

## COMPARATIVE ANALYSIS OF ENVIRONMENTAL ATTITUDES OF YOUTH FROM EU MEMBER AND CANDIDATE STATES: CASE STUDY CENTRAL AND EASTERN EUROPE<sup>a</sup>

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### Abstract

Worldwide, great efforts are being made in order to establish sustainable development at all levels. European Union (EU) member states are obliged to meet the requirements in the area of environmental protection. In this paper, the authors conducted a comparative study of environmental attitudes among young people from both EU transition countries and EU candidate countries. The objective was to determine the differences in environmental attitudes, environmental awareness and self-efficacy of the youth from these two groups of countries and the EU environmental policy implementation level. Results indicated that the influence of EU membership exists when it comes to the environmental attitudes of youth from the analyzed countries. Average values showed the unsatisfactory situation regarding environmental awareness and self-efficacy of respondents. In order to define the relations among environmental attitudes, self-efficacy and environmental awareness, a structural model was created. This analysis showed that these three components work the same way in both groups of countries.

**Key words:** Environmental Awareness, Environmental Attitudes, Self-Efficacy, Youth, European Union

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**КОМПАРАТИВНА АНАЛИЗА ЕКОЛОШКИХ СТАВОВА  
МЛАДИХ ИЗ ЗЕМАЉА ЧЛАНИЦА ЕУ  
И КАНДИДАТКИЊА ЗА ЧЛАНСТВО:  
СТУДИЈА СЛУЧАЈА ЦЕНТРАЛНЕ И ИСТОЧНЕ ЕВРОПЕ**

**Апстракт**

Широм света се улажу велики напори како би се успоставио одрживи развој на свим нивоима. Земље чланице Европске уније (ЕУ) су у обавези да задовоље све захтеве у погледу заштите животне средине. Аутори су у овом раду спровели компаративну анализу еколошких ставова младих који живе у земљама чланицама ЕУ, а које су у процесу транзиције, и земљама кандидаткињама за чланство. Циљ је био да се дефинишу разлике у еколошким ставовима, свести и самоефикасности младих из ове две групе земаља и одреди ниво ефикасности имплементираних еколошке политике. Резултати су указали на то да утицај чланства у ЕУ постоји у случају еколошких ставова. На основу просечних вредности може се препознати незадовољавајуће стање у погледу степена еколошке свести и самоефикасности свих испитаника. Како би се одредиле релације између еколошких ставова, свести и самоефикасности, креиран је структурни модел. Овом анализом је утврђено да ове три компоненте функционишу на исти начин у обе групе земаља.

**Кључне речи:** еколошка свест, еколошки ставови, самоефикасност, млади, Европска унија.

*1. INTRODUCTION*

Environmental protection and sustainable development represent the most important values towards which Europe strives. It is a very important fact that the EU policy strongly supports environmental activities. The European Union (EU) has passed numerous legislative norms and regulations in recent decades. To overcome the current and prevent potential environmental problems, the concept of environmental protection has been institutionalized and legally prescribed. The issue which was given special attention is the EU enlargement. Since its establishment, the number of countries increased from 6 founding to the current 27 member countries. However, it is still expanding given that more states strive towards accession to the EU.

Compliance with the environmental protection concept is imperative for any country either aspiring to join the European Union (EU), or already a member country. In the process of joining the EU, candidate countries are required to harmonize their environmental standards with those of the EU and achieve viability by raising the environmental awareness of their citizens. Potential candidate countries are being encouraged by EU to create and implement sustainable development strategies and to prove that they are striving to protect and improve the environment (Perović & Radukić, 2017). Due to their complexity and numerous factors that define them, these issues are a significant obstacle for candidate

states. For instance, joining was a great challenge for the EU and the Czech Republic, Hungary, Slovakia and Poland in 2004. The reason for this was their industrial orientation and aspiration towards economic development, which neglected the natural environment thus causing numerous environmental problems. Limited institutional, financial and human resources cast doubt and fear on further preservation of stability and sustainable development of the EU. Such worries were largely unfounded. Newer members did not act as a block in EU bodies. On the contrary, they joined coalitions of leaders and made efforts to find the solutions for particular environmental issues (Selin & VanDever, 2015). We can say that the same scenario is unfolding in the case of candidate countries - Serbia, North Macedonia, and Albania.

