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Environmental sustainability and corporate social responsibility of business schools: is there evidence of transdisciplinary effects?

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ABSTRACT

This study analyses the relationship of environmental sustainability and the corporate social responsibility (CSR) of business schools by using the partial least squares structural equation modelling (PLS-SEM) empirical approach on a sample of 338 students from South East Europe. In support of the extant theory of responsible management education, emphasizing the transdisciplinary relationship between the Ethics, CSR, and Sustainability (ERS) domains, we found a direct relationship between environmental sustainability and CSR of business schools. However, we empirically verified a path of indirect effects at the institutional level, starting with the idealism of individual students, leading to the CSR institutional involvement of a business school, mediated by its environmental involvement. Provided that the idealistic individuals might be driving the functioning of the individual responsible management education and its domains, we propose the existence of a potential halo effect ('ERS halo effect'), which has already been described and verified in the corporate sector. We believe that its dynamics, based on the biased assessment of a single business school ERS domain, with its outcomes reflected in the other domains, should be further explored in different institutional and cultural environments.

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1. Introduction

Higher education has recently turned considerable attention to ethics, Corporate Social Responsibility (CSR), and environmental sustainability. The notion of Responsible Management Learning & Education (RMLE) has been introduced, encompassing those three topics as its fundamental dimensions, within an analytical framework of teaching and organizing for responsible individual and organizational learning (Cullen, 2020).

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This paper aims to empirically examine the RMLE emphasis on transdisciplinarity among its three Ethics-csR-Sustainability (ERS) domains (Laasch et al., 2020a), which has not been done before. It also aims to provide an alternative theoretical explanation of the relationships among students' moral philosophy, pro-environmental behaviour, and their perception of their business school's institutionalized environmental sustainability and its CSR using PLS-SEM modelling. Our attempt at alternative theoretical modelling of the CSR-sustainability relationship in business schools can be supported by the obtained empirical results. Those confirm a path of indirect effects at the institutional level, starting with the idealism of individual students, leading to the CSR institutional involvement of a business school, mediated by its environmental involvement.

A rationale for research of these topics in business schools has been demonstrated quite some time ago, as they were described in terms of an educational setting, in dire need of teaching and implementing ethics and social responsibility, as well as providing a more comprehensive social and economic impact (Alsop, 2006; Mitroff, 2004). More recently, the same applies to a call for more sustainability-friendly business education (Sidiropoulos, 2014; Storey et al., 2017).

Although the current study is limited to the analysis of a relationship between CSR and environmental sustainability of business schools, it fits nicely into the discussions of transdisciplinarity among the ERS fields (Beckmann et al., 2020; Gröschl & Pavie, 2020; Parkes & Blewitt, 2011), within the business education doxa, set by the Sustainable Development Goals (SDGs) and the United Nations Principles for Responsible Management Education (UN PRME) (Annan-Diab & Molinari, 2017; Storey et al., 2017).

The study consists of seven sections: an introduction is followed by a review of extant theory, an overview of the development of our theoretical framework and hypotheses, a description of research methods, presentation of empirical findings, their discussion, and a conclusion.

2. Theoretical background

Sustainability science is a multi-disciplinary and rapidly evolving research field, involving a mix of technical, biological, and social science topics (Kajikawa et al., 2007), which makes it extremely difficult to delineate a specific (sub)field of sustainability education and clearly describe its relationship to similar, or related topics. This is made increasingly evident by the systematic reviews of the literature (Cheeseman et al., 2019; Menon & Suresh, 2020; Viegas et al., 2016), which do show an increasing interest in sustainability in higher education as an emerging discipline, as well as the understanding of its drivers and limitations. On the other hand, they also indicate that integration of different topics within the field (such as academic teaching and learning, research, the greening of the campus, community outreach), both at the conceptual and practical (policy) levels are still lacking, with the bottom-up initiatives often failing to provide the systematic approach and the top management support (Shawe et al., 2019).

A similar (mis)understanding of the role of environmental sustainability and its relationship with similar disciplines can be found when looking at the academic teaching and practices of responsible management (Laasch et al., 2020b). In this study, we follow the RMLE approach and consider sustainability and CSR as integral and equal parts of the three ERS disciplinary domains (Cullen, 2020; Laasch et al., 2020a), although different theoretical conceptualizations of this relationship have been developed historically (Van Marrewijk, 2003). Our approach is supported by the calls to integrate academic teaching and learning of CSR, environmental sustainability, and sustainable development, considered to be similar or related, but not identical, or hierarchically ordered fields, both at the levels of undergraduate (Da Silva Jr. et al., 2019) and graduate/MBA (Doh & Tashman, 2014) business education.

