of values Schwartz marked as tradition. However, similar to the sample of respondents from Serbia, the values that represent the corpus of tradition displayed higher quantitative results. This is another indicator that value inconsistency is possible even after three decades of successful transformation from one social system to another. Certainly, we should not ignore the fact that some modern social trends can encourage the representation of certain value patterns that belonged to the prior systems. Here, we primarily mean security, as a value pattern that was characteristic of the socialist system, but which is also relevant in modern society due to the uncertainties caused by frequent economic crises at the global level.

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CHAPTER 4
Predictors of climate change attitudes among young people in Slovenia and Montenegro

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Abstract

Public attitudes toward climate change are shaped by a range of social and political factors, including gender, education, religiosity, institutional trust, political orientation, democratic values, populist and authoritarian attitudes. This study investigates how these factors predict climate change concern and the sense of personal responsibility to mitigate climate change among individuals aged 15–35 in Slovenia and Montenegro, using data from the European Social Survey Round 10. Regression analyses show that in both countries, climate change concern is the strongest and most consistent predictor of personal responsibility. In Slovenia, higher institutional trust is also associated with a stronger sense of responsibility, while in Montenegro, populist attitudes—contrary to expectations—positively predict responsibility. Other factors such as gender, education, religiosity, political orientation, democratic values, and authoritarianism did not emerge as significant predictors in either country. The findings suggest that while some predictors commonly emphasized in the literature may not hold across different cultural contexts, the perceived threat of climate change remains a key driver of pro-environmental responsibility. Furthermore, the relationship between climate change concern and personal responsibility is moderated by beliefs about the causes of climate change, and is strongest among those who attribute it mainly to natural processes or

partly to both natural processes and human activity. These insights highlight the importance of addressing both cognitive and value-based dimensions in climate communication strategies targeting youth.

***Keywords**: climate change attitudes; youth; personal responsibility; institutional trust; populism; European Social Survey*

1 Introduction

Despite the scientific consensus that human activities are the primary factors behind climate change issues, public opinion on the issue remains highly polarized (Merkley and Stecula, 2018). This discrepancy in attitudes is influenced by a set of various social determinants, such as gender, education, political orientation, and populism (Lewis et al., 2019; Poortinga et al., 2019; Böhmelt, 2021). The aim of the present chapter is to examine a set of social predictors of climate change attitudes and compare them among Slovenian and Montenegrin young people.

2 Sociodemographic predictors

2.1 Gender

The role of gender in shaping attitudes about climate change has been widely researched. Previous literature and research consistently demonstrate that women are more concerned about environmental issues and climate change compared to men (Davidson and Freudenburg, 1996; Franzen and Vogl, 2013; McCright and Sundström, 2013; Lewis et al., 2019). For example, in a meta-analysis of 53 studies conducted on the Turkish population, gender had a significant effect on environmental attitudes, although the effects were small (Gökmen, 2021). It is important to stress that gender gap in concern about environmental issues has been supported by empirical data across various countries (Xiao and McCright, 2015; McCright et al., 2016; Stevenson

et al., 2019), further proving the consistency of the relationship. In addition, Chan et al. (2019) emphasize that gender differences in environmental concern are dependent on societal context. Specifically, the results of their research, which included 32 countries, demonstrated that the gender gap was smaller in societies with higher levels of, amongst others, gender inequality, and economic scarcity.

Besides the country-level context, which can influence and explain such differences, another avenue for explaining gender differences is gender socialization, which suggests that men and women are socialized to adopt specific roles and behaviours that society deems appropriate for their gender (Butler, 1990). For instance, women are socialized to be more nurturing, empathetic, and caring – traits that are thought to extend to environmental concern, whilst men are socialized to be more competitive and dominant, traits that may not align as closely with climate change concerns (Stern et al., 1993; Zelezny et al., 2000). Empirical research seems to corroborate this theoretical framework. For example, women are more likely to engage in pro-environmental behaviours such as recycling and supporting environmental policies, such as plastic ban policies (Hunter et al., 2004; Li et al., 2022). Furthermore, women are more likely to perceive climate change as an important issue and risk, compared to men (Arıkan and Günay, 2021).

2.2 Education

Studies have shown that more educated individuals are more likely to acknowledge the scientific consensus on climate change (Hamilton, 2011), demonstrate greater knowledge about climate change (McCright, 2010), support pro-environmental policies (McCright and Dunlap, 2011), and express greater concern regarding climate change (Smith et al., 2017; Korkmaz, 2018). Additionally, higher levels of education enable individuals to better assess the threats posed by climate change and reduce uncertainty related to its impacts (Yu et al., 2020), which may foster greater concern about environmental issues. In addition, higher education may also help people

to better access knowledge through personal networks of more informed people and increased exposure to news information, which may have an impact on their attitudes about climate issues (Smith et al., 2017).

2.3 Religiosity

Religiosity, or the intensity of an individual's religious feelings and beliefs, has emerged as a significant predictor of climate change concern (Kilburn, 2014; Kwon et al., 2019). The relationship between religiosity and environmental concern is complex and varies depending on religious doctrine and cultural context (Nunn et al., 2016). Some religious teachings, for example, promote care for the environment, which may lead to increased environmental awareness among their followers. On the other hand, certain religious beliefs may prioritize human superiority over nature, leading to less concern for environmental conservation (Kilburn, 2014; Shin and Preston, 2021). Kilburn (2014), for example, found that biblically literalist beliefs and religious service attendance generally fostered a perception that climate change is mostly natural and led to a lesser concern over its consequences. However, frequent service attendance among evangelical Protestants was associated with greater climate concern. Nevertheless, it is important to mention a cross-country study, which revealed that higher levels of religiosity, regardless of religious affiliation, are associated with lower levels of climate change policy stringency (Sharma et al., 2021).

3 Institutional trust

Kulin and Johansson Sevä (2021) found that trust in both partial (parliament, politicians) and impartial (police, legal system) government institutions is an important determinant of climate policy attitudes. The authors argue that public support for climate policies depends not only on the extent to which people trust their political representatives but also, and perhaps even more so, on whether they trust the institutions that are assigned the tasks of enforcing

and implementing government policies (ibid.). Moreover, institutional trust – specifically trust in government – was found to positively affect the willingness to make economic sacrifices for the environment but did not affect eco-friendly behaviour or participation in environmental groups; it affects intended environmental action but not actual action (Taniguchi and Marshall, 2018). One possible avenue for explaining such a discrepancy is that the positive association between institutional trust and willingness to sacrifice for the environment may stem from trust in the government's role in environmental protection. However, the absence of an association between institutional trust and actual eco-behaviour could be due to scepticism about government effectiveness in addressing environmental issues. The authors also pointed out that institutional trust may not affect eco-friendly consumer choices or group participation because these actions are perceived as more individualistic and less tied to government trust (ibid.).

4 Political views

4.1 Democratic attitudes

The association between democracy and climate change has been previously researched, but mostly on a contextual level – e.g., examining how democracy impacts climate policy (Bättig and Bernauer, 2009; Escher and Walter-Rogg, 2018; Povitkina, 2018). However, less research has focused on democracy and democratic attitudes at the individual level. Lewis et al. (2019) confirmed that pro-democratic principles are important determinants of climate change concern. In their cross-country analysis, the authors found that the importance of free elections, freedom of religion, equal rights for women, freedom of speech, freedom of the press, and lack of Internet censorship increased the likelihood of believing that climate change is a very serious problem. This suggests the need for further exploration of the role of democratic attitudes in climate change concern, scepticism, and attitudes.

4.2 Populism and populistic attitudes

Another important political view that has been confirmed as a predictor of climate change attitudes is populism (Lockwood, 2018; Huber et al., 2020; Böhmelt, 2021; Huber et al., 2022). For example, Böhmelt (2021) examined 66 countries and found that populist leadership was strongly associated with lower environmental performance. The author suggests that populist leaders tend to refrain from implementing green policies and that populism erodes democratic institutions, thereby offsetting mechanisms related to better environmental outcomes. It is further argued that populist leaders are generally ineffective in providing public goods, including environmental quality, and that large segments of society are systematically excluded from decision-making, which further hampers a deliberative environmental policy process (ibid.).

In addition to the impact of populist leaders on environmental policies, populist attitudes among the public also serve as a significant barrier to climate change concern and attitudes. Individuals expressing populist attitudes are more likely to express climate scepticism (Huber et al., 2022). Specifically, individuals holding more populistic attitudes show less trust in institutions and science, and exhibit a more right-wing political orientation, which in turn affects climate scepticism. The authors further provide a theoretical explanation for how populist climate scepticism stems from two different mechanisms that are linked to populism rather than its accompanying political ideology. First, populist anti-elitism results in low levels of institutional trust, which should impact climate scepticism given the importance of institutions in climate change policy. Second, populists are also opposed to non-political elites and are highly critical of experts, who are seen as part of a technocratic government. Because climate change policy is heavily influenced by scientific evidence, populist views on science should translate into climate scepticism (ibid.).

4.3 Political orientation

The role of political orientation in expressing climate change concern and attitudes should also be addressed. Individuals with right-wing political views have previously been less likely to perceive negative impacts of climate change and have also been less concerned about it (Cutler et al. 2018; Poortinga et al., 2019). A study by Cutler et al. (2018) yielded similar results; specifically, the results demonstrated that conservatives perceived personal or community health risks from heat waves much less often than liberals did. Moreover, conservatives were significantly less likely to anticipate substantial societal impacts from climate change and were more likely to discredit the idea that global warming is caused to a significant extent by human activities (Davidson and Haan, 2012).

Another important finding is that climate beliefs remain stable over time. A study that examined the stability of climate change beliefs from 2014 to 2018 found that climate change beliefs among Republicans and independents who lean to the political right were substantially more variable than among Democrats. The discovery of higher heterogeneity in climate change opinions on the ideological right than on the ideological left has significant ramifications. First and foremost, the findings show that liberal Democrats are significantly more likely than conservative Republicans to have formed an opinion on climate change. On the right, on the other hand, beliefs seem to be far weaker and less resilient (Jenkins-Smith et al., 2020).

4.4 Authoritarianism

Authoritarianism was demonstrated to be opposed to environmental concerns, and is linked to climate change denial (Stanley et al., 2017; Kaul and Buchanan, 2023). According to a meta-analysis that included 53 samples, authoritarianism is negatively associated with pro-environmental attitudes, such as climate change belief, support for action on climate change, and support for pro-environmental policies (Stanley and Wilson, 2019). The association

between authoritarianism and climate change denial and anti-environmental attitudes can be explained by an authoritarian tendency for economic growth and, as a result, the utilization of nature as a source of economic resources. Limiting the use of natural resources, while beneficial for the environment, is incompatible with growth. Growth overrides environmental concerns for authoritarians, which may be reflected when environmentalism is measured via climate change denial, as this may serve as a justification for increased environmental exploitation (Stanley et al., 2017).

5 Study aims

The primary aim of this study is to examine the predictors of climate attitudes, specifically the sense of personal responsibility to reduce climate change and concern about climate change, among individuals aged between 15 and 35 in Montenegro and Slovenia. Additionally, the study aims to investigate whether these predictors differ between the two national samples. Accordingly, we proposed the following hypotheses and research question:

H1: Women hold more pro-environmental attitudes than men.

H2: Individuals with more educated parents exhibit more pro-environmental attitudes.

H3: Religiosity negatively predicts pro-environmental attitudes.

H4: Institutional trust positively predicts pro-environmental attitudes.

H5: Democratic values positively predict pro-environmental attitudes.

H6: Populistic attitudes negatively predict pro-environmental attitudes.

H7: Right-wing political orientation negatively predicts pro-environmental attitudes.

H8: Authoritarianism negatively predicts pro-environmental attitudes.

RQ1: Do the predictors of pro-environmental attitudes differ between Montenegrins and Slovenians?

6 Methods

The present study conducted a secondary analysis of the European Social Survey Round 10 (European Social Survey, 2022). The European Social Survey is a cross-national survey that measures the attitudes, beliefs, and behaviours across various topics among the European population. In the present chapter, we used data from Montenegro and Slovenia. Though the dataset includes individuals aged 15 to 90, we limited the analyses to those aged between 15 and 35, since we were primarily interested in youth and young adults.

6.1 Sample

Key sociodemographic characteristics of both samples are presented in Table 4.1. Both samples are equally represented in terms of gender and include slightly more women than men (47.1% men in Slovenia and 45.3% in Montenegro). Father's educational attainment is similar in both countries, with the majority reporting that they have completed secondary education. Mother's education in Slovenia is higher compared to Montenegro, as the percentage of those with completed tertiary education is slightly higher in Slovenia. The average age of respondents was 25.17 in Slovenia and 26.17 in Montenegro. Finally, we found that Montenegrins more likely identified with more leftist political orientation, although their answers showed greater variability. In contrast, Slovenians reported a more centrist political orientation.

Table 4.1: Sociodemographic characteristic of Montenegrin and Slovenian sample

		Slovenia		Montenegro	
		f	%	f	%
Gender	Male	160	47.1	179	45.3
	Female	180	52.9	216	54.7
Father's education	Primary	4	1.2	8	2.1
	Secondary	252	78.3	293	77.9
	Tertiary	66	19.4	75	19.9
Mother's education	Primary	4	1.2	25	6.7
	Secondary	235	70.8	300	80.0
	Tertiary	93	28.0	50	13.3
		M	SD	M	SD
	Age	25.17	6.13	26.17	5.11
	Political orientation	5.15	1.75	3.68	3.14

Source: European Social Survey (2022).
Notes: Slovenia (N = 340), Montenegro (N = 395). The minimum age in the Montenegrin sample is 16 years.

6.2 Measures

6.2.1 Institutional trust

For assessing institutional trust, we used five items, specifically trust in the country's parliament, legal system, police, politicians, and trust in political parties. The items were measured on an 11-point scale (0 = no trust at all; 10 = complete trust). We created a composite variable, which was calculated based on the mean score of the five variables. The internal consistency of

the construct was checked for both countries (Cronbach's alpha = .85 for Montenegro and .89 for Slovenia).

6.2.2 Populistic attitudes

Populistic attitudes were assessed using two items: "In Slovenia/Montenegro, the views of ordinary people prevail over the views of the political elite," and "In Slovenia/Montenegro, the will of the people cannot be stopped". The answers ranged from 'Does not apply at all' (0) to 'Applies completely' (10). A composite variable was created based on the mean scores ($r = .64$, $p < .001$ for Montenegro and $r = .50$, $p < .001$ for Slovenia).

6.2.3 Political orientation

Political orientation was examined using a single-item self-placement scale. Respondents were asked the following question: "Where would you place yourself on a political scale that goes from 0 to 10, where 0 means 'Left' and 10 means 'Right'?".

6.2.4 Democratic attitudes

Respondents were asked how important it is for them to live in a democratically governed country. The question was measured on an 11-point scale (0 = not important at all; 10 = extremely important).

6.2.5 Authoritarianism

Authoritarianism was assessed with the statement "How acceptable is it for you would it be for Slovenia/Montenegro to have a strong leader who is

above the law?" to which respondents gave an answer on an 11-point scale ranging from 'Not at all acceptable' (0) to 'Completely acceptable' (10).

6.2.6 Climate change attitudes

We examined beliefs on climate change causes using the question "Do you think that climate change is caused by natural processes, human activity, or both?" with possible answers: 'Entirely by natural processes' (1), 'Mainly by natural processes' (2), 'About equally by natural processes and human activity' (3), 'Mainly by human activity' (4), 'Entirely by human activity' (5), and 'I don't think climate change is happening' (6).

Personal responsibility for climate change reduction was measured using the question "To what extent do you feel a personal responsibility to try to reduce climate change?" (0 = not at all; 10 = a great deal).

Climate change concern was measured with the question: "How worried are you about climate change?" Respondents gave their answers on a 5-point scale (1 = not at all worried; 5 = extremely worried).

6.2.7 Sociodemographic predictors

Age (in years), gender (1 = male, 2 = female), and parental education were included in the analyses. Both maternal and paternal educational attainment was measured with the International Standard Classification of Education (ISCED), which included twenty-seven categories of educational attainment. Due to parsimony, we recoded the variables into three categories (ISCED levels 0-1 = > or primary education (1); ISCED 2-5 = secondary education (2); ISCED 6-8 = tertiary education (3)). We also included religiosity, which was measured on an 11-point scale on which respondents estimated how religious they are, with higher values representing higher religiosity.

6.3 Statistical analyses

SPSS version 28 was used to conduct the analyses. First, basic descriptive statistics (M, SD) were examined to provide an overview of the dataset. Additionally, bivariate correlations were computed to assess the relationships between variables of interest. We then conducted linear regression for hypothesis testing. Before conducting regression, we checked if all the assumptions for linear regression, including multicollinearity, independence, homoscedasticity, and normality of residuals, were met. Scatterplots and residual plots confirmed linearity and homoscedasticity in both Montenegrin and Slovenian samples. The Durbin-Watson statistic was close to two for both countries, indicating that the assumption of independence of errors was met. Lastly, Variance Inflation Factor (VIF) and Tolerance revealed that the assumption of multicollinearity was not violated.

7 Results

First, we present the results of basic descriptive statistics for the Montenegrin sample displayed in Table 4.2. Young Montenegrins expressed moderate levels of populism (M = 4.34, SD = 2.51) and religiosity (M = 5.77, SD = 2.78). Interestingly, despite the moderate populist leanings, they placed a high value on democratic governance (M = 8.08, SD = 2.59). However, institutional trust remained relatively low (M = 3.70, SD = 1.94), suggesting a disconnect between democratic aspirations and confidence in institutions. Concern for climate change indicated a moderate level of environmental concern (M = 2.98, SD = 1.04), and a lower sense of personal responsibility to reduce climate change (M = 4.32, SD = 2.68). The acceptability of having a strong leader above the law was generally low (M = 2.90, SD = 2.99), aligning with the population's democratic inclinations.

In addition, climate change concern among young Montenegrins was positively correlated with education levels for both father's ($r = .14$, $p < .01$) and mother's educational attainment ($r = .15$, $p < .01$), indicating

that higher education is associated with increased concern about climate change. A strong correlation between climate change concern and personal responsibility to reduce climate change was also observed ($r = .51$, $p < .01$), demonstrating that individuals who express higher responsibility also show greater concern. Personal responsibility was also statistically significantly associated with institutional trust ($r = .20$, $p < .01$), and populism ($r = .11$, $p < .05$). Interestingly, other variables were not statistically significantly associated with climate change concern.

Table 4.2: Descriptive statistics for the Montenegrin sample

	M (SD)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Institutional trust	3.70 (1.94)	-									
2. Populistic attitudes	4.34 (2.51)	.34**	-								
3. Political orientation	3.68 (3.14)	.13*	.27**	-							
4. Authoritarianism	2.90 (2.99)	.23**	.12*	.09	-						
5. Democratic attitudes	8.08 (2.59)	-.10*	-.07	.12*	-.30**	-					
6. Climate change concern	2.98 (1.04)	.09*	.06	-.00	.03	.01	-				
7. Personal responsibility	4.32 (2.68)	.20**	.11*	-.07	.06	-.04	.51**	-			
8. Gender	/	-.01	-.04	.05	-.00	.00	-.04	.04	-		
9. Religiosity	5.77 (2.78)	.21**	.14**	.17**	-.01	.13**	-.02	.08	.11*	-	
10. Father's education	2.18 (.43)	.00	.08	-.05	-.10	.05	.14**	.08	-.01	-.12*	-
11. Mother's education	2.07 (.44)	-.06	.07	-.19**	-.09	.11*	.15**	.09	.02	-.14**	.49**

Source: European Social Survey (2022).
Notes: * significant at level <.05; ** significant at level <.01.

In Table 4.3, descriptive statistics for the Slovenian sample are presented. Like young Montenegrins, Slovenians also expressed moderate levels of populism ($M = 4.25$, $SD = 2.05$). However, they showed a higher level of institutional trust ($M = 4.38$, $SD = 1.82$) and were slightly more concerned about climate change ($M = 3.39$, $SD = .87$). The importance of living in a democratically governed country was similarly high in Slovenia ($M = 8.13$, $SD = 2.30$), indicating a shared value for democratic governance across both samples. However, Slovenians showed a slightly higher tolerance for

authoritarian leadership (M = 3.36, SD = 3.21), although the values are small, indicating a tendency toward disagreement. Religiosity among Slovenian youth and young adults was moderate, but lower than in Montenegro.

When examining correlations between key variables, we found a positive correlation between climate change concern and the importance individuals place on living in a democratically governed country ($r = .27$, $p < .01$). This suggests that young Slovenians, highly valuing democratic governance, were more likely to express concerns about climate change, in comparison to Montenegrin young adults. Additionally, concern about climate change was positively correlated with gender ($r = .14$, $p < .05$), indicating that women may be slightly more concerned about climate change than men. Lastly, a positive correlation was observed between climate change concern and the educational attainment of the mother ($r = .11$, $p < .05$), suggesting that higher mother's education is associated with increased concern about climate change. We also found that a sense of personal responsibility was strongly associated with climate change concern ($r = .54$, $p < .01$), similar to Montenegro. Personal responsibility was also associated with higher institutional trust ($r = .16$, $p < .01$), and more pro-democratic attitudes ($r = .29$, $p < .01$).

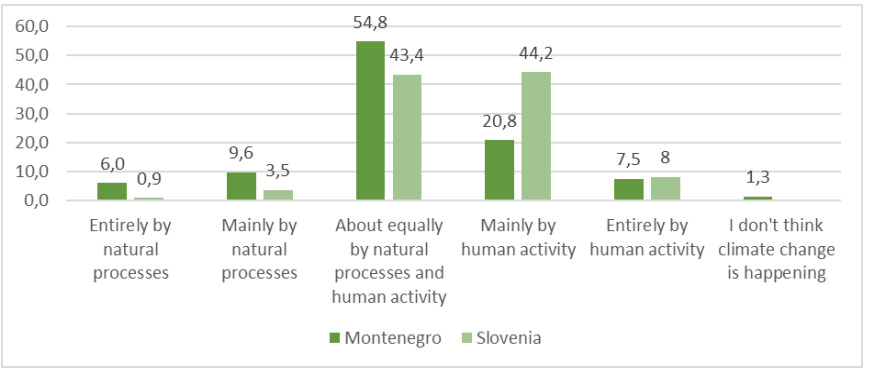
Table 4.3: Descriptive statistics for the Slovenian sample

	M (SD)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Institutional trust	4.38 (1.82)	-									
2. Populistic attitudes	4.25 (2.05)	.37**	-								
3. Political orientation	5.15 (1.75)	.12	.09	-							
4. Authoritarianism	3.36 (3.21)	-.01	.22**	.10	-						
5. Democratic attitudes	8.13 (2.30)	.25**	-.03	-.03	-.35**	-					
6. Climate change concern	3.39 (.87)	.08	-.10	-.14*	-.14**	.27**	-				
7. Personal responsibility	6.69 (2.30)	.16**	-.06	-.03	-.02	.29**	.54**	-			
8. Gender	/	-.01	-.09	-.13*	-.13*	.07	.14*	.15*	-		
9. Religiosity	4.52 (3.03)	.11	.06	.25**	.11*	.02	-.01	.12*	.07	-	
10. Father's education	2.19 (.42)	.03	.02	-.16**	-.12*	.15**	.11	.07	.02	-.05	-
11. Mother's education	2.27 (.47)	.17**	-.01	-.08	-.23**	.18**	.11*	.07	-.03	-.11*	.41**

Source: European Social Survey (2022).
Notes: * significant at level <.05; ** significant at level <.01.

Figure 4.1 represents beliefs on the cause of climate change. In Montenegro, the majority of young people (54.8%) believe that climate change is driven equally by natural processes and human activity. A smaller but important percentage (20.8%) attributed it mainly to human activity, while 15.6% thought it was primarily or entirely a result of natural processes. Only a minimal percentage (1.3%) denied the occurrence of climate change altogether. Contrastingly, in Slovenia, the most prevalent view (44.2%) was that climate change is driven mainly by human activity. This was followed by 43.4% who believe it is about equally caused by natural processes and human actions. A smaller percentage (4.4%) expressed that it is primarily or entirely a result of natural processes. Importantly, none of the Slovenian youth indicated that they do not believe climate change is happening.

Figure 4.1: Beliefs on the cause of climate change



Source: European Social Survey (2022).

Linear regression of predictors of the extent to which individuals feel a personal responsibility to reduce climate change (Table 4.4) explained 32% of the variance in Montenegro ($R^2 = .32$, $F (10, 223) = 10.467$, $p < .001$). Among the observed predictors, the level of worry about climate change emerged as the most significant ($b = .45$, $p < .001$). Populism also appeared as a significant predictor ($b = .13$, $p < .05$), while other variables, such as institutional trust, political orientation, and religiosity, were not significant predictors in the model.

In Slovenia, the model explained 35% of the variance in the extent to which individuals feel a personal responsibility to reduce climate change ($R^2 = .35$, $F (10, 237) = 12.909$, $p < .001$). Similar to Montenegro, the level of worry about climate change was the most significant predictor ($b = .51$; $p < .001$). Unlike Montenegro, institutional trust was also a significant predictor ($b = .15$; $p < .001$). However, other variables like populism, political orientation, and religiosity did not emerge as significant predictors of personal responsibility to reduce climate change.

Based on the results, Hypotheses 1, 2, 3, 5, 7, and 8 were not supported, due to the non-significant effects. Hypothesis 6 was not supported due to the positive effect in Montenegro, while Hypothesis 4 was supported.

Concerning RQ1, we found the predictors of pro-environmental attitudes differ between Montenegrins and Slovenians. In Montenegro, populistic attitudes significantly predicted personal responsibility, whereas in Slovenia institutional trust was significant, but populism was not (Table 4.4). In both countries, climate change concern was the strongest predictor, while other variables such as gender, political orientation, religiosity, democratic attitudes, and authoritarianism were not significant.