The goal of this study is to determine the level of environmental awareness, attitudes and self-efficacy of youth from the EU transition countries and the EU candidate countries located in Central and Eastern Europe. According to the "Youth in Action Programme for the period 2007 to 2013", youth are considered young people aged between 15 and 28 (Council Directive 1719/2006/EC). The countries involved in this study are Poland, the Czech Republic, Hungary and Slovakia (EU countries), on the one hand, and Serbia, North Macedonia and Albania (non-EU countries) on the other. Therefore, authors tend to identify possible differences among environmental awareness, attitudes and self-efficacy between youth from these two groups of countries by using comparative analysis. The motivation for selecting these three components was the indication that awareness, attitude and self-efficacy play an influential role in youth's sense of environmental responsibility.

Based on the results, a conclusion can be drawn on whether the existing legal framework and environmental education guidelines imposed by the EU work in practice and whether and how it reflects on the environmental awareness of young people.

## 2. MATERIAL AND METHODS

The questionnaire used in this study was constructed based on the already published instruments and documents (Wilke, 1997; Dunlap, Van Liere, Mertig & Robert, 2000; La Trobe & Acott, 2000). The questionnaire had the total of 59 questions separated into two groups of questions. The first group indicates the demographic characteristics of students (gender, age, study level, nationality). In the second group of questions, a quantitative approach was used in order to collect data on the levels of *Awareness, Attitude and Self-efficacy*. For the gradation of results, a 5 point Likert type scale on environmental pollution issues was used.

Awareness, defined as a concern for what is happening in the environment, was examined by a series of questions inquiring about the influ-

ences, perceptions and worries concerning local environmental issues. Attitude, defined as the acquisition of values, feelings and motivations towards the environment, was examined using the amended NEP 2000 instrument and asking questions regarding a balance between social responsibility and environmental interest, government regulations and political actions taken to protect the environment. The questions in the instrument focused on self-efficacy connected with environmental education, and environmental political and social actions were adapted to the respondents' country of origin. Self-efficacy was measured by a series of questions inquiring about personal levels of satisfaction, importance and perception of natural surroundings.

The online survey was conducted in the period between February and December 2018, encompassing the youth from the Czech Republic, Poland, Hungary, Slovakia, Serbia, North Macedonia and Albania. The extensive data set consisted of the answers from 858 questionnaires (598 from EU countries and 260 from non-EU countries). Software packages used for the data processing were SPSS v. 17 and AMOS v. 8.0.

### *2.1. Theoretical Framework*

The environmental education of individuals should begin in early childhood by respecting environmental values within the family. Particular attention should be directed towards the youth as future decision-makers in environmental protection. They have to be environmentally responsible throughout their lives (Lasso de la Vega, 2006). There are two key reasons for paying close attention to trends related to this age group (Wray-Lake, Constance, Flanagan & Wayne, 2010). First, the theory of generational replacement argues that changes in adolescents' attitudes are important markers of long term social change. Second, young people's environmental concerns also deserve attention due to many examples showing the youth as active agents in protecting the environment.

Determining the level of young people's environmental attitudes can help researchers better understand their actions towards the environment and what it means to them. Accordingly, there is a number of studies that dealt with the environmental attitudes of young people (Yilmaz, Boone & Andersen, 2004; Jenkins & Pell, 2006; Boyes & Stanisstreet, 2012; Zsóka, Szerényi, Széchy & Kocsis, 2013; Atav, Altunoğlu & Sönmez, 2015). Based on a detailed review of scientific facts in the field of environmental attitudes of young people, Rickinson (2001) draws the following conclusions: 1) young people foster positive attitudes towards the environment; 2) young people are less environmentally oriented about specific issues, such as those that are related to their way of life; 3) some of the demographic characteristics influence the attitudes of young people towards the environment.

Among youth, students have the most important role in preserving and protecting nature (Aminrad, Zakaria & Hadi, 2011). Students' population presents a significant segment of society and requires attention in terms of studying environmental culture, opinions, attitudes and behaviour (Erdogan, 2013; Obradovic, Babović & Shpak, 2016). In order to acquire environmental attitudes fully, it is desirable for them to participate in environmental activities (Paivi, Kuitunen & Tynys, 2000). Positive environmental attitudes encourage students to display pro-environmental behaviour (Ari & Yilmaz, 2017).

