



ORGANIZATIONS BETWEEN ENVIRONMENTAL AND ECONOMIC CONCERN: HOW EMPLOYEES' PERSONAL VALUES AND ATTITUDES PREDICT PREPAREDNESS OF ORGANIZATIONS FOR ENVIRONMENTAL PROTECTION

Vojko Potocan¹, Jerzy Szkutnik², Zlatko Nedelko³

¹University of Maribor, Faculty of Economics and Business

²Czestochowa University of Technology, Faculty of Management

³University of Maribor, Faculty of Economics and Business

Abstract: Paper examines the relationships between personal values, attitudes and companies' devotion of resources to environmental protection based on the value theory and sustainability theory. We proposed a model for the study of the influence of personal values on attitudes toward concerns for environment and economics results, and influences of both considered attitudes on preparedness of organizations for devotion of resources to environmental protection. The model was tested with structural equation modeling approach, using data collected from 600 employees in organizations and 300 post-graduate business students as future employees in Slovenia. The results indicate that universalism and benevolence, for employees, and benevolence and security, for students, are strong positive predictors of concern for the environment. Security and tradition, for employees, and tradition, for students, are strong negative predictors of concern for the environment. Concern for the environment is strongly positively correlated with the allocation of resources to environmental protection, for both groups. Results about employees' and students' concern for environment are in line with previous studies. But contradictory to the expectation, in both groups concern for economic results showed a weak positive impact on regarding the level of the devotion of resources to environmental protection.

Keywords: Attitudes, Organizations, Environmental concern, Environmental Protection, Economic Concern, Personal Values

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Introduction

Numerous solutions have emerged for improvement of organizations' responsibility towards the nature and community in which they operate (Korten 2009; Laurent 2003; Waddock, Bodwell 2007). Modern organizations try to fulfill demands and requirements of natural, social and economic environments with utilization of sustainable responsibility concepts like sustainable development, corporate social responsibility (CSR), and pro-environmental behavior (Alibeli, Johnson 2009; Glavas, Kelley 2014; Gonzalez-Rodriguez, Diaz-Fernandez, Simonetti 2016).

Responsible working and behavior of organization is there in forefront of studies in environmentalism, management and behavior theory (Stern 2000; Waddock, Bodwell 2007; Wang et al. 2016). Environmentalism theory focused its attention on conceptualization of responsible business through development of models for utilization of responsible working in organizations (Dunlap, Gallup, Gallup 1993; Adams 2008; Davis, Whitman, Zald 2008; Gonzalez-Rodriguez, Diaz-Fernandez, Simonetti 2016). Management theories are focused on consideration of responsible traits and behavior (Blackburn 2007; Peet, Hartwick 2009; Glavas 2016). For instance, Carroll (Carroll 1999) emphasized that responsible actions go beyond the explicit pecuniary interest of the firm.

Behavior theory investigates links between behavior of individuals, groups or organizations and responsible business; it established that employees' behavior is a valid predictor for organizations' responsible behavior (Stern 2000; Raven, Berg 2003; Rego, Pina, Polonia 2017). For instance, Dietz et al. (Dietz, Fitzgerald, Shwom 2005) established that single variables of managers' behavior differently influence organization's CSR. On the contrary, Friedman (Friedman 1962) denied any meaning of environmental goals for managers' behavior, and Balabanis et al. (Balabanis, Phillips, Lyall 1998) reported that environmental initiatives are negatively related with managers' perception about firm's performance in top British companies. But rare behavior studies widely investigate influences of managers' attitudes on managers' direction, implementing plans and motivating people in utilization of socially responsible initiatives (Fransson, Garlin 1999; Schwartz 2006; Ralston et al. 2014).

Given the research emphasis on grand challenges, the need for a broad theoretical understanding of the influence of managers' behavior becomes all the more critical, particularly if one aims to introduce new cognitions into practical, strategic and policy advice (Brzóska, Jelonek 2015, p. 48-55).

To give an analytical flavor to our exposition, we begin with highlighting three gaps of socially responsible behavior challenges that have been emphasized in prior studies.

First, we focused our attention on managers' behavior, unlike previous studies, which are primarily oriented on employees' or organization's behavior (Schultz, Zelezny 1999; Waddock, Bodwell 2007; Wray-Lake, Syvertsen 2010). The focus on behavior of specific groups of stakeholders eliminates general behavior's arbitrary or incidental influences, reduces behavior variance and increases the conceptualization and validity of findings about managers' SR behavior (Glavas, Kelley 2014; Wang et al. 2016).

Second, we add to previous investigation the conceptualization of managers' SR behavior as a multidimensional construct. Multidimensionality of the concept is based on broader consideration of two groups of relationships in values-attitudes-behavior chain (Stern, Dietz 1994; Rego, Pina, Polonia 2017). In the first phase we considered effect of 10 groups of personal values on managers' attitudes toward concerns for environment and economic results (Schwartz 2012; Glavas, Kelley 2014; Skowron-Grabowska, Mesjasz-Lech 2016). In the second phase, we considered how managers' attitudes shape preparedness of organizations for

devoting resources to environmental protections as considered characteristics of a socially responsible behavior (Thompson, Barton 1994; Glavas 2016, Seroka-Stolka, Nowakowska-Grunt 2012).

Finally, in our study we investigate how the present personal values and attitudes of managers and students – i.e. as future managers, shape preparedness for devotion of resources to environmental protections in Slovenian society (Alibeli, Johnson 2009; Gonzalez-Rodriguez, Diaz-Fernandez, Simonetti 2016). This enables us to detect the current situation in organizations and predict development trends in devotion of resources through opinions of future managers.

