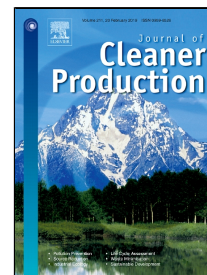


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Running Head: *Students' Corporate Social Responsibility Orientation in Higher Education*

Abstract

Given that the future of corporate social responsibility depends on upcoming generations' attitudes, a better understanding of the relationship between corporate social responsibility orientation and its predictors has significant implications for various stakeholders. This study sought to examine the factors that influence students' corporate social responsibility orientation in higher education contexts. To this end, primary data were collected through questionnaires distributed to undergraduate and graduate students at the University of Trás-os-Montes and Alto Douro, a northern Portuguese public institution. Although personal values, gender, religion, political ideology, academic field of study, and volunteerism appear to influence some corporate social responsibility orientation dimensions, the results only show significant relationships with gender, religion, and volunteerism. The most important findings include that women, religious students, and those who volunteer have a stronger philanthropic orientation and that women appear to have a more intense ethical orientation. In addition, the research conducted facilitated the definition of student profiles for each corporate social responsibility orientation dimension. This study's results provide interesting evidence of orientation-determinant links, which expands the literature on corporate social responsibility, especially regarding higher education contexts. As university students are about to make important choices regarding their careers, these findings may help to broaden the field of corporate social responsibility research by identifying factors that contribute to shaping students' corporate social responsibility orientation. Theoretical and practical implications are discussed, highlighting what still needs to be done to encourage corporate social responsibility orientation in higher education programs.

Key words: Corporate Social Responsibility Orientation, Students, Higher education.

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Keywords: Students, Higher Education, Corporate Social Responsibility Orientation.

1. Introduction

Because of companies' important impacts on society, corporate social responsibility (CSR) is a phenomenon that has become increasingly significant to companies, consumers, and academics (Dzupina, 2016; Avram et al., 2018; Schmidt and Cracau, 2018). Currently, firms are becoming increasingly aware of CSR's importance in terms of global competitiveness. Thus, they understand the need to focus not only on making profit but also on making decisions that are ethically and socially acceptable to all parties involved, including communities, the environment, and shareholders (Bir et al., 2009; Teixeira et al., 2018).

Although the literature has explored CSR for over 50 years (e.g., Bowen, 1953; Friedman, 1962; Davis, 1973), this topic still attracts many academics' interest (e.g., Burton and Goldsby, 2009; Avram et al., 2018). However, prominent researchers in the field have shifted their focus from CSR to corporate social performance (Wartick and Cochran, 1985) and its influence on financial performance (Waddock and Graves, 1997; Ciampi, 2018). According to Maignan (2001), CSR-related issues, nonetheless, remain an understudied field of research. This is particularly true regarding CSR orientation (CSRO) and its determinants.

Because professionals frequently make important decisions on behalf of their organizations, these employees' CSRO generally plays a central role in corporate decision

making. Thus, studying CSR orientation facilitates a deeper understanding of the importance that professionals assign to their company's social performance (Burton, and Goldsby, 2009) and, more specifically, these employees' orientation regarding economic, legal, ethical, and philanthropic CSR dimensions (Aupperle, 1982).

Various authors have stressed the lack of empirical studies of CSRO (Lam and Shi, 2008; Wang and Juslin, 2012; Tang and Tang, 2017). The research in this field is also relatively recent (e.g., Van den Heuvel et al., 2014; Dzupina, 2016; Ehie, 2016; Ciampi, 2018), which shows that the relevance, pertinence, and real-world implications of CSRO is now attracting the attention of a variety of researchers.

In addition, most studies reported in the literature have been conducted in countries outside Europe, as well as focusing mainly on entrepreneurs, managers, and administrators. This has contributed to at least three shortcomings in this field: a lack of CSRO-based studies involving other important stakeholders (e.g., employees), potential stakeholders (e.g., students), and different geographical areas (Egri and Ralston, 2008; Matten and Moon, 2008; Van den Heuvel et al., 2014; Tang and Tang, 2017).