Solving environmental problems requires improvement of environmental awareness, attitudes and knowledge. Attitudes, knowledge, behaviour and care of young people for the environment will affect the future ecological development and the availability of natural resources directly or indirectly. It is essential to get information on how young people relate to the environment and their feelings towards it. It is also important to become familiar with their contribution and motivation in the preservation and environmental protection. Informing youth on environmental issues influences the creation of positive environmental attitudes. While some researchers think that the participation of young people in environmental courses and activities will increase their responsibility towards the environment and encourage them in dealing with environmental problems, some authors believe that life experience is more effective (Bradley, Waliczek & Zajicek, 1999; Aydin, 2010). In order to set appropriate guidelines for directing young people to act responsibly towards their natural environment and gain specific environmental knowledge, among other things, it is necessary to determine the relations among their environmental awareness, attitudes and self-efficacy.

The evaluation of global environmental problems as major political issues reflects the growing awareness of the problematic relation between contemporary industrialized societies and the physical environment they depend on (Stern, Young & Druckman, 1992). Environmental awareness of an individual is, among other things, determined by the cultural and political context of the society in which they live. The population of developed and prosperous countries is not faced with an economic struggle for survival, so the people are oriented towards post-materialistic goals, such as political freedom, individual self-fulfillment, and environmental protection (Pisano & Lubel, 2017). Environmental behavior of an individual depends on one's economic, political and technological positions.

Environmental awareness can be improved by pointing out that environmental and economic developments are not mutually exclusive. According to Stern's study (2002), social structure influences values and worldviews. Therefore, environmental awareness is dynamic, shaped in a particular cultural and historical process and dependent on the particular state in society.

The attitudes reflect a set of beliefs, reactions and behavioural intentions a person holds concerning the environment. Many authors have studied correlations between the country of origin and environmental orientation of the population (Kemmelmeier, Krol & Youn, 2002; Bechtel, Verdugo, Asai & Riesle, 2006; Franzen & Meyer, 2010; Freymeyer & Johnson, 2010). In some studies, it was found that the environmental attitudes of the population depend on the level of economic development of the country they come from (Franzen & Meyer, 2010; Freymeyer & Johnson, 2010).

The concept of self-efficacy was created by a psychologist, Albert Bandura, in the 1970s. Bandura defined self-efficacy as a “*belief in the ability of organisation and execution of actions needed for the achievement of a certain type of assumptive activities*” (Bandura, 1977: 196). It is based on the importance of subjective perception of personal competence in the different objectives not on real knowledge and skills. Self-efficacy is one of the indicators of ecological behaviour, knowledge and attitudes of young people. It determines the motivation of the individual to act environmentally responsible. In order to solve ecological problems, there is a need for active citizens ready to participate in this process (Teixeira, 2013). Suppose people have strong beliefs in their abilities to change the world around them. In that case, they will produce more effective coping strategies and higher levels of achievement than those showing lower levels of belief in their abilities (Meinhold & Malkus, 2005). Self-efficacy is not a hereditary trait. It develops gradually. However, as years of experience increase, perceived self-efficacy often improves (Sodak & Podell, 1997; Brand & Wilkins, 2007).

Regarding the reviewed literature, the following hypotheses have been derived:

*Hypothesis 1.* There is a statistically significant influence of the origin country membership in the EU on the youth’s environmental awareness, attitudes and self-efficacy.

*Hypothesis 2.* Environmental attitudes have a positive influence on environmental self-efficacy.

*Hypothesis 3.* Environmental attitudes have a positive influence on the level of environmental awareness.

*Hypothesis 4.* Self-efficacy has a positive influence on the level of environmental awareness.

Out of listed hypotheses, in the research that will be presented here, hypothesis H1 was analyzed using the Independent Samples T-test. In contrast, for hypotheses H2, H3 and H4, the starting - conceptual model of mutual relations and influences among environmental awareness, attitudes and self-efficacy, as well as elements that determine them, being set (Figure 1).