Literature Review

Modern literature investigations and business practices include various solutions for improving the relationship between business of organizations and their care for protection of natural environment (Carroll 1999; Aguinis, Glavas 2012; Wang et al. 2016). The current studies focused their intention on two main research areas.

The first group of authors includes social (e.g., economic and business) sciences that focus on relationships between organizations and their natural environment (e.g., green business concepts and theories) (Davis, Whitman, Zald 2008; Rego, Pina, Polonia 2017). We use their cognitions about the existence of a variety of business goals, needs for balance, human impacts on business, and mezzo organizational theories (Blackburn 2007; Peet, Hartwick 2009; Mullins 2013).

The second group includes authors from sociological sciences (e.g., philosophy, psychology, sociology), which focus on the environmental conservation and concern of enterprises for the natural environment (Adams 2008; Glavas, Kelley 2014). This group is mostly based on environmentalism as a science, philosophy, and social movement (Haq, Alistair 2011; Wray-Lake, Syvertsen 2010). We use their cognitions about protecting natural resources and ecosystems, the need for the development of suitable behavior, and the influence of personal values/culture/ethics/norms (VCEN) on the environmental protection. Most of these studies exclude economic performance (Frank, Karp, Rush 1996; Stern, Dietz 1994; Schultz, Zelezny 1999; Dahlsrud 2008).

Researches on values, including their influence on work and behavior of enterprises, are widely considered in the management literature. Authors have examined the methodological repertoire for the consideration of values (Hofstede 2001; Rokeach 1973; Schwartz 1994, 2012). We adopted a questionnaire from the Schwartz's (Schwartz 1992, 1994) value survey, focusing on environmental questions (Frank, Karp, Rush 1996; Schultz, Zelezny 1999). The characteristics of values and their role and importance for enterprises are based on the cognitions of Rokeach (Rokeach 1973) and Schwartz and Bilsky (Schwartz, Bilsky 1987). We consider the basic cognitions about the influence of values on work and behavior from England (1967), Posner and Munson (Posner, Munson 1979), and Ralston et al. (2014).

Research studies in this field primarily confirm the impact of personal values on environmental issues. For example, Axelrod and Lehman (1993), Kimmelmeier et al. (Kimmelmeier, Krol, Hun Kim 2002), and Dietz et al. (Dietz, Fitzgerald, Shwom 2005) recognized and defined a set of important factors influencing pro-environmental behavior. Stern (Stern 2000) identified several important factors that influence behavior orientation. Additionally, Stern and Dietz (Stern, Dietz 1994), Karp (Frank, Karp, Rush 1996), and Schultz and Zelezny (Schultz, Zelezny 1999) recognized personal values as an important source defining relationships with the environment.

The literature identifying the influence of personal values on the selected environmental issues makes it evident that:

- Either the abbreviated scale of the Schwartz value measurement (Schultz, Zelezny 1999; Stern, Dietz 1994) or the full range of values (56 values) is used (Frank, Karp, Rush 1996);
- The impact of values on environmental issues is primarily examined by using single and multiple regression (Schultz, Zelezny 1999; Aoyagi-Usui, Vinken, Kuribayashi 2003), although more recently these relationships have been tested using structural equation modeling procedures (Nordlund, Garvill 2002; Oreg, Katz-Gerro 2006);
- The mainstream surveys focus primarily on student populations (Schultz et al. 2005; Alibeli, Johnson 2009; Cordano et al. 2010), whereas other researchers have used nationwide random samples that have also included employees (Aoyagi-Usui, Vinken, Kuribayashi 2003; Nordlund, Garvill 2002); and
- The majority of studies used the environmental paradigm, developed by Dunlap and Van Liere (Dunlap, Van Liere 1978) and revisited by Dunlap et al. (Dunlap, Gallup, Gallup 1993), to try to measure general environmental attitudes.

For our study, we used the following fundamental research terms. Concern for the environment was generally defined as people's awareness of problems regarding their environment and their support to solving the recognized problems (Dunlap, Gallup, Gallup 1993; Schultz, Zelezny 1999). Concern for economic results can be most generally defined as worrying foremost about the economic results of enterprises' workings and behavior (Baumol, Litan, Schramm 2007; Buchanan, Huczynski 2010). Personal values can be defined as attitudes that guide our behavior and workings (Rokeach 1973; Schwartz, Bilsky 1987).

Hypotheses

According to the cognitions from the relevant literature (Rokeach 1973; Schwartz, Bilsky 1987; Dunlap, Gallup, Gallup 1993; Baumol, Litan, Schramm 2007; Wang et al. 2016), and to the purpose of our study, we postulated the following four hypotheses:

- H1: Personal values significantly influence one's attitudes toward concern for the environment.
- H2: Personal values significantly influence one's attitudes toward concern for economic results.

- H3: Increasing concern for the environment is positively associated with devotion of resources for the environmental protection.
- H4: Giving priority to the economic results is negatively related to the devotion of resources for environmental protection.
- H5: Increasing concern for the economic results is negatively associated with devotion of resources for the environmental protection.

The hypotheses concerning the impact of employees' personal values on their attitudes towards concern for economic results and the environment were kept very general as we go beyond the prevalent presupposing which single values predict which concerns (Frank, Karp, Rush 1996; Schultz, Zelezny 1999; Shafer-Landau 2007). Thus, we consider the impact of all groups of personal values on economic and environmental concerns. This approach can contribute to a more comprehensive understanding and consideration of the research problem.

