

# Business students' preferences about social responsibility in Hungary

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*Abstract:* Understanding personal attitudes and opinions towards social responsibility is the key of development both for business strategies and curriculum in higher education. Simply asking the opinions may lead to a distorted picture because of the various social expectations reflected in expressed opinions. Using preference analysis, including the measurement of individual and collective level of consensus improves the validity of a research in the field. This paper presents the results of investigating related preferences of business students as future managers in Hungary (n=250, random sampling). The research activity focuses on the perception of environmental and social issues; personal consistency in preferences; and exploring grouping options. The analysis uses descriptive statistics, Kendall's coefficient of concordance and Nonlinear Canonical Correlation (OVERALS) analysis. The results show that preference orders of most respondents are clear and those are different by gender, level of education and knowledge level about CSR. The respondents keep environmental problems more important than social ones. OVERALS analysis confirmed the grouping possibilities which allows the targeted development and education actions.

*Key-Words:* corporate social responsibility, sustainability, preference test, consistency, Guilford-method, OVERALS

## 1 Introduction

Several studies deal with social responsibility and moving towards sustainability. The corporate goals may be cleaning the production or increase the eco-efficiency (see e.g. Schmidheiny 1992; Brennan 2012) or establishing a new foundation for meeting the resource-usage and satisfying the customer needs (see e.g. Pauli, 2010). Along supply chain systems a multiplicative effect can be achieved, sustainable service offerings and green strategies (Mahdzar et al., 2016) can be extended. Moreover, greening can be a good business if customer behavior would move in a more socially and environmentally responsible way.

The challenge is complex. Although, corporations have the possibilities to develop their environmental performance, it is not available without supporting legal regulations and without fundamental research of personal aspects including the customer and decision maker roles. In addition, the influence of economic interest in the decisions related to environmental and social issues (Karajz, 2014).

Exploring the students' approaches and opinions allows to justify the future strategies that lead to harmony and genuine progress. Our research focuses on business students, who will become the future managers and decision makers.

Recent results point out that remarkable differences can be found by gender, age, level of knowledge or religion, but the generalization is difficult because territorial validity may be limited, national and local characteristics may influence the results. Ibrahim et al (2008) found in the USA that there are no significant differences by religion, managers are concerned significantly more about the economic aspects than students, and significantly less about legal, ethical and discretionary aspects. Ng and Burke (2010) points out that a more collective orientation supports sustainable business practices. Schmidt and Cracau (2015) based on a German and Qatar sample diagnose that females keep economic sustainability less important than males, significant differences between the countries underlines the necessity of consideration of country specific characteristics in corporate CSR strategies. Kaya et al. (2014) in Turkey did not find a difference between students having or not having a social responsibility course, past volunteer experience is believed to foster future opportunities to volunteer. These examples denote that a common attitude is not to find both in the respondents' behavior and the research interest. We believe that local solutions require local investigation. However, the domestic official and relevant researches about the concept and content corporate social responsibility are considerably limited in Hungary. Primarily bachelor, master and doctoral thesis deal with the issues, but representativeness is often missing, therefore wider conclusions are hard to make. The available results show a development in the recognition of the subject. The research of Zsóka et al. (2013) can be highlighted which investigates the effects of environmental education on pro-environmental behavior. They found that 'light green' activities are preferred by the respondents and education has a relevant impact on environmental behavior.

The research institute Sonda Ipsos made a representative survey in 2002 involving respondents who are interested in the topic, i.e. people who are interested in social and economic issues and corporate behavior is a topic of conversation. There is distrust expressed towards the corporate social responsibility practice of Hungarian corporations by 44% of the respondents and the practice of multinational corporations by 54% of them.

In the context of responsible corporate behavior, the respondents emphasized the treatment of employees (29%), higher wages and salaries (26%), safety workplaces (26%) and job creation/job protection (17%). The opinions agree that the external focus must be on quality products at a reasonable price, environmental protection, ethical

behavior, including avoiding child employment and ethical information about the products.

Another Hungarian survey from 2006 (performed by the Business Council for Sustainable Development and GfK) points out that the topic is not widely known. The concept of sustainable development was known by 26% of the respondents of whom 42% claimed that also the content is known. In their opinion, sustainable development covers environmental protection, economic development, and improving quality of life, utilization of renewable energy sources, continuous improvement and encouraging organic products. Answers related to sharing responsibility showed that corporations shall focus on healthy and safe working environment as a main duty, and supporting R&D programs in harmony with the sustainable development goals. On the other hand, governmental responsibility includes supporting NGO-s, consumer protection, health education and promotion, health care, fighting against discrimination and poverty.