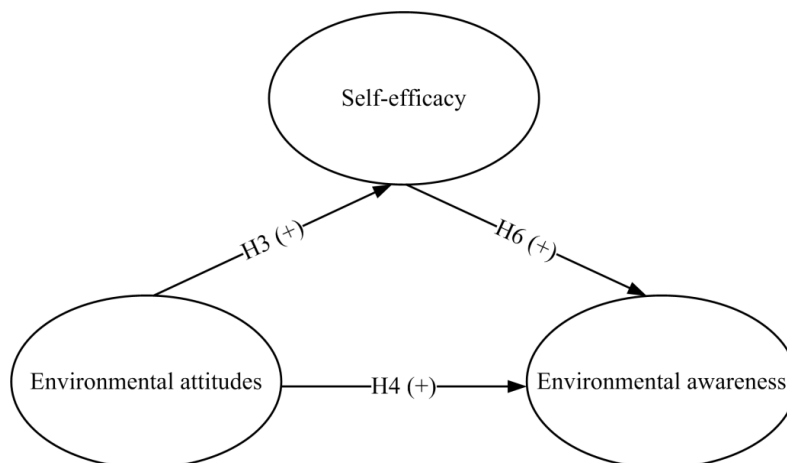


Figure 1. Conceptual model (authors' source)

By testing the hypotheses, one can have a more realistic insight into the advantages and disadvantages of the (non) application of the EU legislative framework and its influence on young people's environmental awareness, attitudes and self-efficacy. Furthermore, because environmental education is the only non-institutionalized EU recommendation in environmental protection, the results will show whether environmental education is satisfactory in both groups of countries and whether it has the same effects on youth from EU member and candidate states in Central and Eastern Europe.

### 3. RESULTS

In the beginning, a descriptive analysis of the demographic characteristics of the respondents was conducted. The obtained results are presented in Table 1.

In order to examine the dependence between the respondents' answers and the group of the country they come from (EU or non-EU member), Independent samples T-test was applied. The Independent-Samples T-Test procedure compares means for two groups of cases. Variable *membership* was a grouping-independent variable. It was measured on a nominal scale. According to Cooper and Schindler, nominal data collects information on a variable that can be divided into two or more mutually exclusive and collectively exhaustive categories (Cooper & Schindler, 2014). Average responses within each group of questions (environmental awareness, environmental attitudes and self-efficacy) were used as a test variable. Mean AW, ATT and SE have some non-integer values. So, they are measured on the interval scale level. The

Table 1. Demographic characteristics of respondents

Demographic variables	The composition of the sample	
	Categories	Percentage (%)
Gender	Male	60.1
	Female	39.9
Age	15-18	0.7
	19-22	64.6
	23-25	26.8
	26-28	7.9
Nationality	Czech	14.5
	Macedonian	5.1
	Slovak	11.9
	Serbian	24.7
	Hungarian	19.6
	Polish	23.5
	Albanian	0.7

interval scale level is where the difference between variable values is comparable and has an equal distance between each value (Dalati, 2018). The independent variable (membership) influence on each of the test variables was calculated. Based on the results presented in Table 2, a statistical significance ( $F = 139.44$  and  $p < 0.001$ ) was noticed only in the case of a group of questions related to environmental attitudes.  $F$  value presents the result of testing the significance of differences between group variances, and  $p$  is the level of  $F$  - test significance, i.e. the mistake claiming that variances are statistically significant.

Table 2. Independent Samples Test results

		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Err.
MEAN_ AW	Equal variances assumed	1.711	.192	-1.559	427	.120	-.07291	.04676
	Equal variances not assumed			-1.518	228.468	.130	-.07291	.04803
MEAN_ ATT	Equal variances assumed	18.204	.000	-.557	427	.578	-.03873	.06954
	Equal variances not assumed			-.608	299.594	.544	-.03873	.06370
MEAN_ SE	Equal variances assumed	.657	.418	-11.808	427	.000	-.47960	.04061
	Equal variances not assumed			-11.032	209.653	.000	-.47960	.04347

Descriptive statistics were used for calculating the mean of answers for each group of questions (Table 3). Based on the obtained



results, a comparison of these values between the EU member and EU candidate countries was made. The obtained results indicate low average values for all three groups of questions (environmental awareness, environmental attitudes and self-efficacy), both in EU member and EU candidate countries. The comparative analysis of the obtained average values shows that environmental attitudes in countries that are not members of the EU are higher (average = 3.45) than in the case of EU countries (average = 2.97). The levels of environmental awareness and self-efficacy were approximately equal in both groups of respondents. Average values for the EU countries and those which are not are low, and are they are around 2.7 if we talk about environmental awareness and 2.0 when it comes to self-efficacy.