Table 4.4: Linear regression of predictors of personal responsibility to reduce climate change

	Montenegro			Slovenia		
	B (SE)	t	p	B (SE)	t	p
Institutional trust	.10 (.09)	1643.00	.10	.15 (.08)	2499.00	.01
Populistic attitudes	.13 (.07)	2133.00	.03	-.05 (.07)	-.87	.39
Political orientation	-.12 (.05)	-1886.00	.06	.04 (.07)	.66	.51
Authoritarianism	.01 (.05)	.16	.87	.09 (.04)	1573.00	.12
Democratic attitudes	-.10 (.06)	-1597.00	.11	.10 (.06)	1668.00	.10
Gender	.02 (.30)	.29	.78	.05 (.24)	.98	.33
Religiosity	.12 (.07)	1904.00	.06	.08 (.04)	1454.00	.15
Father's education	.04 (.41)	.56	.58	-.02 (.31)	-.30	.77
Mother's education	.06 (.42)	.94	.35	.05 (.29)	.77	.44
Responsibility	.45 (.14)	7886.00	<.001	.51 (.15)	8955.00	<.001

Source: European Social Survey (2022).
Note: Presented are standardized beta coefficients.

Since in both countries climate change concern was demonstrated to be a significant predictor of the sense of personal responsibility to reduce climate change, and we previously observed that Montenegrin and Slovenian youth differ on their beliefs about climate change causes, we further explored whether this variable moderated the relationship between personal responsibility and concern. A moderated regression analysis was employed to investigate the relationship between climate change concern and the sense of personal

responsibility for climate change, moderated by individuals' beliefs about the causes of climate change (Table 4.5). The moderator variable had five categories: 'Entirely by natural processes,' 'Mainly by natural processes,' 'About equally by natural processes and human activity,' 'Mainly by human activity,' and 'Entirely by human activity.' The sixth category, 'I don't think climate change is happening', was excluded due to insufficient representation in the dataset.

The overall model was statistically significant, $F(11, 649) = 31.64$, $p < .001$, explaining approximately 35% of the variance in the sense of personal responsibility for climate change. The interaction term between climate change concern and beliefs about its causes was statistically significant, $F(4, 649) = 2.30$, $p = .057$, indicating a nuanced moderating effect. The relationship between climate change concern and personal responsibility was significantly stronger for individuals who believe that climate change is caused mainly by natural processes ($b = 0.41$, $p = .022$) and about equally by natural processes and human activity ($b = 0.45$, $p = .022$), compared to the reference group. No significant moderation was found for those who believe it is caused entirely by natural processes or mainly by human activity.

In other words, the findings suggest that individuals' beliefs about the causes of climate change moderate the relationship between their level of concern for climate change and their sense of personal responsibility for it. The relationship is particularly strong for those who attribute climate change to both natural processes and human activity or mainly to human activity.

Table 4.5: Moderation of the relationship between climate concern and personal responsibility by beliefs about climate change causes

	B (SE)	t	p	LLCI	ULCI
Climate change concern	1.04 (.62)	72.713	< .001	.7556	13.146
W1 (Natural process)	-.39 (.77)	-.5113	.6093	-18.964	11.129
W2 (Mainly by natural process)	-.64 (.55)	-11.700	.2424	-17.160	.4346
W3 (Equally natural & human)	-.24 (.65)	-.3673	.7135	-15.107	10.346
W4 (Mainly by human)	1.04 (1.21)	.8648	.3875	-13.259	34.128
Climate change concern × W1	-.06 (.28)	-.2114	.8326	-.6062	.4884
Climate change concern × W2	.41 (.17)	22.934	.0221	.0585	.755
Climate change concern × W3	.45 (.20)	22.939	.0221	.0654	.8434
Climate change concern × W4	.06 (.32)	.192	.8478	-.5607	.6822

Source: European Social Survey (2022).
Note: Category five of the moderator variable is the reference category.

8 Discussion

The current study aimed to explore the predictors of climate attitudes, particularly the sense of personal responsibility to reduce climate change and concern about climate change, among young individuals in Montenegro and Slovenia. The study was grounded in various theoretical frameworks, including the role of political orientation, populism, institutional trust, and religiosity in shaping environmental attitudes.

Our research did not discover any link between gender and climate attitudes in Montenegro or Slovenia. This finding goes against a body of literature that suggests women are generally more concerned about climate change issues compared to men (Franzen and Vogl, 2013; McCright and Sundström, 2013; Lewis et al., 2019; Gökmen, 2021). It is important to consider the context, as Chan et al. (2019) found that the gender gap in environmental concern can vary depending on factors such as gender inequality and economic scarcity. Contrary to existing studies that generally support a relationship between

education and pro-environmental attitudes (McCright, 2010; Hamilton, 2011; Yu et al., 2020) our study did not find parental education to be a predictor in either country. This result is particularly surprising considering a study by Kirbiš (2023) which found that father's education influenced pro-environmental attitudes among young people in Slovenia. Our results somewhat align with a study conducted in Montenegro, which did not find a statistically significant association between personal responsibility to reduce climate change and education (Ćeranić et al., 2023). Furthermore, religiosity was also not found to be a predictor of climate attitudes in either country. This contrasts with some research findings, demonstrating that religiosity has a negative effect on pro-environmental attitudes (Kilburn, 2014; Nunn et al., 2016; Kwon et al., 2019; Sharma et al., 2021).

In Slovenia, institutional trust was a significant predictor of a sense of personal responsibility to reduce climate change, supporting the findings of Kulin and Johansson Sevä (2021) and Taniguchi and Marshall (2018). In contrast, institutional trust was not significant in Montenegro, suggesting that the role of trust in institutions may vary by context. Interestingly, populism proved to be a significant positive predictor in Montenegro, while it was not significant in Slovenia. The Democratic Party of Socialists (DPS) in Montenegro presents an interesting case of populism that deviates from the typical left-right spectrum commonly seen in Western Europe. According to Džankić and Keil (2017), the DPS employs a blend of left and right political elements in its rhetoric, and acknowledges global issues like environmental devastation and climate change, although it does not offer specific details on its stance regarding it. This type of populism in Montenegro could potentially explain why populism is a significant positive predictor of pro-environmental attitudes in the country, contrary to the general trend in the literature, which links populism to scepticism about climate change (Lockwood, 2018; Huber et al., 2020; Böhmelt, 2021; Huber et al., 2022).

In addition, political orientation and democratic attitudes were not significant predictors in either country, which is also in contrast to previous findings (Davidson and Haan, 2012; Cutler et al., 2018; Escher and Walter-

-Rogg, 2018; Povitkina, 2018; Poortinga et al., 2019). Authoritarianism also did not prove to be a significant predictor, which is surprising given its negative association with pro-environmental attitudes in the existing literature (Stanley et al., 2017; Stanley and Wilson, 2019; Kaul and Buchanan, 2023).

Importantly, in both countries, the level of concern about climate change emerged as the most significant predictor of the extent of personal responsibility for climate change mitigation. Our moderated regression analysis also revealed a nuanced relationship between concern about climate change and feelings of personal responsibility to reduce climate change. The relationship was particularly strong among those who believe that climate change is caused either mainly by natural processes or about equally by natural processes and human activities. This suggests that people's beliefs about the causes of climate change may significantly influence their sense of personal responsibility, providing a new starting point for future research.

In conclusion, the study provides insights into the social predictors of climate change attitudes among young people in Montenegro and Slovenia. The findings have implications for policymakers and educators aiming to enhance climate change awareness and action among young people. However, the present study has some limitations that must be addressed. First, the sample sizes were relatively small in both countries. Second, due to the nature of the data, we cannot draw conclusions on causality. Additionally, we examined young people as a single group; separating these age groups for comparison might provide a more nuanced understanding of climate change attitudes and their predictors. Future research should also aim to incorporate a more comprehensive set of predictors to offer a more holistic understanding of the predictors influencing climate attitudes.

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CHAPTER 5
Determinants of academic achievement among Slovenian and Montenegrin youth

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Abstract

This study examines the levels and determinants of academic achievement among youth in Slovenia and Montenegro, focusing on the role of family environment, cultural capital, academic motivation, study habits, and gender. The research builds on prior evidence that these factors contribute to educational outcomes, while highlighting the need for comparative analysis across distinct national contexts. Using data from the FES 2019 survey, we analyze responses from nationally representative samples of young people aged 14 to 29 in both countries. Descriptive, bivariate, and multivariate statistical techniques were applied to assess relationships between academic achievement and the selected predictors. Results show that Slovenian youth report higher average grades, while Montenegrin youth demonstrate higher academic motivation, more favourable perceptions of family environment, and stronger study habits. Academic motivation emerged as the only consistent and significant predictor of academic achievement in both countries, while cultural capital had an additional positive effect in Slovenia. Other predictors such as family environment and study habits were not significant in multivariate models, suggesting their effects may be mediated or context-dependent. These findings underscore the central role of academic motivation across contexts, while also pointing to country-specific dynamics in how other determinants operate.

Future research should explore the influence of national education policies, cultural context, and long-term trends to better understand cross-national differences in academic success.

***Keywords**: academic achievement; youth; academic motivation; cultural capital; family environment; study habits*

1 Introduction

Academic achievement, also referred to in the literature as school performance, learning outcomes, or academic success, plays a key role in the education system. Academic achievement is a measurable indicator of a student's progress, including achievement in terms of grades, cognitive and emotional skills, moral development, and understanding of the curriculum (York et al., 2015). Academic achievement not only reflects the effectiveness of teaching methods, but also provides valuable insights into the strengths and weaknesses of the whole education system. At the individual level, it affects students' self-esteem, their development, and their motivation to continuously improve (Tokan et al., 2019; Robbi et al., 2020; Zheng et al., 2020), while contributing to the attainment of higher social positions (Grusky, 2001), the quality of their interpersonal relationships, their health, and the resolution of everyday problems (Ross and Wu, 1995; Dotterer et al., 2008; Roohafza et al., 2009; Pampel et al., 2010). At a systemic level, academic achievement shapes educational policies and practices. Given the importance of academic achievement (Coleman et al., 1966) for both individuals and education systems, and thus society as a whole, many recent studies have focused on exploring the determinants that influence academic achievement.

In this chapter, we present the results of a study on the determinants of academic achievement among Slovenian and Montenegrin youth. We start with a brief theoretical overview of some key determinants of academic achievement. It should be noted that there is little research available on this topic from Montenegro, although there are more studies on Slovenian youth.

We then present our study aim. In the third and fourth sections of this chapter, methodology is described. This is then followed by a comparative analysis of levels and determinants of academic achievement between both countries. The last section provides a discussion on the relevance of our results and some study implications, together with several policy recommendations.

2 Theoretical background

2.1 Gender and academic achievement

Researchers have been studying the impact of gender on academic performance for decades because it is a complex and diverse phenomenon. While it is widely believed that gender may account for differences in student performance, with male students on average underperforming compared to female students (Buckingham, 1999; Horne, 2000; Roderick, 2003), it is important to note that these differences are the result of the interaction of several factors, including biological, psychological, social, and environmental influences. A key finding from the literature is that gender differences in academic performance are present in different subject areas and at different levels of the education system. For example, Deasley and colleagues (2018) found differences in literacy development in pre-school children. In Slovenia, Razdevšek Pučko et al. (2003) and Peček and Lesar (2006) reported that female pupils outperform male pupils in Slovenian language, mathematics, and overall academic achievement at the end of primary school, while Pečjak and Košir (2003) found that female pupils perform better than male pupils in reading comprehension. OECD data on gender differences in achievement show small differences in mathematics and science in 2016, with 33 out of 60 countries showing that male students outperform female students (OECD, 2016a; 2016b; Eriksson et al., 2020).

International research also shows gender differences. The Progress in International Reading Literacy Study (PIRLS) (Mullis et al., 2017) showed that

girls in grade four in Slovenia and in most countries around the world have statistically higher average reading literacy scores than boys. PISA (Programme for International Student Assessment), with a sample of 15-year-olds, shows that female students score statistically significantly higher than male students on reading tests (Mullis et al., 2017). TIMSS data (see Mullis et al., 2017) shows a significantly higher reading achievement among female students. The Trends in International Mathematics and Science Study (Mullis et al., 2016) in 2015 found that in mathematics proficiency in 23 countries, 18 countries had higher female student achievement than male students, while 8 countries had higher male student achievement than females.

In Montenegro in 2018, 15-year-old girls performed better than boys in reading literacy, with a statistically significant difference of 30 points (OECD average was 30 points higher for girls). The average performance in science of 15-year-olds in Montenegro was 415 points, compared to an average of 489 points in OECD countries. Girls performed better than boys in Montenegro, with a non-statistically significant difference of 5 points (OECD average was 2 points higher for girls) (OECD, 2018).

2.2 Family environment and academic achievement

The family environment is also a direct and indirect determinant of academic performance, as pointed out by many researchers (Barber, 1988; Davis-Kean, 2005; Davis-Kean et al., 2021; Fan and Chen, 2001). Components of the family environment include parental encouragement of their children's learning, parental school-related expectations, and their emotional and moral support, as well as the family's socioeconomic status (Powers, 2003), including access to resources, parental education, and learning materials. Parental educational approaches (Kirbiš et al., 2021) that promote independence, responsibility, perseverance, and active parental involvement (Cupar et al., 2021) in the child's school life and educational process (such as parental attendance at school meetings, monitoring children's school assignments, parental participation in events, and the family home library in the form of

the number of books, and parents encouraging their children to read) are also important. Some studies also point to the influence of family structure: from single parenthood (Rich, 2000), birth order (Mackintosh, 1998), and gender (Roderick, 2003), to differences in the socialization of the child (Considine and Zappala, 2003).

2.3 Cultural capital and academic achievement

The impact of cultural capital (Bourdieu, 1986; 1987) on academic achievement (DiMaggio, 1982) is an important factor to be taken into account in educational research and policy-making. Ensuring equal opportunities for all individuals, regardless of their cultural background, is key to reducing inequalities in education and promoting successful learning and development. Cultural capital refers to the body of knowledge, values, skills, habits, and experiences that an individual acquires through social and cultural interaction. Cultural capital takes three forms (ibid.): embodied cultural capital (the personal knowledge, skills, and abilities an individual acquires through education and personal development, including formal education, language skills, technical skills, and other competencies); objectified cultural capital (the physical objects and material resources that represent cultural value: books, works of art, musical equipment, etc.); and institutionalized cultural capital (i.e. the reputation, visibility, and social validity of an individual or family based on their cultural knowledge, education, artistic taste, etc.).

Individuals who have higher levels of cultural capital often have an advantage in understanding and mastering school learning material, which can have a positive impact on their academic achievement. However, some research does not confirm the link between cultural capital and academic achievement. For example, Katsillis and Rubinson (1990), in a study of a sample of Greek students, found that cultural capital had neither a direct nor an indirect effect on academic achievement. Similarly, Roscigno and Ainsworth-Darnell (1999) found that cultural capital only partially impacts academic achievement, with race and class having the greatest impact. In

Slovenia, Flere and colleagues (2010) found that the strongest determinants influencing academic achievement are school attachment and cultural capital. Both had a substantial positive impact on academic achievement in primary and secondary school.

2.4 Motivation and academic achievement

The impact of motivation on academic achievement is a crucial and well-studied aspect of the educational process. Motivation refers to the intrinsic or extrinsic factors that motivate an individual to act and achieve goals. Motivation, according to psychological literature (Hidi and Harackiewicz, 2000; Harackiewicz et al., 2008; Wigfield and Cambria, 2010), influences academic achievement in several ways. First, focus and goals are important because an individual who has clear goals and is motivated to achieve them will be more focused on learning and knowledge acquisition. Second, motivation encourages the individual to put more effort into learning. Higher levels of motivation often mean a greater willingness to tackle more challenging tasks and to explore material more thoroughly. At this point, it is important to highlight Dweck's (2006) distinction between a 'fixed mindset' and a 'growth mindset'. People with a fixed mindset believe that they have certain natural talents and abilities, whereas people with a growth mindset believe that abilities can be developed through effort, progress, and learning. Success in learning and other areas therefore requires a change in mindset.

Third, motivated individuals are more likely to face challenges and difficulties and persevere in solving problems, leading to better learning outcomes. In addition, motivated learners are more likely to engage in deep thinking, analysis, and integration of information, leading to better understanding and long-term retention with increased quality of learning. The fifth mechanism involves self-regulation (Pintrich and De Groot, 1990; Caprara et al., 2008), whereby motivated individuals develop better self-regulation skills. This means that they are more in control of their learning processes, such as planning, monitoring progress, and adapting strategies.

As Pintrich et al. (1998) found in their study, students with higher intrinsic motivation were more likely to use learning strategies for self-regulation, which contributed to their better academic performance. Finally, a positive emotional state is also critical, as motivation is often accompanied by positive emotions such as curiosity, satisfaction, and self-confidence. Such a positive emotional state can improve the overall learning experience and encourage further learning.

It is important to stress that motivation is not uniform and can vary between individuals and contexts. There are also different types of motivation, such as intrinsic motivation (where an individual performs an activity for their own interest and satisfaction) and extrinsic motivation (where an individual performs an activity because of external rewards or pressures). Intrinsic motivation is usually associated with better academic achievement, as it promotes deep understanding and sustained learning. Deci and colleagues (2001) emphasize that students who are motivated in their academic activities tend to perform better academically and are more likely to experience success in various areas of life, compared to those who lack motivation.

In short, teachers, parents, and learning institutions all have an important role to play in encouraging and maintaining motivation in students. By adapting the learning environment, setting realistic goals, providing positive feedback, and encouraging autonomy, they can help foster intrinsic motivation and consequently improve individual learning achievement.

2.5 Study habits and academic achievement

Study habits also play an important role in academic achievement. Credé (2008) defines them as external factors that facilitate the learning process. Research (e.g., McManus et al., 1998; Wenger et al., 2009; Cerna and Pavliushchenko, 2015) shows that consistent and effective studying and the use of appropriate learning strategies can have a positive impact on academic achievement. Students who develop good study habits, such

as regular and planned repetition of material, breaking down material into smaller units, and active learning through a variety of techniques such as explaining to others, writing summaries, and repetition, tend to have better learning outcomes. A study by Numan and Hasan (2017) showed that study habits have a significant impact on test anxiety and academic achievement. Students with effective study habits experience low levels of test anxiety and perform better academically than students with inadequate study habits. It was also found that girls experience higher levels of test anxiety compared to boys. However, the findings also highlighted that girls demonstrate better study habits and perform better academically than boys. Correlation analysis showed a significant positive relationship between study habits and academic performance, while test anxiety was negatively correlated with academic performance and study habits. These findings highlight the need to improve the study habits of pupils and students to overcome test anxiety and improve their academic performance.

2.6 Educational characteristics in Slovenia and Montenegro

Education and knowledge are of paramount importance for the social and economic progress of every country. The characteristics and challenges of Slovenia and Montenegro vary based on historical, cultural, political contexts, and other factors. Nonetheless, both countries strive to provide high-quality education for their citizens. Results of the FES study (FES, 2019a) related to the field of education indicate that young people from socioeconomically disadvantaged backgrounds face significant inequality in access to education, especially at the tertiary level. Such inequality is more pronounced in Montenegro than in Slovenia, which has a very high rate of participation in tertiary education (FES, 2019a: 16).

There is also a higher risk that young people from socioeconomically disadvantaged backgrounds drop out at different levels of education. This risk is higher in Slovenia than in Montenegro. The low socioeconomic status of young people's parents and family presents a barrier to realizing

their educational potential, acquiring the necessary knowledge and skills, and cultivating aspirations for higher education. In addition to limiting life opportunities and the quality of life for young people from socioeconomically disadvantaged backgrounds, evidence suggests that educational systems also perpetuate educational inequalities. The level of satisfaction with education in one's own country has increased in Slovenia and is similarly high in Montenegro. In both countries, there is a prevalent belief that corruption is widespread in education (72% in Montenegro and 58% in Slovenia; survey participants in the FES study believe that "There are cases where grades and exams are 'bought'") (FES, 2019a: 20). Although there is improvement in the practical aspects of the educational system in both countries, a relatively low share of young people in Slovenia and Montenegro believe education is well adapted to the current world of work, with 28% and 18%, respectively (FES, 2019a: 22).

2.7 Study aim

The aim of the present study was to examine the levels and determinants of academic achievement of Slovenian and Montenegrin youth. We were interested in (1) whether and how the levels of academic achievement, as well as the levels of several of the above-described determinants – gender, family environment, cultural capital, academic motivation, and study habits – differ among youth from both countries; (2) whether there are differences in the direction and strength of the impact of these five determinants on academic achievement among youth in Montenegro and Slovenia; and (3) to what extent these five examined determinants predict academic achievement among youth in both countries.

3 Method

3.1 Sample

We examined data from an FES (2019b) study. The target population was all citizens of the Republic of Slovenia and Montenegro aged 14 to 29. A stratified quota sample was employed by data collectors.

Data collection took place between the January and March 2018. Data were meticulously gathered through personal, face-to-face interviews conducted predominantly in households. These interviews were conducted using the CAPI method (computer-assisted personal interviewing). Interviewers employed computers and tablets equipped with questionnaires programmed into specialized interviewing software. The questionnaire encompassed both an oral and a written (personal) section (FES, 2019a).

Despite the sample's careful construction to align with criteria concerning pertinent demographic variables, minor deviations from the "optimal structure" did arise. In other words, interviewers occasionally fell short of meeting predetermined quota requirements. To enhance the sample's representativeness, the data underwent weighting prior to analysis. This was done to align the demographic composition of the sample with the authentic demographic makeup of the target population. The data-weighting process hinged on variables such as gender, age, and educational attainment (FES, 2019a).

3.2 Measurement

3.2.1 Outcome variable

We measured academic performance by asking about the average grade in the academic year: "What was your average grade during the last academic year?" (1 = mostly 1–2/5–6; 2 = mostly 2–3/7–8; 3 = mostly 3–4/8–9; 4 = mostly 4–5/9–10).

3.2.2 Predictor variables

Family environment was measured with the following three items: "Parents were aware of my concerns in school" (1 = never; 5 = many times), "Would you raise your children like your parents raised you, or would you do it differently?" (1 = totally differently; 4 = the same), and "Which of the following statements best describes your relationship with your parents?" (1 = very conflictual relationship; 4 = we get along very well). All items were standardized, and then a three-item summation index was formed (Cronbach's Alpha (Montenegro) = .49; Cronbach's Alpha (Slovenia) .61), with higher scores indicating a more favourable family environment. For the purposes of descriptive statistics, respondents were grouped into quartiles (1 = least favourable family environment; 4 = most favourable family environment).

Cultural capital was measured with three indicators of embodied cultural capital in adolescents. The question was phrased as follows: "On a scale from 1 to 5, please rate the following activities that adolescents engage in during their free time, where 1 means never and 5 means very often. How often do you, on average, engage in the following activities?" The activities included "reading books," "reading newspapers/magazines," and "creative activities (writing, painting, playing music)." The summation scale proved to be reasonably reliable (Cronbach's Alpha (Montenegro) = .64; Cronbach's Alpha (Slovenia) = .55). The respondents were ranked into quartiles.

Motivation was measured with the following item that served as a proxy for educational motivation: "What is the highest education level you are aspiring to?" (1 = just primary school; 2 = secondary school: up to 3 years (vocational/technical); 3 = secondary school: 4 or more years; 4 = university education: bachelor; 5 = specialist/master; 6 = PhD).

Study habits were measured with the following question: "How many hours on average do you spend studying (after classes/at home) per day?" (1 = 0–1 hour; 2 = 1–2 hours; 3 = 2–3 hours; 4 = more than 3 hours).

Gender was measured with a standard item (1 = female; 2 = male).

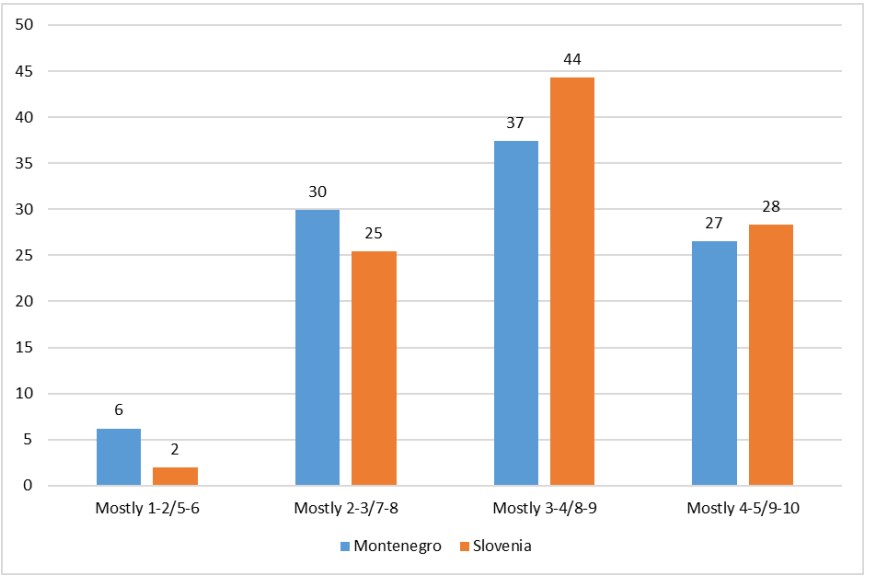
4 Results

4.1 Descriptive analysis

4.1.1 Academic achievement

With regard to academic achievement, Figure 5.1 shows that in 2018, a higher percentage of Slovenian youth were in the highest or second-highest grade group, while Montenegrin youth were more likely to fall into lower grade groups. This finding indicates that Slovenian youth had a higher average grade compared to Montenegrin youth.

