

ENVIRONMENTALLY RESPONSIBLE PURCHASING – ANALYSIS OF THE EX-YUGOSLAVIAN REPUBLICS

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Abstract. The aim of this study is to compare the environmentally-conscious behavior of buyers between the ex-Yugoslavian republics. The starting points are H0: there are differences in the environmentally-conscious behavior of buyers in the ex-Yugoslavian republics and H1: there are demographic and socio-economic differences in environmentally-conscious behavior of buyers between the ex-Yugoslavian republics. The survey was conducted on a sample of 1550 respondents from all the ex-Yugoslavian republics. The obtained results show that there are differences between Montenegro and Macedonia, Montenegro and Croatia, and Montenegro and Slovenia. Respondents from Montenegro purchase environmentally friendly products less often than respondents from Macedonia, Croatia, and Slovenia. The results also indicate that there are differences in the level of education and monthly income by household when purchasing environmentally friendly products between respondents from the ex-Yugoslavian republics. Through adequate implementation of obtained data, behavior of buyers becomes a tool of environmental management. Increasing the purchase of environmentally friendly products will affect environmental protection.

Keywords: *environmentally responsible purchasing, ex-Yugoslavian republics, environmental management*

Introduction

Environmentally-conscious behavior of buyers is the purchasing of products that are characterized as ecological (Roozen and Pelsmacker, 2000).

In 2006 households all over the world spent more than \$24 trillion on goods and services while in 1960 for the same purposes they spent \$4.8 trillion (UNED, 2008: 14). The increased level of purchases affects the increase in spending natural resources which as a consequence has the depletion of non-renewable resources, while many renewable resources are extremely degraded. Ecological, social and economic costs of today's unsustainable purchases are: natural disasters, biodiversity loss, poverty, epidemic disease, etc. (UNED, 2008: 14). Current patterns of purchase are unsustainable. Because of that, management of environmentally-conscious behavior of buyers is a global task.

Numerous studies in different countries have been conducted with the aim of determining patterns of environmentally-conscious behavior of buyers. They have been studied in: the UK (Samdahl and Robertson, 1989; Gilg et al., 2005), Singapore (Shamdasani et al., 1993), the USA (Roberts, 1996), China (Chan, 1999), Portugal (De Paço and Raposo, 2010), India (Jain and Kaur, 2006), Italy (Pedrini and Ferri, 2014), and Germany (Pagiaslis and Krontalis, 2014; Pinto et al., 2014).

However, there are not enough cross-cultural studies on the topic of environmentally-conscious purchasing: the USA-France (Arbuthnot and Lingg, 1975), the USA-Germany (Sriram and Forman, 1993), Sweden-Baltic countries (Gooch, 1995), Canada-France (Laroche et al., 1996) and Belgium-Poland (Roozen and Pelsmacker, 2000). Environmental purchasing is a global problem, which is why the cross-cultural studies are very important because they provide information that will provide a more complete picture for efficient management of consumer purchasing than studies in individual countries.

In researching cross-cultural studies on the topic of environmentally-conscious purchasing (Arbuthnot and Lingg, 1975; Sriram and Forman, 1993; Gooch, 1995; Laroche et al., 1996; Roozen and Pelsmacker, 2000), the authors have concluded that there is no relevant research paper published with reference to the ex-Yugoslavian republics.

The aim of the study is to compare the environmentally-conscious behavior of buyers between ex-Yugoslavian republics. The ex-Yugoslavian republics are: the Republic of Serbia (Serbia), the Republic of Croatia (Croatia), the Republic of Slovenia (Slovenia), the Former Yugoslav Republic of Macedonia (FYR Macedonia), the Federation of Bosnia and Herzegovina (Bosnia and Herzegovina) and Montenegro. The ex-Yugoslavian republics had 73 years of shared history which certainly influenced similarities in consumer behavior. Today all the ex-Yugoslavian republics are independent countries with different macro, structural, demographic, socio-economic, etc. characteristics (State Statistical Office of Macedonia, 2014; Institute for Statistics of Serbia, 2014; Statistical Office of the Slovenia, 2014; Statistical Office of the Montenegro, 2014; Croatian Bureau of Statistics, 2014; Federal Office of Statistics of Bosnia and Herzegovina, 2014). According to the author's knowledge this will be the first cross-cultural study of the ex-Yugoslavian republics on the topic of environmentally-conscious purchasing.