CSR's future depends on upcoming generations' attitudes as these individuals will influence relationships between companies and societies while playing the role of citizen, customer, and/or manager (Muijen, 2004; Jorge and Peña, 2014). Therefore, understanding the relationship between CSR orientation and its predictors has significant implications for various stakeholders. However, most studies have focused on only a few predictors such as gender, work experience, or educational level.

The present research sought to study the determinants that influence students' attitudes toward CSR in higher education contexts, exploring potential factors that may contribute to shaping these individuals' CSR orientation. These factors include, among others, personal values, gender, religion, political ideology, academic field of study and volunteerism. To this end, primary data were collected through questionnaires distributed to undergraduate and graduate students at the University of Trás-os-Montes and Alto Douro, a northern Portuguese public institution. The questionnaire was based on the measurement instrument developed by Aupperle (1982) and Aupperle et al. (1985), and data analysis was conducted using IBM® SPSS Statistics® version 21.0 software.

The current study's results provide interesting evidence of orientation-determinant links, which expands the literature on CSR especially in higher education contexts. As university students are about to make important choices that affect their careers, these findings may help to broaden the field of CSR research by identifying factors that shape these individuals' CSR orientation.

After this introduction, a brief review of the relevant literature is presented. In section three, the methodology is described, while the fourth and fifth sections present and discuss the results. The last section provides the study's main conclusions, limitations, and implications, as well as potential lines of research.

2. Theoretical framework

2.1 CSR

CSR began to gain prominence in the 1950s, when Bowen (1953) first argued that entrepreneurs have an obligation to take into account their society's goals and values when making decisions. The cited author thus raised the level of awareness and recognition of corporate responsibility toward society. However, according to Rahman (2011) and Teixeira et al. (2018), no consensus has yet been reached concerning a definition of CSR because it varies according to the socioeconomic, political, and environmental context. For the European Commission (2001), CSR is "a concept in which

companies integrate social and environmental concerns into their business operations and their interaction with stakeholders on a voluntary basis” (p. 6).

The European Commission (2001) also identifies two distinct CSR dimensions: internal and external. The internal dimension is about socially responsible practices within institutions, such as investment in safety, health, and human capital involving employees. The external dimension, in turn, refers to external stakeholders, such as suppliers, customers, society, and the environment.

In the conceptual framework proposed earlier by Carroll (1979), CSR is divided into four dimensions of responsibility: economic, legal, ethical, and discretionary (i.e., voluntary or philanthropic) aspects. Economic responsibility requires efficient management to maximize profits for owners or shareholders by providing goods and services to match market demand. Legal responsibility comprises management in accordance with the current legal framework. To be ethical, companies must act with fairness, equity, and impartiality and always respect social norms. Finally, philanthropic responsibilities must be purely voluntary (Carroll, 1991, Ibrahim et al., 2008).

Understanding their social responsibilities allows organizations to maintain high levels of moral or ethical conduct, as well as superior financial performance due to strengthened credibility, a more motivated workforce, and the ability to attract the desired employees (Bir et al., 2009; Kao et al., 2018). Some studies (e.g., McGuire et al., 1988; Waddock and Graves, 1997; Wu et al., 2015; Lee and Hu, 2018) have shown that organizations’ credibility is directly related to their socially responsible activities, so companies engaged in these activities can increase their credibility and thus their competitiveness.

CSR represents the way companies’ contributions serve various types of stakeholders and especially the role these initiatives play in supporting well-being in society at large (Vázquez et al., 2013; Fernández-Guadano and Sarria-Pedroza, 2018). The main challenge faced by companies is the need to be financially sustainable while playing a decisive role in the development of the surrounding society (Karatas-Ozkan et al., 2014; Dey et al., 2018) and making strategic decisions that respect the environment in which future generations will live.

2.2 CSRO

CSRO has attracted strong interest from researchers (e.g., Albinger and Freeman, 2000; Dzapina, 2016; Ciampi, 2018) because studying CSRO provides a better understanding of how important companies’ social performance is (Burton and Goldsby, 2009). In addition, CSRO allows scholars to measure individuals’ behaviors and proclivities using economic and social performance measures (Bir et al., 2009). CSRO is also a tool that can capture stakeholders’ perceptions of companies’ CSR performance, with the goal of examining the values that underpin CSR-related decisions (Bir et al., 2009; Tang and Tang, 2017).