Calls for integration of CSR and sustainability views, as compatible approaches to stimulating sustainable and ethical business development, have been extended to all organizational practices in higher education (Filho et al., 2019). This is aligned with the transdisciplinarity among the ERS domains of the responsible management concept. Transdisciplinarity is a relevant approach that provides the understanding and relevant solutions to 'wicked problems' (McCune et al., 2021), including environmental sustainability and sustainable development (Norton, 2005). However, it should not be reduced to academic teaching and learning only, although it is critical in enabling students to co-operate with relevant stakeholders and lead transformational change (Fam et al., 2018). In the field of higher education, transdisciplinarity should respond to the call for a systemic transformation toward a higher level of sustainability (Beringer & Adomßent, 2008) by being applied to the production of new knowledge and scientific policies (Jahn et al., 2012), as well as all other aspects of business school functioning. If the literature has a point on the transdisciplinary nature of RMLE, academic administrators should be able to achieve a synergetic effect by using the systematic approach in its implementation.

However, there are no empirical studies of the transdisciplinary effects, at least from the students' point of view, advocated by Kagawa (2007). In this paper, we aim to perform such an analysis. The business ethics dimension of the ERS field seems to be most susceptible to practical research problems due to significant challenges in overcoming the positivist (Crane, 1999) and normative limitations (Rosenthal & Buchholz, 2000). Therefore, the adequate first step in the empirical analysis of RMLE transdisciplinary effects should be performed by checking the relationship of its CSR and sustainability dimensions. The most apparent observed effect of transdisciplinarity could be defined along the lines of behavioural changes, as a result of different initiatives in one of the ERS dimensions (such as the environmental sustainability), while producing effects in another (such as the school's CSR). Another processual mechanism involving transdisciplinarity could link different aspects of institutional RME involvement. In the empirical part of the study, we will check for the existence of both paths, which will be referred to as the 'individual' and the 'institutional' one.

Student assessment of academic institutions' efforts in introducing responsible management might involve potential cognitive biases while assessing the individual dimensions of institutional CSR, based on the general CSR impression (or vice versa). In addition, there could be a cognitive bias in the evaluation of different aspects of

the institutional CSR, based on the perception of an exceptionally positively (or negatively) perceived CSR component/dimension. Such stereotyping is the well-known halo effect, which has been covered by an extensive body of knowledge in psychology, related to judgment and assessment of individuals (Dion et al., 1972; Nisbet & Wilson, 1977; Thorndike, 1920), teams (Naquin & Tynan, 2003), as well as organizations, especially in the research of organizational legitimacy and reputation (Bitektine, 2011). The halo effect can be also found in consumers' assessment of the CSR performance (Smith et al., 2018), including environmental performance (Park et al., 2020).

If present and relevant, such psychological drivers are likely to cause either a positive ('angel halo') or a negative ('devil halo') effect in subsequent evaluations of different but related dimensions of organizational CSR. Extant research has confirmed the existence of these biases in the commercial sector. For instance, previous CSR involvement can be used as a defence when responding to negative news (Cho & Kim, 2012). However, such a shield is limited by its strength and works only in the case of a high corporate reputation before the crisis (Coombs & Holladay, 2006). This is confirmed by Hong and Liskovich (2015), who found that the CSR halo effect can be linked to lower fines for the companies found to breach the US Foreign Corrupt Practices Act. In addition, consumers tend to use limited information on some aspects of organizational CSR to create robust assessments of a company's CSR performance, both within a single and across multiple CSR domains (Smith et al., 2018). Park et al. (2020) show that the 'angel halo effect' works for environmental sustainability, as well, by establishing the link between the general social reputation and the media framing of the environmental company performance. Chernev and Blair (2021) argue that the strength of the halo effect, based on consumers' evaluation of company sustainability, depends on the degree of their concern for ethical issues and their assessment of the company's pro-social activities. Additional evidence in the academic sector can be found in reporting on HEIs' pro-social and pro-environmental initiatives (An et al., 2019).

We believe that a similar mechanism might be used as an alternative to the RMLE-implied transdisciplinarity, or the systematic actions of higher education administrators in RMLE implementation, in explaining the relationships of environmental sustainability and the CSR of a business school. As we are informed, there is no comparable research for business schools involved in RMLE. When coupled with previous findings on institutional processual mechanisms of RMLE, converting students' values/attitudes into responsible management intentions (Haski-Leventhal et al., 2020), the results of this empirical research could significantly contribute to understanding the synergies and interactions of the three RMLE disciplinary domains and the potential of different RMLE-based interventions in academic business education.

3. Theory and hypotheses development

3.1. Environmental sustainability and CSR of business schools

Based on the previous discussion of the extant literature, we examine the following research questions:

- Is there an empirical relationship between environmental sustainability and the CSR of business schools?
- Is there empirical evidence of RMLE transdisciplinarity, defined either in terms of a synergetic effect of student behaviour in one of ERS dimensions, affecting the outcomes of others, or in terms of different ERS outcomes being linked one to another?
- Is the individual halo effect a better fit for explaining the obtained empirical results, considering the contextual contingencies of the environment in which the study has been conducted?