Research Design

Sample and procedure

Participants – The sample for this study includes 600 employees working in Slovenian organizations and 300 post-graduate business students at the University of Maribor, Faculty of Economics and Business (FEB) Maribor, Slovenia. Employees' data were obtained through computer-assisted telephone interviews (CATI) with employees in Slovenian organizations in 2017. Altogether, approximately 1000 organizations were contacted and 600 usable answers were obtained from their employees. From each organization maximum one answer was used. Data for business students were collected during a management course at FEB in spring 2017. All participants in our survey participated voluntarily.

Sample characteristics – By briefly outlining the demographics of our sample, we can postulate the following. The average age of employees is 33.3 years and students' one 21.9 years. Among employees, 68.8% are females and 31.2% are males; among students, 69.8% are females and 30.2% are males. Employees have on average 11.22 years work experiences. Regarding employees' education, 53.6% have bachelor degree, 42.2% high school, and the rest have higher degrees – i.e. master's or doctorate degrees. All students finished high school. Regarding employees' current position in the organization, 67.1% are non-supervisory staff while 20.2% are first-line managers, 11.0% are middle managers, and 1.7% are upper-level managers. In terms of organizational size, 61.1% of employees work in organizations with fewer than 50 employees, 28.2% work in organizations having between 50 and 250 employees, and 10.7% work in organizations with more than 250 employees. The employees, who responded to the survey were from organizations operating in agriculture, mining, forestry and fishing (1.7%), construction (2.5%), manufacturing (24.0%), transportation, communication, utilities (9.7%), the wholesale and retail trade (19.2%), finance, insurance, and real estate (14.2%), services (9.0%), public administration (9.7%), healthcare (1.7%), and other (8.3%) industries.

Measures

Personal values – To measure personal values, the Schwartz value survey (SVS) was used (Schwartz 1992, 1994), where respondents rate each of 56 personal values using a 9-point Likert-type scale, ranging from “opposed to my values” (-1) to “of supreme importance” (7). According to the Theory of basic human values (Schwartz 1992, 1994, 2012), we used in our empirical study 10 dimensions of values, which are based on 56 single values. This structure of values was validated on worldwide samples (Schwartz 1994, 2012) as well as on Slovenian samples (Nedelko, Potocan 2013; Ralston et al. 2014). The considered groups of values are: power ($\alpha = 0.670$), achievement ($\alpha = 0.678$), hedonism ($\alpha = 0.674$), stimulation ($\alpha = 0.601$), self-direction ($\alpha = 0.526$), universalism ($\alpha = 0.750$), benevolence ($\alpha = 0.687$), security ($\alpha = 0.569$), tradition ($\alpha = 0.589$), and conformity ($\alpha = 0.568$). Regarding the multidimensional structure of personal values (i.e., 10 latent variables in the model), we presuppose that 10 measurement variables reflect 10 groups of values in a reliable manner in the selected Slovenian sample, since the obtained reliability coefficients (outlined in brackets above) are similar to those in other studies using SVS for surveying personal values (Nordlung, Garvill 2002; Egri et al. 2012; Ralston et al. 2014; Glavas 2016).

Employees' attitudes and behavior

The items chosen to measure employees' attitudes toward concern for the environment, attitudes toward concern for economic results, and behavior regarding the devoting of resources to environmental protection were adapted from a scale of 25 items aimed at measuring corporate responsibility (Ralston et al. 1993; Furrer et al. 2010; Ralston et al. 2014). A 9-point scale was used, ranging from 1 (strongly agree) to 9 (strongly disagree). We used a factor analysis (in SPSS for Windows) to detect the considered factors.

The items selected to measure employees' attitudes towards concern for the environment were: a) prevent environmental degradation caused by the pollution and depletion of natural resources (EN 1); b) adopt formal programs to minimize the harmful impacts of organizational activities on the environment (EN 2); and c) minimize the environmental impacts of all organizational activities (EN 3) (Dunlap, Gallup, Gallup 1993; Thompson, Barton 1994; Cordano et al. 2011; Wang et al. 2016). Cronbach's α for this scale was 0.675.

The items used to measure the employees' attitudes about giving priority to the economic results (over the other considered aspects of corporate social responsibility) were: a) no commitment to ethical principles (EC 2); b) ignore environmental issues when jobs are at stake (EC 3); and c) agree that ethical responsibilities may negatively affect economic performance (EC 4) (Waddock, Graves 1997; Kemmelmeier, Krol, Hun Kim 2002; Blackburn 2007; Kitzmueller, Shimshack 2012). Cronbach's α for this scale was 0.589.

Finally, the items used to measure employees' behavior regarding the devotion of resources to environmental protection were: a) devote resources to environmental protection, even when economic profits are threatened (DEV 1); b) voluntarily exceed the government's environmental regulations (DEV 2); c) pay

the full financial cost of using energy and natural resources (DEV 3); and d) only proceed with activities where environmental risks can be fully evaluated and controlled (DEV 4) (Westing 1996; Glicken, Fairbrother 1999; Cordano et al. 2010; Glavas 2016). Cronbach's α for this scale was 0.640.

Comparable researches in this field (Dahlsrud 2008; Alibeli, Johnson 2009; Aguinis, Glavas 2012) illustrate a Cronbach's α falling between 0.539 and 0.572 for three constructs related to concern for the environment. Schultz and Zelezny (Schultz, Zelezny 1999) reported a Cronbach's α coefficient between 0.47 and 0.81; after modification, the reliability coefficient for all 14 nations in the sample was 0.70. In this field of research, Nordlung and Garvill (Nordlung, Garvill 2002) and Oreg and Katz-Gerro (Oreg, Katz-Gerro 2006) reported similar values of Cronbach's α (the lowest $\alpha = 0.52$ and $\alpha = 0.50$, respectively). We can summarize that our Cronbach's α values for the latent variables are satisfactory, given the exploratory nature of our research.