The main instrument for measuring CSRO was developed and empirically tested by Aupperle (1982, 1985). This scale is based on the four CSR dimensions defined by Carroll (1991), which can be organized according to two main types of concerns: 1) legal, ethical, and discretionary concerns related to societal issues and 2) economic concerns related to organizational performance (Halpern, 2008).

Although the earliest studies (Aupperle et al., 1985) mostly assessed business executives’ CSRO, the concept has been applied to other stakeholders such as investors, consumers, employees, and students (Bir et al., 2009; Van den Heuvel et al., 2014; Tang and Tang, 2017). Various studies have confirmed the existence of factors influencing CSRO in different contexts, including religion (Angelidis and Ibrahim, 2004; Ibrahim et

al., 2006, 2008), gender (Burton and Hegarty, 1999; Marz et al., 2003; Quintana-García et al., 2018), the training of management students versus managers (Ibrahim et al., 2006, 2008), and business students versus business professionals (McDonald and Scott, 1997). Other factors found are managers' influence at the corporate and individual level (Marz et al., 2003), managerial values (Sharfman et al., 2000; Ibrahim et al., 2003), and organizational attractiveness (Smith et al., 2004).

In academic contexts in recent decades, CSR education has also been given special attention by researchers because CSR's integration into higher education courses is considered crucial since students will become clients, citizens, and/or managers (Ceulemans et al., 2011; Jorge and Peña 2014; Teixeira et al., 2018). In particular, Stubbs and Cocklin's (2008) work highlights the importance of students becoming familiar with business ethics and CSR issues and being able to integrate this knowledge into their future lives. This trend has led to a few studies focused on analyzing CSRO in higher education contexts.

For example, a pioneering study by Arlow (1991) used social assessment questionnaires to measure CSR among 138 American college students. This research showed that nearly one-third of the respondents "strongly agreed" that CSR is important for companies, while 70% believed that maximizing profits should be businesses' primary goal. The cited author further notes that personal characteristics such as gender and age play an important role in students' attitudes toward CSR and business ethics. Achua and Lussier (2008), in turn, studied CSRO among 75 business students enrolled in a university in the United States, after these individuals had had contact with the concept of CSR. The authors found that 73% of the respondents had a strong CSRO and believed that corporate responsibility goes further than an exclusive concern about profits. However, Wang and Juslin (2011) found that the 980 Chinese university students interviewed had a neutral perception of CSR.

Table 1 presents a summary of CSRO studies conducted in academic contexts around the world. Notably, most of these studies have focused on undergraduate and postgraduate students in three main contexts: the United States, Europe (e.g., Spain, Italy, Greece, Turkey, and Croatia), and Asia (e.g., Hong Kong, India, and Iran).

>>>> Insert Table 1 around here—Research focused on students' CSRO

Besides studying students' CSRO specifically, most of these studies have examined CSRO's potential predictors, highlighting the implications for various stakeholders. As Table 2 shows, different predictors have been analyzed over the last two decades, but studies have focused mostly on a few predictors such as age, education, ethnicity, nationality, culture, and religion and/or ideology, with a special emphasis on gender.

>>>> Insert Table 2 around here—Main predictors of students' CSR orientation in previous research

2.3 Research model and hypotheses

A review was conducted of the existing literature to identify factors that can influence higher education students' CSRO. The research hypotheses were formulated based on the review's findings, as discussed below.

2.3.1 Personal values

Various alternative approaches to personal values have been developed, including the list of values (LOV) instrument developed and applied by Kahle (1986) and Kahle and Kennedy (1988), which is grounded in previous theoretical frameworks (e.g., Maslow, 1954). Personal values include a sense of belonging, excitement, warm relationships, self-fulfillment, respect from others, fun and enjoyment of life, security, self-respect, and a sense of accomplishment. These values are an important concept in social psychology, which has been attracting significant attention in the literature published in recent years because these values have impacts at different levels and influence most individuals' behaviors (Hemingway, 2005).