In this section of the paper, we describe the development of the theoretical framework, addressing these research questions and the resulting hypotheses. The central hypothesis is related to the relationship between environmental sustainability and CSR. The research of those two topics in the corporate sector has been shown to converge since 2003 (Ye et al., 2020), starting with the corporate responsibility for environmental pollution (2005-2009), toward the institutionalization of environmental issues within the CSR (2010-2013) and the recent emphasis on CSR capabilities to solve environmental problems globally. Such a perspective of environmental sustainability and CSR integration should be applied to business schools (Doh & Tashman, 2014; Da Silva Jr. et al., 2019; Filho et al., 2019) if the more comprehensive RMLE framework is accepted.

Making environmental sustainability an integral part of the CSR curricula seems to be the most visible aspect of such integration (Rusinko, 2010). In addition, there is convincing bibliometric evidence that researchers see transdisciplinary learning and courses involving industry and other stakeholders as a necessity in 'greening' academic curricula (Menon & Suresh, 2020). Content of the curricula is also becoming increasingly inter/transdisciplinary, as shown by a systematic review of the role of HEIs in sustainable development (Wu & Shen, 2016), especially in business schools, with business ethics/CSR becoming substantial parts of the environmental sustainability curricula (and vice versa).

Although the inter/transdisciplinary integration might not be as visible in all the academic practices or across all of the three ERS disciplinary domains of RMLE, there seem to be strong links among relevant academic practices. However, some might need to be uncovered by future research. In this paper, we focus on the relationship between the environmental sustainability and CSR of business schools and follow Zaikauskaite et al. (2020), who linked moral idealism with pro-social and pro-environmental outcomes. Therefore, we hypothesize:

Hypothesis H1. Students perceive a direct relationship between the institutional environmental sustainability and the corporate social responsibility (CSR) of a business school.

3.2. Potential transdisciplinary effects between environmental sustainability and CSR

As per our literature review, there should be a high level of transdisciplinarity among the ERS disciplinary domains of the RMLE framework. The RMLE processual

mechanisms might work through the direct influence of RMLE activities to integrative CSR behavioral intentions, considering the relationship among behavioural purposes and future behaviour (Webb & Sheeran, 2006), as well as limitations in determining the future behaviour of current business school students (Cooper-Thomas & Anderson, 2006). An indirect effect, based on serial mediation, involves personal values and integrative CSR attitudes (Haski-Leventhal et al., 2020). Transdisciplinarity implies the existence of separate mechanisms in each of the ERS disciplinary domains, with the synergetic effects involving the cross-domain interactions supporting students' pro-environmental, pro-social and ethical behavioural intentions (or behaviors).

Literature focusing on the environmental domain also supports addressing the student characteristics by using the different pedagogies and learning processes to create individual environmental awareness and, ultimately, pro-environmental behaviour on the individual level (Viegas et al., 2016). Pro-environmental personal transformations, supported by experiential and transformative learning, lead to change at the institutional level (Moore, 2005; Sipos et al., 2008; Viegas et al., 2016). Since the values – attitudes – behavioural intentions/behaviour processual mechanism has been well explained (Haski-Leventhal et al., 2020), we chose to utilize a similar mechanism from classical psychological research, involving student moral philosophy, based on the Ethics Position Theory/Questionnaire (Forsyth, 1980). The extant research confirms the moral philosophy as a robust predictor of individual pro-social choices and behaviours (Forsyth, 1992; Forsyth & Nye, 1990). A recent study (Zaikauskaite et al., 2020) extended such a conclusion to the environmental domain, showing that moral philosophies also predict environmental behaviours.

The transdisciplinary logic of RMLE implies that the processual mechanism involving moral philosophy, pro-environmental student behaviour, and the institutional environmental sustainability of a business school should result in synergetic effects, enhancing the institutional involvement in the other two ERS dimensions. Therefore, we hypothesize that the RMLE-implied internal processual mechanism work, in terms of building upon relevant students' characteristics, via their pro-environmental behaviour, all the way to being institutionalized in a business school environment, within a single ERS topical domain *(Hypothesis H2)* and, after that, synergistically influence other ERS topical domains *(Hypothesis H3):*

> *Hypothesis H2.* Students' moral philosophy influences the level of environmental sustainability involvement of a business school, mediated by students' pro-environmental behaviour.

> *Hypothesis H3.* There are synergetic effects, both on the individual (student) and institutional levels, involving the cross-dimensional influence of the moral philosophy, pro-environmental student behaviour, and institutional environmental involvement to the CSR involvement of a business school.

Based on the results of the empirical analysis of the proposed hypotheses, the discussion section of the paper (Section 6) provides an assessment of whether the halo effect should be adopted as a potentially better explanation of the obtained empirical results.