*Table 3. Descriptive statistics*

	Country	N	Mean	Std.dev
MEAN_AW	EU	300	2.69	0.43479
	Non_EU	129	2.76	0.46509
MEAN_ATT	EU	300	2.97	0.36405
	Non_EU	129	3.45	0.43222
MEAN_SE	EU	300	2.04	0.69912
	Non_EU	129	2.08	0.55977

For the testing of the general conceptual model in this paper, the SEM (Structural Equation Modeling) was conducted using the software package AMOS Version 8.0. The first part of this methodology includes an assessment of the model measurement to test whether the model fits well with data collected on satisfactory results, based on reliability analysis. In the second part, the structural model to test the hypotheses is defined. The method of maximum likelihood estimation was used for data analysis. Multi-group confirmatory factor analysis (MGCFA) was used for comparative measurements with two samples from different groups of countries, EU countries and non-EU countries. Multi-group confirmatory factor analysis includes three first-order factors - Awareness, Attitude and Self-efficacy. Table 4 depicts the correlation and confirmatory factor analysis for testing interdependence in many variables, followed by the method of maximum likelihood (Table 5).

*Table 4. Correlation matrix*

	Eco Attitude	Self-Efficacy	Eco Awareness
Eco Attitude	1		
Self-Efficacy	0.863	1	
Eco Awareness	0.553	0.769	1

Table 5. *Confirmatory Factor Analyses and Inter-Consistency Coefficients*

Scale	Non-standardized parameters	T-value	Cronbach's Alpha	Spearman-Brown Coefficient	$\Omega$
Environmental awareness			0.786	0.592	0.840
EAW1- Influences	0.488	4.970			
EAW2- Perception	-0.16	0.252			
EAW3- Concerns	1.00				
Environmental attitudes			0.742	0.712	0.777
EAT1-Environmental interest	0.901	6.680			
EAT2- Social responsibility	1.00				
Self-efficacy			0.773	0.657	0.784
		2.538			
SE1-Education	1.00				
SE2- Political and social actions	0.297				

This questionnaire was tested for reliability, scoring ranges of 0.71 to 0.85 in the Cronbach's Alpha coefficient, Spearman-Brown coefficient and  $\Omega$  where Nunnally (1978) proposes values  $\geq 0.7$ . Cronbach's alpha factor for total population is 0.858, and values per groups are shown in Table 5. Findings are very satisfying, demonstrating a good fit between the measurement model and the data ( $\chi^2_{Sat}=20.6/ df=11$  ( $p<0.01$ ); RMSEA=0.045; NFI = 0.931; IFI=0.967, TLI=0.934, CFI=0.965; GFI=0.987; AGFI=0.967; Normed  $\chi^2 =1.87$ ).

The purpose of the conceptual model is to perceive reliability among variables. In this case, the confirmatory factor analysis was used, and the results showed that all factor loadings are significant ( $p>0.5$ ). After the estimated conceptual model had tested structural relations, multi-group confirmatory factor analysis (MGCFA) was conducted. It demonstrated no significant differences in factor loadings and critical ratio ( $<1.96$ ;  $p > 0.05$ ) between EU countries and non-EU countries.

To test the differences in the factor loading, it is necessary to set separate but identical conceptual models for EU countries and non-EU countries (Table 6). Cronbach's alpha factor for the first group (EU countries) is 0.820, and for the second group (non-EU countries) is 0.850, which confirms the reliability of both groups. The hypothesis being tested is that the measurement model is valid for both groups of countries. This hypothesis requires that the regression weights, which predict the group variables, are the same for both groups (group invariant). At the same time, the common factor variance and covariance can be different in both groups.

*Table 6. Multi-group Confirmatory Factor Analyses*

Construct (Fx)		EU countries (n=299)			Non- EU countries (n=130)		
		Regression Weights	C.R.	Cronbach's Alpha	Regression Weights	C.R.	Cronbach's Alpha
Environmental awareness	EAW1	0.846	4.915	0.812	8.917	5.425	0.784
	EAW2	0.352	3.232		0.244	2.619	
	EAW3	1.000			1.000		
Environmental attitudes	EAT1	0.519	3.793	0.644	0.586	4.579	0.744
	EAT2	1.000			1.000		
Self-efficacy	SE1	1.000	1.067	0.687	1.000	1.594	0.729
	SE2	0.172			0.235		

The statistics of chi-square goodness-of-fit that define relations for group invariant and group variant were conducted (Table 7).