Parsons et al. (1965) describe personal values as an explicit or implicit conception of what is desirable. Personal values are thus important life goals or standards that act as guiding principles in individuals' life (Rokeach, 1973; Schwartz, 1994; Franco et al., 2017). According to Williams (1968), personal values can function as preference criteria or patterns because values involve cognitive, effective, and directional aspects that, when fully thought through, can become criteria for judgments, preferences, and choices.

Individuals' behaviors result from concrete motivations in specific situations, which are partly determined by personal beliefs and values (Williams, 1979). Parashar et al. (2004) and Hemingway (2005) also argue that personal values influence human perceptions and behaviors as these involve an element of judgment that determines social norms and emotions about what is right, good, or desirable.

According to the above insights, personal values are directly related to behaviors, and values have a steering function. Therefore, the following research hypothesis was proposed for the present study:

H1: The personal values of higher education students influence their CSRO.

2.3.2 Gender

Gender has been studied in various fields of research (e.g., entrepreneurship, psychology, and management) in order to understand specific attitudes or behaviors (e.g., Bussey and Bandura, 1999; Van den Heuvel et al., 2014; Galbreath, 2018). Quintana-García et al. (2018) assert that women's moral reasoning is different than that of men because women attach greater importance to ensuring everyone is taken care of while men concentrate on making sure everyone receives justice. According to Bussey and Bandura (1999), social cognitive theory can be used to explain gender development and differentiation. For example, the social-psychological approaches developed by Bern (1981) and Markus et al. (1982) focus mainly on individual differences in information processing.

Overall, most previous studies on gender's influence on CSR have reported a clear difference between men and women. Smith et al. (2001), for instance, found that women attach greater importance to philanthropic responsibilities than men do. McDonald and Scott (1997) confirmed that women favor more ethical corporate actions. Ibrahim and Angelidis's (1991) study revealed that female board of director members are more strongly oriented toward philanthropic responsibility than male members are.

Although a variety of studies on gender differences in CSR have already been conducted, the present review found that no consensus yet exists on the results and that few studies have explored the gender gap among higher education students in European countries. In accordance with these findings, the following research hypothesis was proposed:

H2: Female higher education students attribute greater importance to philanthropic and ethical responsibility than male higher education students do.

2.3.3 Religion

Religion is seen as a belief in a divine being that generates a commitment to follow certain principles (McDaniel and Burnett, 1990). Besides playing a key role in humans' lives, religion also provides guidelines on how individuals should live (Sheikh and Beise-Zee, 2015) and plays an important role in individuals' perceptions of or efforts to guide organizations' social responsibility (Graafland et al., 2006; Brammer et al., 2007; Verma and Singh, 2016; Griffin and Sun, 2018). According to Cornwell et al. (2005), religion can be considered a subset of any culture, which shapes important values in individuals' cognitive structure that influence their behavior (Delener, 1994). Religion, in this way, guides human actions and has specific consequences (Verma and Singh, 2016).

Brammer et al. (2007) observe that religious individuals do not prioritize companies' responsibilities differently, but these people tend to operate based on broader conceptions of CSR than non-religious individuals do. Thus, religion can reasonably be argued to be extremely important in terms of moral issues (Uygur, 2009) and the values individuals include in their cognitive structure (Delener, 1994), thereby having an impact on human behaviors (McDaniel and Burnett, 1990; Cornwell et al., 2005). These findings justified postulating the following hypothesis for the present study:

H3: Higher education students with a Catholic religious orientation attach greater importance to philanthropic responsibility than do those who have no Catholic religious orientation.

2.3.4 Political ideology

Political science and political psychology research has provided substantial insights into the role of political ideologies play in individuals' values (Rosenberg, 1956; Barnea and Schwartz 1998; Goren et al., 2009). Political ideology is usually defined as a set of interconnected attitudes and values about societal issues and the ways in which these have to be handled (Tedin, 1987; Jiang et al., 2018). Burris (2001) reports that political ideologies tend to be formed early in individuals' life, and these beliefs are often transmitted from parents to children, leading to the formation of stable political identities. Adult political ideology has its roots in stable personality patterns that reflect basic, motivational cognitive predispositions. Thus, chief executive officers' (CEOs) political ideologies are relatively stable and long-lasting, and their personal inclinations influence CSR initiatives in their companies (Jost, 2006; Chin et al., 2013; Antonetti and Anesa, 2017).