4. Methods

This study has been conducted on a population of undergraduate students of business from the South East European region, enrolled in public regional business schools based at the University of Split (Croatia) and University of Banja Luka (Bosnia & Herzegovina). We used Microsoft Excel to randomly select the sample of 500 students (250 per school) from the school records. Participants were informed of the purpose of the study and guaranteed anonymity. Out of 500 invited students, 366 (115 from Faculty of Economics Banja Luka and 251 from Faculty of Economics, Business and Tourism Split) filled in the self-administered anonymous Web survey. After detecting and removing the unusual influence observations, the obtained final sample size of respondents has been reduced to 338, representing the return rate of 67.6%.

The research instrument consisted of several sections, measuring students' moral philosophy and pro-environmental behaviour and their assessments of the business school institutional commitment to environmental sustainability and CSR. Moral philosophy, i.e., students' idealism vs. relativism, was measured by using the well-established Ethics Position Questionnaire (EPQ) instrument (Forsyth, 1980). Pro-environmental behaviour has been measured by thirteen items, modified from the examples of pro-environmental behaviour, introduced by Sahin et al. (2012).

Institutional commitment to environmental sustainability is based on five items, conceptually described by Clugston and Calder (1999), as dimensions of institutional commitment to environmental sustainability. Items representing an institutional commitment to CSR were constructed by authors based on dimensions derived from Clugston and Calder (1999). Since this scale has not been previously verified by empirical research, we checked its validity using the conventional Cronbach alpha measure of internal consistency. Its value of 0.788 indicates an acceptable measurement scale (cf. Taber, 2018).

On the survey Web page, the researchers' e-mail addresses and other contact details were published to make it possible to obtain feedback and receive potential questions from respondents. Aside from several inquiries related to the technical difficulties, no feedback indicated any issues with the research instrument or the survey procedure. In addition, researchers made an additional effort to organize in-class presentation(s) and feedback session(s) with the student population at both schools during the survey process.

We use structural equation modeling to test the proposed hypotheses, based on the partial least squares method (PLS-SEM) (Henseler et al., 2015; Richter et al., 2015; Sarstedt et al., 2018). Application of PLS-SEM technique over widely used multiple regression analysis and covariance-based SEM is preferred due to the interdependence of latent constructs (Hair et al., 2014) and less rigorous conditions of restrictive assumptions, which often qualify PLS-SEM as a distribution-free approach (Astrachan et al., 2014; Hair et al., 2017). PLS-SEM allows researchers to predict and explain the variance of the critical endogenous constructs and contribute to further developing emerging theories (Hair et al., 2018; Sarstedt et al., 2018), unlike covariance-based SEM. The latter is appropriate when the research aims to fit the observed and expected covariances (Hair et al., 2012), making it more suitable for confirming and advancing already established theories.

The obtained sample is considered adequate for the PLS-SEM method. According to the sample size rule of the thumb, the sample should have ten times more observations than there are relationships of a latent construct in the measurement or the structural model (Bagozzi & Yi, 2012; Chin, 2010; Chin et al., 2003; Hair et al., 2018). More accurate determination of the minimum sample size is obtained by statistic power analysis, performed in G*Power 3.1.9.2, using a maximum of two predictors of an endogenous construct in the proposed structural model, indicating minimum sample size is 55 observations to achieve 80% statistical power, with probability error of 5%, to detect at least values of 0.25 of R^2. Kurtosis and skewness values as indicators of data normality are in range ±2, suggesting that is no severe violation of the data normality requirement (Gravetter & Wallnau, 2012). Additionally, PLS-SEM imposes no rigorous data normality distribution (Astrachan et al., 2014).

5. Empirical findings

PLS-SEM analysis represents a two-stage process, including measurement model and structural model evaluation, that is performed according to previously established evaluation criteria (Chin, 1998; Götz et al., 2010; Hair et al., 2017; Henseler et al., 2009; Roldán & Sánchez-Franco, 2012; Sarstedt et al., 2014; Tenenhaus et al., 2005). After internal consistency and discriminant validity assessment of the reflective measurement models of latent constructs in the first stage, evaluation of the intensity and significance of the paths using resampling technique bootstrapping (Henseler et al., 2009) with the number of 5000 bootstrap samples and no sign change option, two-tailed t-test, at 5% and 10% significance level and using bias-corrected and accelerated (BCa) bootstrap intervals (Aguirre-Urreta & Rönkkö, 2018) is performed. PLS-SEM analysis was conducted using the SmartPLS software package, version 3.2.9 (Ringle et al., 2015).

5.1. Construct measurement, internal consistency, reliability, and validity

Before conducting structural model evaluation, it is essential to examine the fulfilment of criteria for reflective measurement models (Hair et al., 2018; Sarstedt et al., 2014). Results of internal consistency analysis, convergent validity, and discriminant validity investigation are presented in Table 1.