Differences in Environmentally Responsible Purchasing Between Countries

Purchase of environmentally friendly products is different in different countries, according to the results of previous empirical comparative cross-cultural researches (Arbuthnot and Lingg, 1975; Sriram and Forman, 1993; Gooch, 1995; Laroche et al., 1996; Roozen and Pelsmacker, 2000). The purchase of environmentally friendly products was more often in the USA than in France (Arbuthnot and Lingg, 1975). Swedes were buying environmentally friendly products more than buyers from Baltic countries (Gooch, 1995). Canadians were purchasing environmentally friendly products more than the Frenchmen (Laroche et al., 1996). Also, Belgians were purchasing environmentally friendly products more than Poles (Roozen and Pelsmacker, 2000). However, one of the studies suggests that there were no differences in the purchase of environmentally friendly products among buyers from the USA and Germany (Sriram and Forman, 1993).

Considering the results of earlier cross-cultural research (Arbuthnot and Lingg, 1975; Sriram and Forman, 1993; Gooch, 1995; Laroche et al., 1996; Roozen and Pelsmacker, 2000) it can be assumed that:

H1: There are differences in environmentally-conscious behavior of buyers from different the ex-Yugoslavian republics.

The most common demographic characteristics represented in previous researches of environmentally responsible purchasing, as in this study, are: gender, age, degree of education and monthly income by household.

If we look at the link between environmentally responsible purchasing of consumer and gender, most of the research, from: Singapore (Shamdasani, et al, 1993), UK (Gilg et al., 2005), Portugal (De Paco and Raposo, 2010) and Italy (Pedrini and Ferri, 2014) shows that women and men are equal in environmentally responsible purchasing. However, some researches from India (Jain and Kaur, 2006) and Germany (Pinto et al., 2014) have come to the result that women are more environmentally responsible consumers than men related to purchasing environmentally friendly products.

If we look at the link between environmentally responsible purchasing and age, most of the research, from: the USA (Roberts, 1996), the UK (Samdahl and Robertson, 1989; Gilg et al., 2005), China (Chan, 1999), Portugal (De Paco and Raposo, 2010), Italy (Pedrini and Ferri, 2014) and Germany (Pagiaslis and Krontalis, 2014) has reached the conclusion that older consumers purchase environmentally friendly products more than the younger ones. One study conducted in India (Jain and Kaur, 2006) resulted in data that young consumers purchase environmentally friendly products more than the older ones. Part of the research, from the Singapore (Shamdasani et al., 1993), China (Chang, 1999) and Germany (Pinto et al., 2014) suggests that environmentally responsible purchasing does not depend on the age of the consumer.

If we look at the link between environmentally responsible purchasing and consumer education level, most of the studies, from: the USA (Roberts, 1996), China (Chan, 1996), India (Jain and Kaur, 2006), Portugal (De Paco and Raposo, 2010), Italy (Pedrin and Ferri, 2014) and Germany (Pinto et al., 2014; Pagiaslis and Krontalis, 2014) confirm that consumers which are more educated are more environmentally responsible when purchasing. However, one study in the UK (Samdahl and Robertson, 1989) has come to the result that lower educated consumers purchase environmentally friendly products more. Finally, the result of a study from Singapore (Shamdasani et al., 1993) shows that the level of educational attainment is not associated with environmentally responsible purchasing.

If we look at the link between environmentally responsible purchasing and monthly income by household, most of the studies from: China (Chan, 1999), India (Jain and Kaur, 2006), Portugal (De Paco and Raposo, 2010), Italy (Pedrini and Ferri, 2014) and Germany (Pinto et al., 2014; Pagiaslis and Krontalis, 2014) have reached the conclusion that consumers with higher incomes by household purchase environmentally friendly products more. One study from the UK (Samdahl and Robertson, 1989) resulted in data suggesting that consumers with lower incomes by household purchase environmentally friendly products more. Still, one study from Singapore (Shamdasani et al., 1993) found no association between monthly income by household and environmental responsibility purchasing.