Jost (2006) further points out that political ideology helps explain why individuals engage in certain behaviors. The cited author argues that the distinction between left versus right or liberal versus conservative ideologies has been the main useful, if simplified way of classifying political attitudes for over 200 years. Liberal individuals are more concerned about civil rights and more likely to be sensitive to general social issues and to specific issues such as diversity, social change, human rights, and the environment (Chin et al., 2013). In contrast, conservative individuals emphasize stability, respect for authority, and businesses' needs (McClosky and Zaller, 1984; Gupta et al., 2017).

According to Tetlock (2000), more conservative CEOs consider property rights more important than claims and believe that a focus on generating shareholder wealth is the most efficient approach. More liberal CEOs, however, believe that companies should be

more concerned about society's needs. In addition, Dunlap et al. (2001) and Li et al. (2011) stress that political ideologies and social and ethical behaviors are directly related because various studies have revealed that politically liberal individuals are more concerned about social and ethical issues than politically conservative individuals are (Jorge and Peña, 2014). Given the above assertions, the following research hypothesis was proposed for the present study:

- H4:** Higher education students with more liberal political ideologies are more concerned about social and ethical responsibility than are higher education students with conservative ideologies.

2.3.5 *Academic field of study*

Previous studies have reported that students' academic field of study significantly influences their ethical values and attitudes (Chonko and Hunt, 1985; Giacominio and Akers, 1998; Pohling, 2016; Beitelspacher and Rodgers, 2018). Sankaran and Built (2003) state that students from non-business courses tend to be more concerned about ethics than are students from business-based courses. Lindeman and Verkasalo (2005) found that students in business and technology-based courses have more individualistic and hard values. These students also have a positive attitude toward the current state of corporate ethics and responsibility, while students from forest ecology or environmental science courses have more negative perspectives. Amberla et al. (2011) reached similar conclusions, asserting that, in general, students from forest ecology and environmental science courses have more negative perspectives on the forest industry's environmental and social responsibilities. In contrast, students from business and technology-based courses have a more positive perspective on the forest industry's social responsibility.

Thus, academic programs can reasonably be seen as having an influence on students' behaviors and orientations. Within the CSR context, various studies have suggested that students' field of study can influence their CSRO, although the literature still shows a significant lack of consensus on this issue (Sankaran and Built, 2003; Wang and Juslin, 2012). The following research hypothesis was thus formulated for the present study:

- H5:** Higher education students enrolled in economics and business sciences programs have a stronger economic CSRO than do students from other academic fields.

2.3.6 *Volunteerism*

Volunteering comprises individuals' formal, public, and proactive choice to donate their time and energy freely to benefit another person, group, or organization (Snyder and Omoto, 1992; Wilson, 2000; Dreesbach-Bundy and Scheck, 2017). According to Blum (2010), volunteerism has been growing in popularity in recent years, which has triggered a substantial increase in studies of this activity in different fields including social psychology, sociology, and organizational behavior (Snyder and Omoto, 1992; Wilson, 2000; Dreesbach-Bundy and Scheck, 2017; Cook and Burchell, 2018). However, little research on volunteering has taken place within the field of CSR, especially on European students. Some studies in the literature have sought to explain why people become voluntarily involved in their communities, finding that beliefs, personal attitudes, and education appear to be potential predictors of volunteerism (McPherson and Rotolo, 1996).

In addition, Phillips and Ziller (1997) report that individuals without preconceived ideas about others are usually more likely to volunteer because they try to understand and

engage with everyone regardless of ethnicity or religion. Piliavin and Charng (1990) suggest that volunteering can be a way to motivate people. For example, employees who volunteer for their company (i.e., helping the firm fulfill its philanthropic responsibilities) usually have a more positive attitude and are more motivated, which can positively influence their job performance (Piliavin and Charng, 1990; Dobrowolska-Wesołowska, 2018). Various studies have also shown that individuals who participate in volunteer activities and interact with community members have personal beliefs and attitudes more closely related to societal needs (Gillespie Finney et al., 2014). Thus, the following hypothesis was proposed for the current research:

H6: Higher education students who participate in volunteer activities are more committed to philanthropic responsibility.