Internal consistency analysis is performed to determine indicators' and constructs' validity. Items with loadings below 0.4 are automatically excluded from the measurement models (Hair et al., 2017; Hulland, 1999). The decision to obtain the rest of the constructs' items is made while examining the constructs' convergent validity. Retained items in constructs' measurement models have high loads (0.572-0.842) on the associated latent construct. Cronbach's α and composite reliability (ρ_c) as indicators of internal consistency (Churchill, 1979; Jöreskog, 1971) are calculated. These values are above the recommended threshold of 0.7 (Hair et al., 2017), indicating that constructs' internal consistency is established. The average variance extracted (AVE) as an indicator of the construct's convergent validity (Sarstedt et al., 2018) is calculated. All AVE values (0.501-0.542) are above the threshold proposed in the literature

Table 1. Internal consistency, convergent validity, and discriminant validity of constructs.

Internal consistency and convergent validity												
ID		RL		PROENVBEH		HEI ENV INV		HEI CSR INV	
Remaining items with loading values									
epq3	0.593	epq13	0.678	proenv_beh11	0.709	nat_sus1	0.692	econ_sus1	0.741
epq4	0.810	epq15	0.765	proenv_beh12	0.787	nat_sus2	0.786	econ_sus2	0.618
epq5	0.842	epq16	0.658	proenv_beh13	0.776	nat_sus3	0.572	econ_sus3	0.711
epq6	0.755	epq18	0.830	proenv_beh4	0.659	nat_sus4	0.766	econ_sus4	0.821
epq8	0.592			proenv_beh6	0.648	nat_sus5	0.754	econ_sus5	0.771
epq9	0.705			proenv_beh8	0.694				
				proenv_beh9	0.671				
Cronbach's α									
0.817		0.761		0.834		0.767		0.787	
Composite reliability (ρc)									
0.866		0.824		0.875		0.840		0.854	
AVE									
0.523		0.542		0.501		0.515		0.541	
Discriminant validity using HTMT criterion									
		ID		RL		HEI ENV INV		HEI CSR INV	
ID						0.134		0.169	
RL		0.122				0.111		0.154	
PROENVBEH		0.307		0.110		0.321		0.297	
HEI ENV INV								0.839	

Source: Research results.

(Hair et al., 2012; Hulland, 1999). Discriminant validity is tested using heterotrait-monotrait criterion (HTMT) (Hair et al., 2017), regarded as a more sensitive technique for detecting discriminant validity issues as opposed to widely used Fornell-Larcker criterion (Fornell & Larcker, 1981) and cross-loadings of items (Chin, 1998). In this study, all obtained HTMT values are clearly below the conservative HTMT threshold of 0.85 (Kline, 2011), indicating a lack of constructs' discriminant validity problems.

5.2. Path coefficients and predictive relevance

After analysing the reflective measurement model evaluation criteria, the inner (structural) model assessment is conducted. The first criterion of the inner model assessment addresses the multicollinearity issue using variance inflation factor (VAF) as an indicator. All VAF values are below the acceptable threshold of 3 (Hair et al., 2018), ranging from 1.004 to 1.180, indicating minimal collinearity in the inner model. To determine the predictive relevance of the structural model coefficient of determination (R^2) that represents the model's measure of in-sample predictive accuracy (Rigdon, 2012; Sarstedt et al., 2014). The evaluated inner model is presented in Figure 1.

As shown by Figure 1, in the proposed structural model, business school environmental involvement and pro-environmental behaviour explain 49.7% of business school CSR involvement variance. The R^2 value of the business school CSR involvement construct can be regarded as moderate (Hair et al., 2011; Henseler et al., 2009). Endogenous constructs of pro-environmental behaviour and business school environmental involvement have low R^2 values – 0.152 and 0.017, respectively, indicating weak predictive relevance of the model.