There were 2.000 people involved in the investigation by Putzer et al. (2014) of whom 87.6% have heard about the concept of corporate social responsibility. 42% of the respondents summarizes it as supporting environmental and social initiatives. Corporate social responsibility means compliance with law and regulation (34.5%), ethical operation (24.6%) and profit maximization (19.3%).

It is observed that comparing the results with the categories pyramid of Carroll (1991) the economic, legal and ethical ones are represented but voluntary elements are missing. Such actions are kept only a marketing trick by 10.8% and 11.5% believes that corporate social responsibility is associated with a cost-increase.

A representative customer survey by Riskó et al. (2015) highlights the job creation and employment, compliance with law and regulation and environmentally conscious operations as the most important aspect of corporate social responsibility. Scholarly investigating in the field is even more limited among higher education students. Our study subject is the perception and attitudes of business students towards corporate social responsibility.

This paper is structured as follows. First, research questions, hypothesis under study, description of random sampling and analysis methods are introduced. In Chapter 3 empirical results are presented based on the Guilford model and OVERALS analysis. Finally, the last section outlines the conclusions and discusses some directions for further research.

## 2 Problem Formulation

### 2.1 Research sample and limitations

The research sample contains the responses of Hungarian higher education business students from several institutions. The data collection was performed in 2014 and 2015 by an on-line, entirely voluntary survey. The sample of the present study contains 250 of the 1014 responses, randomly selected. However, the research sample is not representative and the results and conclusion are limited to the sample, the large sample and the random sampling improve the validity.

The grouping criteria are gender, level of education and level of CSR education. Table 1. summarizes the characteristics of the sub-samples.

Table 1: Research sample

Sample	Description	Sample size
Female	Female students	162
Male	Male students	88
BA/BSc	Bachelor students	166
MA/MSc	Master students	72
Other level	Other level (post gradual) students	12
Did not learn about CSR	Students who has not learnt about CSR (based on self-reporting)	135
Superficial CSR knowledge	CSR was mentioned in the curricula but details are not known (based on self-reporting)	81
Detailed CSR knowledge	CSR is discussed in details or known by self-education (based on self-reporting)	34

Source: own survey

### 2.2 Disabilities and challenges of attitude studies

It is easy and obvious to ask the respondents about their attitudes and opinions by using ordinal evaluation scales (e.g. a five-point Likert scale), but serious limitations and distortions should be considered, including the problems of common understanding and the effects of social expectations in responses. The relevant literature shows various surveys for exploring the attitudes toward the content

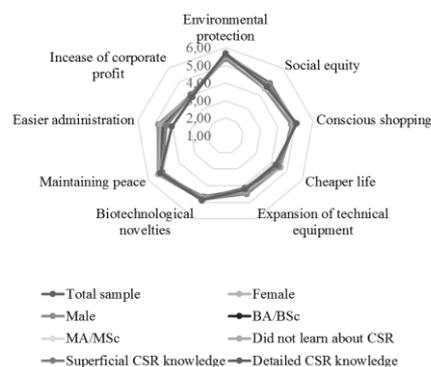
of sustainable development and corporate social responsibility (see e.g. Calabrese et al., 2016).

The experiences show that it is difficult and unclear to define the appropriate attention to environmental, social and economic aspects in decisions neither on personal nor on corporate level. Investigation is complicated because of the varied concepts and interpretations of topics related to sustainability (see e.g. Tetřevová & Svědík, 2012). E.g. differences between corporate social responsibility and corporate social responsiveness (Kubenka & Miskova, 2009) gives solutions to a quite narrow scope of the corporations, an everyday delimitation misses the required background knowledge of the society as well as the need for further elaboration.

The stakeholder theory (see e.g. Freeman, 2010; Phillips, 2011) explains the conflict of interest due to the diverse goals of the interested party even if the common goals are clear and known. Moreover, social expectation must be considered in stated opinions in a survey (Babbie, 2000) that inspired to apply preference analysis instead of a direct attitude study.

The present survey includes a session, which asks to mark on a six-point scale, whether the listed item is more (higher value) or less (lower value) important for sustainable development (Figure 1.).

Fig. 1: Evaluation of some issues for sustainable development (6-point scale)



Source: own survey

The results illustrate that the opinions are similar regardless of the applied grouping factors and higher values (higher importance for sustainable development) are typical, real preferences remain hidden. Checking the skewness ( $\gamma$ ) of the distribution with the support of SPSS (Argyrous, 2013) it is confirmed that the responses show a left-extending distribution in each case (Table 2.) because  $\gamma < 0$ .

Establishing effective development actions (including the renewal of environmental and business

education) requires a more detailed picture about the topic which expects a new investigation approach and new types of questions. In our paper we use simple ranking and pairwise comparison for further analysis.