Figure 5.1: Descriptive analysis of academic achievement among Montenegrin and Slovenian youth

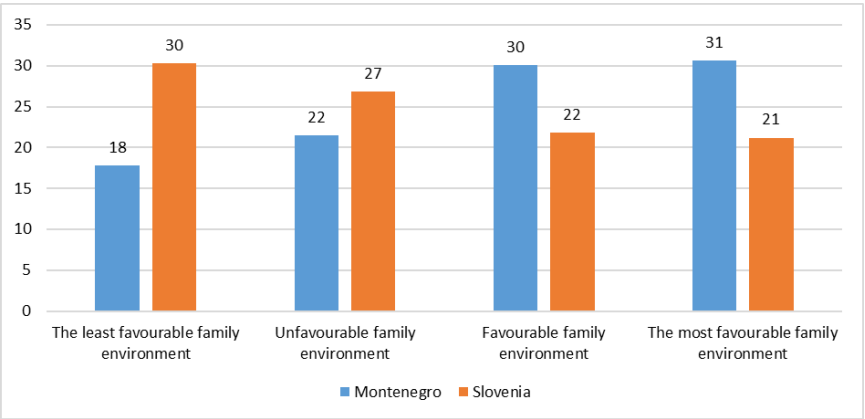


Source: FES (2019b).

4.1.2 Family environment

Figure 5.2 shows that youth in Montenegro rated the family environment more favourably than youth in Slovenia. The proportion of youth reporting the least favourable and unfavourable family environments is lower in Montenegro, while the perception of the family environment as favourable or most favourable is higher in Montenegro than in Slovenia.

Figure 5.2: Descriptive analysis of family environment among Montenegrin and Slovenian youth

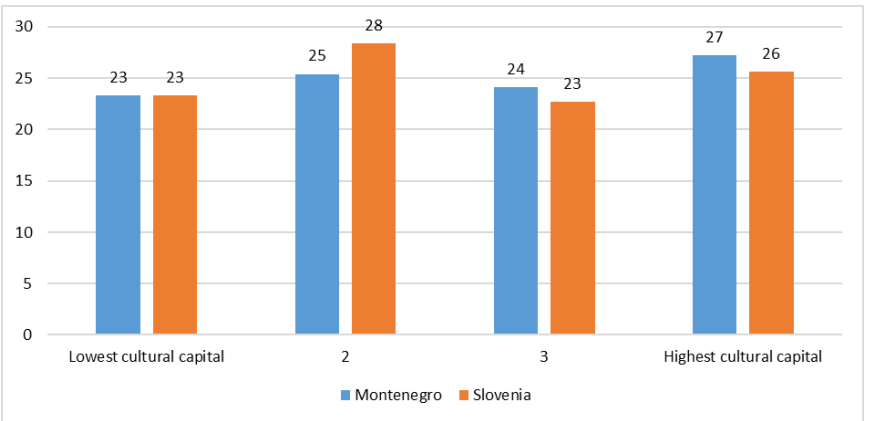


Source: FES (2019b).

4.1.3 Cultural capital

Figure 5.3 shows relatively similar levels of embodied cultural capital in Slovenia and Montenegro.

Figure 5.3: Descriptive analysis of embodied cultural capital in Slovenia and Montenegro

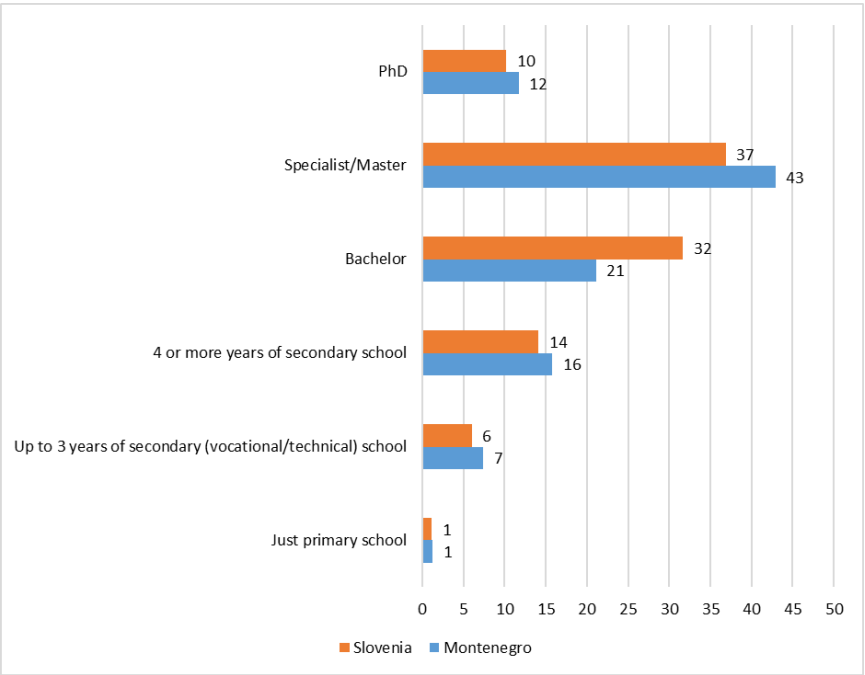


Source: FES (2019b).

4.1.4 Academic motivation

Figure 5.4 shows high academic motivation in both countries, as a master's degree is the most frequently selected desired educational level among Montenegrins (43%) and Slovenes (37%). A bachelor's degree is the second most frequently chosen level of education in both countries. However, more Slovenes (32%) than Montenegrins (21%) chose this level of education as the one they wish to achieve.

Figure 5.4: Descriptive analysis of academic motivation among Montenegrin and Slovenian youth

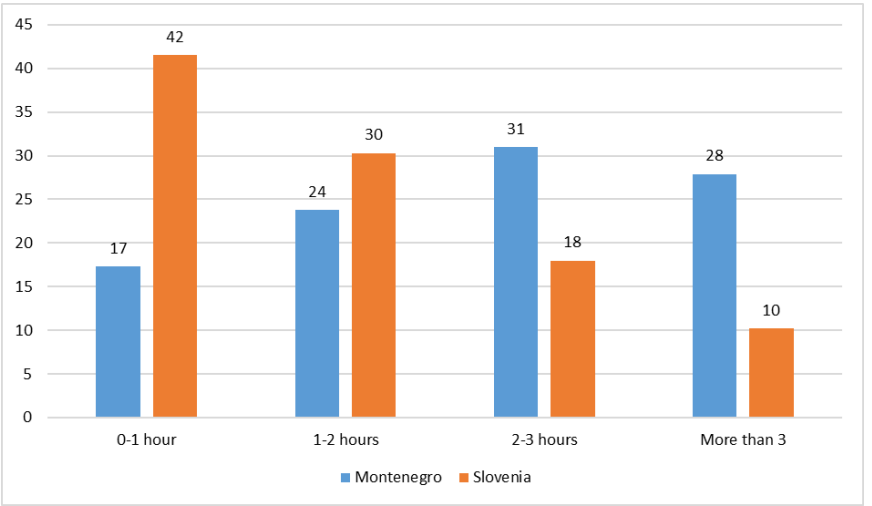


Source: FES (2019b).

4.1.5 Study habits

Figure 5.5 presents average study time at home as a proxy for youth's study habits. There is a higher percentage of Montenegrin youth who study at home for more than 2 hours, whereas among Slovenian youth, there is a larger proportion who study less than 2 hours daily. These findings indicate that Montenegrin youth have better study habits than Slovenian youth.

Figure 5.5: Descriptive analysis of study habits among Montenegrin and Slovenian youth



Source: FES (2019b).

4.2 Bivariate analysis

Table 5.1 shows the results of the bivariate analysis. The Pearson correlation coefficients below the diagonal are for Montenegrin youth, while the coefficients above the diagonal are for Slovenian youth. In Montenegro, the findings indicate a positive relationship between academic achievement and academic motivation ($r = .27$; $p < .01$), study habits ($r = .16$; $p < .01$), and cultural capital ($r = .15$; $p < .01$). In Slovenia, academic achievement was found to be linked to the same three determinants, although the order of coefficients in terms of magnitude differed. Cultural capital had the strongest impact on academic achievement ($r = .19$; $p < .01$), followed by academic motivation ($r = .18$; $p < .01$) and study habits ($r = .09$; $p < .05$). There was no statistically significant association observed between academic achievement and other predictor variables in either country.

Table 5.1: Bivariate analysis of academic achievement and examined determinants among Montenegrin and Slovenian youth

	Slovenia						
		Academic achievement	Family environment	Cultural capital	Academic motivation	Study habits	Gender (male)
Montenegro	Academic achievement	-	.05	.19**	.18**	.09*	-.07
	Family environment	.05	-	.07*	.13**	.10*	-.01
	Cultural capital	.15**	.13**	-	.16**	.20**	-.12**
	Academic motivation	.27**	.04	.21**	-	.16**	-.05
	Study habits	.16**	.14**	.31**	.16**	-	-.10**
	Gender (male)	-.09	-.06	-.21**	-.16**	-.18**	-

Source: FES (2019b).
Notes: * significant at level <.05; ** significant at level <.01. Coefficients below the diagonal are for Montenegro; coefficients above the diagonal are for Slovenia.

4.3 Multivariate analysis

Table 5.2 shows the results of multiple linear regression analysis predicting academic achievement among Montenegrin and Slovenian youth. The findings indicate that in Montenegro, only academic motivation had a significant impact on academic achievement. More motivated youth (i.e. those aspiring to achieve a higher level of education) had a higher average grade ($\beta = .22$; $p < .01$). In Slovenia, however, two out of the five examined determinants had a significant impact. Cultural capital ($\beta = .15$; $p < .01$) had a statistically significant positive impact on academic achievement, as did academic motivation ($\beta = .15$; $p < .01$). As in the bivariate analysis, other predictors (family environment and gender) were not statistically significant in the multivariate analysis in either country.

Table 5.2: Multiple linear regression of academic achievement predicted by examined determinants among Montenegrin and Slovenian youth

	Montenegro (R^2 = .06; p < .001)		Slovenia (R^2 = .05; p < .001)	
	B (SE)	β	B (SE)	β
Family environment	.74 (.30)	-.00	1.20 (.18)	.03
Cultural capital	-.00 (.07)	.07	.03 (.04)	.15*
Academic motivation	.05 (.05)	.22*	.12 (.03)	.15*
Study habits	.18 (.05)	.10	.11 (.03)	.03
Gender (male)	.07 (.05)	-.00	.02 (.03)	-.02

Source: FES (2019b).
Note: ** significant at level <.01

In sum, the results indicate that academic motivation is the only predictor universally (i.e. in both countries) linked to higher academic achievement. However, the predictive model explained only 6% of the variance in Montenegro and 5% in Slovenia, indicating that other predictors not included in the model may play a more important role in academic achievement.

5 Discussion

The academic achievement of young individuals is closely linked to several factors that play a pivotal role in their success in the school environment. In the present study, we examined the levels and determinants of academic achievement of Slovenian and Montenegrin adolescents, focusing on how levels of academic achievement and the impact of five determinants vary between countries. Our findings suggest that Slovenian youth achieve higher grades than Montenegrin youth. This is unexpected, as several predictors of academic achievement found in the literature are higher in Montenegro. For example, Montenegrin youth set higher goals for educational attainment (i.e. have higher academic motivation), and rate their family environment more positively compared to Slovenian youth. Furthermore, Montenegrin

youth have better study habits, spending more time studying than Slovenian youngsters. Cultural capital was the only predictor whose level was similar across both countries.

Prior research suggests that the family environment plays an exceptionally important role in shaping academic achievement of youth. Family support, upbringing, and communication within the family can significantly influence students' motivation and self-confidence, consequently impacting their success in school (Cupar et al., 2021; Kirbiš et al., 2021). In our study, however, it was not a significant predictor in either bivariate or multivariate analysis in either country. In addition, cultural capital was also previously found to be important for academic achievement, as it represents the wealth of knowledge, experiences, and values that individuals receive from their family and surroundings. Higher cultural capital can enable young individuals to better prepare for school tasks and comprehend the study material, and is thus linked to better academic achievement (DiMaggio, 1982; Flere et al., 2010). In our study, cultural capital had no impact in the multivariate analysis in Montenegro, but it did in the bivariate analysis, suggesting it may be linked to higher achievement due to other correlated variables. On the other hand, cultural capital remained a significant predictor in the multivariate analysis in Slovenia, consistent with earlier studies of Slovenian youth (Flere et al., 2010).

Academic motivation was previously also found to be crucial for achieving educational goals. Young people who are internally motivated to learn are often more successful, as they strive to attain their objectives (Deci et al., 2001). We found that academic motivation (i.e. expected level of education to be achieved by an individual) was the only predictor with a significant impact in both countries, and was the strongest predictor as well.

Finally, study habits were previously found to play a central role in academic success. Students who develop good study habits, such as time management, effective learning, and the handling of school material, usually achieve better results (Hidi and Harackiewicz, 2000; Harackiewicz et al., 2008; Wigfield

and Cambria, 2010). In our study, however, study habits were significant only in the bivariate analysis in both countries. It may be that study habits reflect (i.e. are linked to) other predictors of academic achievement. Our data show that study habits are linked to academic motivation, which then increases academic achievement even when other predictors are taken into account. All these factors must be taken into consideration when devising strategies to improve the academic achievement of young individuals and ensure successful education.

The limitations of our research primarily stem from the different historical, cultural, and educational contexts in both countries. Although, due to a shared history in the state of former Yugoslavia, the two countries may appear similar in several respects, it is important to consider that Slovenia is already a part of the European Union, which means it has had to adapt many legal and other social systems, including education, to European Union regulations. Montenegro is yet to embark on this path. In addition, Slovenia is ranked higher on several indicators of social development, including economic development (Human Development Report, 2022).

Nonetheless, despite the differences between both countries, we found some common patterns in the role of key predictors of academic achievement, particularly the consistent significance of academic motivation in both contexts. However, the differences in the strength and significance of other predictors, such as cultural capital, as well as differences in overall achievement levels, suggest that the determinants of academic success are also shaped by country-specific factors. Further research on academic achievement in Slovenia and Montenegro should delve into other important questions regarding educational outcomes to enhance our understanding of the determinants of academic achievement in these two countries. Some potential areas for future research encompass: (1) the impact of educational policies, i.e. how distinct policies affect academic outcomes; (2) the role of the family environment, including further studies on family support, parenting style, parental education, and family wealth, and how these elements can be more effectively harnessed to foster the academic achievement of

young individuals; (3) the impact of cultural context on academic success, including the role of tradition, language, and values in the educational process; (4) long-term trend monitoring, with future research tracking academic achievement over extended periods to identify evolving patterns and facilitate better adaptability of educational systems; and (5) comparative analysis of academic achievement in Slovenia and Montenegro with that in other European countries, offering a more comprehensive assessment of the position of these two nations in the global educational landscape.

Further investigation in these domains would contribute to the understanding of the educational systems in Slovenia and Montenegro and the factors that impact the academic success of young individuals in both countries.

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CHAPTER 6
Social media use for political information, political efficacy, and political participation among youth in Montenegro and Slovenia

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Abstract

This study explores the relationship between the use of social media as a source of political information and youth political engagement in Slovenia and Montenegro, drawing on data from the FES Youth Study Southeast Europe 2018/2019. While prior research suggests positive links between social media use and various political outcomes, findings on political efficacy remain inconsistent. We examined whether frequency of social media use for political news predicts political interest, internal and external efficacy, and participation among youth in both countries, controlling for sociodemographic and socioeconomic factors. Using regression analysis, we tested three hypotheses across national samples aged 15–29. Results show that social media use positively predicts political interest and political participation in both countries, is positively associated with internal efficacy only in Montenegro, and negatively associated with external efficacy in Slovenia. These findings point to context-specific patterns in how social media use relates to youth political orientations and behaviour. A

better understanding of these dynamics can inform efforts to support political participation among young people in diverse democratic settings.

***Keywords**: social media use; political interest; political efficacy; political participation; youth; news; Slovenia; Montenegro*

1 Introduction

New communication technologies that enable access to the internet and social networks are of great importance for everyday life, especially for young people. They are a key resource for the formation of social and personal identity and for participation in (online) environments (Hrženjak, 2014). Through the use of smart devices, such as smartphones, tablets, and laptops, young people can spend much of the day on social networks, constantly connected to the world and their peers (Matthes, 2022; Vorderer and Kohring, 2013). At the same time, these technologies and platforms enable new forms of civic and political participation. All of this calls for a thorough reflection on how political participation is redefined through the use of new communication technologies and whether these technologies can contribute to reducing the democratic deficit ("a situation where institutions and their decision-making procedures may suffer from a lack of democracy and accountability") (Publications Office of the European Union, 2022), especially in the case of young people (Hrženjak, 2014).

Young people in Slovenia and Montenegro spend an extensive amount of time on the internet and social networks (such as Facebook, Instagram, TikTok...). Specifically, according to the Youth Study Southeast Europe (2018/2019), young Slovenians, aged between 16 and 29, spend 4.6 hours per day on the internet on average, while young Macedonians spend 6.6 hours per day on the internet on average (Tomanović, 2019: 102). Moreover, 85% of respondents in the Slovenian Youth Study 2013 (aged between 16 and 27) reported that they use the internet for social media (Kirbiš and Zagorc, 2014: 118). Youth 2020 data show that 87% of Slovenian youth (aged

between 16 and 27) use social media (Matjašič et al., 2021: 334). Similarly, the 2018/19 Youth Study in Montenegro shows that 82.6% of youth in the same age group use social media often (Đukanović, 2019: 22).

Interestingly, the younger the youth are, the more often they use social media, a finding that is consistent throughout the last three Slovenian Youth Studies (Kirbiš and Zagorc, 2014; Lahe and Cupar, 2019; Matjašič et al., 2021). Đukanović (2019) reported similar age-related findings for Montenegrin youth. Additionally, similarly to Slovenian youth, young Montenegrins mainly use the internet to communicate with friends and family, to use social networks, and to share photos, videos, and music (Đukanović, 2019).

Besides using social networks for communication and entertainment, they have also become platforms for citizen (i.e., civic and political) participation. Over the last two decades, digitization (the conversion of physical resources, such as physical books and magazines, into a digital format, such as e-books and e-magazines; Cieśliński et al., 2019) has had a significant impact on how people participate in civic and political activities (Theocharis et al., 2023). The use of social networks supports online (e.g., signing online petitions) and offline (e.g., organising protests with the help of social media) political participation (ibid.). Social media platforms are key tools in electoral campaigns, for organizing, attending, and informing about protest events and the creation of volunteer groups, and can help to shape and promote inclusive civic behaviour and foster participation among younger and disengaged groups (Jungherr et al., 2020).

1.1 Young people's social media use for political information and political interest

Young people have much lower political interest compared to adults (Kirbiš and Flere, 2011a, 2011b; Kirbiš and Zagorc, 2014; Pap Vorkapić et al., 2018; Small and Jansen, 2020; Weiss, 2020; Deželan et al., 2021). Similar findings have been reported for institutional (i.e. conventional) political

participation, including voter turnout and party membership (Kirbiš and Flere, 2011b; Kirbiš, 2018; Pap Vorkapić et al., 2018; Fjellman and Rosén Sundström, 2021). However, the political participation levels among youth differ cross-nationally. A study covering 28 EU countries shows that social context shapes the level of political participation among young people (Kitanova, 2020), with youth living in established EU democracies being more likely to be politically active than those living in younger EU democracies (Kitanova, 2020).

While young people in Slovenia show a greater general political interest than a decade ago (see Kirbiš and Flere, 2011b), interest among young Slovenians is still low (Deželan et al., 2021). In addition, most young people feel that they do not understand politics (ibid.). Even if some research shows the decline of political interest among young people, other studies point to young people's critical attitude towards institutionalised political participation (Kirbiš and Flere, 2011b; Kirbiš and Zagorc, 2014; Hrženjak, 2014). It has been argued that young people are unable to integrate their identity and political preferences; instead, they generate alternative spaces, modes, and content of political participation (Hrženjak, 2014), especially turning to non-institutional participation, including protest participation and issue-oriented participation (Kirbiš and Flere, 2011b; Kirbiš and Zagorc, 2014).

Similar to young Slovenians, young people in Montenegro express little political interest, whether in local, regional, or international politics (Đukanović, 2019). They rarely follow politics-related news and are less likely to understand the most important political issues in society than other segments of the population (Westminster Foundation for Democracy, 2021). According to the Youth in Southeast Europe Study (Lavrič et al., 2019), based on samples of youth between the ages of 14 and 29, only 13% of young Slovenians and 14% of young Montenegrins answered that they agree (4) or completely agree (5) with the statement that they are personally interested in politics on a scale from 1 to 5 (Lavrič and Jusić, 2019: 63).

According to findings in the Montenegrin Youth Survey 2018, television is still the predominant channel of information for young people (Đukanović, 2019). The internet is the next most often used platform for informing themselves about political events, while online social networks are ranked third (ibid.). In recent years, voter turnout in elections has also become increasingly linked to online platforms. The most popular platforms among Montenegrin adults for online political participation are email and social networks (Adjaip-Veličkovski and Nurković, 2020).

The claim that young people's use of social networks can influence their political interest has been supported by a large body of research (Boulianne, 2009; Li and Chan, 2017; Boulianne and Theocharis, 2020). For example, Keating and Melis (2017) found that social media use increases individuals' exposure to political information and provides social mobilisation when friends and family post links to news or express political opinions – all of which can trigger or reinforce youths' political interest. Similarly, Pap Vorkapić and colleagues (2018) found that the more active young people are in discussions about politics on Facebook, the higher their political interest. The wide availability of communication technologies has provided more channels than ever before for young people to learn about, discuss, and engage in politics (Li and Chan, 2017; Pap Vorkapić et al., 2018).

Studies have consistently shown a positive association between social media use for finding political information and political interest (Wolfsfeld et al., 2015; Shehata and Strömbäck, 2021; Haugsgjerd and Karlsen, 2022). Research suggests that mainly people who are already interested in politics tend to search for political content on social media (Wolfsfeld et al., 2015). However, as Valeriani and Vaccari (2016) concluded, finding political content on social media (even unintentionally) can also lead to higher political interest, especially among those citizens that may not be interested in politics in the first place. Additionally, social media provides political information to those groups that use traditional media channels the least, and may thereby reduce overall gaps in political media consumption between different groups of people (Bode, 2015).

Furthermore, young people are more likely to stay informed about politics through digital platforms than other segments of the population (Oblak Črnič, 2022; Deželan et al., 2021). However, a number of studies have questioned the impact of young people's use of social networks on their political interest (e.g., Bakker and de Vreese, 2011; Sveningsson, 2014; Keating and Melis, 2017). For example, Sveningsson (2014) interviewed 26 young Swedes (aged 17 and 18) and found that they were sceptical about the use of social media for political discussion. Specifically, the interviewed Swedes consider online political activities to often be unruly and characterised by a hostile atmosphere (ibid.). Thus, contrary to the findings of Pap Vorkapić and colleagues (2018), Swedish participants were in principle reluctant to use social media for political discussions (Sveningsson, 2014). In sum, even though some studies show that young people use social media to further their political interest, other studies show reluctance towards such use of social media. Therefore, it remains unclear to what extent social media use furthers political interest among young people.

1.2 Young people's social media use for political information and political efficacy

Besides political interest, political efficacy is another central psychological orientation towards politics. Political efficacy refers to the perception that political participation of individuals holds the potential to influence or shape the political process and bring change (Craig and Maggiotto, 1982). However, research regarding the association between the use of social media and political efficacy remains understudied (Fierro et al., 2022). Some evidence shows that the use of social media may increase political efficacy (Ha et al., 2013; Wei and Zhao, 2017; Fierro et al., 2022). For example, Ha and colleagues (2013) found that social media use is positively linked to the political efficacy of first-time voters.

Fierro and colleagues (2022) emphasize that previous research has mostly included political efficacy as a one-dimensional concept (Ha et

al., 2013; Tully and Vraga, 2018). However, a distinction should be made between internal political efficacy (perceptions of an individual's capacity to engage in political activities – their sense of being well-informed and knowledgeable about politics) and external political efficacy (perceptions regarding the extent to which one can influence the decisions regarding politics and government, as well as views concerning the government's level of responsiveness) (Boulianne et al., 2023). Social media use is not necessarily associated with both of these dimensions. For example, Park (2019) found only evidence that using social media for reading news is positively linked to internal political efficacy.

Research suggests that political efficacy among youth in Slovenia and Montenegro is relatively low. According to the Youth in Southeast Europe Study (Lavrič et al., 2019), only 12% of young Slovenians and 16% of young Montenegrins expressed that they agree or completely agree with the statement that they know a lot about politics (Lavrič and Jusić, 2019: 63). Interestingly, 57% of young people living in ten countries in Southeast Europe (Slovenia, Montenegro, Albania, Croatia, Romania, Bosnia and Herzegovina, Bulgaria, Kosovo, Macedonia, and Serbia) completely disagree with the statement that they know a lot about politics, and, at the same time, they feel underrepresented in politics and think they should have more say in politics (Lavrič and Jusić, 2019: 64). Additionally, low perceived knowledge about politics and the feeling of underrepresentation among young people were present in earlier studies of Slovenian youth (Kirbiš and Zagorc, 2014; Lahe and Cupar, 2019; Deželan et al., 2021), and in the recent study of Montenegrin youth (Đukanović, 2019). We argue it should be tested whether social media use for political information is linked to either aspect of political efficacy among Slovenian or Montenegrin youth.