The theoretical insights discussed above and the resulting hypotheses led to the development of the conceptual research model shown in Figure 1. This displays the potential factors that may influence Portuguese higher education students' CSRO.

>>>> **Insert Figure 1 around here**—*Conceptual model*

3. Methodology

3.1 Data collection and sample profile

This study's most important objective was to identify the main factors that influence higher education students' CSRO, so primary data were collected using a questionnaire. This method facilitated contact with a larger number of students and avoided the need to control respondents' response time and any influence on responses (Cooper and Schindler, 2016). A pilot test was conducted with undergraduate and graduate students to evaluate the questionnaire's appropriateness. Data collection was then carried out in April 2017 in a northern Portuguese public university.

Regarding ethical concerns, a formal request for authorization to administer the questionnaire in various classes was previously submitted and approved by the university administration. Before distributing the questionnaires in the selected classes, students were previously informed about the study's main purpose and the voluntary and anonymous nature of their participation in this research.

The selection criteria for the sample were students from two programs per academic area and individuals who were about to enter the job market (i.e., third-year undergraduate students and master's students). Questionnaires were distributed in classrooms to all the students present. Table 3 summarizes the sample structure, which included 317 questionnaires (i.e., a 55% response rate, 4% margin of error, and 95% confidence level) completed by 68 master's students and 249 third-year undergraduate students. The respondents were studying in various programs from three academic fields of study.

>>>> **Insert Table 3 around here**—*Sample structure*

3.2 Measurement, scale development, and analysis

The questionnaire used in this study was divided into three main sections. The first section included 20 items assessing students' CSRO. In the second section, students were asked about their personal values, and the third section collected demographic data (see

Table 4). To evaluate individuals' behavior and orientation toward measures of economic and social performance (Bir et al., 2009), CSRO was measured with the scale developed by Aupperle (1982) and Aupperle et al. (1985). The cited authors' instrument used a forced choice method to minimize social convenience's effect on responses. Respondents were asked to assign 10 points to each of the 20 sets of statements that measure CSRO. This scale is considered by Smith et al., (2001) to be flexible enough for applications to varied stakeholders, and the scale has been widely used in different countries and populations (Burton et al., 2000; Halpern, 2008; Burton and Goldsby, 2009; Schmidt and Cracau, 2018).

The present study also evaluated CSRO with 20 items, but responses were given on a Likert scale ranging from 1 ("Strongly disagree") to 5 ("Strongly agree"). This section of the questionnaire included 20 sets of 4 statements each corresponding to CSRO's four dimensions: economic, legal, ethical, and philanthropic.

Personal values were measured using the LOV instrument developed and applied by Kahle (1986), and Kahle and Kennedy (1988) and grounded in the theoretical frameworks of Maslow (1954), Rokeach (1973), and Feather (1975). This variable was thus assessed in the present study using a 9-item scale and a Likert scale ranging from 1 ("Without any importance") to 9 ("Very important"). The values included a sense of belonging, excitement, warm relationships, self-fulfillment, respect from others, fun and enjoyment of life, safety, self-respect, and a sense of accomplishment.

Besides the two variables discussed above, additional questions were incorporated to collect data about the respondents. The items covered were gender (i.e., male or female), age, religion (i.e., with or without a Catholic religious orientation), political ideology (i.e., far-left, left, center-left, center, center-right, right, far-right, and no political ideology), and participation in volunteer activities (i.e., yes or no). The last item asked about the respondents' academic field of study (i.e., life science and healthcare, exact sciences and engineering, and economics and business sciences) (see Table 4).

>>>> Insert Table 4 around here—Study variables

To understand which factors influence students' CSRO, various analyses were performed, namely, correlation analysis, *t*-tests, and analysis of variance (ANOVA). The different analyses were conducted using IBM SPSS Statistics version 21 software.

4. Findings

4.1 Sample profile

As shown in Table 5, of the 317 students who participated in this research, 249 were undergraduate students. A little more than half (52.6%) were female, and 43.4% were between 21 and 22 years old. Most (67.5%) had a specific religious orientation, while 55% did not subscribe to a political ideology. Regarding their academic field, 42.6% were studying life science and healthcare, and 60.6% did not participate in any volunteer activities. Concerning the 68 students who were enrolled in a master's degree program, most were female (58.8%) and over 22 years old (72.1%). The majority also had a specific religious orientation (77.9%) and political ideology (51.5%). They were studying economics and business sciences (64.7%), and most did not participate in any volunteer activities (54.4%).