Research Model

According to the postulated hypotheses the model for this research consists of 13 latent variables. Since these variables cannot be observed directly, several manifest variables serve as indicators of the underlying construct they are presumed to represent. The proposed model evaluates how employees' personal values – i.e. considered through 10 groups of values, influence employees' attitudes toward concern for the environment and concern for the economic results. Furthermore, the model evaluates how the concern for the environment and concern for economic results influence the corporate's devotion of resources to environmental protection. Since the latent variables are not assumed to be perfectly predicted by associated constructs, the dependent variables include a residual (Z1, Z2, and Z3). Therefore, the question of the plausibility of the multidimensional structure of the latent variables must be investigated. The hypothesized model is outlined in *Figure 1*.

Data analysis – In our examination we go beyond the single and multiple regression analysis approaches usually utilized in previous studies in this field (Frank, Karp, Rush 1996; Schultz, Zelezny 1999; Cordano et al. 2011; Frynas, Yamahaki 2016). We used structural equation modeling (SEM) techniques to examine the impact of personal values on the concern for the environment, concern for the economic results, and the corporate devotion of resources for environmental protection. Using SEM enables us to comprehensively estimate the multiple and interrelated dependence relationships between groups of values, concern for the environment, concern for economic results, and devotion of resources for environmental protection. We tested our model using the AMOS program, following the suggestions of Byrne (Byrne 2010) and Becker et al. (2016).

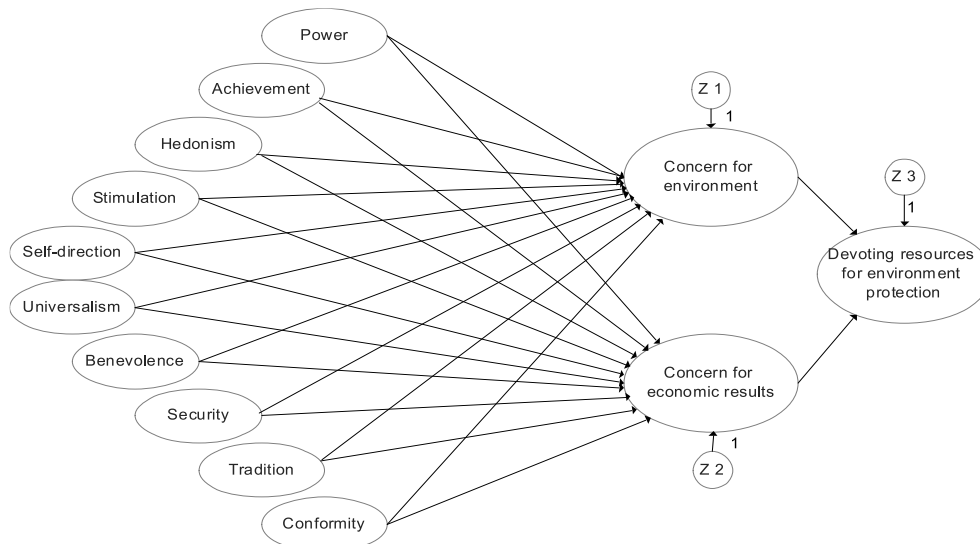


Figure 1. The model of the corporate devotion of resources for environmental protection

Source: (Nedelko, Potocan 2013)

Goodness-of-Fit Statistics – Reliability coefficients of the latent variables in the proposed model of corporate devotion of resources for environmental protection, reveal a solid reliability of the measures (Ho 2006). In frame of using structural equation modeling a fit between the data and proposed model should be achieved and reported (Byrne 2010; Becker et al. 2016).

When building a structural model, where we established relationships between personal values, attitudes and behavior, the goodness-of-fit test yielded a poor fit: χ^2 ($N = 900$, $df = 4242$) = 13849.913, $p < 0.001$; CFI = 0.427; IFI = 0.433; RMSEA = 0.050; PCLOSE > 0.05 (0.346) indicated a poor fit between hypothesized model and data (Hu, Bentler 1999; Byrne 2010; Becker et al. 2016).

Poor goodness of fit between the proposed relations and data is a consequence of plethora of variables and interdisciplinary nature of our research – i.e., the impact of personal values on issues targeting the allocation of resources for environment protection. Although these relations are well known in frame of value-attitude-behavior theory (Ajzen, Fishbein 1980; Nordlung, Garvill 2002; Rego, Pina, Polonia 2017), empirical evidences are poor.

Utilization of structural equation modeling for examination of relationship between values, attitudes and behavior are rare, and consider only significant relations between those variables (Nordlung, Garvill 2002; Oreg, Katz-Gerro 2006; Glavas, Kelley 2014). The aim of such approach is to achieve a good model fit (Byrne 2010), but consequently not including the entire array of relations between variables.

In terms of the principles for achieving a satisfactory model fit (Hu, Bentler 1999; Becker et al. 2016) and the prevalent research practice in this field

(Nordlung, Garvill 2002; Oreg, Katz-Gerro 2006; Glavas, Kelley 2014) would our model yield the following fit statistics: χ^2 ($N = 900$, $df = 75$) = 215.135, $p < 0.001$; CFI = 0.916; IFI = 0.917; RMSEA = 0.056; PCLOSE > 0.05 (0.128) indicated a good fit between the hypothesized model and data.

For our research we identified new constructs regarding employees' attitudes toward environment, economics results and behavior regarding devotion of resources for environmental protection. To study the personal values we adopted those from Schwartz value theory (Schwartz 1994, 2012). For newly identified variables, we researched the interplay between them and their fit to the data. The tested model is outlined in *Figure 2*.

Figure 2 presents the measurement and relation-model for the combined samples of employees and business students ($N = 900$).