Table 2: Evaluation of some issues for sustainable development – skewness of distribution

Question	Skewness (Y)	Std. Error
Environmental protection	-2.129	0.154
Social equality	-0.665	0.154
Conscious shopping	-0.852	0.154
Cheaper life	-0.507	0.154
Technical equipment	-0.140	0.154
Biotech innovation	-0.656	0.154
Peace	-1.530	0.154
Administration	-0.622	0.154
Profitability of companies	-0.310	0.154

Source: own edition based on SPSS output

### 2.3 Research goals and assumptions

Raising awareness for both establishing sustainable business strategies and targeted education in the field may moderate the dissension of opinions and it may allow the establishment of a comprehensive interpretation of the terminology and goals of corporate social responsibility. Business students as future managers have a key role in these changes. In our research we try to explore the consistency of opinions and attitudes towards sustainability and corporate social responsibility based on the analysis of respondents' preferences.

This paper analysis two topics of the survey, which allow the analysis of preferences by leaving the attitude-scales aside:

- Which of the following do you believe the main global problems worldwide? – Respondents are asked to mark 3 issues from a list.
- Which of the following should rather deal with a company? – Respondents are asked to make a pairwise comparison of 6 selected topics

including environmental, social and economic issues.

There are 3 hypotheses of the research are as follows:

- H1. Environmental problems are considered more important than social ones by the respondents.
- H2. The respondents have inconsistent preference orders about the corporate responsibility related to sustainability.
- H3. Respondents' perceptions about global problems and preferences about corporate responsibility can be grouped by gender, level of education, and CSR knowledge.

### 2.4 Methods

The perception of global problems worldwide is analyzed by a question which asks to mark maximum 3 relevant elements from a list including 15 items. The items are selected by the consensus of an expert team based on reviewing the concerning literature. The pairwise comparison about the focus point of corporate responsibility 6 topics in 15 pairs and the respondents has to choose the preferred one. The topics are as follows:

- cost reduction,
- developing greener technologies,
- financial support of environmental protection,
- higher income for workers,
- supporting schools and kindergartens,
- waste reduction.

The questions are prepared for preference analysis by the Guilford-method (Kindler & Papp, 1978) that allows to calculate:

- the personal level of consistency (K) in the order of the factors ( $0 \leq K \leq 1$ , where 0 is the complete absence of consistency, 1 is the complete consistency, the latter means the responder has a clear list of preferences),
- group-level preference orders on interval-scale (a limitation of the method is that quantified results between groups are not comparable!) between 0 and 100,
- group level consensus by Kendall's coefficient of concordance for pairwise comparison (v) (Kendall, 1970), including the cases  $K \geq 0.75$ .

The maximum level of Kendall's coefficient of concordance is 1, on the other hand, the minimum is not fixed, it depends on the number of cases (m):  $v_{\text{even}} = -1/(m-1)$  and  $v_{\text{odd}} = -1/m$ . In order to ensure the comparison, we calculate with a corrected coefficient of consensus as:

$$v_{corr. i} = 100 * \frac{v_i - v_{min}}{1 - v_{min}} \quad (1)$$

The significance test is as follows (Kindler & Papp 1978:187):

$$u = \sqrt{2\chi^2} - \sqrt{2d_f - 1} \quad (2)$$

where  $\gamma$  shows the sum of values below the main diagonal in the aggregated preference matrix, i.e. the number of non-preferred incidences;  $n$  is the number of factors and  $\chi^2, d_f$  :

$$\chi^2 = \frac{4}{m-2} \left\{ \sum \gamma^2 - m \sum \gamma + \binom{m}{2} \binom{n}{2} - \frac{1}{2} \binom{n}{2} \binom{m}{2} \frac{m-3}{m-2} \right\} \quad (3)$$

$$d_f = \binom{n}{2} \frac{m(m-1)}{(m-2)^2} \quad (4)$$

In order to examine our third hypothesis about differences between students' perceptions on global problems in the European Union, the main characteristics of CSR activities and the preferences about corporate responsibility by gender, CSR-related knowledge and level of education at the same time, were identified by Nonlinear Canonical Correlation (OVERALS) analysis. The main purpose of Nonlinear Canonical Correlation analysis is to explain as much variance in the relationships between two or more sets of numerical, ordinal or nominal variables as possible in a low dimensional space (van der Burg et al. 1994, Meulman and Heiser, 2004). As van der Burg et al. (1994) suggest OVERALS also contains some basic techniques of multivariate analysis and can be regarded as a type of homogeneity analysis as well. Canonical correlation for more than two sets of variables can be generalized with the following formula (SPSS Inc, 2007, p. 251), where  $d$  is dimension number,  $K$  is number of sets,  $E$  is eigenvalue.

$$p_d = ((KxEd) - 1)/(K - 1) \quad (5)$$

For measuring the association between sets of variables, fit and loss values generated by SPSS were used. Fit and loss values indicate the fit between the nonlinear canonical correlation solution and the optimal quantified data with respect to the association between the sets (SPSS Inc, 2007).