*Table 7. Good Fit to the data for Group Invariant and Group Variant*

	Chi-Square	df	$\chi^2$	RMSEA	RMR	GFI	AGFI	IFI	CFI
Invariant model	45.2	27	1.67	0.040	0.037	0.973	0.944	0.925	0.920
Variant model	42.2	26	1.62	0.038	0.039	0.974	0.944	0.934	0.929
Accepted fit	/	/	<3	<0.08	<0.10	>0.90	>0.90	>0.90	>0.90

The obtained results indicate that a model set like this leads to a statistically significant decrease value of chi-square ( $p < 0.001$ ), referring to the variant and invariant tested models. Chi-square goodness-of-fit statistics, comparative fit index and model comparison statistics for both groups of models simultaneously are presented in Table 7. Chi-square values for both models have statistical significance; indices for model comparison, RMSEA, RMR, GFI, AGFI, IFI, CFI are higher than 0.9, which is the recommended value (Hoyle & Panter, 1995). Fulfilling the conditions for calculating the coefficients of multi-sample structural trajectories, defined in the previously presented theoretical model (Figure 1), was carried out with satisfactory precision. The regression coefficients (coefficients ()) variant group for EU and non-EU countries and determination R<sup>2</sup> for multi-group analysis were used to test the model. The regression coefficient in group variant for a group of EU countries and non-EU countries is presented in Table 8 and Figure 2. Based on the obtained results, it could be concluded that all hypotheses can be substituted for one another in both models.

Table 8. Multi-sample analysis

EU membership	Non-standardized parameters	Standardized parameters	T-value	Causal relations	R <sup>2</sup>
EU country					
<i>Eco Attitude – Self Efficacy</i>	0.392 (a)	0.477	4.719	R1: yes	
<i>Eco Attitude – Eco Awareness</i>	0.392 (a)	0.370	4.719	R1: yes	0.417
<i>Self-Efficacy – Eco Awareness</i>	0.684 (a)	0.531	7.240	R1: yes	
Non-EU country					
<i>Eco Attitude – Self Efficacy</i>	0.744 (a)	0.893	3.360	R1: yes	
<i>Eco Attitude – Eco Awareness</i>	0.392 (a)	0.297	4.719	R1: yes	0.651
<i>Self-Efficacy – Eco Awareness</i>	0.684 (a)	0.432	7.240	R1: yes	

(a) Significant at the 99% level

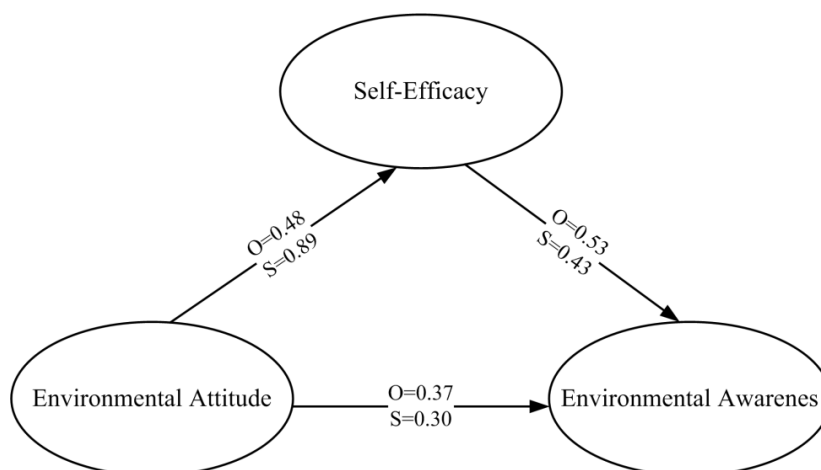


Figure 2. Structural model (MGCF) between European Union countries and non-European Union countries (authors' source)

The Squared Multiple Correlations (R<sup>2</sup>), which determine if dependent group variables differ for the VARIANT group, indicated that the values of coefficients are different for the two groups (R<sup>2</sup> = 0.417 for the sub-sample of “EU countries” and R<sup>2</sup> = 0.651 for sub-sample of “non-EU countries”).