According to the data presented above, it can be concluded that the studies from different countries have resulted in different data. It can be observed that the different results come from the same country. This happens because the studies were carried out

in the same country with a different sample, with different methods and in different time periods. From the results of previous researches (Samdahl and Robertson, 1989; Shamdasani et al, 1993; Roberts, 1996; Chan, 1999; Gilg et al., 2005; Jain and Kaur, 2006; De Paco and Raposo, 2010; Pedrini and Ferri, 2014; Pinto et al., 2014; Pagiaslis and Krontalis, 2014) it can be assumed that:

H2: Differences in environmental responsibility between consumers of the ex-Yugoslavian republics are caused by demographic characteristics.

Materials and Methods

Sample

The study included 1,550 respondents from six ex-Yugoslavian republics: 276 participants from Serbia, 250 participants from Croatia, 265 participants from Bosnia and Herzegovina, 250 participants from Montenegro, 253 participants from Macedonia and 256 participants from Slovenia (*Table 1*).

Table 1. Gender structure of the sample

| Country | Male | Female | Total |
|------------------------|------|--------|-------|
| Serbia | 114 | 162 | 276 |
| Croatia | 78 | 172 | 250 |
| Bosnia and Herzegovina | 111 | 154 | 265 |
| Montenegro | 109 | 141 | 250 |
| FYR Macedonia | 93 | 160 | 253 |
| Slovenia | 70 | 186 | 256 |
| Total | 575 | 975 | 1550 |

Table 2 shows the age structure of the sample by country. Almost half of the sample consists of younger respondents, aged 18 to 30. The next category consists of respondents aged 31 to 40. The fewest respondents are in the category aged 71 to 80. Only seven respondents did not provide information about their age.

Table 2. Age structure of the sample (*N* = 1543)

| Country | Age categories (in years) | | | | | |
|------------------------|---------------------------|-------|-------|-------|-------|-------|
| | 18-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 |
| Serbia | 118 | 86 | 22 | 32 | 14 | 2 |
| Croatia | 137 | 48 | 34 | 24 | 6 | 1 |
| Bosnia and Herzegovina | 146 | 66 | 36 | 15 | 1 | 0 |
| Montenegro | 197 | 34 | 19 | 2 | 1 | 0 |
| FYR Macedonia | 105 | 68 | 28 | 24 | 14 | 8 |
| Slovenia | 84 | 89 | 55 | 22 | 5 | 0 |
| Total | 787 | 391 | 194 | 119 | 41 | 11 |

Table 3 shows the structure of the sample by level of education by country. The smallest number of respondents have completed only primary school (*N* = 15). The

same number of respondents have completed high school and college/university (N = 617). A somewhat smaller number of respondents have completed post-graduate studies (N = 297).

Table 3. Sample structure by education level (N = 1546)

| Country | Education level | | | |
|------------------------|-----------------|-------------|---------------------|----------|
| | Primary school | High school | College, university | MSc/ PhD |
| Serbia | 5 | 126 | 93 | 50 |
| Croatia | 2 | 121 | 95 | 32 |
| Bosnia and Herzegovina | 0 | 134 | 83 | 48 |
| Montenegro | 0 | 123 | 89 | 41 |
| FYR Macedonia | 6 | 69 | 104 | 70 |
| Slovenia | 2 | 44 | 153 | 56 |
| Total | 15 | 617 | 617 | 297 |

Table 4 shows the structure of the sample by the average monthly income by household by country. Most of the respondents (N = 758) have estimated that they have average income by household, while fewer respondents have estimated their income at below average. The fewest number of respondents have estimated to have an above average income by household.

Table 4. Sample structure according to monthly income by household (N = 1548)

| Country | The amount of monthly income by household | | |
|------------------------|---|---------|---------------|
| | Below average | Average | Above average |
| Serbia | 70 | 111 | 94 |
| Croatia | 42 | 174 | 34 |
| Bosnia and Herzegovina | 21 | 193 | 51 |
| Montenegro | 57 | 120 | 76 |
| FYR Macedonia | 28 | 76 | 146 |
| Slovenia | 50 | 84 | 121 |
| Total | 522 | 758 | 268 |

Disparities in age and professional qualifications of the participants in the sample (age categories: 61-70 and 71-80; and education level: elementary) could be considered as limitations of this research. It should be noted, however, that it is really difficult to create the same pattern of demographics and socio-economic characteristics across all categories in several different countries (Raaij, 1978). The other cross-cultural researches also had disparities in sample (Arbuthnot and Lingg, 1975; Gooch, 1995; Roozen and Pelsmacker, 2000). Disparities exist because younger people and people who have higher education are more interested

in taking part in studies such as this one, compared to older and less educated people (Chan, 2001).