### 3 Problem Solution

#### 3.1 Perception of global problems

The survey shows that environmental problems precedes socials in the judgment of the respondents. Table 3. summarizes the five most important problems worldwide and the ratio of marking. Air pollution, depletion of energy sources and climate change are primarily mentioned by the respondents. Starvation accessed the fifth place on the list, but the ratio of markings (26%) are much less than the previously mentioned issues have (Table 3.).

Table 3: Top-5 global problems, total sample (marked by the % of the sample)

Total sample		
1.	Air pollution	42
2.	Depletion of energy sources	41
3.	Climate change	40
4.	Water pollution	29
5.	Starvation	26

Source: own survey

Table 4: Top-5 global problems by study level (marked by the % of the sample)

Bachelor level		Master level	
1.	Air pollution & Depletion of energy sources	40	Air pollution 47
2.	Depletion of energy sources		Depletion of energy sources 43
3.	Climate change	39	Water pollution 38
4.	Starvation	28	Climate change 36
5.	Crime	27	Industrial waste 24

Source: own survey

Table 5: Top-5 global problems by gender (marked by the % of the sample)

Female			Male	
1.	Air pollution	41	Depletion of energy sources & Air pollution	43
2.	Climate change & Depletion of energy sources	40	Air pollution	43
3.	Depletion of energy sources		Climate change	39
4.	Water pollution	28	Water pollution	31
5.	Starvation & Crime	26	Starvation	25

Source: own survey

The results by the level of studies (Table 4.) contains also crime (27%). Master level student feel air pollution and depletion of energy resources more

relevant than bachelors, and industrial waste appears on the list. Top-5 list by gender (Table 5.) contains similar items.

Analysis by the level of CSR knowledge (Table 6.) shows that in the top three issues are the same but the preference orders are different. Crime and starvation as social issues are in the top five by respondents without or superficial knowledge about CSR and healthy foods in case the respondent has a detailed CSR knowledge.

Table 6: Top-5 global problems by CSR knowledge (marked by the % of the sample)

Did not learn about CSR		Superficial CSR knowledge	Detailed CSR knowledge			
1.	Air pollution	44	Depletion of energy sources	43	Air pollution	44
2.	Climate change & Depletion of energy sources	40	Climate change	40	Depletion of energy sources	41
3.	Crime	31	Air pollution & Water pollution	37	Climate change	38
4.	Starvation	30	Starvation	27	Healthy foods	32
5.					Water pollution	29

Source: own survey

### 3.2 Personal level of consistency

Based on the pairwise comparison the personal level of consistency can be calculated. Figure 2. shows the distribution for the total sample, by gender and study level. 45.2% of the respondents have an absolutely clear preference order (K=1). This ratio is between 35.3% and 51.4%. The highest value is present in the group of master level students. 75.2% of the sample represents a high consistency level (K>=0.750). By sub-samples, 73.5% of females, 78.4% of males, 71.6% of bachelor and 83.3% of master students have this high consistency level.

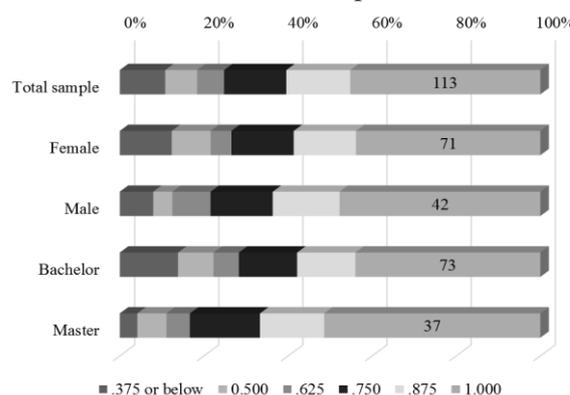
What is more, inconsistency (K<0.5) is a characteristic of 10.8% of the respondents. The highest ratio is to find in the sub-samples bachelor students (13.9%) and females (12.3%).

The more detailed CSR knowledge may expect a higher level of consistency. The results (Figure 3.) show that for the cases K>=0.750 this statement is true: 73.3% of who did not learn about CSR, 75,4% of who has superficial knowledge and 82.3% of who has detailed knowledge are in this group. Nevertheless, the sub-sample with detailed CSR

knowledge includes the fewest respondents with an absolutely clear preference order (K=1).