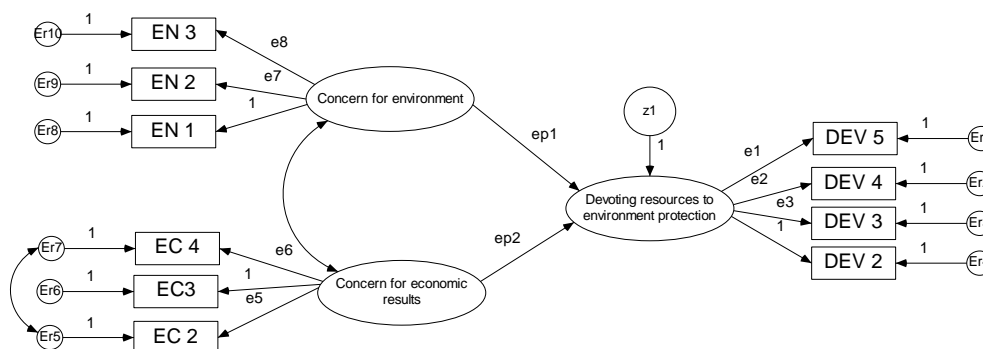


Figure 2. A final hypothesized model of relationships in the environmental model

Source: (Nedelko, Potocan 2013)

According to the proposed research design, our final model resulted in a good model fit: χ^2 ($N = 900$, $df = 71$) = 206.422, $p < 0.05$; CFI = 0.920; RMSEA = 0.046; $\Delta\chi^2 = 186.04$; $\Delta CFI = 0.070$; $\Delta RMSEA = 0.006$.

The hypotheses will be tested for employees in organizations and for then business students. We will use the final model, which will also incorporate personal values. In line with research aims, we used two samples to reveal possible differences among employees and future employees as well as the role of personal values and attitudes for shaping behavior for each sample.

We further tested whether the same factor structure is valid for both samples or not. The group invariant model – the same model is valid for both samples – results are χ^2 ($N = 900$, $df = 71$) = 206.422, $p < 0.05$; CFI = 0.920; RMSEA = 0.046 whereas the group variant model – involving a different model for each sample – results are χ^2 ($N = 900$, $df = 62$) = 200.934, $p < 0.05$; CFI = 0.918; RMSEA = 0.050. The results reveal that the group invariant model fits the data better than variant model. Thus, the same relation-structure is valid for employees and business students; the group invariant model results are considered.

In terms of identifying a possible multi-collinearity among variables in the study – i.e. employees' personal values, employees' attitudes and devotion of the resources, it is evident that the “tolerance values” ranged between 0.426 and 0.849, and the VIF values ranged between 1.177 and 2.347. In research practice, the tolerance values greater than 0.10 and the VIF values lower than 10 are acceptable (Ho 2006).

Results

Table 1. Means, standard deviations, and correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Power	4.26	1.06	1											
2. Achievement	5.13	0.84	0.663**	1										
3. Hedonism	5.02	1.37	0.375**	0.407**	1									
4. Stimulation	3.82	1.43	0.412**	0.475**	0.465**	1								
5. Self-direction	5.16	0.82	0.367**	0.554**	0.327**	0.442**	1							
6. Universalism	4.84	0.90	0.299**	0.402**	0.298**	0.249**	0.497**	1						
7. Benevolence	5.10	0.76	0.273**	0.403**	0.317**	0.271**	0.406**	0.610**	1					
8. Security	5.00	0.98	0.426**	0.477**	0.372**	0.287**	0.403**	0.555**	0.564**	1				
9. Tradition	3.18	1.23	0.366**	0.293**	0.225**	0.242**	0.210**	0.441**	0.525**	0.440**	1			
10. Conformity	4.51	1.05	0.422	0.454**	0.294**	0.251**	0.286**	0.433**	0.593**	0.535**	0.570**	1		
11. Concern for environment	2.77	1.50	0.116*	-0.051	-0.011	-0.002	-0.125**	-0.254**	-0.187**	-0.099*	-0.009	-0.063	1	
12. Concern for economic results	4.97	1.36	-0.248**	-0.148**	-0.100*	-0.113*	0.002	0.036	-0.009	-0.060	-0.123**	-0.126**	-0.287**	1
13. Devotion of resources	3.78	1.38	0.012	-0.078*	-0.039	-0.045	-0.110**	-0.210**	-0.202**	-0.132**	-0.136**	-0.128**	0.467**	-0.061

Notes: **p < 0.001, * p < 0.05; sample size is 900.

Source: Authoring

Results for employees

The impact of the employees' personal values, their attitudes toward environment and their attitudes toward concern for economic results on corporate devotion of resources for environment protection, are outlined in *Figure 3*.