The sampling method was stratified sample. The total population from the territory of the ex-Yugoslavian republics, which makes about 20 million people, is divided into stratum, now independent countries: Serbia, Croatia, Bosnia and Herzegovina, Montenegro, FYR Macedonia, and Slovenia. After that, method simple random sample was used for each stratum. For example, the researcher asked her friend who lives in Slovenia to participate in research and to distribute the questionnaire to his friends and colleagues from Slovenia.

Questionnaire

For the purposes of this study, and following the example of previously conducted research (Soutar et al., 1994; Barr and Gilg, 2005; Gilg et al., 2006; De Paco and Raposo, 2010; Young et al., 2010) a questionnaire was composed to test the difference between environmentally conscious behavior of buyers in the ex-Yugoslavian republics. The items in the questionnaire were adapted to the national and the international environment of the countries in which the research was conducted.

The questionnaire is composed of three parts (*Appendix 1*). The first part of the questionnaire is the respondent's consent for doing the questionnaire. Completing the questionnaire was anonymous. The second part refers to the demographic and socio-economic characteristics of respondents: country, gender, age, level of education, and monthly income by household. In order to adapt the questionnaire to this study, the question about income had to be standardized. Data about income were differently shown in the Statistical Yearbooks of each country for 2013 (State Statistical Office of Macedonia, 2014; Institute for Statistics of Serbia, 2014; Statistical Office of the Montenegro, 2014; Statistical Office of the Slovenia, 2014). Data for incomes were presented at the annual level for household in the Statistical Yearbook of Macedonia (State Statistical Office of Macedonia, 2014), at the monthly level for one member of household in the Statistical Yearbook of Serbia (Institute for Statistics of Serbia, 2014) and at the monthly level for household in the Statistical Yearbooks of Montenegro (Statistical Office of the Montenegro, 2014) and Slovenia (Statistical Office of the Slovenia, 2014). Unfortunately, data for income does not exist for Bosnia and Herzegovina and Croatia. Standardization meant equalization data of income at the same instance of time and to the same dimension to whom income refers. Author opted for monthly income by household, because such data existed in two of the four Statistical Yearbooks of the countries. In addition, the question for monthly income by household was asked in the currency of the country where the questionnaire was implemented, so that it would be easier to understand and answer it. The third part of the questionnaire refers to environmentally-conscious behavior of buyers. It has 7 items relating to the behavior of buyers of which each item refers to another group of products: 1) food and beverage, 2) chemicals and pharmacy products, 3) clothing, 4) furniture, 5) electrical appliances, 6) means of transport and 7) office supplies (*Table 5*). Answers to the questionnaire were measured by Likert scale, 1-strongly disagree, 2-mostly disagree, 3-undefined, 4-mostly agree, and 5- completely agree. The aim of this construction of questionnaire was to get a more precise picture of environmentally-conscious behavior of buyers.

Table 5. Descriptive statistics of items of the total sample

| Items | M | SD |
|---|------|------|
| I buy organically grown products. | 3.11 | 1.10 |
| I buy home care products that threaten the environment less. | 3.11 | 1.19 |
| In the flat/house I also have furniture that I bought at a marketplace or in a second-hand store. | 2.10 | 1.58 |
| I buy technical appliances that save energy. | 2.09 | 1.38 |
| I also buy clothes in second hand stores. | 3.56 | 1.25 |
| I would rather buy a bicycle than a car. | 3.69 | 1.41 |
| I buy toilet paper, books, notebooks, etc. made of recycled paper. | 2.99 | 1.23 |

The questionnaires were translated into Slovenian, Macedonian, Croatian, and Serbian. Respondents from Serbia, Bosnia and Herzegovina, and Montenegro filled in questionnaires in Serbian considering that they can be classified in the same language area.