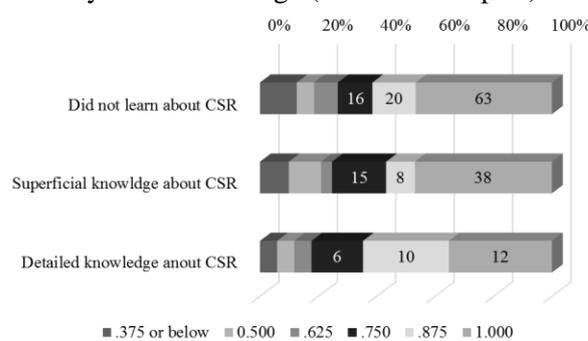
The significance of the results was checked by cross-tabulation (Anderson et al., 2007) between the level consistency and the grouping factors. Based on the analysis the sub-samples by each grouping factors are different from each other. Table 7. summarizes the Pearson-χ<sup>2</sup> and the significance levels.

Fig. 2: Distribution of personal consistency levels (% of sub-samples)



Source: own survey

Fig. 3: Distribution of personal consistency levels by CSR knowledge (% of sub-samples)



Source: own survey

Table 7: Significance-test of grouping by personal consistency levels

Grouping factor	χ <sup>2</sup>	df	2-sid. sign.
Study level	5.975(a)	8	0.650
Gender	14.866(b)	16	0.534
CSR knowledge	16.003(c)	16	0.453

- (a): 6 cells (33,3%) have expected count less than 5. The minimum expected count is .35.
- (b): 15 cells (55,6%) have expected count less than 5. The minimum expected count is .05.
- (c): 13 cells (48,1%) have expected count less than 5. The minimum expected count is .14.

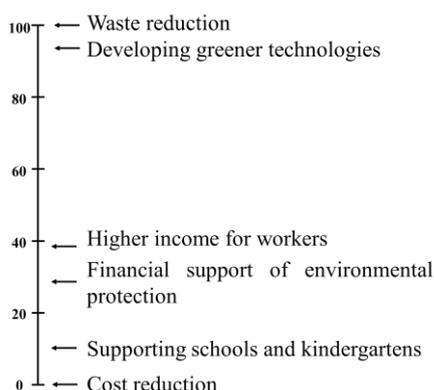
Source: own edition based on SPSS output

### 3.3 Preference orders and weighting by the Guilford-method

Based on the total sample, respondents keep the most important focus point of corporate responsibility the waste reduction. That is followed by developing greener technologies. At the end of the list cost reduction is to find. Figure 4. summarizes the degree of difference between the judgement on the importance of items on interval-scale.

Appendix 1. settles the results of sub-samples. It is important to note that the figure does not show the between them and results in the table are not directly comparable with each other due to the characteristics of an interval-scale (Gomm, 2009). Only the relative positions are to interpret within one sub-sample

Fig. 4: Expectations about corporate responsibility focus, weights on interval-scale by Guilford-method (0-100)



Source: own survey

According to the result presented in Appendix 1, it can be stated related to the preference orders about the expected areas of corporate social responsibility:

- waste reduction and greener technology development are kept the most important,
- social issues are behind the environmental ones,
- investing in the future by supporting schools and kindergartens is at the end of the preference lists,
- the rank of financial support of environmental protection is worse if the CSR knowledge level is higher.

### 3.3 Students' perceptions about global problems in the European Union, potential role and main elements of CSR activities

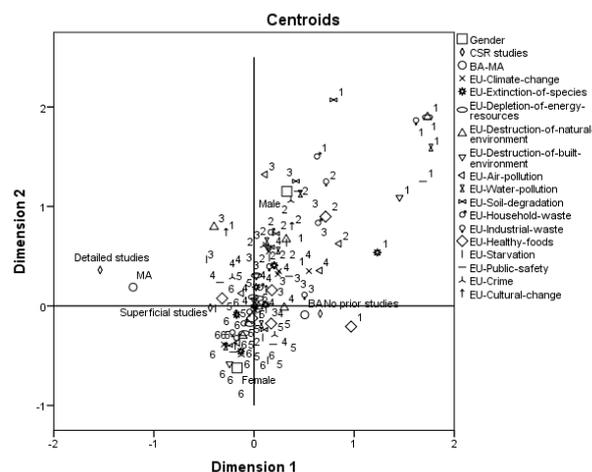
In the survey respondents were asked to express their personal opinion regarding the status of global

problems in the European Union and the role of CSR by using a 6-point Likert scale (which varied from 1: 'No relevance' or 'Totally disagree' to 6: "Fundamental problem" or "Totally agree"). Appendix 2 summarizes the main social and environmental problems in the EU and the list of statements in respect of the potential role of CSR being analyzed. Based on the total sample, Nonlinear Canonical Correlation (OVERALS) analysis was conducted to identify the interrelationship between the sets of variables of global problems in the European Union and the role of CSR practices by gender, level of education and CSR-related knowledge sets.