1.2.1 Internal political efficacy

Some studies report a positive correlation between digital media use for information seeking and internal political efficacy (e.g., Boulianne et al.,

2023). Despite scarce research, some studies have been conducted on the potential for people to gain knowledge about politics on social media (Bode, 2015). People can learn from political information they are exposed to on social media (ibid.). Research also suggests that individuals who engage with social media platforms for the purpose of consuming political news are more likely to know more about politics (Dimitrova et al., 2014; Park, 2019). The diversity of sources that is accessible through social platforms can provide up-to-date information, and social media users can easily share information through the features that are built into the social media platforms, which makes it easier to engage in news and strengthen knowledge about politics (Park, 2019).

Even though the majority of research suggests that there is a positive link between the usage of social media for political information and political learning, some research found no such association (Shehata and Strömbäck, 2021). Furthermore, some findings show that there is a negative association between the frequency of following news on social media and political knowledge (Bowyer et al., 2017; Cacciatore et al., 2018; van Erkel and Van Aelst, 2021; Yamamoto and Yang, 2022). For example, Bowyer and colleagues (2017) concluded that social media content consumers (i.e. people who read, listen to, or watch some form of media content) tend not to gain deeper levels of political knowledge from social media platforms (e.g., understanding complexities of political topics), especially when the message contradicts the viewer's beliefs. Furthermore, Leonhard and colleagues (2020) found that certain types of social media use (such as predominant use of social media for entertainment and frequent social media use) may contribute to people perceiving their political knowledge as high, even though their understanding of politics might, in reality, be low.

1.2.2 External political efficacy

Studies on the relationship between political information seeking on social media and external political efficacy are also relatively scarce (Fierro et al.,

2022). Existing research has largely failed to show any link between these two variables (Zhou and Pinkleton, 2012; Halpern et al., 2017). Zhou and Pinkleton (2012) found that online political news consumption and external political efficacy are not associated; however, they reported a positive link between traditional news consumption (e.g., TV news, newspapers...) and political efficacy. Similarly, Halpern and colleagues (2017) found no association between sharing political information on social media (e.g., Facebook and Twitter) and external political efficacy. However, Gil de Zúñiga and colleagues (2017) found that news consumption on social media is negatively linked to external political efficacy. Additionally, Warner and colleagues (2017) found no association between consumption of political content on social media and increased external efficacy over time. They conducted two waves of survey data collection and, after they used the variables in the first wave as control variables for themselves in the second wave, the association between social media use (content production or consumption) and external political efficacy did not hold (ibid.).

In theory, there is a possibility that social media use could increase internal and external political efficacy. Social media offers a diverse palette of possibilities to strengthen internal and external political efficacy (Warner et al., 2017; Boulianne et al., 2023). However, since research is fairly limited and inconclusive, further research is needed on a possible link between social media use for political information and both dimensions of political efficacy.

1.3 Young people's social media use for political information and political participation

Similar to political interest, young people's political participation is also generally lower than that of other segments of the population (Kirbiš and Flere, 2011b; Kirbiš and Zagorc, 2014; Pap Vorkapić et al., 2018; Weiss, 2020; Deželan et al., 2021; Oblak Črnič, 2022). Political participation can be defined as ordinary citizens' actions or activities that are aimed at impacting political outcomes in society (Ekman and Amnå, 2012: 286). Different forms

of political participation exist; some are institutionalised (e.g., voting and membership in a political party), others are non-institutionalised (e.g., protest behaviour, political discussions). This distinction is important because young adults are more likely to participate in non-institutionalised ways (Kirbiš and Flere, 2011b; Kirbiš and Zagorc, 2014; Weiss, 2020; Deželan et al., 2021; Matthes, 2022).

In Slovenia, young people have lower levels of institutional political participation (Kirbiš and Flere, 2011b; Kirbiš and Zagorc, 2014; Kirbiš, 2018; Lavrič and Jusić, 2019). For example, low youth participation in elections is typical, especially when it comes to elections to the European Parliament (Deželan et al., 2021). However, young people in Slovenia cannot be characterised as disinterested in sociopolitical life (Kirbiš and Flere, 2011a). While the data suggest that they are socially engaged, young people largely avoid partisan, institutional politics, mainly because they perceive political elites as unresponsive to the wishes of citizens (Kirbiš and Flere, 2011a).

However, non-institutional participation is high among youth. For example, the Slovenian Youth 2020 study has shown that 50% of young people included in the study believe that they would or have participated in non-violent demonstrations or protests (Deželan et al., 2021). Some young people engage in activism and discuss political issues through digital technologies, for example by creating Facebook groups dedicated to spreading the word about a political issue they are passionate about, and by organising protests on different social media platforms (Oblak Črnič, 2022).

According to the Youth in Southeast Europe Study (Lavrič et al., 2019), 55% of young Slovenians and 59% of young Montenegrins who were eligible to vote voted during the last national elections (Lavrič and Jusić, 2019: 65). Interestingly, according to the Youth Perceptions and Attitudes Towards Politics in Montenegro (2021) survey, the type of media young people use as a primary source of information impacts their political participation (Westminster Foundation for Democracy, 2021). Specifically, among the respondents who use different forms of media, the ones who use online

news platforms as primary sources of information were found to be the most inclined to vote, while those who use Facebook were the least likely to vote (ibid.).

In the same way that the use of online social networks can stimulate young people's political interest (Boulianne, 2009; Sandoval-Almazan, 2016; Li and Chan, 2017; Pap Vorkapić et al., 2018; Boulianne and Theocharis, 2020), they can also stimulate their political participation (Levy et al., 2016; Keating and Melis, 2017; Pap Vorkapić et al., 2018; Matthes, 2022). Online social networks may offer a new tool for engagement for those young people who are already interested in politics, but they may not appeal to young people with low political interest. However, Boulianne (2011) and Kim and colleagues (2013) show that social networks allow politically disinterested users to uniquely experience politics through the politically mobilising actions and messages of their peers, as well as through incidental exposures, which could help to foster their political interest.

Nonetheless, an important question is whether youth's political use of social networks (e.g., commenting on news related to politics) increases their political participation (Boulianne and Theocharis, 2020). Social media use may also reduce political participation, as young adults often use social networks primarily for non-political purposes, which is distracting and time-consuming rather than mobilising (Matthes, 2022). Still, the general view is that the use of social media can boost political participation. The available findings offer a strong, convincing argument that online and offline forms of engagement are strongly linked; young people who engage in politics online are also more engaged offline (Boulianne and Theocharis, 2020).

Furthermore, most research suggests that using social media as a source of political information is positively correlated with political participation (Gil de Zúñiga et al., 2012; Willnat et al., 2013; Valeriani and Vaccari, 2016; Karakaya and Glazier, 2019; Kim and Ellison, 2022). For example, Gil de Zúñiga and colleagues (2012) found that news consumption on traditional and online news media, larger political discussion networks, and searching

for information through social networks all have a positive impact on political participation. Furthermore, Valeriani and Vaccari (2016) found that the use of social media platforms for news consumption, even accidental, results in personalised dissemination of information directly to individuals' news feeds, and such a targeted approach to news consumption fosters a specific political news diet, which in turn promotes political participation (Kipkoech, 2023).

Youth political activities on online social networks can thus be a first step leading to increased political participation among young people (Boulianne, 2011; Kim et al., 2013; Kirbiš and Naterer, 2011). However, if participation outside social networks leads to higher participation online, these technologies may have little impact – in such a case, efforts to increase participation should focus on activities outside social networks (Boulianne and Theocharis, 2020). Either way, it is also possible that the relationship between participation on social networks and outside social networks is reciprocal (ibid.). In any case, examining the link among Slovenian and Montenegrin youth is relevant, considering the lack of studies from the Balkan area.

1.4 Study aim and hypotheses

The findings on social media use as a source for political information and political interest mostly indicate a positive association. Specifically, studies show that social media use for political information is linked to increased political interest (Wolfsfeld et al., 2015; Valeriani and Vaccari, 2016; Shehata and Strömbäck, 2021; Haugsgjerd and Karlsen, 2022), and political participation (Gil de Zúñiga et al., 2012; Willnat et al., 2013; Valeriani and Vaccari, 2016; Karakaya and Glazier, 2019; Kim and Ellison, 2022). Furthermore, some studies show that social media use for political information is linked to increased political efficacy (Ha et al., 2013; Wei and Zhao, 2017; Fierro et al., 2022). On the other hand, others show that social media use decreases political efficacy (Dimitrova et al., 2014; Park, 2019). Internal and external political efficacy as separate dimensions in relation to

social media use for political information remain understudied (Fierro et al., 2022). However, research indicates a possibility of a positive association between social media use as a source for political information and external (Warner et al., 2017; Boulianne et al., 2023), and internal political efficacy (Dimitrova et al., 2014; Bode, 2015; Park, 2019; Boulianne et al., 2023).

Since research shows frequent social media use among Slovenian and Montenegrin youth (Kirbiš and Zagorc, 2014; Lahe and Cupar, 2019; Đukanović, 2019; Matjašič et al., 2021), but also low levels of youth political interest (Kirbiš and Flere, 2011a, 2011b; Kirbiš and Zagorc, 2014; Lavrič and Jusić, 2019; Deželan et al., 2021; Westminster Foundation for Democracy, 2021), political efficacy (Lahe and Cupar, 2019; Lavrič and Jusić, 2019; Deželan et al., 2021), and political participation (Kirbiš and Flere, 2011b; Hrženjak, 2014; Kirbiš and Zagorc, 2014; Kirbiš, 2018; Đukanović, 2019; Lavrič and Jusić, 2019), in the present chapter we examined the links between social media use for information and the above-discussed political outcomes.

Based on previous literature, we formed the following hypotheses:

H1: Among young people in Slovenia and Montenegro, there is a positive correlation between the frequency of use of social media as a source of information on political events and political interest (e.g., Wolfsfeld et al., 2015; Shehata and Strömbäck, 2021; Haugsgjerd and Karlsen, 2022; Valeriani and Vaccari, 2016).

H2: Among Slovenian and Montenegrin youth, there is a positive correlation between the frequency of use of social media as a source of information on political events and internal political efficacy (H2a) (e.g., Bode, 2015; Dimitrova et al., 2014; Park, 2019; Boulianne et al., 2023), as well as external political efficacy (H2b) (e.g., Warner et al., 2017; Boulianne et al., 2023).

H3: For youth in both Slovenia and Montenegro, there is a positive correlation between the frequency of use of social media as a source of information on political events and political participation (Gil de Zúñiga

et al., 2012; Willnat et al., 2013; Valeriani and Vaccari, 2016; Karakaya and Glazier, 2019; Kim and Ellison, 2022).

In addition, we were interested in between-country differences in these links, as both countries have several similarities, but also differences with regard to macro-level characteristics, such as levels of socioeconomic development (Human Development Report, 2022), political (Nations in Transit, 2023), and cultural characteristics (Kirbiš, 2017).

2 Methods

2.1 Sample

The sample was part of the FES Youth in Southeast Europe Study, collected in early 2018 (FES, 2019). It included more than 10,000 respondents aged 14–29 in ten countries in Southeast Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, Macedonia, Montenegro, Romania, Serbia, and Slovenia (Naterer et al., 2019; Đukanović, 2019). In the present chapter, we examined data collected in Slovenia and Montenegro.

The Slovenian Youth 2018 data was based on a representative sample of Slovenian youth. The target population consisted of 333,542 individuals who were inhabitants of the Republic of Slovenia and were within the age range of 15 to 29 years in 2017 (N = 1015; M_{age} = 21.68; 49% women). The data was collected in the form of a personal, face-to-face field survey, between 23 January and 2 March 2018. The target population was stratified into 12 statistical regions and 5 types of community (for more details regarding sampling and how the data was obtained, see Naterer and Lavrič, 2019).

The national Montenegrin Youth 2018 data was based on a nationally representative random sample of Montenegrin youth. A total of 711 respondents aged 14 to 29 were selected (N = 710; M_{age} = 22.43; 51.5% women).

The survey was carried out in 15 Montenegrin municipalities between 10 February and 6 March 2018 (for more details regarding sampling and how the data was obtained, see Đukanović, 2019). Similarly to the Slovenian Youth 2018 data, the Montenegrin Youth 2018 data was collected with the use of face-to-face interviews through fieldwork and data collection processes.

2.2 Measures

2.2.1 Outcome variables

We used three outcome variables: political interest, internal and external political efficacy, and political participation.

Political interest was measured with a question: "How much are you personally interested in politics in general?" The answer was ranked on a five-point Likert scale (1 = "not interested at all"; 5 = "very interested").

To measure *internal political efficacy*, we used a question regarding self-assessed knowledge about politics. Specifically, the respondents were asked to what extent they agree with the statement: "I know a lot about politics." The answer was ranked on a five-point Likert scale (1 = "completely disagree"; 5 = "completely agree").

To measure *external political efficacy*, we used a proxy variable, specifically, a summation scale measuring to what extent the respondents agree with the statements: "Young people should have more possibilities to speak out in politics" and "I don't think politicians care about young people's opinions." The answers were ranked on a five-point Likert scale (1 = "completely disagree"; 5 = "completely agree"). This item was recoded so that higher values indicated high external political efficacy. The answers on both external political efficacy questions were combined and averaged to create a summation scale. Cronbach's alpha of .70 for the sample of Slovenian youth

and .75 for the sample of Montenegrin youth indicated high reliability of the summation scale of external political efficacy in both samples.

Political participation was measured with five items, from which a summation scale was created, consisting of five questions regarding different forms of political participation: "Have you ever": (1) "Signed a list with political requests/supported an online petition", (2) "Participated in a demonstration", (3) "Worked in a political party or political group", (4) "Stopped buying things for political or environmental reasons", and (5) "Participated in political activities online/in social networks". The answer was ranked on a three-point scale (1 = "no", 2 = "I haven't yet, but I would", and 3 = "I've done this"). The answers to those questions were combined and averaged to create a summation scale. Cronbach's alpha of .74 for Slovenian youth and .83 for Montenegrin youth indicated high reliability of the summation scale.

2.2.2 Predictor variables

Use of social media as a source of information on political events was measured with a question: "What are your main sources of information on political events?" We examined whether the respondent selected using social media as a source of information (0 = "no"; 1 = "yes").

2.2.3 Control variables

Based on the literature regarding the relationship between use of social media as a source of information regarding political events on one hand, and political interest, internal and external political efficacy, and political participation on the other, we included several control variables: *gender* (0 = female; 1 = male), *age* (in years), *size of residential settlement* (1 = less than 2,000 inhabitants; 2 = 2,000–5,000 inhabitants; 3 = 5,000–10,000 inhabitants; 4 = 10,000–20,000 inhabitants; 5 = 20,000–50,000 inhabitants; 6 = 50,000–100,000 inhabitants; 7 = 100,000–500,000 inhabitants; 8 = at

least 500,000 inhabitants), *self-assessed family material status* (1 = "We don't have enough money for basic bills (electricity, heating…) and food"; 2 = "We have enough money for basic bills and food, but not for clothes and shoes"; 3 = "We have enough money for food, clothes and shoes but not enough for more expensive things (fridge, TV set, etc.)"; 4 = "We can afford to buy some more expensive things but not as expensive as a car or a flat, for instance"; 5 = "We can afford to buy whatever we need for a good living standard"), and *education activity status of the respondent* (1 = is enrolled in some form of education; 2 = is not in any kind of education or training).

2.3 Plan of analysis

We first present the results of descriptive analyses. We then examined the bivariate relationships between the usage of social media as the main source of information on political events and the political outcome variables. Finally, we conducted four multivariate analyses for each country (one for each outcome variable), with social media use and control variables included in the regression models. All statistical analyses were performed with the IBM SPSS 28 statistical software.

3 Results

3.1 Descriptive analysis

Table 6.1 summarizes the descriptive statistics of the outcome and predictor variables we use in this study. The usage of social media as a source of information on political events among Slovenian youth (59.3% stated that their main source of information on political events was social networks) is quite different percentage-wise from usage of social media for that purpose among Montenegrin youth (16.7% stated that their main source of information on political events was social networks).

A little more than a tenth of Slovenian (12.5%) and Montenegrin (13.4%) respondents are interested or very interested in politics in general. A bit fewer Slovenian (10.9%) and Montenegrin (11.4%) respondents "agree" or "completely agree" with the statement that they know a lot about politics. Furthermore, exploring our measures for external political efficacy, just over half of Slovenian (57.2%) and Montenegrin (56.4%) respondents "agree" or "completely agree" with the statement that young people should have more possibilities to speak out in politics. Similarly, around half of Slovenian (50.7%) and Montenegrin (53.4%) respondents "agree" or "completely agree" that they don't think politicians care about young people's opinions.

Lastly, we look at our measures for political participation. Around half of Slovenian respondents have already—or haven't yet, but would—sign a list with political requests or support an online petition (53.2%), participate in a demonstration (42.9%), and stop buying things for political or environmental reasons (42.3%). Approximately a third stated that they have already—or haven't yet, but would—participate in political activities online or in social networks (32.2%), and just below a quarter have already—or haven't yet, but would—work in a political party or political group (24%). Around a third of Montenegrin respondents have already—or haven't yet, but would—sign a list with political requests or support an online petition (31.9%), participate in a demonstration (29.4%), and participate in political activities online or in social networks (28%). Approximately a quarter stated that they have already—or haven't yet, but would—work in a political party or political group (26.3%), and about a fifth of Montenegrin respondents have already—or haven't yet, but would—stop buying things for political or environmental reasons (21.9%).

Table 6.1: Descriptive statistics of outcome and predictor variables for Slovenian and Montenegrin youth

		Slovenian youth n (%)	Montenegrin youth n (%)
Use of social media as a source of information on political events	"What are your main sources of information of political events: online social networks"	602 (59.3%)	119 (16.7%)
Political interest	"Interested in politics in general"*	128 (12.5%)	95 (13.4%)
Internal political efficacy	"I know a lot about politics"**	111 (10.9%)	81 (11.4%)
External political efficacy	"Young people should have more possibilities to speak out in politics"**	581 (57.2%)	401 (56.4%)
	"I don't think politicians care about young people's opinions"**	514 (50.7%)	380 (53.4%)
Political participation	"Signed a list with political requests /Supported an online petition"***	540 (53.2%)	227 (31.9%)
	"Participated in a demonstration"***	435 (42.9%)	209 (29.4%)
	"Worked in a political party or political group"***	243 (24%)	187 (26.3%)
	"Stopped buying things for political or environmental reasons"***	430 (42.3%)	156 (21.9%)
	"Participated in political activities online / in social networks"***	327 (32.2%)	199 (28%)

Source: FES (2019).
Notes: *Are interested or very interested. ** Agree or completely agree with the statement. ***Haven't done this yet, but would, or have already done this.

3.2 Bivariate analyses

We examined whether the use of social media as a source of information on political events is related to (1) interest in politics, (2) internal and (3) external political efficacy, and (4) political participation among Slovenian and Montenegrin youth. The results are shown in Table 6.2.

For both Slovenian and Montenegrin youth, we found a significant, albeit weak, positive correlation between the usage of social media and political interest, confirming H1.

Table 6.2: Relationships between the use of social media as a source of information on political events and (1) political interest, (2) internal and (3) external political efficacy and (4) political participation

	Slovenian youth		Montenegrin youth	
	Spearman's ρ	No. of cases	Spearman's ρ	No. of cases
Political interest	.12**	954	.21**	521
Internal political efficacy	.03	901	.25**	429
External political efficacy	-.15**	895	-.01	454
Political participation	.12**	783	.15**	402

Source: FES (2019).
Notes: * significant at level <.05; ** significant at level <.01.

However, when it comes to political efficacy, the results differed. In the sample of Slovenian youth, we found no significant correlation between the use of social media as a source of information on political events and internal political efficacy. In Montenegro, however, the link was positive ($\rho = .25$; $p < .01$). H2a is therefore supported in Montenegro but not in Slovenia.

In addition, the use of social media proved significantly linked with external political efficacy in only one country. However, we found a significant negative correlation between the use of social media and external political efficacy among Slovenians ($\rho = -.15$; $p < .01$), but there was no significant association in Montenegro ($p > .01$). The findings show no support for H2b, as no positive link was detected in either country.

Finally, we found a significant positive correlation between social media use and political participation in Slovenia ($\rho = .12$; $p < .01$) and Montenegro ($\rho = .15$; $p < .01$). Therefore, H3 is confirmed.

3.3 Multivariate analyses

To perform a stricter test of our hypotheses, we included sociodemographic and socioeconomic variables in multivariate models to control for potential confounders. The results are shown in Table 6.3 and 6.4. Hierarchical multiple regression (Pallant, 2020) was used to assess the ability of social media use as a source of information on political events to predict (1) political interest, (2) internal and (3) external political efficacy, and (4) political participation, after controlling for gender, age, size of residential settlement, self-assessed family material status, and education activity status of the respondent. In step 1, we entered the controls, and in step 2, we added the predictor variable. This procedure was conducted for the Slovenian and the Montenegrin samples, and for every outcome variable separately, so that we could disentangle the separate effects of our predictor variable, which is the same in every model of outcome variables.

Table 6.3: Multiple linear regression of political interest, internal and external political efficacy and political participation for Slovenian youth

	Model 1S (political interest) (R^2 =.044; p < .05)		Model 2S (internal political efficacy) (R^2 =.024; p > .05)		Model 3S (external political efficacy) (R^2 =.038; p < .001)		Model 4S (political participation) (R^2 =.032; p < .05)	
	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Gender (male)	.14 (.08)	.06	.27 (.08)	.12 **	.21 (.07)	.11*	.04 (.04)	.04
Age	.04 (.01)	.14**	.03 (.01)	.12 *	.01 (.01)	.01	.02 (.01)	.16*
Size of residential settlement	.02 (.02)	.03	−.01 (.02)	−.02	−.01 (.02)	−.01	.01 (.01)	.04
Self-assessed family material status	.13 (.04)	.10*	.02 (.04)	.01	−.07 (.04)	−.06	.02 (.02)	.04
Education activity status	−.19 (.11)	−.07	−.25 (.10)	−.09*	−.06 (.09)	−.03	−.12 (.05)	−.10*
Use of social media as a source of information on political events	.26 (.08)	.11*	.04 (.08)	.02	−.30 (.07)	−.15**	.11 (.04)	.10*

Source: FES (2019).
Notes: * significant at level <.05; ** significant at level <.01.

Table 6.4: Multiple linear regression of political interest, internal and external political efficacy and political participation for Montenegrin youth

	Model 1M (political interest) (R^2 =.115; p < .001)		Model 2M (internal political efficacy) (R^2 =.139; p < .001)		Model 3M (external political efficacy) (R^2 =.050; p > .05)		Model 4M (political participation) (R^2 =.039; p < .05)	
	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Gender (male)	.37 (.11)	.24*	.32 (.12)	.12*	.02 (.10)	.01	.13 (.05)	.13*
Age	.08 (.02)	.25**	.08 (.02)	.25**	.02 (.01)	.07	.01 (.01)	.07
Size of residential settlement	.03 (.02)	.08	.08 (.04)	.10*	.11 (.03)	.18**	.01 (.02)	.01
Self-assessed family material status	.01 (.05)	.00	.04 (.06)	.03	.04 (.04)	.04	.01 (.02)	.01
Education activity status	−.44 (.14)	−.16*	−.49 (.15)	−.17**	−.25 (.12)	−.11*	.07 (.06)	.07
Use of social media as a source of information on political events	.63 (.13)	.20**	.072 (.15)	.22**	−.06 (.12)	−.02	.182 (.06)	.15*

Source: FES (2019).
Notes: * significant at level <.05; ** significant at level <.01.

Firstly, models 1S and 1M include the effect of the use of social media as a source of information on political events and the effects of all the control variables on political interest. The 1S model shows that, among Slovenian youth, those who use social media as a source of information on political events were more likely to express more political interest ($\beta = .11$; $p < .05$); however, the effect is relatively small. Moreover, as shown in model 1M, young Montenegrins that use social media as a source of information on political events were also more likely to express more political interest ($\beta = .20$; $p < .001$). The explained variance was relatively low in both models (R^2 for 1S being only 4.4% and for 1M only 11.5%), indicating that other unobserved

variables may impact the level of political interest among Slovenian and Montenegrin youth. In sum, use of social media as a source of information on political events proved to be a predictor of political interest among Slovenian and Montenegrin youth, confirming H1.

Secondly, models 2S and 2M include the effect of the use of social media as a source of information on political events and the effects of all the controls on internal political efficacy. The 2S model was not statistically significant, indicating no significant relationship between the use of social media as a source of information on political events and internal political efficacy among Slovenian youth. However, the 2M model was significant, indicating that those young Montenegrins who use social media as a source of information on political events show higher internal political efficacy ($\beta = .22$; $p < .001$). As with our preliminary analysis, H2a is therefore supported in Montenegro (even though the explained variance R^2 for 2M was only 13.9%) but not in Slovenia.

Thirdly, models 3S and 3M show the effect of use of social media as a source of information on political events and the effects of all the controls on external political efficacy. This time, the 3M model was not statistically significant (the relationship between the use of social media as a source of information on political events and external political efficacy among Montenegrin youth was not significant), but the 3S model was statistically significant. The results therefore indicate that those young Slovenians who use social media as a source of information on political events show lower external political efficacy ($\beta = -.15$; $p < .001$). Again, similar to our preliminary analysis, the findings show no support for H2b, as no positive link was detected in either country.

Finally, model 4S indicates that among Slovenian youth, those who use social media as a source of information on political events have significantly higher levels of political participation ($\beta = .10$; $p < .05$); however, the effect is relatively small. Moreover, as shown in model 4M, young Montenegrins that use social media as a source of information on political events were also more

likely to indicate higher political participation ($\beta = .15$; $p < .05$). Again, the explained variance was relatively low in both models (R^2 for 4S being only 3.2% and for 4M only 3.9%), and other unobserved variables may affect the level of political participation among Slovenian and Montenegrin youth. In summary, we found that the use of social media as a source of information on political events is a predictor of political participation among Slovenian and Montenegrin youth. Therefore, H3 is confirmed.