The questionnaire was distributed personally and through various Internet platforms (Google Drive, FB, email, etc.). It was sent to the addresses of various entities: private individuals, non-governmental organizations, higher education institutions, businesses, statistical bureaus of the countries, etc.

Variables

Independent variables in this study are: country, gender, age, professional qualification and monthly income by household. There is one dependent variable - environmentally responsible purchasing.

Data Analysis

For data processing we used the software package SPSS:20 (SPSS, 2008).

Preparing the data for the main analysis included the replacement of missing values by EM method and the treatment of extreme values that resulted in not showing even one outlier.

After preparing the data, exploratory factor analysis (EFA) was conducted. The results of EFA suggested that there is a stable factor structure of the questionnaire, with three different dimensions. Next, the obtained factor solution was confirmed by confirmatory factor analysis (CFA) in statistical packages "lavaan" (Rosseel, 2012) and "semTools" (Pornprasertmanit et al., 2013), written for the R environment.

One-way ANOVA with factor: country (6 levels) and Scheffe post hoc test were used as the methods for determining the differences in environmentally responsible purchasing between the ex-Yugoslavian countries. Also, two-way ANOVA and Scheffe post hoc test were used to test the differences in demographic and socio-economic characteristics of participants related to environmentally responsible purchasing between the ex-Yugoslavian republics, with the following factors: country (6 levels) and gender (2 levels), country (6 levels) and age of respondents (6 levels), country (level 6) and degree of education (4 levels), and country (6 levels) and monthly income by household (3 levels).

Results

Descriptive statistics

It may be noted that the distribution of subscales purchasing does not deviate significantly from normal values (values Skunis and Kurtosis are within the permissible values), despite the significant value of K-S statistics (*Table 6*). Reliability coefficients of the subscales do not show quite adequate in the case of half the countries and in the case of total of subscales, with respect to their values, which are lower than .70 (*Table 6*). Cronbach's alpha level can be explained by a small number of items for each subscale. The author decided on a small number of items due to the nature of this cross-cultural study.

Table 6. *Descriptive statistics and reliability coefficients of questionnaire*

| Country | M | SD | Skunis | Kurtosis | K-S | α |
|------------------------|-------|------|--------|----------|-------|----------|
| Serbia | 20.38 | 5.18 | -.116 | -.268 | .065* | .624 |
| Croatia | 20.65 | 5.47 | -.011 | -.060 | .066* | .724 |
| Bosnia and Herzegovina | 20.39 | 5.51 | -.010 | -.448 | .061* | .704 |
| Montenegro | 18.91 | 5.07 | .029 | -.179 | .053 | .652 |
| Macedonia | 21.79 | 4.59 | .401 | .211 | .081* | .628 |
| Slovenia | 21.73 | 5.12 | .140 | -.258 | .071* | .742 |
| Total | 20.64 | 5.25 | .020 | -.131 | .046* | .682 |

Note: * $p < .01$.

Differences in the environmentally responsible purchasing between the ex-Yugoslavian republics

The results of one-way ANOVA with the factor: the state (level 6) and the dependent variable buying organic products indicate that among respondents from different countries there is a statistically significant difference when it comes to eco-buying, $F(5, 1544) = 10.64$, $p < .01$, $\eta^2_p = .03$. Post hoc tests (Scheffe) have shown that there are *statistically significant differences between respondents from Montenegro ($M = 18.92$, $SD = 5.07$) and FYR Macedonia ($M = 21.79$, $SD = 4.59$, $p < .01$), Montenegro and Croatia ($M = 20.65$, $SD = 5.47$, $p < .01$), and Montenegro and Slovenia ($M = 21.73$, $SD = 5.12$, $p < .01$)*. In all three cases, it was shown that respondents from Montenegro achieve significantly lower scores in environmentally-conscious purchase when compared to respondents from aforementioned countries.