Figure 5 investigates the relationships between gender, level of education, CSR-knowledge sets and the sets of variables of global problems in the European Union (fit value: 0.830; average loss: 1.170).

Female students think that the extinction of species, climate change, water pollution, soil erosion, air pollution, destruction of the natural and built environment, depletion of energy resources, industrial and household waste management, cultural change and public safety are fundamental problems in the European Union, while male students seem to be less concerned about these types of environmental and social problems on EU level. The gravity of hunger seems to be serious and fundamental problems according to the perceptions of bachelor students with no prior CSR related studies while master students with superficial or even detailed CSR studies assume that the availability of healthy foods represents a critical issue in the European Union.

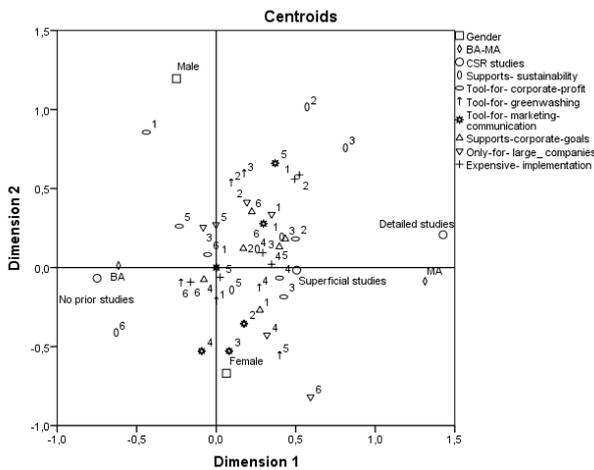
Fig. 5: Centroid plot for Global problems in the EU by gender, level of education and CSR related studies



Source: own model, based on SPSS 22.0

Figure 6 highlights the relationships between the different variables of CSR, gender, level of education and CSR-knowledge sets with a fit value of 0.746. According to the figure, students with detailed CSR related studies think that CSR can be seen as an excellent marketing communication tool and support corporate visions by bringing together the different economic, social and environmental goals of a company, while students with no prior CSR related studies assume that CSR activities can support sustainability, however companies usually use these practices for greenwashing as well. It should be also noted that master level female respondents think that CSR is applicable only by large companies, and male respondents with BA level studies assume that the implementation of CSR practices is expensive.

Fig. 6: Centroid plot for the role of CSR by gender, level of education and CSR related studies



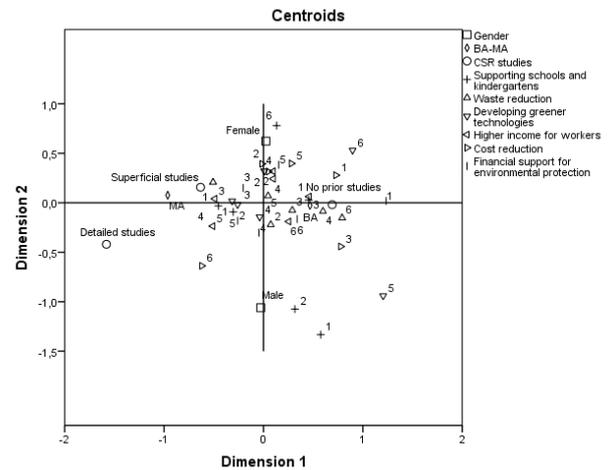
Source: own model, based on SPSS 22.0

In order to further investigate students' perceptions associated with the importance of the aforementioned CSR activities, our sample was refined by eliminating entities with non-perfect personal consistencies, and in accordance with the results of pairwise comparison, the interval scale values relevant for the variables of CSR activities have been transformed to ordinal scale (where 1 is the most important and 6 is the less important activity). The size of the sub-sample containing respondents whose personal Kendall's coefficient of consistency equals 100% is 113.

Figure 7 illustrates (fit value: 0.746, average loss: 1.254) that in this subsample, female students with no prior CSR related studies assume that cost reduction, financial support for environmental protection and insurance of higher income for workers are the most important CSR activities of companies. Furthermore,

master students seem to think that companies should focus their CSR activities on the development of greener technologies and waste reduction, while BA students seem to emphasizing the role of supporting schools and kindergartens.