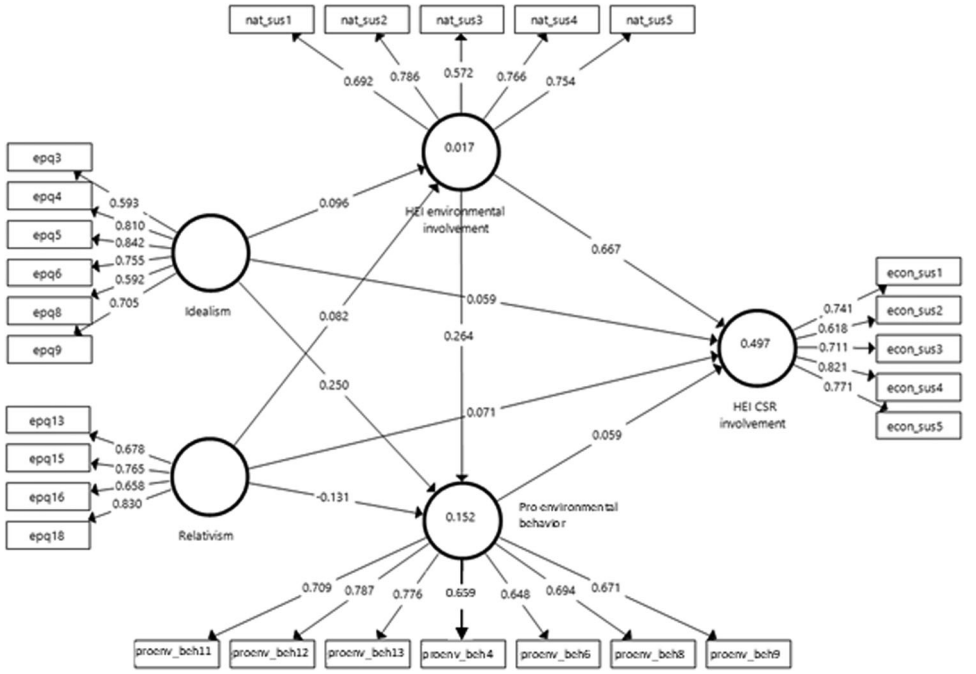

Figure 1. Direct effects and predictive relevance of the structural model.
Source: Research results.

The size and significance of the direct and total effects, which will be used to evaluate the research hypotheses, are presented in Table 2.

Following Hair et al. (2017), the significance levels at 5% and 10% of the direct and total effect are calculated using bootstrapping technique providing corresponding p-values and appropriate BCa 95% and 90% confidence intervals. At the significance level of 5%, business school environmental involvement directly affects business school CSR involvement (0.667), supporting Hypothesis H1.

There are similar direct effects of business school environmental involvement (0.264) and idealism (0.250) on pro-environmental behaviour at the significance level of 5%, which is not expected from the theoretical viewpoint. There seems to be a 'virtuous circle' in place for the idealistic individuals, whose idealism drives pro-environmental behaviour directly and indirectly by using the business school environmental involvement as a mediator. This will be further discussed in the following section of the paper.

Analysis of mediation in the structural model shows that the expected path, consisting of the moral philosophy (idealism) – pro-environmental behaviour – business school environmental involvement does not exist. This finding does not support Hypothesis H2, on the functioning of the internal processual mechanisms in the sustainability RMLE domain, according to the theoretical expectations.

At the significance level of 5%, idealism has a significant total effect on business school CSR involvement (0.140) through the institutional path, i.e. the business school environmental involvement mediator. The individual path, consisting of the moral philosophy (idealism) – pro-environmental behaviour – business school CSR

Table 2. Direct and total effects, bootstrapping confidence intervals, and model's predictive accuracy.

Direct effects and bootstrapping results

			BCa confidence intervals			
			95%		90%	
Path	Direct effects	p values	LB	UB	LB	UB
HEI ENV INV -> HEI CSR INV	0.667	0.000**	0.588	0.740	0.597	0.726
HEI ENV INV -> PROENVBEH	0.264	0.000**	0.138	0.371	0.157	0.354
ID -> HEI CSR INV	0.059	0.152	−0.021	0.142	−0.006	0.130
ID -> HEI ENV INV	0.096	0.048*	−0.005	0.186	0.012	0.169
ID -> PROENVBEH	0.250	0.000**	0.123	0.355	0.150	0.336
RL -> HEI CSR INV	0.071	0.168	−0.040	0.167	−0.016	0.153
RL -> HEI ENV INV	0.082	0.324	−0.166	0.192	−0.133	0.173
RL -> PROENVBEH	−0.131	0.052	−0.237	0.034	−0.222	0.011
PROENVBEH -> HEI CSR INV	0.059	0.171	−0.027	0.142	−0.012	0.125

Total effects and bootstrapping results

			BCa confidence intervals			
			95%		90%	
Path	Total effects	p values	LB	UB	LB	UB
HEI ENV INV -> HEI CSR INV	0.683	0.000**	0.603	0.748	0.616	0.737
HEI ENV INV -> PROENVBEH	0.264	0.000**	0.138	0.371	0.157	0.354
ID -> HEI CSR INV	0.140	0.009**	0.026	0.239	0.048	0.224
ID -> HEI ENV INV	0.096	0.048*	−0.005	0.186	0.012	0.169
ID -> PROENVBEH	0.275	0.000**	0.149	0.381	0.173	0.361
RL -> HEI CSR INV	0.119	0.147	−0.159	0.219	−0.113	0.204
RL -> HEI ENV INV	0.082	0.324	−0.166	0.192	−0.133	0.173
RL -> PROENVBEH	−0.109	0.139	−0.231	0.057	−0.211	0.040
PROENVBEH -> HEI CSR INV	0.059	0.171	−0.027	0.142	−0.012	0.125

Variance explained

	Endogenous constructs		
	PROENVBEH	HEI ENV INV	HEI CSR INV
R^2	0.152	0.017	0.497
adj. R^2	0.145	0.011	0.491

Note: LB-lower bound; UB-upper bound; significance assessment of effects (p-values) is determined using the biased corrected and accelerated (BCa)(two-tailed) confidence intervals derived from the bootstrapping procedure with 5,000 samples, two-tailed test, no ign change - $^{**}p < 0.05$; $^{*}p < 0.10$.
Source: Research results.

involvement, is not supported by the results of the empirical research. Thus, Hypothesis H3 is supported only partially. The expected effects at the institutional level are present via the significant influence of moral idealism on CSR institutional involvement, mediated by the environmental involvement. On the other hand, the expected path at the student/individual level (consisting of moral idealism, pro-environmental behavior, and CSR institutional involvement) cannot be empirically confirmed.