Demographic and socio-economic differences in the environmentally responsible purchasing between the ex-Yugoslavian republics

The results of two-way ANOVA with the factors: the country (level 6) and the gender (2 levels) indicate a statistically significant main effect of the gender, $F(1, 1537) = 7.73$, $p < .01$, $\eta^2_p = .005$ and a statistically significant main effect of the country, $F(5, 1537) = 9.42$, $p < .01$, $\eta^2_p = .03$, while the interaction between country*gender is not statistically significant, $F(5, 1537) = 1.36$, ns. Respondents from Montenegro ($M = 18.91$, $SD = 5.07$) differ when compared to respondents from Croatia ($M = 20.65$, $SD =$

5.47), Slovenia ($M = 21.73$, $SD = 5.12$) and respondents from FYR Macedonia ($M = 21.79$, $SD = 4.59$) in purchasing environmentally friendly products ($p < .01$). Also, results indicate that, regardless of the country, female buyers ($M = 96$, $SD = 15.63$) buy environmentally friendly products more than male buyers ($M = 93.11$, $SD = 14.81$).

The results of two-way ANOVA with the factors: the country (level 6) and the age (level 6) indicate a statistically significant main effect of the age, $F(4, 1510) = 15.82$, $p < .01$, $\eta^2 = .04$, and a statistically significant main effect of the country, $F(5, 1510) = 11.23$, $p < .01$, $\eta^2 = .03$, while the interaction of country*age is not shown as a statistically significant, $F(22, 1510) = 1$, ns. Respondents from Montenegro ($M = 18.91$, $SD = 5.07$) differ when compared to respondents from Croatia ($M = 20.65$, $SD = 5.47$), Slovenia ($M = 21.73$, $SD = 5.12$) and respondents from FYR Macedonia ($M = 21.79$, $SD = 4.59$) in purchasing environmentally friendly products ($p < .01$). Also, results indicate that, regardless of the country, older respondents spend more money on ecological products (age 18-30: $M = 19.38$, $SD = 5.12$; age 31-40: $M = 21.39$, $SD = 5.20$; age 41-50: $M = 22.56$, $SD = 4.07$; age 51-60: $M = 22.06$, $SD = 5.24$; age 61-70: $M = 23.42$, $SD = 4.65$; age 71-80: $M = 22.71$, $SD = 4.27$).

The results of two-way ANOVA with the factors: the country (level 6) and the level of education (4 level) show *statistically significant interaction between country*level of education* $F(13, 1524) = 2.58$, $p < .01$, $\eta^2 = .02$, and a statistically significant main effect of the country $F(3, 1524) = 3.43$, $p < .01$, $\eta^2 = .006$. The main effect of educational level, however, is not shown as statistically significant, $F(3, 1524) < 1$ ns. Post hoc tests (Scheffe) indicated that the respondents from Montenegro with secondary education ($M = 17.98$, $SD = 5.08$) differ from respondents in Slovenia with completed university/college education ($M = 21.66$, $SD = 5.26$, $p < .01$), and participants from FYR Macedonia ($M = 21.19$, $SD = 5.11$) with secondary education. Participants from Montenegro have significantly lower scores on scale of environmentally-conscious purchase in relation to the aforementioned participants from FYR Macedonia and Slovenia.

Finally, the results of two-way ANOVA with the factors: the country (level 6) and the monthly household income (3 levels) indicate *statistically significant interaction between factors country * monthly household income*, $F(10, 1530) = 2.65$, $p < .01$, $\eta^2 = .02$, and statistically significant main effects of monthly household income, $F(2, 1530) = 6.51$, $p < .01$, $\eta^2 = .008$, and of the country, $F(5, 1530) = 9.44$, $p < .01$, $\eta^2 = .03$. Post hoc test (Scheffe), however, did not show statistically significant differences between countries and categories when it comes to environmentally-conscious purchase ($p > .05$).

Discussion

The study results show that there are differences in environmentally-conscious behavior of buyers between: Montenegro and FYR Macedonia, Montenegro and Croatia and Montenegro and Slovenia. Respondents from Montenegro buy environmentally friendly products less when compared to respondents from FYR Macedonia, Croatia and Slovenian. *The results partially confirm H1*, there are differences in environmentally-conscious behavior of buyers from different ex-Yugoslavian countries. Other cross-cultural researches confirmed that differences in purchasing environmental friendly products have existed between other countries (Arbuthnot and Lingg, 1975; Gooch, 1995; Laroche et al., 1996; Roozen and Pelsmacker, 2000).