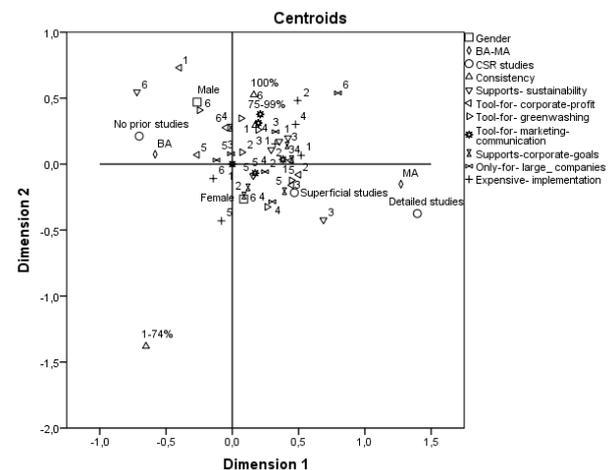
Fig. 7: Centroid plot for the preference of key CSR activities by gender, level of education and CSR related studies



Source: own model, based on SPSS 22.0

Based on these findings it is worth to investigate the differences between the respondents grouped not only by gender, CSR-related studies and level of education, but also by their personal level of consistency associated with the importance of the various CSR activities being analyzed.

Fig. 8: Centroid plot for the role of CSR by gender, level of education, CSR related studies and personal consistency



Source: own model, based on SPSS 22.0

As it is shown in Figure 8, students with perfect and high personal consistency level assume that corporate social responsibility is usually used by large

companies and can be interpreted as an excellent tool for marketing communication while respondents with low personal consistency level regarding the importance of CSR activities seem to think that implementing CSR activities is expensive. Results also highlight that there is a massive contradiction in the perceptions of male students with no prior CSR related studies at bachelor level associated with the role of CSR activities since they think that despite of being a useful tool to achieve the main goals of sustainability CSR is usually used by companies only for greenwashing purposes.

## 4 Conclusion

### 4.1 Evaluation of the results

Studies dealing with the future viability and success of CSR practices, sustainable technological and institutional innovations depend not only on the development and availability of management tools, systems or regulations, but on the perceptions and attitudes of the next generations as well (Stubbs & Cocklin, 2008, Fernandez & Sanjuan, 2010).

There is a great challenge of the higher education system to give a comprehensive knowledge about the topic. Cultural differences, gender, religiosity, age etc. may influence the perception of the problems and the applicable solutions, but a consensus is missing in the significant differences in various research reports (Panwar et al., 2010, Ng & Burke, 2010, Bageac et al., 2011, Zsóka et al., 2013). Our analysis presented in this paper focuses on exploring personal preference orders instead of asking the attitudes directly by elements. This approach allows to form a more nuanced picture about the value judgements.

Female respondents gave usually higher ratings, the overall picture shows a more definite and more sensitive approach of them to environmental and social problems and they have trust more in the usefulness of CSR.

### 4.2 Environmental vs. social issues in preferences

The hypothesis about the higher importance of environmental problems than social ones can be accepted based on the result.

The lists of five most important global problems by any sub-samples contain dominantly environmental issues. Although the order of importance is partly different, depletion of energy sources, air pollution, climate change and water pollution are kept the most worrying regardless of the

surveyed groups by university, gender or CSR knowledge level.

### 4.3 Personal preferences

The second hypothesis about the inconsistency of the preference orders must be rejected. Regardless of surveyed groups, it can be stated that the majority of the sample has a clear preference order about the expected areas of corporate social responsibility.

The research questions suggest whether it is feasible to break down the total sample into homogeneous groups. Our findings of nonlinear canonical correlation analysis highlight that students' perceptions associated with the presence of global problems in the EU, the potential role of CSR activities and their preferences about corporate responsibility can be grouped by gender, level of education, and CSR knowledge.

Regarding the relationship between gender and the perceptions of CSR, our findings suggest that female students consider most of the global problems to be more serious in the European Union than males. Our results also highlight that respondents with detailed CSR related studies think that CSR can be a useful marketing communication tool that supports corporate visions by bringing together the different economic, social and environmental goals of a company. Students with no prior CSR related studies assume that CSR activities can support sustainability, however companies can use these practices for greenwashing purposes as well.

Based on the results of OVERALS it can be also noted that female students with no prior CSR related studies and perfect consistency in relation to their preference of various CSR activities examined assume that cost reduction, financial support for environmental protection and insurance of higher income for workers are the most important CSR activities. The preferences of master students with perfect personal consistency reflect that companies should focus their CSR activities on the development of greener technologies and waste reduction, while corporate support of schools and kindergartens is preferred by bachelor respondents with perfect consistency. These results are somewhat contradicting the findings of Guilford method applied to the total sample indicating the critical and influential role of consistent thinking on preferences.

In sum, tests related to personal level of consistency show significant differences by each grouping factor. Consequently, the third hypothesis can be accepted, grouping factors are valid.