6. Discussion

Our empirical results confirm that institutional environmental sustainability directly affects institutional CSR in business schools (*Hypothesis H1)*, which opens the issue of explaining the nature of such a relationship. The potential transdisciplinary effects among RMLE domains can be analysed by examining how a business school's environmental sustainability is reflected in the CSR domain *(Hypothesis H3)*. We found a

significant and positive influence of idealism on business school CSR, mediated by the institutional sustainability involvement. Empirical verification of such a mechanism, to which we refer to the institutional level, seems to be consistent with the notion of ERS transdisciplinarity. Idealistic individuals could be pushing business schools to achieve sustainability, which further strengthens the general CSR orientation of the school by an implied transdisciplinary effect. The processual mechanism, to which we refer as the one at the individual (student) level, should lead the idealistic students to develop pro-environmental behaviours. If consistent RMLE is in place, it could be expected that such behaviours are institutionalized in the sustainability domain by using academic teaching and learning and other sustainability initiatives *(Hypothesis H2)*.

However, our findings show that idealism seems to shape both the individual behaviour and the institutionalized sustainability involvement of a business school, which could be described as a 'virtuous circle.' This finding could be explained by the idealistic individuals or informal groups of business school stakeholders, filling in the institutional voids, often found in the business school environment in South East Europe, as justified by the literature on other types of institutional voids in developing economies and societies (see, e.g., Puffer et al., 2016). The lack of institutional support can be filled by a range of actors, such as informal regional institutions (Onuklu et al., 2021) or social groups, including families (Manolova et al., 2019). In the specific context of CSR, institutional voids lead to the development of specific adaptive mechanisms (Amaeshi et al., 2016), which could be in place here, as well.

Therefore, if individuals are filling in for the system deficiencies, it makes sense that individual idealism might drive the institutional involvement of a business school and, as such, shape student behaviour, both directly and indirectly. Lack of interaction between moral relativism and other constructs, related both to environmental sustainability and social responsibility, could be theoretically expected, based on the results of Zaikauskaite et al. (2020). To verify the generalizability of this finding and its proposed explanation, further research is needed, both by involving additional business school actors (administrators, staff) and stakeholders, as well as replicating such studies in all three ERS disciplinary domains.

Transdisciplinary and synergetic relationships between ERS domains of RMLE should positively affect responsible student behaviour from one to another domain, which is why we initially expected to see the indirect effect of idealism to institutionalized CSR via pro-environmental behaviour *(Hypothesis H3)*. Since this processual mechanism has not been empirically identified within a single (sustainability) domain, it might not be realistic to expect synergetic effects among different ERS domains.

This leads to a potential alternative explanation of the confirmed 'institutional path,' leading from idealism to CSR. It could be, also, caused by a simple psychological effect, affecting idealistic individuals, i.e., the 'angel halo effect,' which we could refer to as the 'ERS halo effect.' Theoretically, it can be shaped as the CSR halo effect, previously described in research of profit sector consumers, with the potential bias of idealistic business school actors and stakeholders, influencing the assessment of different RMLE domains. When business school students/stakeholders see a high level of environmental sustainability, they could assess other ERS domains as very successful. However, this needs to be confirmed by future research.

7. Conclusions and research limitations

In this paper, we consider two potential explanations of the relationship between environmental sustainability and CSR of business schools. One can be found in the responsible management education framework, implying a high level of transdisciplinarity among the (corporate) social responsibility, environmental sustainability, and business ethics. Our empirical analysis shows limited evidence for such an explanation on a student sample from South East Europe, which leads us to propose the existence of the halo effect, similar to the CSR halo effect in the corporate sector.

This proposition needs to be verified by future research and conducted in various cultural and institutional business school environments. We have used the culturally homogenous student sample from two public, regional business schools in Croatia and Bosnia & Herzegovina. These are the principal limitations of the study, preventing us from reaching further generalizations. In addition, future studies will benefit from an additional procedure, ensuring students' understanding of the concepts and items, as used in the research instrument. Before the primary data collection, this could be done by a preliminary qualitative testing of a research instrument, involving a focus group of students (or other stakeholders). Including other business school stakeholders would also provide a more diverse set of views on ethics, CSR, and natural sustainability issues.

Future research should also focus on the additional perspectives within the responsible management education framework to verify their proposed relationships, as well as the potential alternative theoretical explanations.

Disclosure statement

No potential conflict of interest was reported by the authors.