>>>> Insert Table 5 around here—Sample profile by academic degree

4.2 Results analysis

Table 6 shows the correlations between the four CSRO dimensions. A significant negative correlation exists between the economic dimension and the philanthropic and ethical dimensions, which corroborates the findings of previous studies (e.g., Aupperle et al., 1985; Smith et al., 2001; Van den Heuvel et al., 2014; Schmidt and Cracau, 2018). The results also show a significant positive correlation between the philanthropic and ethical dimensions, which also matches other studies' findings (e.g., Burton et al., 2000; Van den Heuvel et al., 2014; Schmidt and Cracau, 2018). Moreover, Table 6 shows that the legal and ethical dimensions have the highest average values.

>>>> **Insert Table 6 around here**—*Correlations between CSRO dimensions*

4.2.1 Personal values

The Pearson's correlation coefficients between personal value items and the four CSRO dimensions (see Table 7) were calculated, revealing that the ethical dimension is the most positively and significantly correlated with personal values. More specifically, this dimension is linked with self-fulfillment ($r = 0.209$; $p < 0.001$), respect from others ($r = 0.162$; $p = 0.004$), warm relationships ($r = 0.136$; $p = 0.015$), and a sense of accomplishment ($r = 0.134$; $p = 0.017$). Warm relationships ($r = 0.165$; $p = 0.003$) and self-fulfillment values ($r = 0.118$; $p = 0.035$) are also positively and significantly correlated with the philanthropic dimension. For the economic dimension, excitement is the only significant personal value with a positive correlation ($r = 0.137$; $p = 0.014$), with the remaining values found to be significant but showing negative correlations. Notably, the philanthropic dimension has only two significant correlations that indicate a negative relationship with this dimension.

>>>> **Insert Table 7 around here**—*Correlations between personal values and CSRO dimensions*

According to Haski-Leventhal et al. (2017), personal values are increasingly important in studies because these values allow researchers to understand respondents' profiles more fully. However, although H1 postulated that personal values would be positively related to CSRO, the present results show that only the ethical dimension appears to be positively correlated with almost half of the personal values. Among the remaining dimensions, positive significant relationships are rare or nonexistent.

In previous studies, LOV items have generally been reduced to a smaller number of underlying dimensions to facilitate analyses. To address the concerns frequently raised about single-item measurement in value surveys, the present study followed Kahle and Kennedy's (1988) recommendation to use factor analysis when processing data on the LOV scale's items. Thus, Homer and Kahle's (1988) approach was adopted, which included conducting principal component factor analysis with varimax rotation to identify the values' underlying relationships.

In general, the Kaiser-Meyer-Olkin (KMO) test for sampling adequacy and Bartlett's test of sphericity play a significant role in assessments of samples' appropriateness for factor analysis. The KMO's result (0.818) confirmed that the present study's data were suitable for this kind of analysis. Bartlett's test of sphericity ($p = 0.000$) also confirmed the validity and suitability of the data collected to address the research objectives.

Various previous studies have used the LOV scale as a measurement instrument (e.g., Kropp et al., 2005) and have shown that the 9 values can be associated with either 2 (e.g., Donoho et al., 2003) or 3 (e.g., Homer, and Kahle, 1988) different factors. The present study's factor analysis produced a 2-factor solution with eigenvalues greater than 1. The first factor explained 44.2% of the variance, and the second factor explained 16.9% of the variance. Overall, the 2-factor solution explained 61.1% of the variance.

In line with previous studies (e.g., Kim et al., 2002), the first factor included the values of a sense of belonging and excitement, and this factor was labelled "self-direction." The second factor was labelled "social affiliation" and included the remaining items: self-respect, respect from others, fun and enjoyment in life, a sense of security, a sense of accomplishment, and self-fulfillment. The item of warm relationships with others was not retained for analysis because of its high loading on both factors, in accordance with the procedures performed in previous studies (Shim and Eastlick, 1998).