In all ex-Yugoslavian republics women buy environmentally friendly products more than men, which is also confirmed by previous research results (Jain and Kaur, 2006; Pinto et al., 2014). In addition, in all ex-Yugoslavian republics older customers buy environmentally friendly products more than younger consumers, which is consistent with the results of previous studies (Roberts, 1996; Samdahl and Robertson, 1989; Gilg et al., 2005; Chan, 1999; De Paco and Raposo, 2010; Pedrini and Ferri, 2014; Pagiaslis and Krontalis, 2014). That consumers who have higher level of education are more likely to buy environmentally friendly products than less-educated consumers (respondents with secondary education from Montenegro buy environmentally friendly products less than respondents with university/college education from Slovenia) also confirmed by previous research results (Roberts, 1996; Chan, 1996; Jain and Kaur, 2006; De Paco and Raposo, 2010; Pedrin and Ferri, 2014; Pinto et al., 2014; Pagiaslis and Krontalis, 2014). Results related to the differences in monthly income by household between countries show that there are differences, but the post hoc tests (Scheffe) did not show which countries and which groups are the ones that differ. Differences in monthly income by household between countries related to purchasing environmentally friendly products are also confirmed by previous studies (Samdahl and Robertson, 1989; Chan, 1999; Jain and Kaur, 2006; De Paco and Raposo, 2010; Pedrini and Ferri, 2014; Pinto et al., 2014; Pagiaslis and Krontalis, 2014). Based on all of the above, it can be concluded that there are demographic differences in environmentally-conscious behavior of buyers in ex-Yugoslavian countries, which *partially confirms H2*.

Limitations of research

Although this cross-cultural research was done with caution, it has certain limitations. The first limitation can be that the questionnaire was designed for research purposes and it has not been used elsewhere, and cannot be characterized as multiply successful. The second limitation can be the number of items in the questionnaire, seven items. That can be considered as a small number of items which is why maybe the structure of the questionnaire is not the best. Disparities in age and professional qualifications in the sample are also a limitation. Respondents answered on the basis of their past behavior and potential future behavior, which is considered the fourth limitation of the study. Environmentally-conscious purchasing is socially desirable behavior and it is assumed that the respondents were subjective and that they were giving socially desirable answers, which is also considered a limitation of the study.

Conclusion

This study is one of the first cross-cultural research of the environmentally responsible purchasing in the region of ex-Yugoslavian republics as such as provides valuable information.

The results indicate that there are differences in environmentally-conscious behavior of buyers between respondents from: Montenegro and FYR Macedonia, Montenegro and Croatia and Montenegro and Slovenia.

The data obtained by this research indicates different segments of environmentally-conscious buyers in republics of the ex-Yugoslavian which can be used to create instruments for increasing environmentally-conscious purchases. For example, if a market subject (international institutions, government bodies, NGOs, businesses, etc.) wants to increase the purchase of environmentally friendly products in FYR Macedonia,

Croatia and Montenegro they will apply the same instrument for FYR Macedonia and Croatia and a different one for Montenegro. The instruments directed towards Montenegro should be more stimulating considering that the purchase of environmentally friendly products is the lowest in Montenegro. Or, if a market subject wants to increase the purchase of environmentally friendly products in Serbia, Bosnia and Herzegovina, and FYR Macedonia, they can apply one strategy for all countries, since the countries do not differ according to environmentally-conscious behavior of buyers. Also, the data indicate that the strategies of increasing environmentally-conscious purchases of consumers aimed at different former Yugoslavian countries should take into account the differences in the level of education and monthly income by household. The data obtained can serve as a starting point for entering into horizontal and vertical partnerships between the various market entities at national and international level with the aim of environment protection through increased purchases of environmentally friendly products. Through adequate implementation of obtained data, the behavior of buyers can become a tool of environmental management and improve the quality of life in the region. Increasing the purchase of environmentally friendly products will reduce the degradation of renewable natural resources and the use of non-renewable natural resources.

From a theoretical perspective, the data obtained is important because it provides an empirical basis for other studies through creation of an environmental profile of responsible consumers. Also, the research was conducted with a newly created questionnaire which can be used for other research, and for create another questionnaire on the same topic.