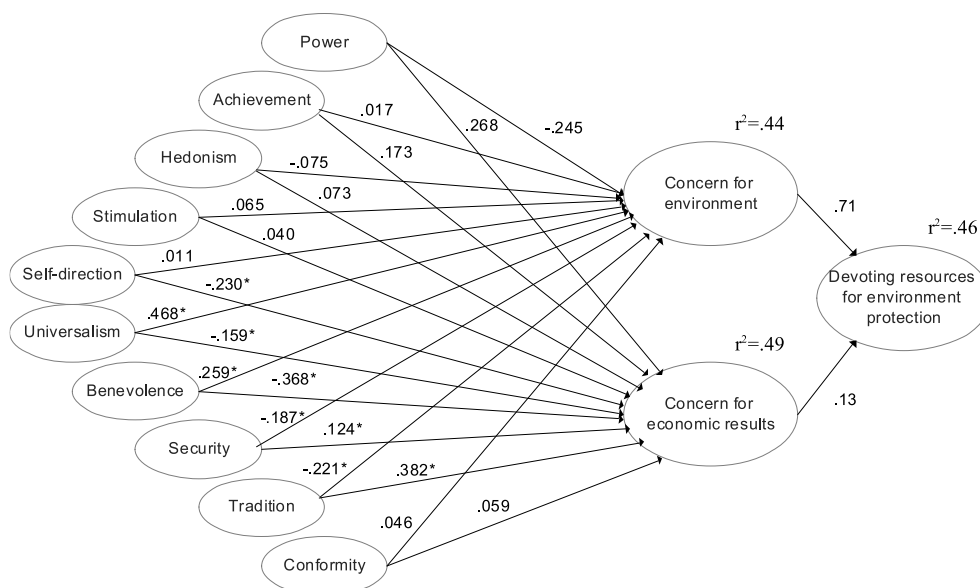


Figure 3. Standardized regression coefficients for relations between values, attitudes and behavior – employees

Source: (Nedelko, Potocan 2013)

The strongest and statistically significant effects on the concern for the environment come from universalism, benevolence, tradition, and security, thereby supporting Hypothesis 1. In other words, as the importance of universalism and benevolence increases, so does the concern for the environment. On the other hand, as the importance of tradition and security increases, concern for the environment decreases.

The strongest and statistically significant effects on the concern for economic results belong to tradition, benevolence, power, self-direction, universalism, and security; this supports Hypothesis 2. As the importance of tradition increases, so does the priority of concern for economic results. Meanwhile, as the importance of benevolence, self-direction, power, and universalism decreases, the priority for economic concern increases.

The results indicate that the concern for the environment positively and significantly impacts the level of corporate devotion of resources for environmental protection ($\beta = 0.71$, $p < 0.001$). Thus, a higher concern for the environment is associated with a higher devotion of resources to environmental protection. These findings confirm Hypothesis 3.

The results also reveal that the concern for economic results positively and significantly impacts the level of devotion of resources to environmental protection ($\beta = 0.13$, $p < 0.05$). Based on these statistical findings, we support Hypothesis 4.

The squared multiple correlations illustrate that 46% of the variance in the level of the corporate's devotion of resources to environmental protection is accounted for by the joint influence of concern for the environment and the concern for economic results. The remaining variance (i.e., 54% the level of the corporate's devotion of resources to environmental protection) cannot be explained by the model, i.e. with personal values and the considered two attitudes.

Results about the direct effect of different groups of values on employees' attitudes toward the devotion of resources to environmental protection are outlined in *Figure 4*.

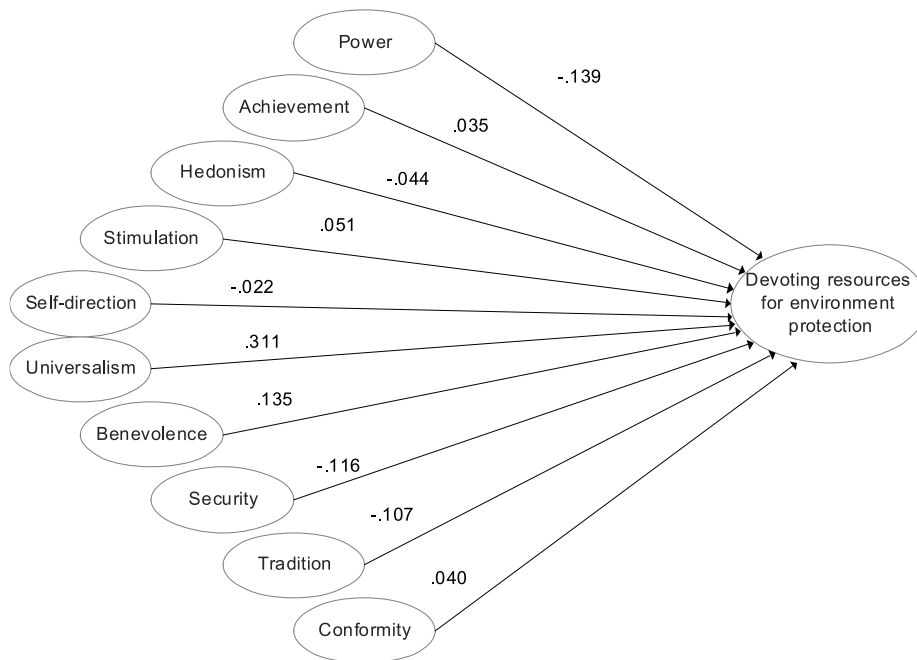


Figure 4. Standardized regression coefficients for relations between personal values and behavior – employees

Source: (Nedelko, Potocan 2013)

In the case of employees, universalism has the strongest direct effect on the devotion of resources for environmental protection. Thus, the higher importance of universalism for employees is associated with a greater allocation of resources for environmental protection. The effects of other groups of values (i.e., power, benevolence, security, and tradition) are weaker.

Results for students

The impact of the students' personal values, their attitudes toward environment and their attitudes toward concern for economic results, on corporate devotion of resources for environment protection, are outlined in *Figure 5*.