## 5. DISCUSSION

This research indicates a low level of environmental attitudes, awareness, and self-efficacy of the respondents. The study conducted by authors Pirani and Secondly (2011) also showed that youth from European countries do not seem to be strongly environmentally orientated. One of the reasons for this unfavourable condition could be an inadequate environmental education program, both in EU member and candidate countries. The Euro-

pean system of education has to resolve conflicts between personal and social, global and local, traditional and modern, long term and short term, competition and equality (Jovanović, Živković, Andjelković, Gatarić & Petrović-Stanisavljević, 2015). In any case, youth's environmental knowledge does not determine their environmental acts (Boeve-de Pauw & Van Petegem, 2011). Environmental activities are hampered if there is a weak link between believed effectiveness and willingness to engage. In this case, social norms and situational characteristics are dominant, while education becomes insufficient (Boyes & Stanisstreet, 2012). Accordingly, low self-efficacy leads to the conclusion that young people are not sufficiently motivated to protect the environment and are insufficiently involved in solving problems in their own countries. This situation is particularly worrying in the case of the analyzed EU member transition states.

The lack of significant differences among environmental awareness, attitudes and self-efficacy of young people from these two groups of countries suggests that the system of environmental education and other institutional EU recommendations were not implemented adequately. As Dagiliut and Liobikien (2015) confirmed, not much has been done to the formal education systems in Lithuania and other Central and Eastern European countries.

The Independent Samples T-test results indicated that the environmental attitudes are significantly determined by the origin of respondents, i.e. whether the country they come from is a member of the EU. A comparative analysis of the obtained average values shows that environmental attitudes are higher in non-EU countries than EU countries. Based on this, it can be concluded that young people from non-EU countries have more positive environmental attitudes than young people from EU transition states. This could be explained in terms of beliefs and feelings towards the environment being more positive within this group of young people since the region's environmental problems are more pronounced. Therefore, they directly witness consequences caused by the human disregard for the natural environment and the negative anthropogenic influence. This increases youth's concern and awareness regarding environmental issues and indicates that personal experience with the threats is more important than schools' environmental protection classes (Robinson & Kaleta, 1999). According to Dunlap (1994), residents of the less economically developed countries tend to rate their local environment much more negatively than highly developed nations. Population from financially stable countries consider global environmental conditions worse than those in their local or national surroundings. This result is in line with Inglehart's (1995) "objective problems, subjective values" hypothesis that states that their pro-environmental orientation originates from concrete local environmental problems rather than from the transfer to post-materialist values. On the other hand, the degree of environmental awareness and self-

efficacy development was approximately equal in both groups. Given that the Independent Samples T-test results showed no statistical significance ( $p < 0.05$ ) in the case of environmental awareness and self-efficacy, hypothesis H1 cannot be fully confirmed.

Further research demonstrated the interconnectedness of these three categories - environmental awareness, attitudes and self-efficacy of young people in both groups of countries. This means that their relations do not differ in terms of country of origin - the EU countries and EU candidate countries, and that these relations work similarly. The presented structural model indicates that the level of environmental awareness of youth from EU and non-EU countries is directly influenced by environmental attitudes and self-efficacy. Therefore, hypothesis H3 and H4 are confirmed in the case of both groups of countries. Environmental attitudes and self-efficacy are, in fact, some of the elements of environmental awareness, and these results were expected. At the same time, hypothesis H2, which is related to the influence of environmental attitudes of youth on their self-efficacy in the EU and non-EU countries, was confirmed.

Empirical research of the defined general hypothetical model confirmed all three hypotheses for both examined groups. Accordingly, individuals with a high level of environmental awareness will eagerly participate in environmental activities (Altin, Tecer, Tecer, Altin & Kahraman, 2014). At the same time, in both cases, active participation will turn into environmental attitudes.

The conducted multi-group analysis indicates that the combined influence of the two predictors (environmental attitudes and self-efficacy) on environmental awareness can be calculated with a higher percentage of variance in EU transition countries than non-EU countries. This suggests that these elements have a larger share in creating young people's environmental awareness in the analyzed EU transition countries. In raising the environmental awareness of youth, competent and educational institutions from the candidate states should pay more attention to the improvement of elements such as environmental knowledge and behaviour.

## 6. CONCLUSION

One of the most important fields, which the EU authorities are dealing with, is environmental protection. By including environmental aspects in all strategies, policies and development programs, it is possible to provide a safe and environmentally sustainable future and generations with a high level of environmental awareness. The expected effect of campaigns to raise environmental awareness is an environmentally oriented and responsible population. Environmental education has to be carefully treated by the long-term strategy, integrated into all spheres of life. In addition, one should bear in mind a number of socio-economic

factors that characterize the specific region. The learning process should be in accordance with each population group's value system, needs and social norms. It is possible to implement environmentally oriented actions in everyday activities only in this way. This is the reason why environmental education is often an obstacle for candidate countries in the process of their accession to the EU.