4 Discussion and conclusion

Social media is a platform that allows many young people to create spaces alternative to those in the physical world (Hrženjak, 2014). A large portion of young people in Slovenia (Kirbiš and Zagorc, 2014; Matjašič et al., 2021) and Montenegro (Đukanović, 2019) frequently use social media. In addition, previous studies of Slovenian (Kirbiš and Zagorc, 2014; Lahe and Cupar, 2019; Lavrič, 2019; Deželan et al., 2021) and Montenegrin (Lavrič, 2019; Đukanović, 2019) youth also reported low political interest, perceived knowledge about politics, the feeling of underrepresentation, and low levels of political participation among young people (Kirbiš and Zagorc, 2014; Lahe and Cupar, 2019; Đukanović, 2019; Lavrič and Jusić, 2019; Westminster Foundation for Democracy, 2021). When young people use social media as a source of information on political events, that might help them develop or strengthen political interest to some extent (see Binder et al., 2021). Our findings support this line of thought, since we found a positive relationship between the use of social media as a source of information on politics and political interest among Montenegrin and Slovenian youth.

However, the relationship between the use of social media as a source of information on political events and internal political efficacy was inconsistent between both countries; the link was weak and positive only among Montenegrin (but not Slovenian) youth, which is consistent with some other findings (Dimitrova et al., 2014; Park, 2019). The results indicate that the role of social media as a source of political information for political interest

might be context-dependent. One reason might lie in the exact purpose for which youth in each country predominantly seek new information (whether they use social media primarily to learn something new or to entertain themselves, for example) (Dimitrova et al., 2014; Park, 2019; Leonhard et al., 2020). There may also be other contributing factors that we have not controlled for, such as aspects related to education (for example, education level) that might differ between youth in Slovenia and in Montenegro (Lavrič and Jusić, 2019).

On the other hand, the relationship between the use of social media and external political efficacy was weak and negative in Slovenia, but non-significant in Montenegro. Our findings are not consistent with the view that social media use could support internal and external political efficacy theorised by some (e.g., Warner et al., 2017; Boulianne et al., 2023). As Boulianne and colleagues (2023) suggest, external political efficacy may be influenced by various factors (alongside social media use), such as differences in interactions with officials (online and offline), the type of political activity (the way in which citizens communicate their political views), and perceptions of government responsiveness to citizen inputs (online and offline). Additionally, Gil de Zúñiga and colleagues (2017) suggest that low-quality news and the negative presentation of political events in media may negatively influence external political efficacy.

As research on the association between the use of social media and political efficacy remains understudied (Fierro et al., 2022) and inconsistent, our results indicate that social media use could be beneficial for the internal political efficacy of Montenegrin youth and detrimental for the external political efficacy of Slovenian youth, again pointing to the importance of national, cultural, or socioeconomic context when examining the role of social media in political outcome variables. Additionally, our findings indicate that it is beneficial to examine internal and external political efficacy as separate concepts (i.e. dimensions), since they may be related differently to the use of social media.

Finally, we found that there is a positive relationship between the use of social media as a source of information on politics and political participation in both countries. This indicates that even though some research finds that general social media use might hinder political interest and political participation, since young people often use these platforms for non-political purposes (Matthes, 2022), using social media as a source of information on politics may boost political interest and political participation among Montenegrin and Slovenian youth. Our findings are in line with studies which found a positive relationship between social media use and political interest (Wolfsfeld et al., 2015; Shehata and Strömbäck, 2021; Haugsgjerd and Karlsen, 2022; Valeriani and Vaccari, 2016), and political participation (Boulianne, 2009; Boulianne and Theocharis, 2020; Li and Chan, 2017; Pap Vorkapić et al., 2018; Sandoval-Almazan, 2016).

The present study has several limitations. First, there might be other confounding variables that influence our findings that we have not included in our models. In future research, variables such as political socialization, traditional media use, and other potential confounders (Kirbiš et al., 2017; Kirbiš, 2018) should be controlled for. Second, causality cannot be inferred from our study, since the data is cross-sectional. Third, the use of social media as a source of information on political events was measured using a binary variable (yes/no). If instead we used a scale that measured the time spent on social media, looking for content on political events, or if we measured actual time of exposure to political content on social media, the results might be different.

Future studies should therefore take a more nuanced look at the possible link between the use of social media as a source of information on political events and political interest, internal and external efficacy, and political participation. Different methodological approaches, such as measuring time spent on social media looking for news regarding politics, and longitudinal research methods, could be used. Additionally, especially internal and external political efficacy should be researched further and separately, since,

as indicated by our results, they can relate in opposite ways to the use of social media.

Our findings support the idea that the use of social media as a news source on political events is positively connected with increased political interest and political participation among young people (Boulianne, 2011; Kim et al., 2013), regardless of the national context. However, when assessing the relationship between the use of social media as a news source and political efficacy (internal and external) among young Slovenians and Montenegrins, our findings show that social media use may also have a negative impact on some youth political outcomes.

5 References

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CHAPTER 7
Cognitive and affective drivers of pro-environmental behaviour among youth and adults: evidence from Slovenia, European, and non-European regions

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Abstract

This study examines the role of cognitive and affective dimensions of climate literacy in predicting pro-environmental behaviour among youth and adult populations in Slovenia, Europe, and non-European countries. Data were drawn from the International Social Survey Programme (ISSP) 2020 environment module, encompassing 28 countries and a total sample of 44,100 respondents, divided into Slovenian, European, and non-European subsamples. Multivariate regression and mediation analyses were conducted to explore how cognitive (e.g., knowledge of causes, consequences, and mitigation) and affective (e.g., concern, self-efficacy, policy support) sub-dimensions relate to various individual and collective pro-environmental actions. The results indicate that both cognitive and affective dimensions significantly predict pro-environmental behaviour, with policy support emerging as the strongest and most consistent predictor across groups. For Slovenian youth, pro-environmental behaviour is predominantly

driven by cognitive knowledge of climate causes and consequences, while affective factors such as concern, self-efficacy, and policy support play a weaker role. This highlights the need for interventions that not only strengthen specific, actionable knowledge but also cultivate emotional engagement and personal efficacy to bridge the gap between awareness and action. Overall, the findings underscore the importance of integrating both cognitive and affective drivers to enhance climate engagement across diverse populations.

***Keywords**: climate literacy; pro-environmental behaviour; cognitive dimension; affective dimension; policy support; Slovenia; cross-national comparison*

1 Introduction

Climate change is one of the most pressing global challenges, requiring both individual and collective action to mitigate its effects. Pro-environmental behaviour, defined as actions that minimize harm to the environment and promote sustainability, plays a crucial role in addressing climate change (Li et al., 2019; Tian and Liu, 2022). Key pro-environmental types of behaviour include reducing meat consumption, recycling, using public transport, and energy conservation (Eriksson et al., 2008; Berardi, 2017; Willett et al., 2019). Engagement in such behaviour, however, varies across populations and is shaped by factors such as region, age, climate literacy, and broader sociocultural, psychological, and informational influences (Meyer, 2015; Davitt et al., 2021; Kolenatý et al., 2022).

Climate literacy, defined as an individual's understanding of climate science, their ability to evaluate climate-related information, and their willingness to act sustainably, has been consistently identified as a major driver of environmentally responsible behaviour (Kolenatý et al., 2022; Pan et al., 2023). Empirical findings demonstrate that individuals with higher levels of climate literacy are more likely to engage in environmentally friendly actions (Srivastava, 2024; Akakpo et al., 2024; Hu et al., 2025). Importantly, some research also indicates regional and age-related disparities in climate literacy

and pro-environmental engagement, but these disparities are not thoroughly explored (Connor et al., 2022). For example, Adu Boateng et al. (2023) found that people residing in younger households (younger than 45 years) have higher awareness of climate change, its causes, and impacts compared to those who live in households with individuals older than 45 years. Whitmarsh et al. (2022) also found that climate anxiety was higher among younger age groups. Moreover, those residing in Western European countries tend to report higher levels of environmental concern and climate knowledge than non-European counterparts, as engagement in pro-environmental behaviour is influenced by the availability and quality of environmental infrastructure and services in different countries (Kennedy et al., 2009; Vicente-Molina et al., 2013; Jakučionytė-Skodienė and Liobikienė, 2021).

Climate literacy is a multidimensional construct comprising cognitive, affective, and behavioural dimensions (Kolenatý et al., 2022; Lubej et al., 2025). The cognitive dimension refers to factual and conceptual knowledge about the climate system, including causes, impacts, and mitigation strategies. The affective dimension encompasses emotional and value-based responses, such as concern, worry, guilt, or moral obligation regarding environmental issues. The behavioural dimension reflects individuals' willingness and actual tendency to engage in pro-environmental action (Sipos et al., 2008; DeWaters et al., 2014; Azevedo and Marques, 2017).

These dimensions do not operate in isolation but rather reinforce one another, as studies show that increases in individuals' environmental knowledge positively affect environmental concern, which in turn positively influences individuals' willingness to act in a pro-environmental way (Penny et al., 2015; Minelgaitė and Liobikienė, 2021; Srivastava, 2024). Sánchez et al. found that scientific understanding of climate change (e.g. causes, consequences) fosters greater emotional engagement and concern (Sánchez et al., 2016). For example, individuals who understand and are aware of the relationship between meat consumption and greenhouse gases are more likely to express stronger environmental concern (Moosburger et al., 2023). Furthermore, Milfont (2012) found that higher levels of knowledge lead

to higher levels of climate change concern, which in turn leads to greater personal efficacy. Conversely, misinformation or lack of knowledge can weaken climate concern, even among educated individuals (Czarnek et al., 2021). Beyond knowledge, studies show that individuals who support government climate actions are also more likely to report different forms of pro-environmental behaviour (Thøgersen and Noblet, 2012; Sharpe et al., 2021). Self-efficacy is equally crucial, as individuals who feel that their actions can make a difference are more likely to engage in sustainable behaviours (Vicente-Molina et al., 2013; Lee et al., 2014; Huang, 2016).

The affective dimension has received growing attention as a key mediator between knowledge and behaviour. Emotional responses such as concern or moral responsibility are frequently the missing link that explains why some knowledgeable individuals still fail to engage in sustainable action (Suárez-Perales et al., 2021; Pan et al., 2023). For instance, Suárez-Perales et al. (2021) found that emotional concern significantly predicted the likelihood of reducing carbon-intensive behaviours. Similarly, Yusliza et al. (2020) reported that affective engagement, manifested as environmental commitment and consciousness, predicted pro-environmental practices among adults in Malaysia. Moreover, Kolenatý et al. (2022), based on a quasi-experimental design in 47 schools, found that knowledge is the initial driver of climate change concern, which then positively influences self-efficacy levels and individuals' willingness to act. On the other hand, among 848 students on the West Coast, Meinhold and Malkus (2005) found that higher levels of pro-environmental attitudes positively influenced pro-environmental behaviour, and the key moderator in this relationship was environmental knowledge.

Despite increasing awareness among youth globally, significant knowledge gaps and differences in climate-related understanding persist. Therefore, this study investigates whether cognitive and affective dimensions of climate literacy predict pro-environmental behaviour, and whether this relationship varies across Slovenian, European, and non-European regions, as well as between youth and adults. Furthermore, it examines whether the

affective dimension and its sub-dimensions mediate the relationship between knowledge and behaviour, as knowledge may influence action both directly and through emotional engagement.

Based on this theoretical framework, the hypotheses and research questions of our study are:

H1: Both cognitive and affective sub-dimensions of climate literacy significantly predict pro-environmental behaviour, with the affective sub--dimensions showing a stronger effect.

H2: The affective dimension and its sub-dimensions of climate literacy mediate the relationship between the cognitive dimension and pro-environmental behaviour.

RQ1: Are there differences in the strength and direction of these relationships across regional groups?

RQ2: Do these relationships vary between youth and adults?

2 Method

2.1 Sample

For our study, we use data from the International Social Survey Programme (ISSP Research Group, 2023). The sample covers 28 countries (N = 44,100), of which 16 are European and 12 are non-European. For the purposes of our study, we divide the sample into three sub-samples: Slovenia (N = 1102), European countries (N ≈ 21,171), and non-European countries (N ≈ 21,754). Table 7.1 presents the sub-sample characteristics. The Slovenian sample includes 53.3% women and 46.7% men, 82.9% of whom are adults and 17.1% are young individuals (from 15 to 29 years old). Most of the

respondents in Slovenia have completed higher secondary education (49.2%). The European sub-sample includes 51.8% women, 48.2% men, 13.2% young individuals (from 15 to 29 years old), and 86.8% adults (30 or older). Most of the respondents (38.7%) have completed higher secondary education. Similar characteristics are found in the non-European sub-sample.

Table 7.1: Sample characteristics

		Slovenia		Europe		Non-European countries	
		f	%	f	%	f	%
Gender							
	Male	515	46.7	10204	48.2	9870	45.4
	Female	587	53.3	10967	51.8	11884	54.6
Total		1102		21171		21754	
Age							
	Young	188	17.1	2766	13.2	3605	16.7
	Adults	914	82.9	18226	86.8	17995	83.3
Total		1102		20992		21600	
Education							
	No education, incomplete primary education	6	.5	176	.9	1150	5.3
	Primary education	18	1.6	672	3.3	2407	11.1
	Lower secondary education	87	8	2731	13.3	3364	15.6
	Higher secondary education	537	49.2	7961	38.7	6100	28.2
	Post-secondary, non-tertiary	0	0	601	2.9	743	3.4
	Short level of tertiary education	103	9.4	1943	9.5	2340	10.8
	Lower tertiary, undergraduate	114	10.4	2875	14	3862	17.9
	Higher tertiary, Master's degree	198	18.1	3201	15.6	1420	6.6
	PhD, specialisation	28	2.6	386	1.9	244	1.1
Total		1091		20546		21360	

Source: ISSP (2023).

2.2 Measures

2.2.1 Climate literacy

2.2.1.1 Cognitive dimension

Climate literacy is measured along three dimensions: cognitive, affective, and behavioural. The cognitive dimension consists of three sub-dimensions: knowledge about the causes and consequences of climate change, climate change mitigation, and general knowledge about climate change.

Knowledge about the causes and consequences is measured with: "On a scale from 0 to 10, how bad or good do you think the impacts of climate change will be for the world as a whole?" and "On a scale from 0 to 10, how bad or good do you think the impacts of climate change will be for [COUNTRY]?", which are measured on a scale from 0 (extremely bad) to 10 (extremely good), and are recoded to a 5-point scale (1 = extremely good; 5 = extremely bad). Moreover, we include the item: "Environmental problems have a direct effect on my everyday life." (1 = agree strongly; 5 = disagree strongly), which is reversed (1 = disagree strongly; 5 = agree strongly).

We also use statements such as "In general, do you think…?", "…that air pollution caused by cars is…", "that air pollution caused by industry is…", "And do you think that pesticides and chemicals used in farming are...", "And do you think that pollution of [COUNTRY] rivers, lakes and streams is…", "…that a rise in the world's temperature caused by climate change is…", "…that modifying the genes of certain crops is...", "And do you think that nuclear power stations are…", which are measured on a scale from 1 (extremely dangerous for the environment) to 5 (not dangerous at all for the environment), and are reversed from 1 (not dangerous at all for the environment) to 5 (extremely dangerous for the environment). Finally, we create a summation variable that includes all those items ($\alpha = .63$).

Climate change mitigation is measured with: "Modern science will solve our environmental problems with little change to our way of life.", "In order to protect the environment [COUNTRY] needs economic growth.", and "Economic growth always harms the environment." These are measured on a scale from 1 (agree strongly) to 5 (disagree strongly), then reversed to 1 (disagree strongly) to 5 (agree strongly), and combined into a summative variable (α = .60).

Finally, the sub-dimension of general knowledge is measured with: "Almost everything we do in modern life harms the environment." (1 = agree strongly; 5 = disagree strongly; reversed to 1 = disagree strongly; 5 = agree strongly), "There has been a lot of discussion about the world's climate and the idea it has been changing in recent decades. Which of the following statements comes closest to your opinion?" (1 = the world's climate has not been changing; 4 = the world's climate has been changing mainly due to human activities), "I find it hard to know whether the way I live is helpful or harmful to the environment." (1 = agree strongly; 5 = disagree strongly), and "Which problem, if any, do you think is the most important for [COUNTRY] as a whole?" (1 = air pollution, 2 = chemicals and pesticides, 3 = water scarcity, etc.). We standardize and group all of these into a summation variable. The overall cognitive concept is created by summing these three sub-dimensions (α = .45).

2.2.1.2 Affective dimension

The affective dimension is measured by a newly created summation variable (α = .68), which consists of three sub-dimensions: climate change concern, self-efficacy, and support for government policies.

The sub-dimension of concern includes: "Generally speaking, how concerned are you about the environmental issues?" (1 = not at all concerned, 5 = very concerned), "We worry too much about the future of the environment and not enough about prices and jobs today." (1 = agree strongly; 5 = disagree

strongly, reversed to 1 = disagree strongly; 5 = agree strongly), "People worry too much about human progress harming the environment." (1 = agree strongly; 5 = disagree strongly), "There are more important things to do in life than protect the environment." (1 = agree strongly; 5 = disagree strongly, reversed to 1 = disagree strongly; 5 = agree strongly), and "Many of the claims about environmental threats are exaggerated." (1 = agree strongly; 5 = disagree strongly) (α = .72).

Self-efficacy is measured by: "It is just too difficult for someone like me to do much about the environment." and "There is no point in doing what I can for the environment unless others do the same." (1 = agree strongly; 5 = disagree strongly) (α = .57).

Finally, the sub-dimension of support for government policies is measured by: "How willing would you be to pay much higher prices in order to protect the environment?", "And how willing would you be to accept cuts in your standard of living in order to protect the environment?", and "And how willing would you be to pay much higher taxes in order to protect the environment?" (1 = very willing; 5 = very unwilling, reversed to 1 = very unwilling; 5 = very willing). "How willing would you be to accept a reduction in the size of [COUNTRY] in order to open them up for economic development?" (1 = very willing; 5 = very unwilling), and "Which of these approaches do you think would be the best way of getting business and industry in [COUNTRY] to protect the environment?" and "Which of these approaches do you think would be the best way of getting people and their families in [COUNTRY] to protect the environment?", which are both measured on a 3-point scale (1 = heavy fines for business/people that damage the environment; 2 = use the tax system to reward business/people who protect the environment; 3 = more information and education for businesses/people about the advantages of protecting the environment), which we recode from 1 = heavy fines for business/people that damage the environment to 3 = use the tax system to reward business/people who protect the environment (α = .58).

2.2.1.3 Pro-environmental behaviour

The dimension of pro-environmental behaviour is measured with: "I do what is good for the environment, even if it costs me more money or takes me more time." (1 = agree strongly; 5 = disagree strongly, reversed to 1 = disagree strongly; 5 = agree strongly), "In the last twelve months, how many trips did you make by plane? Count outward and return journeys, including transfers, as one trip.", "In a typical week, about how many hours do you spend in a car or another motor vehicle, including motorcycles, trucks, and vans, but not counting public transport? Do not include shared rides in buses, collective taxis, or carpooling services such as Uber Pool and Lyft Share." (measured by number of hours), "In a typical week, on how many days do you eat beef, lamb, or products that contain them?" (0 = 0 days a week; 8 = 8 days a week, reversed to 0 = 7 days a week, 8 = 0 days a week), "How often do you make a special effort to sort glass or cans or plastic or newspapers and so on for recycling?", and "And how often do you avoid buying certain products for environmental reasons?", measured on a 4-point scale (1 = always; 4 = never, reversed to 1 = never; 4 = always).

We also include: "Are you a member of any group whose main aim is to preserve or protect the environment?", "In the last five years, have you… signed a petition about an environmental issue?", "…given money to an environmental group?", "…taken part in a protest or demonstration about an environmental issue?" (1 = yes, I have, 2 = no, I have not, recoded into 0 = no, I have not, 1 = yes, I have) (α = .54).

2.2.2 Control variables

For control variables, we use: gender (1 = male, 2 = female), age (in years), education (0 = no schooling; 12 = PhD), and self-assessed social position measured with: "In our society, there are groups of people who are near the top and groups who are more towards the bottom. Below is a

scale from top to bottom. Where would you place yourself on this scale?" (1 = bottom; 10 = top).

2.3 Statistical analyses

We use multivariate regression analyses to analyse the effect of the sub--dimensions of the affective and cognitive dimensions on different forms of pro-environmental behaviour. We also conduct mediation analyses to examine whether the cognitive dimension impacts pro-environmental behaviour indirectly through the affective dimension and its sub-dimensions. Figures 7.1 and 7.2 present the mediation models. In each model, a maximum likelihood estimator (MLR) is used to ensure robust and reliable parameter estimates, given frequent deviations from normality and homoscedasticity (Pichardo et al., 2021). For our analyses, we use R (version 2025.05.0+496).

Figure 7.1: Mediation model with affective dimension as the mediator

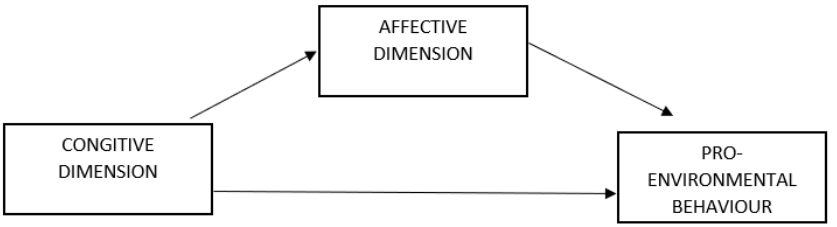
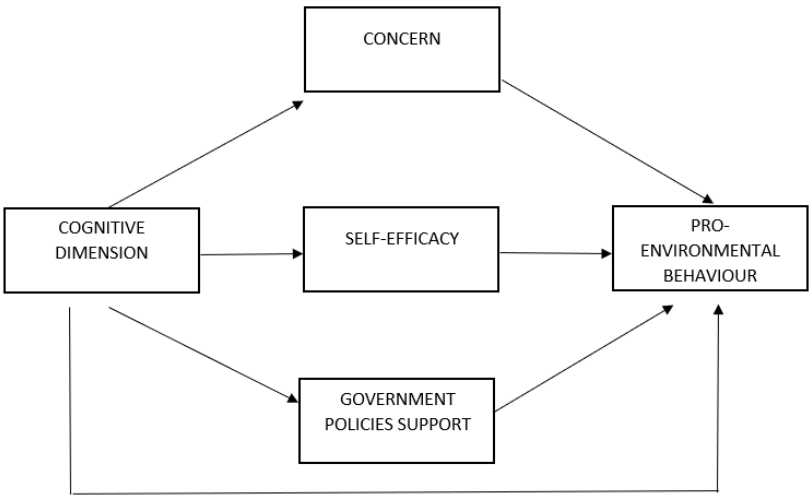


Figure 7.2: Mediation model with concern about climate change, self-efficacy, and support for government policies as mediators



3 Results

Tables 7.2 to 7.7 present the Pearson correlation coefficients and descriptive statistics (M, SD) for the sub-dimensions of the cognitive, affective, and behavioural (i.e. pro-environmental behaviour) (sub)dimensions. Table 7.2 shows the results for Slovenian youth. Almost all (sub)dimensions are positively and moderately correlated, with the exception of climate change mitigation, which is either negatively or insignificantly correlated with other (sub)dimensions. The strongest correlations are observed between concern and self-efficacy ($r = .50$, $p < .01$), and between concern and support for government policies ($r = .51$, $p < .01$).

Similar results are presented in Table 7.3, which reports findings for Slovenian adults. The only difference is that all correlation coefficients are

statistically significant, although climate change mitigation remains negatively correlated with other (sub)dimensions.

Table 7.2: Pearson correlation coefficients and descriptive statistics among Slovenian young

Variable	*M*	*SD*	1	2	3	4	5	6
1. Pro-environmental behaviour	2.4	.37						
2. Causes and consequences of climate change	3.71	.58	.43**					
3. Climate change mitigation	2.79	.42	-.13	-.33**				
4. General knowledge	3.37	.66	.24**	.37**	-.13			
5. Concern	3.52	.7	.39**	.46**	-.39**	.11		
6. Self-efficacy	3.53	.95	.38**	.28**	-.23**	-.02	.50**	
7. Government policies support	2.71	.56	.33**	.27**	-.24**	.18*	.51**	.40**

Source: ISSP (2023).
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.3: Pearson correlation coefficients and descriptive statistics among Slovenian adults

Variable	*M*	*SD*	1	2	3	4	5	6
1. Pro-environmental behaviour	2.51	.27						
2. Causes and consequences of climate change	3.82	.52	.23**					
3. Climate change mitigation	2.75	.37	-.09**	-.21**				
4. General knowledge	3.51	.63	.20**	.32**	-.13**			
5. Concern	3.58	.69	.29**	.39**	-.29**	.28**		
6. Self-efficacy	3.49	1	.21**	.16**	-.22**	.12**	.51**	
7. Government policies support	2.8	.55	.27**	.20**	-.18**	.18**	.43**	.38**

Source: ISSP (2023).
Notes: * significant at level <.05; ** significant at level <.01.

In Table 7.4, results for the sub-sample of European youth are presented. The coefficients between pro-environmental behaviour and causes and

consequences (r = .34, p < .01), general knowledge (r = .26, p < .01), concern (r = .39, p < .01), self-efficacy (r = .30, p < .01), and government policies support (r = .37, p < .01) are moderate but positive. Once again, the exception is knowledge about climate change mitigation, which negatively and weakly correlates with pro-environmental behaviour (r = -.12, p < .01). Similar patterns are also found in Tables 7.5, 7.6, and 7.7, which present the results for European adults and non-European youth and adults.