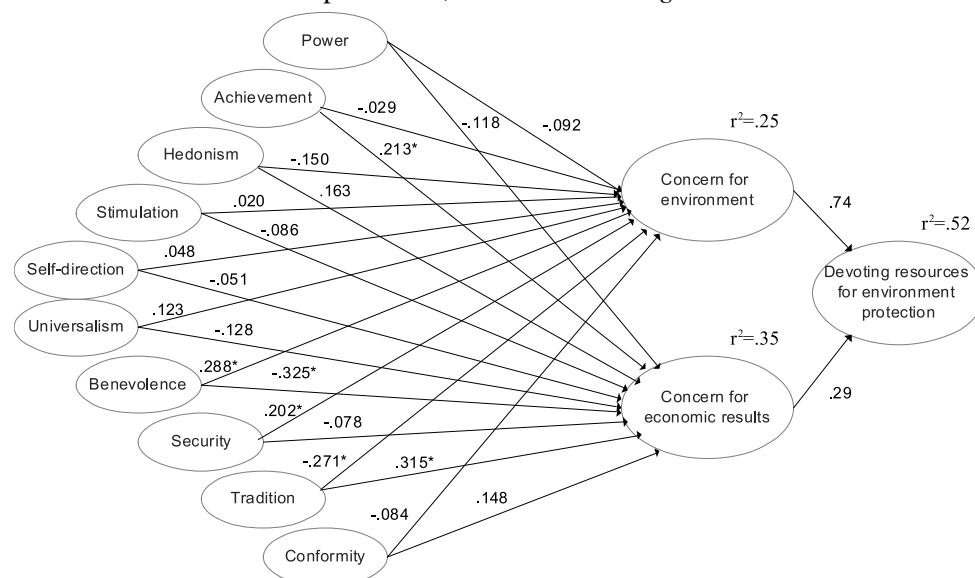


Figure 5. Standardized regression coefficients for relations between values, attitudes and behavior – students

Source: (Nedelko, Potocan 2013)

The strongest and statistically significant effects on the concern for the environment belong to benevolence, tradition, and security, which support Hypothesis 1. As the importance of benevolence and security increases, so does the concern for the environment. On the other hand, as the importance of tradition increases, the concern for the environment decreases.

The strongest and statistically significant effects on the concern for economic results come from benevolence, tradition, and achievement, which support Hypothesis 2. As the importance of benevolence increases, the priority of concern for economic results drops. Meanwhile, as the importance of tradition increases, the priority of concern for economic results increases.

The results indicate that concern for the environment and concern for the economic results significantly and positively impact the level of corporate's devotion of resources for environmental protection ($\beta = 0.74$, $p < 0.001$ and $\beta = 0.29$, $p < 0.05$, respectively). Thus, a higher level of concern for the environment is associated with greater allocation of resources for environmental protection. These findings confirm Hypothesis 3. The results also reveal that the concern for economic results positively and significantly impacts the level of

devotion of resources to environmental protection. Based on these statistical findings, we support Hypothesis 4.

The squared multiple correlations illustrate that 52% of the variance in the level of the corporate devotion of resources to environmental protection is accounted for by the joint influence of concern for the environment and concern for economic results. The remaining variance (i.e., 48% the level of the corporate's devotion of resources to environmental protection) cannot be explained by the model.

Results about the direct effect of different groups of values on students' attitudes toward the devotion of resources to environmental protection are outlined in *Figure 6*.

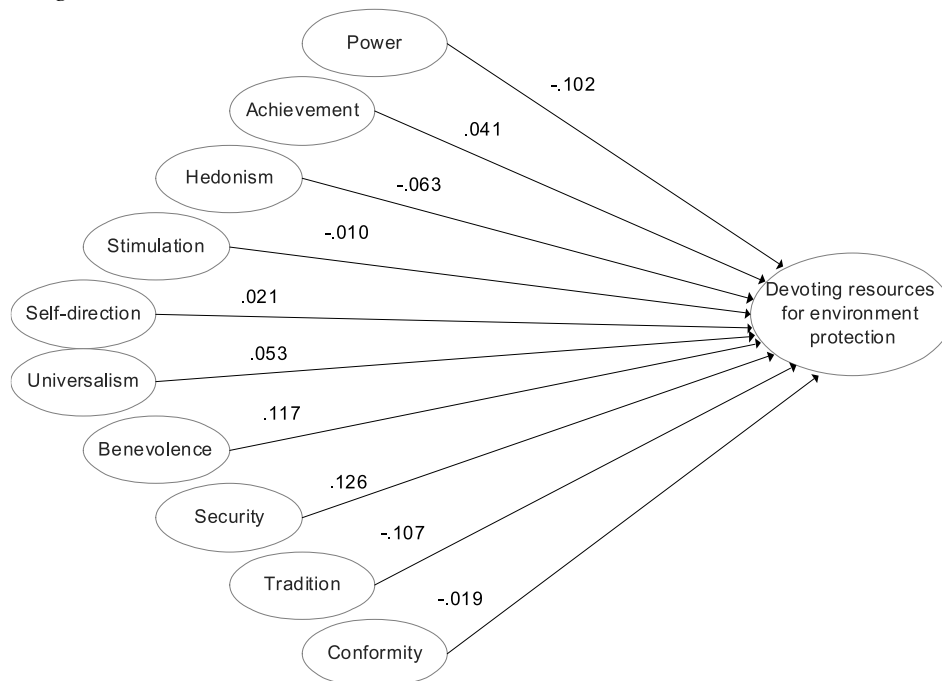


Figure 6. Standardized regression coefficients for relations between values and behavior – students

Source: (Nedelko, Potocan 2013)

The direct effects of all groups of values on the devotion of resources to environmental protection are very weak and insignificant.

Discussion

This study examined the impact of personal values on employees' and business students' attitudes regarding devoting resources to environmental protection, considering also attitudes regarding concern for environment and concern for economic results. In the last decade, the frequently emphasized issues about responsible behavior related to the natural environment have also highlighted the

need to understand how people's personal values influence their behavior when deciding about allocating resources for environmental protection (Davis, Whitman, Zald 2008; Peet, Hartwick 2009; Haq, Alistair 2011; Glavas, Kelley 2014; Rego, Pina, Polonia 2017). The examination of the student sample contributes to the more comprehensive understanding and anticipation as their behavior as the next generation of employees.