Authors suggest that future research should be carried out in the same sample of countries five years later using the same instrument. Such research would provide information on the change in behavior in the countries of the ex-Yugoslavian republics. The future research should involve other variables, for example, religion variables or types of products. Such research would provide a more complex picture of environmentally-conscious behavior of buyers in the ex-Yugoslavian republics. The use of qualitative methods would be very significant because it would provide data about reasons that cause certain behaviors, or in this case, the similarities and differences between environmentally-conscious purchasing from the ex-Yugoslavian republics. Finally, the authors suggest that more studies should be carried out on the topic of environmental responsibility of buyers because it is the only way to analyze the limits and motivators of environmentally responsible behavior of buyers.

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APPENDIX

Appendix 1. Questionnaire used in this study

“Dear Sir/Madam,

Bearing in mind that this is one of rare cross cultural studies in our region, and that the results will provide valuable information on similarities and differences between our cultures, we kindly ask you to devote 10 minutes of your time, which will be enough to fill out all of the questionnaires.

This survey is entirely ANONYMOUS, which means that nobody will be able to associate you with your results. Survey data will be processed in groups and will be used for scientific research purpose only.

We kindly ask you to answer ALL of the questions and check carefully whether you have completed the ENTIRE questionnaire.

You are free to send all of your questions and doubts related to this research via e-mail: rsasaca@hotmail.com.

Filling out these questionnaires is voluntary and requires your consent. If you agree to participate in this survey, circle YES.

I AGREE TO PARTICIPATE IN THIS SURVEY:

YES

NO

THANK YOU IN ADVANCE FOR YOUR COOPERATION!

Circle the number in front of the statement that applies to you.

Country:

1. Serbia
2. Croatia
3. Bosnia and Herzegovina
4. Slovenia
5. FRY Macedonia
6. Montenegro

Gender:

1. Male 2. Female

Age (write how old you are) _____

Education:

1. Primary school 2. High school 3. College/University 4. MSc/MA/Mr/PhD

*According to the Statistical Office of the Republic of Serbia, average monthly income per household in the Republic of Serbia is 56.073, 00 dinars in 2013. Is your average monthly income:

1. above average 2. average 3. below average

In the table below there are several groups of statements describing different behaviors and attitudes which relate to ecological responsibility of consumers. Please, carefully read each of the statements and answer by circling the number and expressing to what degree you agree with each of the statements. Numbers have the following meaning:

1 - I strongly disagree, 2 - I disagree, 3 - Undecided, 4 - I agree, 5 - I strongly agree

| Items | | Answers | | | | |
|-------|---|---------|---|---|---|---|
| 1 | I buy organically grown products. | 1 | 2 | 3 | 4 | 5 |
| 2 | I buy home care products that threaten the environment less. | 1 | 2 | 3 | 4 | 5 |
| 3 | In the flat/house I also have furniture that I bought at a marketplace or in a second-hand store. | 1 | 2 | 3 | 4 | 5 |
| 4 | I buy technical appliances that save energy. | 1 | 2 | 3 | 4 | 5 |
| 5 | I also buy clothes in second hand stores. | 1 | 2 | 3 | 4 | 5 |
| 6 | I would rather buy a bicycle than a car. | 1 | 2 | 3 | 4 | 5 |
| 7 | I buy toilet paper, books, notebooks, etc. made of recycled paper. | 1 | 2 | 3 | 4 | 5 |

*Note: This research was conducted with six questionnaires, where the questionnaires differ in the matter relating to the average monthly income per household. Therefore, Appendix 1 should have six pieces. However, the authors believe that it is unnecessary. For a better understanding of the questionnaires the authors explain that the question refers to the average monthly income per household adjusted for each country in which the research was conducted. For every country were used data relating to the average monthly income per household exactly of that country, from Statistical Yearbooks for 2013. years (State Statistical Office of Macedonia, 2014, 296; Institute for Statistics of Serbia, 2014, 123; Statistical Office of the Montenegro, 2014, 68; Statistical Office of the Slovenia, 2014, 27). Unfortunately, data for income did not exist for Bosnia and Herzegovina and Croatia.”