#### 4.4 Further Challenges

The main purpose of this research was to investigate the approach and opinions of future managers associated with the role and importance of corporate social responsibility. Utilization of the results are dual but interlocking:

- establishing more effective business and HR strategies in order to increase organizational performance,
- finding the lack of knowledge about sustainability and corporate social responsibility in order to develop personal sensitivity through renewed learning objectives and materials.

The authors' intention about the results is to draw attention to education challenges. Since using the topics of corporate social responsibility and sustainable development both in separate courses and integrated in strategic management, we believe that exploring the attitudes and perceptions is essential for adjusting the learning focus. The recent mission is to find the balance between the environmental and social issues of sustainability, i.e. show the comprehensive application of both sides instead of over-emphasizing environmental aspects.

Moreover, the related development actions shall not ignore the new organizational structures and endeavors. There is a growing attention paid to social enterprises in Eastern Europe. The linking possibilities between these enterprises, the social innovations and corporate social responsibility (Szegedi et al., 2016) can give a framework of forming the opinions of business students.

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## Appendix 1: Preference orders and coefficient of concordance by sub-samples

	<b>Total sample</b>	<b>Female</b>	<b>Male</b>	<b>BA/BSc</b>	<b>MA/MSc</b>	<b>Did not learn about CSR</b>	<b>Superficial CSR knowledge</b>	<b>Detailed CSR knowledge</b>
supporting schools and kindergartens	12.6	0.0	43.4	6.6	21.4	11.4	7.1	22.8
waste reduction	100.0	100.0	88.8	100.0	100.0	90.9	100.0	100.0
developing greener technologies	95.3	87.0	100.0	91.9	97.6	100.0	81.6	90.6
higher income for workers	38.9	38.1	42.7	30.4	47.8	48.4	28.5	30.0
cost reduction	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
financial support of environmental protection	29.5	27.3	38.0	29.1	29.5	27.9	23.0	38.3
v	0.0945	0.1050	0.0837	0.0801	0.1297	0.0627	0.1156	0.1969
vcorr.	9.81	11.05	9.40	8.56	14.16	6.96	12.63	21.99
u*	519.34	379.26	174.54	300.03	217.53	197.07	217.60	164.06
Note: because of the fact that preference orders are measured on an interval-scale, results between columns are not comparable! Only in-column, relative positions are to interpret!								
*All results are statistically significant.								

Source: own survey

## Appendix 2: Main social and environmental problems in the EU and the statements regarding the role of CSR

Aspects	Categories	Coding	Scale
<b>Global problems in the European Union</b>	To what extent do you think climate change is a serious problem in the EU?	EU-Climate-change	1: No relevance 2: Low relevance 3: Lower than moderate 4: Higher than moderate 5: Serious problem 6: Fundamental problem
	To what extent do you think extension of species is a serious problem in the EU?	EU-Extension-of-species	
	To what extent do you think depletion of energy resources is a serious problem in the EU?	EU-Depletion-of-energy-resources	
	To what extent do you think destruction of natural environment is a serious problem in the EU?	EU-Destruction-of-natural-environment	
	To what extent do you think destruction of built environment is a serious problem in the EU?	EU-Destruction-of-built-environment	
	To what extent do you think air pollution is a serious problem in the EU?	EU-Air-pollution	
	To what extent do you think water pollution is a serious problem in the EU?	EU-Water-pollution	
	To what extent do you think soil degradation is a serious problem in the EU?	EU-Soil-degradation	
	To what extent do you think household waste represents a serious problem in the EU?	EU-Household-waste	
	To what extent do you think industrial waste represents a serious problem in the EU?	EU-Industrial-waste	
	To what extent do you think availability of healthy foods represents a serious problem in the EU?	EU-Healthy-foods	
	To what extent do you think hunger is a serious problem in the EU?	EU-Hunger	
	To what extent do you think social security represents a serious problem in the EU?	EU-Social-security	
	To what extent do you think crime is a serious problem in the EU?	EU-Crime	
To what extent do you think cultural change represents a serious problem in the EU?	EU-Cultural-change		
<b>CSR related statements</b>	CSR can help to achieve the goals of sustainable development	Supports-sustainability	1: Totally disagree 2: Disagree 3: Lower than moderate 4: Higher than moderate 5: Agree 6: Totally agree
	Another tool for companies to generate profit	Tool-for- corporate-profit	
	These actions represent only greenwashing (main problems are hidden)	Tool-for-greenwashing	
	Excellent marketing communicational tool	Tool-for-marketing-communication	
	CSR can help companies coordinate and bring their different goals and pursuits together	Supports-corporate-goals	
	CSR can only be successful in case of large companies	Only-for- large_ companies	
	CSR implementation is expensive	Expensive-implementation	

Source: own survey