Our fundamental findings about the positive influence of universalism on the concern for the environment and on allocation of resources to environmental protection for both employees and business students are in line with the literature, which reveals universalism as a positive predictor of pro-environmental behavior (Frank, Karp, Rush 1996; Glavas, Kelley 2014) and environmental attitudes (Schultz, Zelezny 1999; Glavas 2016). However, in our study benevolence demonstrated the strongest impact on students' concern for the environment and also on their behavior regarding allocation of resources to environmental protection. This result is different from the prevailing literature, claiming that universalism is the main predictor of pro-environmental behavior (Frank, Karp, Rush 1996; Rego, Pina, Polonia 2017) and positive environmental attitudes (Schultz, Zelezny 1999; Glavas 2016); both of these ideas were also confirmed on student samples (Schultz, Zelezny 1999; Dahlsrud 2008). Our study reveals a dominant influence of benevolence for students and a dominant influence of universalism and benevolence on attitudes about environmental concern and behavior regarding devotion of resources, for employees.

Thus, our results indicate that universalism is the strongest predictor of employees' concern for the environment whereas benevolence is strongest for business students. In other considered studies, benevolence is not mentioned as a significant predictor of environmental attitudes (Stern, Dietz 1994; Schultz, Zelezny 1999; Alibeli, Johnson 2009).

The study results for both samples used in the research indicate that concern for the environment has a very strong and positive impact on people's perceptions regarding behavior about corporate devotion of resources for environment protection (which confirmed Hypothesis 3). Contrary to the expectations, the concern for economic results showed a positive, although weak impact on employees' perception regarding the level of the devotion of resources to environmental protection; for students, the impact is somewhat stronger. The combination of concern for the environment and concern for economic results accounted for 46% of the variance in the level of devotion of resources to environmental protection for employees and 52% for business students. These two predictors have a great explanatory power as they explain almost half of the variance, despite the fact that a set of rational (Axelrod, Lehman 1993; Blackburn 2007; Mullins 2013) and irrational factors (Schultz et al. 2005; Wang, Juslin 2011) influence people's pro-environmental behavior (Axelrod, Lehman 1993; Kemmelmeier, Krol, Hun Kim 2002; Dietz, Fitzgerald, Shwom 2005; Buchanan, Huczynski 2010).

Consistent with Hypotheses 1 and 2, the combination of the considered 10 groups of values for the employees' sample accounted for 44% of the variance in concern for the environment and 49% of the variance in concern for economic results. The values explained 25% and 35% of these variances, respectively, in the business students' sample. A similar investigation by Karp (Frank, Karp, Rush 1996) did not report the percentage of variance in environmental issues that can be explained by the personal values. In addition, Nordlung and Garvill (Nordlung, Garvill 2002) investigated the model of the influence of values through problem awareness and personal norms, finding that 21% of the variance in pro-environmental behavior was explained by a combination of values and other variables in the model.

From a statistical viewpoint, the concern for economic results significantly and positively impacts the level of devotion of resources to environmental protection for both examined samples, although this association is very weak and of little practical significance. We can argue that this tendency is in line with a "contemporary or new" view on the role of striving for economic goals in frame of the "triple-bottom line" idea emphasizing a more balanced role between the economic, environmental and social goals (Elkington 2004). Our findings about positive impact of the economic attitudes on the level of devotion of resources to environmental protection are opposite to those, claiming that the main goal of the organization is profit (Friedman 1962; Kitzmueller, Shimshack 2012).

The results of this study are influenced by several different objectives, including subjective facts and factors. Such objectives include: examining two samples simultaneously (i.e., employees and business students); using SEM when all value groups are simultaneously considered with regard to their influence on concern for the environment and for economic results; and c) using constructs for considering attitudes and behavior, based on exploratory factorial analysis, instead of the well-known variables, albeit with a very general new environmental paradigm.

Conclusions

In our study the influence of employees' values on concern for environment, concern for enterprises' results and their preparedness for using resources for environmental protection are discussed and compared with similar prior studies. Investigation mainly confirms other authors' findings about the influence of personal values on environmental issues, while some differences exist when we compare employees' and business students' samples. We present some cognitions about interdependences between personal values regarding environmental issues, and about the direct impacts of concern for the environment and for economic results in relation to devotion of resources to environmental protection.

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GOSPODARKA ROLNA I PRODUKCJA NA ŚWIECIE I NA WĘGRZECH

Streszczenie: Rolnictwo ekologiczne jest ważną formą zrównoważonego rolnictwa, które w przeciwieństwie do produkcji zintegrowanej nie wykorzystuje chemikaliów i sztucznych nawozów podczas produkcji na rynkach krajów rozwiniętych, gdzie środowisko i dom pozostają ważne dla konsumentów. Artykuł porusza kwestie dotyczące wiedzy konsumentów odnośnie korzyści płynących z produktów ekologicznych i ich wpływu na środowisko, aby nie traktowali ich tylko jako wyroby luksusowe. Kolejną ważną kwestią jest cena, jaką konsumenci mogą płacić za tego typu produkty na rynku, a także istniejący problem nieufności klientów względem producentów i samych produktów. W artykule uwzględniono omówienie wyników badań dotyczących powyższej kwestii, które wskazują, iż jest to bardzo ważny problem, dotyczący rynku węgierskiego, ale także i czynnik mający wpływ na rynki międzynarodowe.

Słowa kluczowe: produkty organiczne, ekologiczne gospodarstwo, rolnictwo, uprawa i produkcja żywności ekologicznej