By encouraging active participation in cleaning green areas, providing information on environmental issues, and organizing panel discussions and student conferences, educational institutions should promote the development of responsible attitudes towards nature within young people. However, to achieve and promote environmentally responsible behaviour of the population, it is not enough to raise their environmental awareness and knowledge. Young people from Europe should be allowed to develop their sense of belonging to nature and fully involve themselves in the process of its changes. Only by integrating environmental awareness with practical knowledge, and turning them into activities, could we expect success in terms of the preservation and protection of the environment.

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## **КОМПАРАТИВНА АНАЛИЗА ЕКОЛОШКИХ СТАВОВА МЛАДИХ ИЗ ЗЕМАЉА ЧЛАНИЦА ЕУ И КАНДИДАТКИЊА ЗА ЧЛАНСТВО: СТУДИЈА СЛУЧАЈА ЦЕНТРАЛНЕ И ИСТОЧНЕ ЕВРОПЕ**

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### **Резиме**

Последњих деценија, Европска унија (ЕУ) је усвојила бројне законодавне норме и регулативе како би превазишла тренутне и спречила будуће еколошке проблеме. У процесу приступања ЕУ, од земаља које представљају кандидате за чланство, изричито се захтева усклађивање еколошких стандарда са европским, као и интензиван рад и успех у унапређењу еколошких ставова и еколошки одговорног понашања становништва. Еколошко понашање појединаца зависи од економских, политичких и технолошких услова окружења у коме живи. Решавање еколошких проблема се не може реализовати без унапређења еколошких ставова, свести, знања и бриге младих људи који ће, на директан или индиректан начин, својим поступцима и одлукама одредити будуће еколошке прилике и доступност природних ресурса.

Циљ ове студије јесте да се одреди ниво еколошке свести, ставова и самоефикасности младих људи који живе у ЕУ земљама у транзицији и земљама које су кандидаткиње за чланство у ЕУ, а које су лоциране на територији Централне и Источне Европе. Земље које су биле укључене у ово истраживање су Пољска, Чешка, Мађарска и Словачка (ЕУ земље) са једне, и Србија, Северна Македонија и Албанија (земље кандидаткиње) са друге стране. Намера аутора је била да се идентификују могуће разлике између еколошке свести, ставова и самоефикасности младих из ове две групе земаља на основу компаративне анализе и креирања структурног модела.

У раду је коришћена метода анкетања. Упитник се састојао од 59 питања подељених по групама. Прву групу питања чине питања везана за демографске карактеристике испитаника. У другој групи питања примењен је квантитативни приступ како би се одредио ниво еколошке свести, ставова и самоефикасности. Анкетање је вршено онлајн путем, у периоду од фебруара до децембра 2018. године. На тај начин је креиран обиман скуп података који су чинили одговори 858 испитаника (598 из ЕУ земаља и 260 из ЕУ земаља чланица). За обраду података коришћени су SPSS v.17 и AMOS v.8.0. софтверски пакети.

Independent Samples T-test анализа је показала да су еколошки ставови у великој мери одређени пореклом испитаника, односно тиме да ли је земља из које испитаник долази чланица ЕУ или не. Компаративном анализом средњих вредности добијених одговора утврђено је да су еколошки ставови испитаника позитивнији у земљама које још увек нису постале чланице ЕУ. Даљим испитивањем утврђивана је међусобна повезаност три категорије: еколошка свест, еколошки ставови и самоефикасност младих људи из обе групе земаља. Резултати су показали да се ти односи не разликују у зависности од тога којој групи одређена земља припада и да ове категорије слично функционишу – еколошка свест младих је под директним утицајем еколошких ставова и самоефикасности.

На основу резултата овог истраживања може се закључити да није довољно једноставно усвојити законску регулативу у области заштите животне средине и промовисати значај еколошки одговорног понашања и знања међу младима. Њих је потребно непрекидно подстицати да активно учествују у свим дешавањима која се тичу решавања еколошких проблема. Неопходно је систематски радити на развијању њиховог осећаја припадности природи и потреби да се свим својим снагама посвете раду на заштити животне средине. Само интегрисањем свих елемената, еколошка свест се може преточити у свакодневне активности младих које су усмерене ка унапређењу стања природних ресурса.