Table 7.4: Pearson correlation coefficients and descriptive statistics among European young

Variable	*M*	*SD*	1	2	3	4	5	6
1. Pro-environmental behaviour	2.35	.41						
2. Causes and consequences of climate change	3.73	.61	.34*					
3. Climate change mitigation	2.8	.46	-.12*	-.18*				
4. General knowledge	3.59	.67	.26*	.36*	-.16*			
5. Concern	3.51	.8	.39*	.49*	-.28*	.43*		
6. Self-efficacy	3.53	.98	.30*	.26*	-.13*	.23*	.43*	
7. Government policies support	2.8	.62	.37*	.24*	-.21*	.29*	.52*	.29*

Source: ISSP (2023).
Note: * significant at level <.01.

Table 7.5: Pearson correlation coefficients and descriptive statistics among European adults

Variable	*M*	*SD*	1	2	3	4	5	6
1. Pro-environmental behaviour	2.46	.36						
2. Causes and consequences of climate change	3.7	.62	.30*					
3. Climate change mitigation	2.78	.41	-.15*	-.25*				
4. General knowledge	3.57	.66	.26*	.38*	-.19*			
5. Concern	3.48	.8	.34*	.49*	-.36*	.42*		
6. Self-efficacy	3.51	.97	.28*	.23*	-.24*	.26*	.48*	
7. Government policies support	2.79	.64	.33*	.24*	-.21*	.27*	.50*	.34*

Source: ISSP (2023).
Note: * significant at level <.01.

Table 7.6: Pearson correlation coefficients and descriptive statistics among non-European young

Variable	*M*	*SD*	1	2	3	4	5	6
1. Pro-environmental behaviour	2.25	.37						
2. Causes and consequences of climate change	3.75	.58	.16**					
3. Climate change mitigation	3.03	.4	-.08**	0				
4. General knowledge	3.38	.67	.12**	.25**	-.06**			
5. Concern	3.19	.73	.23**	.18**	-.30**	.25**		
6. Self-efficacy	2.99	.98	.17**	.04*	-.14**	.20**	.41**	
7. Government policies support	2.72	.57	.29**	.08**	-.08**	.08**	.32**	.18**

Source: ISSP (2023).
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.7: Pearson correlation coefficients and descriptive statistics among non-European adults

Variable	*M*	*SD*	1	2	3	4	5	6
1. Pro-environmental behaviour	2.33	.39						
2. Causes and consequences of climate change	3.73	.61	.21*					
3. Climate change mitigation	2.97	.41	-.09*	-.08*				
4. General knowledge	3.33	.72	.16*	.28*	-.11*			
5. Concern	3.24	.74	.23*	.29*	-.33*	.27*		
6. Self-efficacy	3.02	.97	.18*	.12*	-.21*	.20*	.44*	
7. Government policies support	2.69	.61	.29*	.16*	-.13*	.14*	.35*	.23*

Source: ISSP (2023).
Note: * significant at level <.01.

Table 7.8 presents the results from multivariate regression analysis, with "I do what is good for the environment, even if it costs me more money or time." as the dependent variable. Among Slovenian adults, both knowledge about the causes and consequences of climate change and support for governmental climate mitigation policies are significant, positive predictors of agreement with the statement. Notably, policy support has a stronger effect ($\beta = .192$, $p < .01$). Among European youth, agreement is significantly predicted by knowledge of causes and consequences ($\beta = .294$, $p < .01$), knowledge of mitigation strategies ($\beta = .182$, $p < .01$), concern about climate change ($\beta = .178$, $p < .01$), self-efficacy ($\beta = .072$, $p < .01$), and policy support ($\beta = .308$, $p < .01$), with the strongest predictor being policy support. Similarly, among non-European youth, the most powerful predictor is again policy support ($\beta = .497$, $p < .01$), followed by knowledge of causes and consequences ($\beta = .274$, $p < .01$) and knowledge of mitigation ($\beta = .175$, $p < .01$). For both European and non-European adults, all cognitive and affective subcomponents significantly and positively predict agreement with the statement (except concern among non-European adults). In both cases, policy support is the strongest predictor (European adults: $\beta = .295$, $p < .01$; non-European adults: $\beta = .444$, $p < .01$).

As shown in Table 7.9, no cognitive or affective subcomponents significantly predict the number of hours spent flying among Slovenian or non-European youth and adults. Among European youth, knowledge of causes and consequences (β = -.218, $p < .05$) and mitigation strategies (β = -.235, $p < .01$) negatively predict air travel. Interestingly, support for governmental climate policies is associated with increased air travel (β = .340, $p < .01$). A similar pattern emerges among European adults: more knowledge about climate change is correlated with fewer hours flown (β = -.358, $p < .01$), while stronger policy support predicts more hours flown (β = .557, $p < .01$).

Table 7.10 focuses on hours spent driving a car or other motor vehicle. Among Slovenian youth, no significant effects are found. For Slovenian adults, greater policy support is associated with less car usage (β = -.566, $p < .01$). In the European youth sample, concern about climate change (β = -.948, $p < .01$) and policy support (β = -1.342, $p < .05$) significantly predict lower driving frequency. European adults show a similar trend: concern (β = -.580, $p < .01$), policy support (β = -.580, $p < .05$), and general climate knowledge (β = -.262, $p < .05$) all predict reduced car use. However, knowledge of causes and consequences (β = .395, $p < .01$) and mitigation strategies (β = .672, $p < .01$) unexpectedly predict higher car usage. Among non-European youth, higher knowledge of causes and consequences (β = 1.000, $p < .05$) and self-efficacy (β = .473, $p < .05$) are associated with greater car use. In contrast, for non-European adults, higher knowledge of mitigation strategies is associated with less driving (β = -.646, $p < .01$).

As shown in Table 7.11, lower frequency of meat consumption among Slovenian youth is associated with higher knowledge of causes and consequences (β = .649, $p < .05$), mitigation strategies (β = .922, $p < .01$), and self-efficacy (β = .361, $p < .05$). Among Slovenian adults, only general climate knowledge predicts lower meat intake (β = .202, $p < .05$). The same predictors hold for European youth: knowledge of causes and consequences (β = .661, $p < .01$) and self-efficacy (β = .142, $p < .01$). For European adults, lower meat consumption is linked to more knowledge of causes and consequences (β = .516, $p < .01$) and general knowledge (β = .112, $p < .01$), but surprisingly,

lower policy support (β = -.162, p < .01). Among non-European adults, lower meat intake is predicted by greater knowledge (causes: β = .272; mitigation: β = .223), higher policy support (β = .090), but lower self-efficacy (β = -.108).

Table 7.12 presents the results for recycling. Among Slovenian youth, higher recycling frequency is predicted by greater knowledge of causes and consequences (β = .292, p < .01). Among Slovenian adults, climate concern predicts recycling behaviour (β = .079, p < .05). All affective subcomponents significantly predict more recycling among European youth and adults, as well as non-European youth and adults. For European adults, general climate knowledge has a positive effect (β = .044, p < .01), while specific knowledge of causes (β = -.069) and mitigation strategies (β = -.052) have negative effects. The same negative association for mitigation knowledge is found among non-European youth and adults, although knowledge of causes and consequences is positively related to recycling in those same groups.

Table 7.13 summarizes the results for environmentally motivated product boycotting. Knowledge of causes and consequences positively predicts boycotting across all groups. Among Slovenian adults, both general climate knowledge (β = .116, p < .01) and policy support (β = .173, p < .01) are also significant. In all other groups, the affective subcomponents significantly predict boycotting, except for concern, which is not significant among non-European youth. Additionally, general knowledge predicts boycotting among European and non-European adults.

Table 7.14 covers environmental group membership as the outcome. Among European youth and adults, all affective subcomponents predict membership, with policy support having the strongest effect. However, for European adults, greater knowledge of mitigation strategies is linked to lower group involvement (β = -.014, p < .01). Among non-European youth, only policy support predicts group membership (β = .040, p < .01). For non-European adults, membership is associated with knowledge of causes (β = .011), mitigation strategies (β = .021), and policy support (β = .039), all p < .01.

Table 7.15 presents results for signing petitions. Among Slovenian youth, climate concern is the only significant predictor ($\beta = .128$, $p < .05$). Among Slovenian adults, signing petitions is positively predicted by concern ($\beta = .085$, $p < .01$), knowledge of causes ($\beta = .077$, $p < .01$) and mitigation ($\beta = .075$, $p < .05$), and policy support ($\beta = .092$, $p < .01$). For European youth, predictors include knowledge of causes ($\beta = .069$), self-efficacy ($\beta = .032$), concern ($\beta = .086$) and policy support ($\beta = .148$), all $p < .01$. Among European adults and both non-European groups, all subcomponents significantly predict petition behaviour, except for knowledge of mitigation, which has negative effects across all three groups, and general knowledge does not have a significant effect on petition signing among European adults.

Table 7.16 shows that among Slovenian youth, none of the subcomponents significantly predict donating. Among Slovenian adults, both policy support ($\beta = .049$, $p < .05$) and concern ($\beta = .001$, $p < .05$) are significant predictors. Among European and non-European youth and adults, all affective subcomponents significantly predict donations. However, knowledge of causes has a negative effect among European youth ($\beta = -.034$, $p < .05$), and knowledge of mitigation has a negative effect among European adults ($\beta = -.024$, $p < .01$). Conversely, general knowledge positively predicts donations among non-European adults ($\beta = .021$, $p < .01$). Across these groups, policy support remains the strongest predictor of financial contributions.

Table 7.17 reports on protest participation. None of the subcomponents predict protest behaviour among Slovenian youth. Among Slovenian adults, knowledge of causes ($\beta = .031$, $p < .05$) is the only significant predictor. For all other groups, policy support significantly predicts participation in protests. Additional predictors among European youth include general knowledge ($\beta = .038$, $p < .01$) and concern ($\beta = .040$, $p < .01$). Similar trends hold among European adults, where concern ($\beta = .020$, $p < .01$), general knowledge ($\beta = .006$, $p < .05$), self-efficacy ($\beta = .005$, $p < .01$) and policy support ($\beta = .035$, $p < .01$) are significant. Among non-European youth, concern ($\beta = .028$, $p < .01$) and policy support ($\beta = .053$, $p < .01$) are significant predictors. Among non-European adults, protest participation is predicted by knowledge of

causes (β = .009, p < .01) and policy support (β = .034, p < .01), but negatively by self-efficacy (β = -.006, p < .01).

Finally, Table 7.18 presents the results with summative pro-environmental behaviour as the dependent variable. Knowledge about the causes and consequences of climate change has a positive effect on pro-environmental behaviour in all sub-samples. In a sample of Slovenian youth, higher self--efficacy is also positively associated with pro-environmental behaviour (β = .094, p < .01). In a sub-sample of Slovenian adults, higher levels of pro-environmental behaviour are associated with higher general knowledge about climate change (β = .045, p < .05), higher concern about climate change (β = .050, p < .01), and higher government policies support (β = .075, p < .01). Results for European youth show that, besides knowledge about causes and consequences of climate change (β = .135, p < .01), concern (β = .050, p < .01), self-efficacy (β = .069, p < .01), and government policies support (β = .140, p < .01) are also positively associated with pro-environmental behaviour. The three sub-dimensions of the affective dimension (concern, self-efficacy, and government policies support) are also positively associated with pro-environmental behaviour among European adults and non-European youth and adults. Higher pro-environmental behaviour is also associated with higher general knowledge about climate change among European adults (β = .046, p < .01) and non-European adults (β = .031, p < .01), but is negatively associated with climate change mitigation among non-European youth (β = -.039, p < .05). Based on this, we can support hypothesis H1, as both cognitive and affective sub-dimensions significantly predict pro--environmental behaviour, with affective sub-dimensions consistently showing stronger predictive power.

In Table 7.19, we present the results from mediation analyses with the affective dimension as a mediator. Results are the same for all sub-samples. That is, in all sub-samples, the cognitive dimension has a positive and significant direct effect on pro-environmental behaviour and on the affective dimension. The affective dimension also has a significant and positive effect on pro-environmental behaviour. The indirect pathway from cognitive

dimension to pro-environmental behaviour through the affective dimension is also positive and significant, meaning that cognitive knowledge increases the frequency of pro-environmental behaviour both directly and indirectly via higher affective dimension. This indirect effect is strongest in the sub-sample of European youth ($\beta = .148$, $p < .01$).

Table 7.20 presents the results of mediation analyses with sub-dimensions of the affective dimension as mediators. The results for Slovenian youth show that the cognitive dimension has a positive direct effect on pro-environmental behaviour ($\beta = .297$, $p < .01$), concern ($\beta = .447$, $p < .01$), and government policies support ($\beta = .414$, $p < .01$). Among the three mediators, self-efficacy ($\beta = .079$, $p < .05$) and government policies support ($\beta = .132$, $p < .05$) have a positive effect on pro-environmental behaviour. However, none of the indirect effects through the three mediators is statistically significant. The results for Slovenian adults show similar patterns. The cognitive dimension has a positive and significant direct effect on all three mediators and the outcome. As for the indirect pathways, results among Slovenian adults reveal that increases in the cognitive dimension are associated with increases in pro-environmental behaviour mainly through higher concern about climate change ($\beta = .036$, $p < .01$) and higher government policies support ($\beta = .023$, $p < .01$). For the other four sub-samples, results reveal that all three mediators have a significant and positive indirect effect in the relationship between the cognitive dimension and pro-environmental behaviour. Among European youth, the strongest indirect effect is found in government policies support ($\beta = .057$, $p < .01$), while among European adults ($\beta = .043$, $p < .01$) and non-European youth ($\beta = .016$, $p < .01$), indirect effects via concern and government policies support have the same value. Finally, the strongest indirect effect among non-European adults is found in government policies support ($\beta = .027$, $p < .01$). Thus, we confirm hypothesis H2, as both the affective dimension and its sub-dimensions mediate the relationship between the cognitive and behavioural dimensions.

Regarding RQ1, the results clearly demonstrate differences in the strength and direction of the relationships between climate literacy dimensions and

pro-environmental behaviour across regional groups. Across all regional groups, support for governmental climate policies emerges as the most consistent and strongest positive predictor of pro-environmental behaviours, particularly in areas such as recycling, driving, donations, boycotting, and protest participation. European and non-European adults and youth consistently show stronger and more diverse associations between both cognitive and affective dimensions and pro-environmental behaviours than Slovenian youth, where several relationships are weaker or non-significant. The magnitude of indirect effects via the affective dimension in mediation models also varies, with the strongest indirect effects observed among European youth, while non-European groups generally show smaller indirect effects. As for RQ2, the results show that the relationships between climate literacy dimensions and pro-environmental behaviour vary meaningfully between youth and adults, with adults showing more consistent and significant relationships across a wider range of behaviours. Youth often show stronger indirect effects through affective sub-dimensions, particularly policy support and concern, suggesting that these affective factors may play a more motivational or emotional role in youth decisions.

Table 7.8: Multiple regression analyses; dependent variable: I do what is good for the environment, even if it costs me more money or time

I do what is good for the environment, even if it costs me more money or takes me more time						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	.309 (.122)*	.146 (.060)*	.294 (.038)**	.179 (.014)**	.274 (.037)**	.177 (.016)**
Climate change mitigation	-.007 (.163)	.030 (.073)	.183 (.042)**	.175 (.019)**	.191 (.056)**	.135 (.023)**
General knowledge	.086 (.091)	.061 (.042)	-.004 (.034)	.059 (.013)**	.022 (.034)	.037 (.014)**
Concern	.162 (.110)	.077 (.054)	.178 (.035)**	.054 (.013)**	-.008 (.035)	.006 (.016)
Self-efficacy	.101 (.077)	.056 (.031)	.072 (.024)**	.125 (.009)**	.001 (.025)	.034 (.011)**
Government policies support	.177 (.127)	.192 (.054)**	.308 (.039)**	.295 (.013)**	.497 (.043)**	.444 (.016)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.9: Multiple regression analyses; dependent variable: number of hours in a plane

Number of hours in a plane						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	.098 (.436)	-.013 (.049)	-.218 (.091)*	-.358 (.073)**	-.154 (.083)	-.150 (.086)
Climate change mitigation	.447 (.370)	.103 (.075)	-.235 (.096)*	.188 (.081)*	-.062 (.077)	.007 (.162)
General knowledge	-.136 (.176)	-.072 (.066)	.110 (.082)	-.071 (.108)	.054 (.049)	-.007 (.093)
Concern	.225 (.310)	.097 (.059)	-.005 (.099)	-.101 (.110)	.119 (.071)	.060 (.127)
Self-efficacy	-.016 (.108)	.083 (.044)	-.000 (.056)	.105 (.065)	-.002 (.033)	-.007 (.069)
Government policies support	.210 (.475)	.031 (.077)	.340 (.056)**	.557 (.165)**	.108 (.064)	.037 (.186)

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.10: Multiple regression analyses; dependent variable: number of hours in a car or other motor vehicle

Number of hours in a car or other motor vehicle						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	-.498 (.623)	-.040 (.172)	-.216 (.383)	.395 (.139)**	1.000 (.412)*	-.180 (.161)
Climate change mitigation	-.709 (.656)	.049 (.226)	-.406 (.672)	.672 (.173)**	.774 (.415)	-.646 (.254)*
General knowledge	.235 (.426)	-.081 (.134)	-.584 (.388)	-.262 (.128)*	.098 (.304)	.112 (.165)
Concern	-.159 (.540)	.137 (.152)	-.948 (.359)**	-.580 (.131)**	.108 (.315)	-.003 (.183)
Self-efficacy	.322 (.371)	.034 (.097)	-.366 (.227)	-.101 (.077)	.473 (.206)*	-.105 (.109)
Government policies support	-.738 (.652)	-.566 (.218)**	-1.342 (.431)**	-.580 (.122)**	-.038 (.392)	-.148 (.189)

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.11: Multiple regression analyses; dependent variable: meat intake

Meat intake						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	.649 (.265)*	.136 (.101)	.661 (.087)**	.516 (.027)**	.155 (.084)	.272 (.035)**
Climate change mitigation	.922 (.270)**	-.208 (.139)	.168 (.104)	.027 (.038)	-.035 (.122)	.223 (.052)**
General knowledge	.201 (.195)	.202 (.084)*	.040 (.092)	.112 (.025)**	-.003 (.072)	.042 (.030)
Concern	.103 (.233)	.033 (.099)	.044 (.084)	-.005 (.025)	-.065 (.080)	-.032 (.034)
Self-efficacy	.361 (.163)*	.039 (.058)	.142 (.055)**	-.029 (.016)	.053 (.053)	-.108 (.023)**
Government policies support	.026 (.163)	.036 (.114)	-.150 (.086)	-.162 (.025)**	.123 (.087)	.090 (.036)*

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.12: Multiple regression analyses; dependent variable: recycling

	Recycling					
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	.292 (.117)**	-.047 (.045)	-.011 (.033)	-.069 (.011)**	.118 (.046)**	.054 (.019)**
Climate change mitigation	.094 (.123)	.053 (.056)	-.014 (.038)	-.052 (.015)**	-.201 (.066)**	-.322 (.026)**
General knowledge	.121 (.092)	.051 (.030)	-.017 (.032)	.044 (.010)**	.037 (.037)	.052 (.016)**
Concern	.079 (.016)	.079 (.031)*	.160 (.032)**	.089 (.010)**	.232 (.040)**	.213 (.018)**
Self-efficacy	.084 (.061)	.007 (.018)	.136 (.021)**	.100 (.010)**	.091 (.028)**	.076 (.012)**
Government policies support	.023 (.113)	-.007 (.035)	.220 (.034)**	.159 (.010)**	.298 (.052)**	.254 (.019)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.13: Multiple regression analyses; dependent variable: boycotting buying products for environmental reasons

Avoid buying products						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	.253 (.120)*	.247 (.053)**	.180 (.033)**	.148 (.012)**	.142 (.036)**	.165 (.015)**
Climate change mitigation	-.066 (.119)	.138 (.071)	.079 (.043)	.037 (.016)*	.010 (.044)	-.015 (.021)
General knowledge	.116 (.080)	.116 (.040)**	-.007 (.030)	.050 (.011)**	.024 (.028)	.069 (.013)**
Concern	-.027 (.090)	.069 (.049)	.162 (.030)**	.083 (.012)**	.039 (.030)	.102 (.015)**
Self-efficacy	.100 (.056)	-.017 (.030)	.099 (.019)**	.100 (.008)**	.060 (.021)**	.054 (.010)**
Government policies support	.196 (.105)	.173 (.052)**	.306 (.032)**	.257 (.011)**	.348 (.035)**	.280 (.016)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.14: Multiple regression analyses; dependent variable: membership in environmental organizations

Member of environmental organization						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	-.037 (.057)	.002 (.013)	-.009 (.011)	-.007 (.004)	.013 (.011)	.011 (.004)*
Climate change mitigation	-.082 (.062)	.034 (.019)	-.014 (.012)	-.014 (.005)**	.024 (.013)	.021 (.006)**
General knowledge	.041 (.039)	.010 (.013)	.008 (.009)	.006 (.003)	-.000 (.009)	.004 (.004)
Concern	.010 (.044)	-.009 (.012)	.019 (.010)*	.031 (.003)**	-.005 (.010)	.001 (.004)
Self-efficacy	.025 (.025)	-.008 (.007)	.011 (.006)	.009 (.002)**	-.008 (.006)	.001 (.003)
Government policies support	-.011 (.044)	.021 (.015)	.052 (.013)**	.067 (.004)**	.040 (.010)**	.039 (.005)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.15: Multiple regression analyses; dependent variable: petition signing

	Petition signing					
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	-.027 (.072)	.077 (.029)**	.069 (.018)**	.068 (.006)**	.043 (.013)**	.019 (.005)**
Climate change mitigation	-.074 (.086)	.075 (.033)*	.000 (.020)	-.203 (.008)**	-.048 (.020)*	-.027 (.008)**
General knowledge	.057 (.086)	.039 (.022)	.014 (.017)	.009 (.005)	.034 (.012)**	.012 (.005)*
Concern	.128 (.063)*	.085 (.026)**	.086 (.016)**	.069 (.006)**	.099 (.012)**	.064 (.005)**
Self-efficacy	.041 (.043)	.006 (.016)	.032 (.011)**	.035 (.004)**	.028 (.008)**	.034 (.004)**
Government policies support	.078 (.068)	.092 (.030)**	.148 (.018)**	.116 (.006)**	.085 (.012)**	.071 (.005)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.16: Multiple regression analyses; dependent variable: financial contribution to environmental organizations

Financial contribution to environmental organizations						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	-.023 (.061)	.019 (.023)	-.034 (.014)*	-.009 (.005)	.018 (.011)	.007 (.005)
Climate change mitigation	.100 (.078)	.022 (.025)	-.015 (.016)	-.024 (.008)**	-.020 (.015)	-.005 (.008)
General knowledge	.011 (.044)	.009 (.015)	.002 (.014)	.009 (.005)	.003 (.011)	.021 (.004)**
Concern	.051 (.053)	.001 (.018)*	.041 (.013)**	.056 (.005)**	.037 (.012)**	.040 (.005)**
Self-efficacy	.005 (.034)	.015 (.013)	.037 (.009)**	.025 (.003)**	.025 (.008)**	.022 (.003)**
Government policies support	.074 (.054)	.049 (.023)*	.108 (.015)**	.155 (.005)**	.071 (.012)**	.078 (.005)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.17: Multiple regression analyses; dependent variable: taking part in a demonstration for environmental reasons

Taking part in demonstration						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences	-.019 (.044)	.031 (.013)*	.024 (.014)	.030 (.003)**	-.002 (.008)	.009 (.003)**
Climate change mitigation	-.034 (.063)	.000 (.015)	-.011 (.016)	.000 (.004)	-.014 (.012)	.002 (.005)
General knowledge	.030 (.038)	.018 (.010)	.038 (.013)**	.006 (.003)*	.000 (.0008)	-.003 (.003)
Concern	.037 (.039)	.008 (.013)	.040 (.013)**	.020 (.003)**	.028 (.009)**	.006 (.004)
Self-efficacy	.023 (.027)	.004 (.009)	-.005 (.009)	.005 (.002)**	-.004 (.006)	-.006 (.002)**
Government policies support	.033 (.047)	.029 (.016)	.080 (.015)**	.035 (.003)**	.053 (.010)**	.036 (.004)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.18: Multivariate regression analyses; dependent variable: pro--environmental behaviour

Dependent variable: pro-environmental behaviour						
	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Causes and consequences of climate change	.182 (.061)**	.052 (.018)**	.135 (.016)**	.086 (.005)**	.085 (.014)**	.080 (.007)**
Climate change mitigation	.104 (.055)	.013 (.024)	.028 (.018)	-.003 (.007)	-.039 (.020)*	-.013 (.009)
General knowledge	.080 (.043)	.045 (.014)**	.023 (.014)	.036 (.005)**	.009 (.020)	.031 (.005)**
Concern	.052 (.056)	.050 (.017)**	.050 (.014)**	.036 (.005)**	.032 (.014)*	.038 (.006)**
Self-efficacy	.094 (.035)**	.014 (.010)	.069 (.009)**	.041 (.003)**	.030 (.008)**	.021 (.004)**
Government policies support	.084 (.056)	.075 (.010)**	.140 (.015)**	.109 (.005)**	.161 (.016)**	.142 (.006)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.19: Mediation analyses; mediator: affective dimension

	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Cognitive dimension -> Affective dimension (a)	.268 (.128)*	.432 (.081)**	.613 (.041)**	.617 (.016)**	.210 (.042)**	.253 (.015)**
Affective dimension -> Pro-environmental behaviour (b)	.248 (.043)**	.113 (.020)**	.242 (.017)**	.176 (.005)**	.172 (.014)**	.153 (.006)**
Cognitive dimension -> Pro-environmental behaviour (c)	.303 (.082)**	.127 (.029)**	.173 (.039)**	.143 (.009)**	.087 (.022)**	.138 (.010)**
Indirect effect	.066 (.033)*	.049 (.012)**	.148 (.013)**	.109 (.004)**	.036 (.008)**	.039 (.003)**
Total effect	.369 (.087)**	.175 (.028)**	.322 (.039)**	.252 (.009)**	.123 (.022)**	.176 (.010)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

Table 7.20: Mediation analyses; mediators: concern about climate change, self-efficacy and government policies support

	Slovenian young	Slovenian adults	European young	European adults	Non-European young	Non-European adults
Cognitive dimension -> Concern (a1)	.447 (.172)**	.610 (.090)**	.880 (.051)**	.936 (.019)**	.321 (.053)**	.368 (.020)**
Cognitive dimension -> Self-efficacy (a2)	-.058 (.205)	.341 (.130)**	.611 (.064)**	.524 (.024)**	.251 (.060)**	.206 (.025)**
Cognitive dimension -> Government policies support (a3)	.414 (.131)**	.358 (.071)**	.393 (.038)**	.406 (.015)**	.104 (.037)**	.194 (.018)**
Concern -> Pro-environmental behaviour (b1)	.050 (.049)	.060 (.016)**	.057 (.015)**	.046 (.004)**	.049 (.013)**	.027 (.005)**
Self-efficacy -> Pro-environmental behaviour (b2)	.079 (.033)*	.012 (.011)	.063 (.010)**	.044 (.003)**	.023 (.008)**	.021 (.004)**
Government policies support -> Pro-environmental behaviour (b3)	.132 (.056)*	.065 (.021)**	.146 (.017)**	.107 (.005)**	.155 (.015)**	.141 (.006)**
Cognitive dimension -> Pro-environmental behaviour (c)	.297 (.084)**	.112 (.030)**	.176 (.039)**	.142 (.009)**	.085 (.021)**	.131 (.010)**
Indirect effect via Concern	.022 (.024)	.036 (.011)**	.050 (.013)**	.043 (.004)**	.016 (.005)**	.014 (.002)**
Indirect effect via Self-efficacy	-.005 (.016)	.004 (.004)	.038 (.007)**	.023 (.002)**	.006 (.002)*	.004 (.001)**
Indirect effect via Government policies support	.055 (.028)	.023 (.009)**	.057 (.008)**	.043 (.003)**	.016 (.006)**	.027 (.003)**
Total indirect effect	.072 (.038)	.064 (.014)**	.146 (.014)**	.109 (.005)**	.038 (.008)**	.045 (.003)**
Total effect	.369 (.087)**	.175 (.028)**	.322 (.039)**	.252 (.009)**	.123 (.022)**	.176 (.010)**

Source: ISSP (2023)
Notes: * significant at level <.05; ** significant at level <.01.