Ethical statement

This study is based on the anonymized and non-identifiable data, obtained from Web-based student questionnaires. It has been approved by the Ethics committee of the Faculty of Economics, Business and Tourism Split (no approval number provided), as a part of the project, entitled "Stavovi i znanja studenata o okolišnoj održivosti" ("Student attitudes and knowledge of environmental sustainability").

The data collection was based on an online questionnaire, with an URL (link) to the questionnaire, being sent to participants (students) by e-mail. The participation was entirely voluntary and anonymous - there was no technical opportunity to identify the individual response and link it to the respondent's identity. Private data, which could lead to the identification of a respondent, such as e-mail addresses, or IP addresses, were not collected. Answer to demographic data, which were asked from the participants, included their gender, age, study program (previous education) and average study grade, were optional. The first page of the survey included the written statement of the data collection policy, management of demographic data and the guarantee of anonymity and the cumulative (statistical) reporting of research results. Participants, agreeing to such a policy, were allowed to fill in the on-line survey, while the participants, who did not agree, were not granted access to the on-line survey.

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	Disagree completely 1	2	3 *Disagree* 4	*Neither agree nor disagree* 5	*Agreee* 6	7	8 *Agree completely* 9
1. A person should make certain that their actions never intentionally harm another even to a small degree.							
2. Risks to another should never be tolerated, irrespective of how small the risks might be.							
3. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.							
4. One should never psychologically or physically harm another person.							
5. One should not perform an action which might in any way threaten the dignity and welfare of another individual.							
6. If an action could harm an innocent other, then it should not be done .							
7. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.							
8. The dignity and welfare of people should be the most important concern in any society.							
9. It is never necessary to sacrifice the welfare of others.							
10. Moral actions are those which closely match ideals of the most "perfect" action.							
11. There are no ethical principles that are so important that they should be a part of any code of ethics.							
12. What is ethical varies from one situation and society to another.							
13. Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.							
14. Different types of moralities cannot be compared as to "rightness."							
15. Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.							
16. Moral standards are simply personal rules which indicate how a person should behave, and are not to be applied in making judgments of others.							
17. Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.							
18. Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.							
19. No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.							
20. Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.							

Source: Forsyth (1980).

Appendix: Research instrument (questionnaire)

What is your opinion/attitude about how individuals should act in the society?

	Disagree completely 1	*2*	*3*	*Disagree 4*	*Neither agree nor disagree 5*	*Agreee 6*	*7*	*8*	*Agree completely 9*
1. Walked or cycled instead of traveled by car for environmental reasons.									
2. Deliberately purchased food produced locally rather than imported products.									
3. Attended a protest march or a demostration for environmental reasons.									
4. Purchased products packaged in reusable or recyclable containers.									
5. Avoided buying from a company which shows disregard for the environment.									
6. Picked up litter or trash.									
7. Recycled glass bottles, aluminum cans or paper.									
8. Made an effort to use less water when brushing my teeth or bathing.									
9. Tried to use less energy (e.g. turned off lights when I am the last to leave a room, turned off TV, or a computer, when not used, etc.).									
10. Considered politicians' positions related to environmental issues when voting or supporting.									
11. Chose to read publications that focus on environmental issues.									
12. Encouraged people involved in a destructive environmental behavior to stop that activity.									
13. Encouraged others to take an action on behalf of the environment.									

Source: Modified from Sahin et al. (2012).

How would you describe your behaviour, in terms of accepting pro-environmental principles?

How much do you agree with the following statements, related to the actions of your higher education institution?

	Disagree completely 1	*2*	*3*	*Disagree 4*	*Neither agree nor disagree 5*	*Agreee 6*	*7*	*8*	*Agree completely 9*
1.The written statements of the mission and purpose of the institution, including the descriptions of learning objectives and public relations materials, express their philosophies and commitments toward environmental sustainability.									
2.The written statements of the mission and purpose of the institution, including the descriptions of learning objectives and public relations materials, express their philosophies and commitments toward the Corporate Social Responsibility.									
3.Students learn about the institutional values and practices in the context of environmental sustainability and sustainable development.									
4.Students learn about the institutional values and practices in the context of Corporate Social Responsibility.									
5.Students understand how the campus functions in the ecosystem (e.g. its sources of food, water, energy,endpoint of waste and garbage) and its contribution to a sustainable economy.									
6.Students understand how the institution applies the Corporate Social Responsibility in all aspects of its work.									
7.There is an outreach, related to environmental sustainability of the institution, toward the internal publics, by using special lectures and events, round-table discussions, student discussions, public announcements, etc.									
8.There is an outreach, related to the Corporate Social Responsibility of the institution, toward the internal publics, by using special lectures and events, round-table discussions, student discussions, public announcements, etc.									
9.The institution is engaged in outreach and forming partnerships with local and/or national government and/or civic organizations in promotion and development of environmental sustainability.									
10.The institution is engaged in outreach and forming partnerships with local and/or national government and/or civic organizations in promotion and development of Corporate Social Responsibility.									

Source: Modified from Clugston and Calder (1999).