4 Discussion

The present study aimed to explore the role of climate literacy, specifically its cognitive and affective dimensions, in predicting pro-environmental behaviour. By disaggregating these constructs into their respective sub--dimensions, we gain a more nuanced understanding of which factors are most influential. Furthermore, the study examined whether the affective dimension mediates the relationship between knowledge and behaviour, and whether these relationships differ across regions (Slovenia, Europe, non-European countries) and age groups (youth and adults).

As hypothesized, both cognitive and affective dimensions of climate literacy significantly predicted pro-environmental behaviour (Kolenatý et al., 2022; Pan et al., 2023; Srivastava, 2024). Among cognitive sub-dimensions, knowledge about the causes and consequences of climate change emerged as the most consistent and robust cognitive predictor. This finding aligns with prior research indicating that an understanding of how human activity contributes to climate change increases personal relevance and motivation to act (Sánchez et al., 2016; Moosburger et al., 2023). In contrast, general climate knowledge, although positively related to some behaviours, was a weaker and less consistent predictor. This distinction aligns with the literature suggesting that targeted, actionable knowledge is more behaviourally consequential than broad awareness (DeWaters et al., 2014).

Interestingly, knowledge of climate change mitigation strategies showed mixed effects. While it positively predicted behaviours such as reducing meat consumption and supporting environmental policies, it was negatively associated with behaviours such as driving a car and petition signing. One possible explanation is that knowledge alone cannot override infrastructural or cultural constraints (Kennedy et al., 2009; Vicente-Molina et al., 2013).

The affective dimension was a strong predictor of pro-environmental behaviour even when disaggregated into sub-components. Among these, support for government climate policies consistently emerged as the strongest

predictor across all groups, reinforcing findings that policy support is a key motivator (Thøgersen and Noblet, 2012; Sharpe et al., 2021). Climate change concern was also significant in many models, particularly those related to low-cost or expressive actions, supporting evidence that emotional concern bridges the knowledge–action gap (Suárez-Perales et al., 2021; Kolenatý et al., 2022). However, its predictive power varied across groups (e.g., it was not significant among non-European adults) suggesting that cultural or political factors may moderate its effect. Self-efficacy emerged as a moderate but meaningful predictor, particularly among youth, aligning with studies showing that belief in one's ability to effect change drives climate action (Y. Lee et al., 2014; Huang, 2016).

High-cost behaviours (e.g., reducing flying or driving) were generally less predictable based on cognitive and affective variables, likely due to structural constraints or social norms (Diamantopoulos et al., 2003). In contrast, low-cost or habitual behaviours (e.g., recycling, boycotting products) were consistently predicted by both cognitive and affective sub-dimensions (Semenza et al., 2008). Collective or expressive actions (e.g., protesting, petition signing) were primarily influenced by affective variables, especially concern and policy support, confirming the relevance of emotional and value-based motivations (Yusliza et al., 2020; Pan et al., 2023).

Regional comparisons revealed that European youth and adults displayed the most consistent positive effects on pro-environmental behaviour across both cognitive and affective predictors, possibly reflecting higher climate literacy, institutional trust, and infrastructure (Connor et al., 2022; Jakučionytė-Skodienė and Liobikienė, 2021). Among non-European samples, strong effects, particularly for policy support, suggest that affective alignment with systemic solutions transcends national contexts. However, Slovenian subsamples showed fewer significant effects overall, potentially due to cultural, political, or infrastructural factors (Adu Boateng et al., 2023). Regarding age differences, youth were more sensitive to affective variables, consistent with studies showing higher climate concern and anxiety among younger

populations (Whitmarsh et al., 2022; Adu Boateng et al., 2023). Adults showed more balanced effects, with cognitive predictors more frequently significant.

Mediation analyses revealed that the affective dimension partially mediates the relationship between cognitive dimension and pro-environmental behaviour, confirming theoretical assumptions. This was most evident in the European youth sample, where the indirect effect was strongest. These results are consistent with the knowledge → concern → behaviour pathway (Penny et al., 2015; Suárez-Perales et al., 2021). When the affective dimension was disaggregated, mediation via policy support was especially robust across groups. However, in Slovenian youth, none of the indirect pathways through the affective sub-dimensions were significant, despite the presence of direct effects.

Despite these insights, limitations must be noted. The cross-sectional nature of the data limits causal inferences. While mediation analysis allows testing theoretical pathways, longitudinal or experimental designs are needed to establish causality. Self-report measures may introduce method bias and social desirability effects, particularly for pro-environmental behaviours, which are socially desirable. Disaggregating cognitive and affective constructs increases model complexity, which may elevate the risk of Type I error or obscure potential interactions. For example, knowledge of mitigation strategies might interact with systemic efficacy, which was not captured in this model.

Future research should adopt longitudinal or experimental designs to clarify causal pathways and track how knowledge and emotions evolve over time. Exploring cultural and contextual moderators (e.g., political trust, economic stability, exposure to climate events) would enrich understanding of predictor differences across populations. Qualitative or mixed-methods approaches could reveal how individuals make sense of climate knowledge and emotionally engage with climate change.

In practical terms, the findings suggest that climate change education should go beyond factual knowledge, especially general knowledge, and focus

on communicating the causes and consequences of climate change, as well as actionable solutions. However, this knowledge should be accompanied by strategies to foster emotional engagement, particularly policy support, concern, and self-efficacy. Campaigns that link personal behaviour to broader systemic change may be especially effective, given the strong role of policy support as a mediator. For young people, enhancing climate self-efficacy may be crucial. Interventions that include participatory elements, such as youth-led climate projects, school activism, or simulation games, could empower youth to see themselves as capable agents of change. Policy makers and environmental organizations may also benefit from targeting specific behaviours with tailored psychological strategies. For instance, promoting recycling may rely more on factual awareness and habit formation, while encouraging protest or petition participation may require value-based appeals and group identity framing.

5 Conclusion

This study contributes to research on climate engagement by disaggregating the cognitive and affective dimensions of environmental concern and examining their unique and combined influence on a range of pro-environmental behaviours. Across populations, knowledge about causes and consequences, policy support, and climate concern emerged as key predictors, although their influence varied by behaviour type and demographic context. Importantly, the findings underscore that knowledge alone is insufficient. Affective engagement, particularly policy support and concern, plays a crucial role in translating knowledge into action. Moreover, the mediating role of the affective dimension highlights the need to consider emotional and motivational pathways through which information leads to behavioural change.

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CHAPTER 8
Demographic and socioeconomic predictors of perceived ideological polarization in Slovenia

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Abstract

This study examines how demographic and socioeconomic characteristics shape individuals' perceptions of ideological difference in Slovenia. Data were collected from a sample of 1,253 Slovenian adults aged 19 to 91 years, recruited through an online data panel and stratified to be representative by age, gender, educational level, and region. Descriptive statistics, Pearson correlations, and multiple linear regression analyses were performed using SPSS and R to assess the associations between key predictors and perceived ideological differences. The findings indicate that education, income, and religiosity are the strongest predictors, with higher education and income levels, as well as religiosity, associated with a greater sense of ideological distinctiveness. In contrast, gender, age, and self-assessed socioeconomic status showed no significant effects, while urban residence was significant only in bivariate analyses but not in the regression model. These results highlight the importance of structural factors, particularly education and income, in shaping perceptions of ideological distance. The findings suggest that ideological distinctiveness may function

as a marker of social status or identity, pointing to the need for policies that foster dialogue and critical reflection to mitigate perceived divides and enhance social cohesion.

Keywords: *ideological polarization; demographic factors; socioeconomic status; education; income; religiosity; social cohesion*

1 Introduction

In recent years, ideological polarization has gained growing attention as a critical phenomenon affecting democratic discourse, electoral behavior, and social cohesion. While much of the research has focused on the ideological distance between political parties or partisan groups, scholars increasingly highlight the importance of understanding polarization at the individual level—where it manifests in consistently extreme ideological positions rather than centrist or mixed views (Abramowitz and Saunders, 2008; Torcal and Magalhães, 2022; Ludwig et al., 2023). This chapter adopts such an individual-level approach, emphasizing ideological extremity across a left–right continuum, rather than affective partisanship or elite polarization. Building on recent theoretical and empirical studies, we investigate how specific demographic and socioeconomic characteristics contribute to variation in individuals' perceived ideological positioning. By focusing on Slovenia, a post-socialist European country with a dynamic political landscape, our aim is to explore how these structural factors shape ideological divisions in a national context.

The academic literature identifies several individual-level predictors of ideological polarization, including both demographic and socioeconomic variables. Among demographic factors, gender and age are frequently associated with differences in political extremity. Research suggests that men tend to hold more ideologically consistent and extreme positions than women, who often cluster near the ideological center (Inglehart and Norris, 2003; Abendschon and Steinmetz, 2014; Trogrlić and Todosijević,

2024). Age-related trends are more complex: older adults often exhibit more ideological rigidity, while younger cohorts may be less consistent but still susceptible to ideological radicalization under certain conditions (O'Grady, 2023; Inwald et al., 2024). Similarly, place of residence plays a role: rural populations frequently show stronger alignment with conservative ideologies, whereas urban residents, though generally left-leaning, often display more ideological diversity (Cramer, 2016; Rodden, 2019; Zahl-Thanem and Haugen, 2019). Religiosity is another powerful factor—individuals with high religious commitment are more likely to endorse culturally conservative and ideologically rigid positions, while secular individuals may gravitate toward progressive extremes, particularly on moral issues (Hayes and McKinnon, 2018; Langsæther, 2019; Pew Research Center, 2025). Together, these demographic variables shape the extent and direction of polarization in both predictable and context-dependent ways.

This chapter is structured to first provide a theoretical overview, followed by an empirical analysis of the predictors of ideological polarization. We begin by examining how key demographic factors—such as gender, age, urban versus rural residence, and religiosity—as well as socioeconomic variables including education, income, and subjective economic status, are linked to individual-level ideological polarization. Next, we present the Slovenian dataset used in our analysis, explain the operationalization of variables, and outline the analytical strategy. The Results section includes descriptive statistics, bivariate correlations, and multivariate regression analyses assessing the influence of these predictors. In the final section, we interpret the findings, discuss the study's limitations, and offer suggestions for future research and relevant policy implications. Before turning to the empirical analysis, the next section introduces the conceptualization of ideological polarization and provides a selective review of key demographic and socioeconomic predictors identified in prior research.

2 Theoretical part: conceptualization and predictors of ideological polarization

2.1 Ideological polarization as an individual-level construct

Ideological polarization refers to the extent to which individuals adopt consistently extreme positions on the political spectrum as opposed to moderate or centrist ones (Torcal and Magalhães, 2022; Ludwig et al., 2023). At the individual level, this concept is often operationalized as ideological extremeness – for example, the distance of a person's left–right self-placement from the scale midpoint, or the consistency of their policy attitudes at one end of the spectrum (Abramowitz and Saunders, 2008). It is important to note that ideological polarization can be measured at the individual level but also aggregated to assess groups or societies. In the present chapter, we focus on individual-level polarization, treating it as a characteristic that varies across people. The midpoint of a scale (e.g., the center of a 0–10 left–right scale) represents an ideologically moderate position; greater distance from that midpoint indicates greater extremity.

Scholars have used this approach in many contexts – for example, examining the share of citizens with consistently conservative or consistently liberal views on multiple issues (Pew Research Center, 2016). Fors instance, Ludwig et al. (2023) measured ideological extremity by focusing on the extremity of opinions across 12 items on immigration and refugees, using a folded score method that compresses both ends of a 7-point scale into a 4-point polarization index. Higher values indicate that the person consistently takes strong left- or right-leaning positions on issues, signifying greater polarization, whereas smaller values mean entirely centrist opinions on all issues. On the other hand, Torcal and Magalhães (2022) propose a Weighted Perceived Ideological Polarization (WPIP) index that captures how far apart an individual perceives the positions of political parties to be on a left–right scale – an indirect measure of polarization in one's perception of the political space. Therefore, in contrast to affective polarization (negative feelings

toward opposing partisans), ideological polarization is about substantive issue positions and ideological self-identification (Fiorina and Abrams, 2008).

In the context of this chapter, we understand ideological polarization at the individual level to refer to ideological extremity – how far someone's views are from the middle of the ideological spectrum in their context. This outcome can apply to general left–right self-placement or specific policy domains (economic, cultural, migration, etc.), as long as we are capturing distance from moderate positions rather than the direction of leaning (Ludwig et al., 2023). In our empirical analysis, we use self-identification on the left–right scale. However, following Fraser and colleagues (2022), we measured respondents' perceived ideological polarization by asking them to place both themselves and the average voter in Slovenia on a 0–10 political ideology scale, where 0 represented the left and 10 represented the conservative/right position. We then calculated the absolute difference between the respondent's ideological self-placement and the perceived position of the average voter, referring to this measure as perceived ideological polarization

Next, we turn to the review of the key factors shaping ideological polarization. What follows is a concise, non-exhaustive literature review of the main demographic and socioeconomic predictors identified in previous research.

2.2 Gender

Gender is a fundamental demographic factor that can influence political attitudes and behavior, including the tendency to adopt extreme or moderate positions. Traditionally, women have been seen as less politically engaged and less ideological, favoring more moderate or pragmatic views, while men often show greater political interest and ideological consistency, making them more likely to adopt extreme positions (Inglehart and Norris, 2003; Trogrlić and Todosijević, 2024). Social role theory suggests women tend to value social welfare and compromise, promoting moderations, whereas men may prioritize hierarchy or partisanship, fostering extremity (Schneider and

Bos, 2019). In recent decades, a "modern gender gap" has emerged in many Western countries, with women tending to lean more left (i.e. liberal), but not more extreme, than men on average (Abendschon and Steinmetz, 2014; Dassonneville, 2021).

Cross-national studies indicate that both genders tend to cluster near the ideological center, with women showing a stronger inclination toward centrist positions. For instance, a 29-country study based on the European Social Survey by Trogrlić and Todosijević (2024) found that women's average left–right self-placement is slightly to the left of men's, a difference partly explained by men being more likely to place themselves on the right, whereas women more frequently select the midpoint of the scale. In other words, European women are disproportionately represented among those identifying with centrist positions compared to men. Similar results were found in a cross-national analysis of 28 countries, which found that men are significantly more likely than women to support ideologically extreme parties (Harteveld et al., 2019). These findings support the notion that, on average, women's ideological profiles are a bit more centrist (and less skewed to the right) than men's in Europe. Similarly, Knutsen (1998) also noted that men are more often found at ideological extremes than women.

In Canada, earlier findings suggested men were more polarized, but recent shifts show young women being more liberal and young men more conservative, creating the left-right divide and ideological gender gap (Shorrocks, 2018). This reflects a realignment rather than a uniform extremism by one gender – young women's liberal positions place them to the left, and young men's to the right. Both of these younger subgroups could be considered polarized in opposite directions, which means neither is "centrist" (Shorrocks, 2018; Akbar, 2025). However, considering the general population and multiple issues, women still tend to express slightly less ideological rigidity.

In summary, many studies conclude that men are more often found at ideological extremes (especially on the right) whereas women are more often in the center or moderate left, although gender gaps in polarization are

not enormous (Knutsen, 1998; Saad, 2024; Trogrlić and Todosijević, 2024). Women's greater propensity to choose a middle-ground suggests they are, on average, less polarized than men in ideological terms.

2.3 Age

Age is another factor hypothesized to influence ideological centrism versus extremism. There are competing theoretical perspectives about how age shapes polarization. One argument is that older individuals have had more time to solidify their worldviews and partisan identities, leading to more consistent (and possibly extreme) ideological positions (Peltzman, 2019). Life-cycle effects may reduce openness to new information with age, leading to greater ideological rigidity and potentially aligning older adults with conservative or traditional values (Cornelis et al., 2009). Additionally, cohort effects (generational experiences) can create gaps – for example, generations that lived through intense ideological conflicts (such as the Cold War) might hold more extreme positions on certain issues (Tilley and Evans, 2014). Conversely, another perspective suggests that younger adults, while often less politically engaged or knowledgeable, tend to have more ideologically inconsistent or moderate positions due to identity formation and limited political experience (Stoker and Jennings, 2008; Neundorf and Smets, 2017). However, youth can also be a time of idealism and political radicalization for some, so certain young cohorts might actually embrace extreme causes (either on the left or right) (Awan, 2016). Thus, age effects on polarization are complex: older voters might be more ideologically constrained, but younger voters might include both apathetic moderates and a subset of fervent activists.

While research generally indicates that older adults tend to exhibit slightly greater ideological consistency and extremity than younger adults, the pattern can depend on context. In the United States, rising polarization over recent decades has been partly attributed to demographic change, including an aging population. Pew trend analyses have found widening generational differences:

older cohorts (Boomers and the Silent Generation) have moved toward more uniformly conservative positions in the 2000s, while Millennials have been more likely to hold liberal views – both indicating movement away from the ideological center for different age groups (Pew Research Center, 2016; Saad, 2024). Moreover, one study found that younger Americans were less polarized than older Americans on certain issues related to climate change policy (Inwald et al., 2024). O'Grady (2023) conducted a comprehensive analysis of age-based polarization across 27 European countries from 1981 to 2018. He found that young Europeans today are relatively libertarian in outlook – more socially liberal than their elders – while older Europeans tend to be more socially conservative. In effect, the young lean left on cultural issues and right on economic issues, whereas the old do the opposite (more culturally traditional but pro-welfare). These cross-cutting tendencies mean that neither age group is uniformly more "extreme" across all dimensions. O'Grady (2023) also found no clear increase in age-group polarization over time – the magnitude of generational divides on ideology today is similar to that in the 1980s, or even narrowing in some domains. This suggests persistent, but not widening, age differences.

In summary, older people often demonstrate higher ideological polarization on salient issues (especially value-based issues), while younger people's lower political crystallization can translate into more moderate positions – but also some highly radical youths. On balance, the least polarized segment may be younger adults, since a sizable proportion of youth remain centrist or undecided. The most polarized segment in many countries appears to be middle-aged to older voters who are deeply invested in politics. Still, differences should not be overstated: both young and old include a mix of moderates and extremists. Structural factors (like generational socialization and period effects) mediate these patterns rather than age alone.

2.4 Urban versus rural residence

The urban-rural divide is a major axis of political polarization in contemporary democracies, especially in North America and Europe. Community context plays a key role, as urban areas are typically more diverse and interconnected, which fosters a mix of political views with a left-leaning average. Cities also attract highly educated populations, media, and multicultural communities, contributing to more liberal social values and somewhat greater ideological heterogeneity (Inglehart and Norris, 2016). In contrast, rural areas are generally more socially and culturally homogeneous, with stronger ties to tradition, religion, and conservative norms. Isolation, both geographic and informational, can amplify ideological echo chambers, leading to greater uniformity and rightward polarization (Darmofal and Strickler, 2019). Research shows that rural populations are therefore more likely to score higher on measures of social conservatism, nationalism, and skepticism toward elites or government (Cramer, 2016; Scala and Johnson, 2017; Mettler and Brown, 2022).

In the United States, electoral data show that rural counties are increasingly voting overwhelmingly Republican (conservative) and urban counties overwhelmingly Democratic (liberal), leaving fewer "swing" or mixed areas (Rodden, 2019; Mettler and Brown, 2022). Similarly, the study by Herodowicz et al. (2021) examined the relationship between a locality's socioeconomic development and polarization in Poland. Researchers found that individuals living in more rural and economically underdeveloped areas tended to hold more conservative views, while those residing in urban and more developed regions were more likely to express liberal orientations. Mettler and Brown (2022) argue that a confluence of economic and sociocultural changes has heightened urban–rural polarization, with rural communities feeling culturally alienated and thus adopting more extreme anti-urban, conservative stances. This is reflected in policy attitudes: rural Americans score significantly higher on measures of social conservatism, nativism, and skepticism towards government, aligning with far-right positions, whereas urban Americans on average endorse more progressive positions. Comparative

studies in Europe likewise find that rural areas provide stronger support for radical right parties and are more opposed to immigration and cultural change, whereas urban residents are generally more open and left-leaning (Zahl-Thanem and Haugen, 2019; Luca and Kenny, 2024).

Overall, the literature indicates that rural residents are less centrist: they more uniformly occupy one pole of the spectrum, contributing heavily to mass polarization, while urban residents, though mostly left-leaning, retain relatively more ideological diversity and moderation.

2.5 Religiosity

Religiosity is a major sociocultural factor shaping ideological orientation, particularly on moral and cultural issues. High religiosity, often measured by religious attendance and the importance of faith, is consistently associated with traditionalism, moral absolutism, and deference to authority, leading to strong alignment with right-wing positions (Langsæther, 2019). Highly religious individuals are more likely to hold conservative views on issues like abortion, LGBTQ rights, and gender roles, and often display ideological rigidity rooted in religious doctrine (Woodrum, 1988; Clements, 2014). In contrast, secular individuals reject religious authority and tend to support liberal or progressive positions (Hayes and McKinnon, 2018).

Numerous studies across different countries have found a robust association between high religiosity and right-wing ideological extremism. In the United States, this manifests as the divide between religious traditionalists (e.g., evangelical Protestants, observant Catholics) and secular citizens. Pew Research Center (2025) reports that highly religious Americans are far more likely to identify as conservative and to support hardline positions on issues like abortion and LGBTQ rights. For example, highly religious White Americans are over 60% more likely to oppose abortion and homosexuality than their least religious counterparts. Importantly, the secular are not centrist either, as they tend to hold strongly liberal views on the same issues. Similarly,

Abramowitz and Saunders (2008) found that the gap between religious and secular individuals is strongest on cultural issues such as abortion and gay marriage. Cross-national research also finds religiosity to be a polarizing force. For example, using the European Social Survey, Adamczyk et al. (2024) found that religious individuals were more likely to have negative attitudes regarding abortion and assisted reproductive technologies. In Europe, church attendance has historically been associated with right-wing issue positions (e.g., opposition to divorce, abortion, euthanasia), while secular individuals favor liberal policies. For instance, Hayes and McKinnon (2018) found that in Northern Ireland, individuals who were not religious had a more liberal stance regarding same-sex marriage and abortion.

In summary, more religious individuals are generally less centrist: they cluster on the conservative side and often far toward that side. Less religious (secular) individuals also tend to be ideologically far from the center, albeit on the liberal side, especially on cultural issues. This means religiosity as a factor produces polarization rather than indicating that one group is moderate. The growing sorting of populations along religious lines thus leaves fewer centrists in both camps (Davis, 2018; Pew Research Center, 2025).

2.6 Education

Education is a key predictor of political attitudes and ideological polarization. Higher education tends to increase political knowledge, cognitive engagement, and exposure to ideological discourse, which can lead to more consistent and sometimes more extreme ideological positions (Sunshine Hillygus, 2005; Perrin and Gillis, 2019). Educated individuals are more likely to align clearly with the left or the right, while less educated citizens often hold mixed or ambivalent views, placing them closer to the center (Meyer, 2017; Lee and Tipoe, 2025). Additionally, social environments matter, as college-educated people often interact in ideologically homogeneous networks, reinforcing specific leanings (Linvill and Havice, 2011; Weber et al., 2020). In many Western democracies, this has led to a divide where

university-educated individuals lean liberal, while the less educated tend to hold centrist positions.

A strong body of evidence supports the idea that higher educational attainment is associated with greater ideological polarization. This pattern has been observed in the United States and across multiple democracies. An analysis by the Pew Research Center (2016) found that Americans with postgraduate education were far more likely to have ideologically consistent (uniformly liberal or conservative) views, whereas those with a high school education or less were far more likely to hold a mix of liberal and conservative positions (i.e., to be moderate). In 2015 data, nearly half of low-educated adults had an ideologically mixed profile, compared to only about one-fifth of those with postgraduate degrees. This indicates that less educated citizens remain a reservoir of centrism, while the highly educated have sorted into polarized camps. By the 2010s, a majority of Americans with degrees took mostly one-sided (left or right) positions, a stark change from decades past. This "education polarization" trend is exemplified by the fact that postgraduates were disproportionately likely to be consistently liberal in Pew's values scale, and to a lesser extent consistently conservative, while those without college were much more centrist or non-ideological.

Cross-country research by Lee and Tipoe (2025) confirms that this is not merely a U.S. phenomenon. Using data from 18 OECD countries, they found that in most countries higher education corresponds to more polarized attitudes on key issues (inequality, immigration, gay rights). In fact, the education–polarization gradient is evident: people with university education exhibit larger left–right attitudinal divides (liberals and conservatives more sharply opposed) than those with lower education. The effect is strongest in the United States but is also noticeable elsewhere. The authors suggest mechanisms for this pattern, including the alignment of educated individuals' ideologies with their values (post-materialist or cosmopolitan values among graduates vs. more traditional values among non-graduates) and differences in media consumption (the well-educated are more exposed to ideologically reinforcing news, especially online, which can heighten polarization).

In practical terms, the most educated segments of society are the least centrist, often populating the ranks of committed left-wing progressives or right-wing free-marketeers. By contrast, those with low education (e.g., who did not finish high school) more frequently lack a firm ideological anchor and thus end up in the middle of the spectrum or expressing indifference. This does not necessarily mean that less educated people are consciously moderate; sometimes it reflects low political information. But from a measurement standpoint, it means lower-educated individuals score as more centrist (closer to the midpoint, or mixing left and right issue responses) on average. In summary, individuals with less education are more centrist, whereas individuals with more education are more ideologically polarized (Pew Research Center, 2016; Lee and Tipoe, 2025).

2.7 Income and economic status

Socioeconomic position, often proxied by income, is another important predictor of ideological polarization. Income can influence ideology through material interests and social environment. High-income individuals might favor policies that protect their wealth (low taxes, limited redistribution) – a stance typically associated with the economic right – and they also tend to have higher political engagement, possibly leading them to adopt more consistent ideological packages (e.g., economically conservative and also often socially moderate or conservative if aligned with right-leaning coalitions). Meanwhile, low-income individuals could have economic incentives to support left-wing redistributive policies, but they might also be less politically mobilized or have conflicting social views (some low-income groups are culturally conservative) (Ojer et al., 2025). One hypothesis is that the affluent and socioeconomically successful are more ideologically polarized because they are more involved in politics (donors, activists, etc.), whereas the poor and working-class are more ideologically diffuse or centrist due to lower political efficacy or cross-pressures. For example, data from the American National Election Studies shows that affluent voters align more

with the right-leaning camp while lower-income voters align more with the left (Ojer et al., 2025).

Additionally, income is correlated with education and urbanization, which, as discussed, tend to foster polarization (Lee and Tipoe, 2025; Zahl-Thanem and Haugen, 2019). On the other hand, one could argue that very low-income individuals experiencing economic hardship might turn to radical politics out of discontent (e.g., supporting populist or extremist movements promising drastic change). In this view, economic distress can breed extremism (the classic idea that deprivation radicalizes). Thus, it is crucial to distinguish objective income level from subjective status perceptions. For objective income, the prevailing expectation in established democracies has been that the middle and upper classes have sorted into partisan ideological camps more than lower classes, implying higher polarization among those with higher income.

Al Yussef and Heyndels (2025) investigated the relationship between several variables, including income and ideological polarization in Belgium. Their findings showed that income had the strongest correlation with ideological polarization among all variables considered and suggested that individuals with higher incomes tend to be less ideologically polarized, while those living in poverty are more likely to hold polarized views. Furthermore, based on data from the World Values Survey from 1990 to 2020, Gu and Wang (2022) found that higher income inequality is associated with higher levels of ideological polarization on economic, democratic, and societal issues.

In sum, while high-income individuals are more likely to display consistent and partisan-aligned ideological views, low-income individuals may also adopt extreme or radical positions, particularly under conditions of economic stress or perceived marginalization.

2.8 Subjective economic status

Beyond objective income, people's perceptions of their family's economic status (i.e. subjective socioeconomic status) can influence their political outlook. Relative deprivation theory suggests that those who perceive themselves to be of low status or on a downward trajectory are more prone to anger, resentment, and support for extreme political solutions (Fesnic and Viman-Miller, 2009; Urbanska and Guimond, 2018). In contemporary politics, a narrative has emerged that status anxiety and perceived economic decline fuel support for populist and extremist movements (Gidron and Hall, 2017). Thus, we expect that people who rate their family economic status as low or worsening are less centrist – often gravitating to anti-establishment or radical ideologies (either far-right nationalist or far-left anti-capitalist, depending on context). Those who perceive their status as secure or rising likely have a stake in stability and may prefer moderate politics. Additionally, subjective economic grievances often intertwine with cultural resentment, reinforcing polarization (for example, a person who feels economically marginalized might also feel culturally alienated and thus embrace a far-right ideology that promises to upend the status quo) (Habersack and Wegscheider, 2024). Therefore, low self-assessed economic status is hypothesized to correlate with higher ideological extremism, whereas high self-assessed status correlates with more moderate, status-quo-oriented views.

Research supports the role of subjective economic perceptions in polarization. In Europe, for instance, studies have found that individuals who feel economically insecure or lower-class are more likely to back extremist parties or policies. Gidron and Hall (2017) showed that a decline in subjective social status (one's sense of standing in society) is strongly associated with support for the populist right in Western Europe. Those who see themselves as "have-nots" are drawn to radical right-wing rhetoric blaming elites and outsiders, which represents a departure from the political center. Conversely, those who describe their family's economic status as comfortable or better-off tend to be less receptive to radical change narratives. Feeling economically secure often corresponds to more moderate policy preferences – these

individuals are more likely to support incremental reforms and centrist parties that promise stability (Margalit, 2019). They have less incentive to upend the system ideologically. In fact, Gidron and Hall note that higher subjective status individuals showed lower attraction to both far-right and far-left alternatives, preferring mainstream options. Another study on European voters found that the perception of downward mobility (expecting one's economic situation to worsen) significantly increased the likelihood of voting for extremist parties, independent of actual income (Carreras et al., 2019). This underscores that it is the perception and fear of decline, more than absolute income, that pushes people away from the political center.

In summary, individuals who feel economically disadvantaged or insecure are less likely to be ideologically centrist. They often adopt more polarized stances, tapping into populist or extremist ideologies that promise significant changes. Meanwhile, individuals who feel economically secure or of higher status are more likely to remain at or near the ideological center, favoring moderate politics that protect their status. This dynamic of subjective economic status helps explain recent surges in polarization: stagnant or declining perceived fortunes among segments of the population have fed polarized political movements (Brown-Iannuzzi et al., 2015, 2017). It complements the objective income findings – for example, not all low-income people perceive themselves as "low status," but those who do are the ones more apt to radicalize (Franc and Pavlović, 2023).

In conclusion, ideological polarization as an individual characteristic varies systematically across demographic and socioeconomic groups. Women, younger adults, urban dwellers, the less religious, the less educated, lower--income individuals, and those who feel economically secure generally exhibit more moderate (centrist) ideological positions on average. In contrast, men, older adults, rural residents, highly religious people, the highly educated, higher-income individuals, and those who feel economically insecure are often more ideologically polarized – tending toward consistent left- or right-wing extremes. These trends are supported by a range of studies across different

countries and time periods, highlighting how social structure influences the degree to which citizens depart from the political center.

3 Aim

The primary aim of this study is to examine how demographic and socioeconomic factors shape perceived ideological polarization among adults in Slovenia. While ideological polarization is widely recognized as a growing challenge for democratic societies, research has often focused on partisan or elite-level dynamics rather than individual-level perceptions of ideological distance. This study addresses that gap by exploring how characteristics such as gender, age, place of residence, religiosity, education, income, and self-assessed socioeconomic status are related to individuals' perceived ideological position relative to the average Slovenian.

By combining descriptive, bivariate, and multivariate analyses, the study aims to identify which demographic and socioeconomic factors contribute most strongly to perceived ideological polarization. Specifically, we investigate whether structural factors—such as higher education or income—are linked to stronger perceptions of ideological distinctiveness, while accounting for other individual-level variables. Through this approach, we aim to offer a more nuanced understanding of how social stratification and cultural orientation influence the subjective sense of political difference in a post-socialist European context.

4 Method

4.1 Sample

The study was conducted on a sample of adult residents of Slovenia aged 18 years or older. Participants were recruited through a probability-based panel administered by the research agency Episcenter (Kirbiš et al., 2025).

A total of 1,253 participants completed the first wave of an online survey in December 2024. The sample was stratified by gender, age group, education level, and region to ensure national representativeness.

The sample included individuals from Slovenia aged 19 to 91 years. The sample characteristics are presented in Table 8.1. The sample included 51.9% women and 48.1% men. In the sample, 27.4% of individuals were older than 65 years, 18.3% were between 55 and 64 years old, 18.6% were between 45 and 54 years old, 17.5% were between 35 and 44 years old, and 18.3% were between 19 and 34 years old. Most participants had completed primary or 2–3 years of secondary education (38.4%), followed by those who completed 4-year secondary education (33.2%) and tertiary education (28.2%). As for place of residence, the highest percentage of respondents lived in a village/rural settlement (33%), followed by individuals living in a small town (25%), a big city such as Ljubljana or Maribor (22.1%), and a medium-sized city (19.9%). As for religiosity, 55% of individuals reported that they were religious, while 45% reported that they were not. The sample characteristics regarding income showed that 38.6% of respondents had medium income (between 801 € and 1,300 €), followed by 31.2% with low income (up to 800 €), and 30.2% with high income (more than 1,301 €). Finally, 49.4% of the respondents reported that they lived in medium material conditions, followed by 35% of respondents who lived in (extremely) good material conditions, and only 15.6% who lived in (extremely) poor material conditions.

Table 8.1: Sample characteristics

		f	%
Gender	Male	603	48.1
	Female	650	51.9
Age	19-34 years	229	18.3
	35-44 years	219	17.5
	45-54 years	233	18.6
	55-64 years	229	18.3
	65 or older	343	27.4
Place of residence	Ljubljana or Maribor	277	22.1
	In a medium-sized city (between 10,000 and 100,000 inhabitants)	249	19.9
	In a small town (between 1,000 and 10,000 inhabitants)	314	25
	In a village/rural settlement (under 1,000 inhabitants)	413	33
Religiosity	Yes	689	55
	No	564	45
Education	Primary, 2-3 years of secondary education	482	38.4
	4-year secondary education	415	33.2
	Tertiary education	356	28.4
Income	Low income	354	31.2
	Medium income	438	38.6
	High income	343	30.2
Self-assessed SES	(Extremely) poor	196	15.6
	Medium	619	49.4
	Extremely (good)	438	35

Source: Kirbiš et al. (2025).

4.2 Measures

Ideological polarization was measured following Fraser and colleagues (2022). We constructed perceived ideological polarization from two items. Respondents were first asked: "In politics, people sometimes talk of left and right. Where would you place yourself on a scale from 0 to 10, where 0 means the left and 10 means the right?" Next, we asked: "Where would you place the average voter in Slovenia on a scale from 0 to 10, where 0 means the left and 10 means the right?" We then calculated the absolute difference between the perceived position of the average voter and the respondent's self-placement, defining this value as perceived ideological polarization.

Among demographic predictors, we examined gender (1 = male, 2 = female) and age (in years), which was recoded into five age groups (1 = 18–34 years, 2 = 35–44 years, 3 = 45–54 years, 4 = 55–64 years, 5 = 65 or older). We also included place of residence (1 = Ljubljana or Maribor, 2 = medium-sized city (10,000–100,000 inhabitants), 3 = small town (1,000–10,000 inhabitants), 4 = village/rural settlement (under 1,000 inhabitants)) and religiosity, which was measured with the question: "Do you consider yourself a member of a religion or denomination?" (1 = yes, 2 = no).

Among socioeconomic predictors, we examined education, which was originally measured on a 13-point scale (1 = uncompleted primary school, 13 = PhD) and recoded into a 3-point scale (1 = primary or 2–3 years of secondary education, 2 = 4-year secondary education, 3 = tertiary education). Income was measured with the question: "What is your average monthly personal income (net – after taxes, compulsory social security, and other benefits)? Add up all forms: personal income, pension, scholarship, income from work in handicrafts, agriculture," and recoded into a 3-point scale (1 = 0 to 800 €, 2 = 801 to 1,300 €, 3 = 1,301 € or more). Self-assessed socioeconomic status was measured with the question: "How do you assess the material conditions in which you and your family live?" (0 = extremely poor material conditions, 10 = extremely good material conditions) and recoded into 1 = (extremely) poor material conditions, 2 = medium, and 3 = (extremely) good material conditions.

4.3 Plan of Analysis

First, we conducted descriptive statistical analyses (independent sample t-tests and ANOVA with Tukey post-hoc tests) to examine differences in perceived ideological polarization based on demographic and socioeconomic variables. Next, we conducted bivariate analyses (Pearson correlations), and finally we performed multiple regression analysis to examine the effects of demographic and socioeconomic variables on ideological polarization.

For our analyses, we used SPSS (version 29.0.0.0 (241)) and R (version 2025.05.0+496).

5 Results

Table 8.2 presents the mean values of perceived ideological polarization based on demographic and socioeconomic characteristics. There are no significant differences in perceived ideological polarization based on gender ($t(1242.126) = -.021$, $p > .05$) or age ($F(4, 1247) = 1.959$, $p > .05$). However, place of residence shows a significant effect ($F(3, 1248) = 3.189$, $p < .05$), and the post-hoc test indicates that individuals living in big cities such as Ljubljana or Maribor report significantly higher ideological polarization ($M = 2.47$, $SD = 2.10$) than those living in medium-sized towns ($M = 1.98$, $SD = 2.20$) ($p < .05$). Religiosity also has a significant effect, as religious individuals report higher polarization ($M = 2.32$, $SD = 2.22$) than non-religious individuals ($M = 1.98$, $SD = 2.01$) ($t(1149.581) = 2.772$, $p < .01$).

A significant difference in perceived ideological polarization is also found in educational attainment ($F(2, 1249) = 17.261$, $p < .01$), as individuals with tertiary education report the highest levels of ideological polarization ($M = 2.55$, $SD = 2.02$), followed by those with 4-year secondary education ($M = 2.25$, $SD = 2.18$), while the lowest score is found among those with primary or 2–3-year secondary education ($M = 1.72$, $SD = 2.04$). The post-hoc analysis reveals that participants with a lower level of education (primary or 2–3 years of secondary education) are significantly less polarized compared to participants with 4 years of secondary education ($p < .01$) and those with tertiary education ($p < .01$). However, the difference between participants with 4 years of secondary education and those with tertiary education is not statistically significant ($p = .104$).

Similarly, income level is significantly associated with perceived ideological polarization ($F(2, 1132) = 8.568$, $p < .01$), as participants with low income report lower ideological polarization ($M = 1.78$, $SD = 2.11$) than those with

medium (M = 2.27, SD = 2.11) and high income (M = 2.39, SD = 2.07). Post-hoc analysis reveals that individuals with lower income are significantly less polarized than individuals with medium ($p < .01$) and high income ($p < .01$), but there are no statistically significant differences between individuals with medium and high income ($p = .676$). Finally, there are no statistically significant differences in mean scores of perceived ideological polarization based on self-assessed socioeconomic status ($F(2, 1249) = 2.349$, $p > .05$).

Table 8.2: Means and standard deviations of ideological polarization by demographic and socioeconomic characteristics

Variable	Category	M	SD
Gender	Male	2.13	2.12
	Female	2.13	2.1
Age	19-34 years	2.29	2.06
	35-44 years	2.03	1.95
	45-54 years	2.91	2.27
	55-65 years	1.91	2.11
	65 or older	2.32	2.11
Place of residence	Ljubljana or Maribor	2.47	2.1
	Medium-sized city (10,000–100,000 inhabitants)	1.98	2.2
	Small town (1,000–10,000 inhabitants)	2.03	1.98
	Village/rural settlement (under 1,000 inhabitants)	2.08	2.13
Religiosity	Yes	2.32	2.22
	No	1.98	2.01
Education	Primary or 2–3 years of secondary education	1.72	2.04
	4-year secondary education	2.25	2.18
	Tertiary education	2.55	2.02
Income	Low income	1.78	2.11
	Medium income	2.27	2.11
	High income	2.39	2.07
Self-assessed SES	(Extremely) poor	2.19	2.37
	Medium	2.01	2.05
	(Extremely) good	2.28	2.05

Source: Kirbiš et al. (2025).

Table 8.3 presents the Pearson correlation coefficients among demographic and socioeconomic variables and perceived ideological polarization. Perceived ideological polarization is positively correlated with religiosity ($r = .079$, $p < .01$), indicating that more religious individuals perceive themselves as more ideologically distant from the average Slovenian; with education ($r = .162$, $p < .01$), suggesting that those with higher education report higher levels of ideological polarization; and with income ($r = .115$, $p < .01$), indicating that individuals with higher income levels tend to feel more ideologically distinct. Place of residence has a significant negative correlation with perceived ideological polarization ($r = -.057$, $p < .05$), which means that individuals living in more urban areas report higher ideological polarization. There is no significant correlation between perceived ideological polarization and gender, age, or self-assessed socioeconomic status.

Table 8.3: Pearson correlation coefficients between perceived ideological polarization, and demographic and socioeconomic variables

	1	2	3	4	5	6	7
1.Perceived ideological polarization	-	-	-	-	-	-	-
2. Gender	.001	-	-	-	-	-	-
3. Age	.013	-.148**	-	-	-	-	-
4. Place of residence	-.057*	.018	.056*	-	-	-	-
5. Religiosity	.079**	.055	-.028	.149**	-	-	-
6. Education	.162**	.016	-.240**	-.080**	.012	-	-
7. Income	.115**	-.140**	-.186**	-.067*	-.006	.456**	-
8. Self-assessed SES	.03	-.021	-.174**	-.080**	-.041	.312**	.396**

Source: Kirbiš et al. (2025).
Notes: * significant at level <.05; ** significant at level <.01.

Table 8.4 presents the results from the multiple linear regression analysis, which examines the predictors of perceived ideological polarization. The results indicate that among demographic variables, age and religiosity are significant predictors. Regarding age, older individuals ($\beta = .063$, 95% CI [.002, .018], $p < .05$) tend to report slightly higher levels of perceived ideological polarization. Religious respondents are also significantly more likely to perceive themselves as ideologically different from the average Slovenian

(β = .071, 95% CI [.052, .545], p < .05). Among socioeconomic variables, higher levels of education are significantly associated with greater ideological polarization (β = .136, 95% CI [.178, .523], p < .01), and individuals with higher income levels also tend to feel more ideologically distant from the average Slovenian voter (β = .079, 95% CI [.027, .399], p < .05). On the other hand, gender, place of residence, and self-assessed socioeconomic status are not statistically significant predictors.

Table 8.4 Multivariate linear regression analysis

			95% CI	
	β	S.E.	LL	UL
Gender	.020	.126	-.165	.310
Age	.063*	.045	.002	.180
Place of residence	-.040	.055	-.182	.033
Religiosity	.071*	.126	.052	.545
Education	.136**	.088	.178	.523
Income	.079*	.095	.027	.399
Self-assessed SES	-.027	.101	-.281	.116

Source: Kirbiš et al. (2025).
Notes: * significant at level <.05; ** significant at level <.01.

6 Discussion

The present study examined the extent to which demographic and socioeconomic factors are associated with perceived ideological polarization in Slovenia. The findings suggest that perceived ideological polarization is influenced more strongly by socioeconomic characteristics than by demographic ones. Individuals who are more educated, have higher incomes, and are religious are more likely to perceive themselves as ideologically different from the average Slovenian. The role of urban residence is also notable in bivariate analyses, although it loses its significance in the regression model. Therefore, the results underscore the importance of education, religiosity, and income in shaping individuals' perceptions of ideological difference.

Bivariate analyses indicated that perceived ideological polarization was significantly associated with religiosity, education, and income, with more religious, highly educated, and wealthier individuals reporting greater perceived distance from the average Slovenian. The multivariate findings confirmed these results. Furthermore, in multivariate analyses, age also emerged as a weak but significant predictor, while gender, place of residence, and self-assessed socioeconomic status showed no significant effects once other factors were controlled for.

These findings partly align with previous research. The positive association between education and perceived polarization mirrors earlier findings that higher education is linked to stronger ideological consistency and distinctiveness (Pew Research Center, 2016; Lee and Tipoe, 2025). Likewise, the association with religiosity reflects the tendency for religious individuals to align more clearly with culturally conservative values, distinguishing them from secular norms (Abramowitz and Saunders, 2008; Hayes and McKinnon, 2018; Adamczyk et al., 2024). The role of income also aligns with research suggesting that both objective and subjective economic status can increase ideological clarity and polarization (Gu and Wang, 2022; Al Yussef and Heyndels, 2025).

However, the weak positive effect of age partly aligns with research suggesting that older individuals are more ideologically entrenched due to cumulative life experiences (Tilley and Evans, 2014; Peltzman, 2019; O'Grady, 2023). Furthermore, the lack of significant results regarding gender contrasts with studies showing that men are often more ideologically extreme compared to women (Shorrocks, 2018; Harteveld et al., 2019; Trogrlić and Todosijević, 2024). Moreover, our results also did not confirm the relationship between side of residential settlement and self-assessed socioeconomic status, whereas previous research has found that rural residents are less centrist and more right-oriented, whereas urban residents are more left-leaning (Zahl-Thanem and Haugen, 2019; Luca and Kenny, 2024), and that economically disadvantaged individuals are less likely to be centrist and more likely to be politically polarized compared to economically secure

individuals (Brown-Iannuzzi et al., 2017; Gidron and Hall, 2017; Carreras et al., 2019). Together, these findings suggest that ideological polarization in Slovenia is more closely linked to forms of social capital and identity, particularly education, religiosity, and income, than to broad demographic characteristics.

Despite offering valuable insights, this study has several limitations. First, the measure of perceived ideological polarization relies on a self-assessment comparing one's own ideological position with that of the average Slovenian. This operationalization primarily reflects perceived ideological differences rather than objective ideological distances. Second, the cross-sectional nature of the data limits causal interpretation. Third, the sample may underrepresent certain marginalized or politically disengaged populations, who might experience ideological difference in a way not captured by the current measure. Fourth, the data were gathered through an online data panel, which may introduce sampling biases by excluding individuals with limited internet access or lower digital literacy, potentially leading to an overrepresentation of younger, more urban, or more politically engaged respondents. Nonetheless, the sample was designed to be representative of the Slovenian population in terms of age, gender, educational level, and region.

Future studies should explore the longitudinal dynamics of perceived ideological polarization to determine how these perceptions evolve over time and in response to political events or societal shifts. It would also be valuable to examine how media consumption, political participation, and social network structures impact perceived polarization. Additionally, future research could employ more nuanced or multidimensional measures of ideological polarization, including both self-placement and placement of others across various policy domains. Qualitative methods might also complement quantitative findings by exploring how individuals conceptualize their ideological identity and interpret societal norms. Cross-cultural comparisons could further illuminate whether the observed patterns in Slovenia hold across different sociopolitical contexts.

Our findings have several important implications for understanding political identity and social cohesion in contemporary democracies. The fact that perceived ideological polarization is higher among more educated, wealthier, and religious individuals suggests that ideological distinctiveness may function as a marker of status or identity assertion. From a policy perspective, efforts to foster dialogue and understanding across ideological lines should recognize that polarization is not only a function of ignorance or misinformation but also a reflection of conviction and perceived ideological clarity. Promoting civic education that encourages critical reflection and empathy across ideological divides may help mitigate the subjective sense of polarization and contribute to greater social cohesion.

7 Conclusion

This study highlights that perceived ideological polarization in Slovenia is primarily shaped by socioeconomic factors, particularly education, income, and religiosity, while demographic characteristics such as gender and age play a less prominent role. Our analyses show that individuals with higher educational attainment and income, as well as those who identify as religious, are more likely to perceive themselves as ideologically distant from the average Slovenian. Place of residence emerged as a determinant in bivariate analyses but lost significance when controlling for other variables. These findings underscore the complex interplay between social status, cultural orientation, and perceptions of ideological difference. While the study offers important insights into the social roots of polarization, its cross-sectional design and reliance on self-assessment measures limit the ability to draw causal conclusions. Future research should adopt longitudinal and multi-method approaches to better capture the dynamics and subjective experiences of polarization, while also exploring its implications for political behaviour and social cohesion.

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