To refine the analysis further, Cronbach's alpha coefficient was computed for each dimension. The results confirm the factors have adequate internal consistency, namely, 0.712 for the first dimension and 0.843 for the second dimension. To analyze the potential relationships between personal values and CSRO dimensions, Pearson's correlation analysis was performed (see Table 8). Similar to previous analyses' results, few significant relationships were found between both variables. The results only show significant positive correlations between the self-direction dimension of personal values and CSRO's economic dimension ($r = 0.125$; $p < 0.026$), as well as a positive correlation between social affiliation and CSRO's ethical dimension ($r = 0.140$; $p < 0.013$).

>>>> Insert Table 8 around here—Correlations between personal values' factors and CSRO dimensions

4.2.2 Gender

Regarding gender differences, the *t*-test (see Table 9) revealed significant statistical differences for the economic ($p < 0.001$), philanthropic ($p = 0.001$), and ethical ($p < 0.001$) CSRO dimensions. Male students are more concerned about issues underlying the economic dimension compared with female students (mean for males = 2.48 vs. mean for females = 1.95). In contrast, the results show that female students are more concerned about philanthropic (mean for females = 2.36 vs. mean for males = 2.17) and ethical (mean for females = 2.69 vs. mean for males = 2.39) corporate issues.

>>>> Insert Table 9 around here—Differences between genders regarding CSRO dimensions

As discussed previously, H2 postulated that female students would attach greater importance to issues related to the philanthropic and ethical CSRO dimensions in comparison to male students. Based on the results obtained, H2 appears to be valid, which corroborates the findings of previous studies conducted in different contexts (e.g., Dusuki and Yusof, 2008; Van den Heuvel et al., 2014; Tormo-Carbó et al., 2018).

4.2.3 Religious orientation

To uncover any significant differences between students with a Catholic religious orientation and without a Catholic religious orientation (see Table 10), *t*-tests had to be conducted. The results confirm statistically significant differences in the legal ($t(132.783)$

= -2.142; $p = 0.034$) and philanthropic dimensions ($t(315) = 2.243$; $p = 0.026$). In the case of the legal dimension, the analysis showed that students without a Catholic religious orientation place more importance than students with a Catholic religious orientation do (mean for non-religious individuals = 2.56 vs. mean for religious individuals = 2.41) on legal issues. In contrast, the results reveal that students with a Catholic religious orientation attach more importance than do students without a Catholic religious orientation (mean for religious individuals = 2.31 vs. mean for non-religious individuals = 2.17) to the philanthropic dimension.

>>>> Insert Table 10 around here—Differences between religious and non-religious students regarding CSRO dimensions

H3 postulated that religious students would attach greater importance to the philanthropic CSRO dimension compared with students without any religious orientation. The results obtained indicate that H3 is valid. Because religious orientation plays an important role in individuals' cognitive structure, this factor has a strong influence on the respondents' social behavior and contributes to greater concern about social issues (Cornwell et al., 2005; Verma and Singh, 2016).

4.2.4 Political ideology

Regarding students' political ideologies, the ANOVA analysis (see Table 8) uncovered no significant statistical differences for the CSRO dimensions. Nevertheless, as Table 11 shows, the students belonging to the center-right political spectrum are much more concerned about ethical issues (mean = 2.90) compared to other students.

>>>> Insert Table 11 around here—Differences between different political ideologies regarding CSRO dimensions

According to H4, students subscribing to more liberal political ideologies would be more concerned about issues underlying the philanthropic and ethical CSRO dimensions compared with students with more conservative ideologies. However, the results obtained fail to show any significant statistical difference, so this hypothesis did not receive statistical support.

Additional analysis was performed on the political spectrum data. For this purpose, the initial different ranges of students were reduced to two groups: students with a specific political ideology and students without any political ideology. While the full political spectrum does not appear to have any significant influence on CSRO, the additional *t*-test output (see Table 12) revealed statistically significant differences for the ethical dimension ($p < 0.001$). This suggests that students with a specific political ideology are more concerned about ethical issues (mean for those with an ideology = 2.64 vs. mean for those without an ideology = 2.48) than do students without any political ideology.

>>>> Insert Table 12 around here—Differences between students' attitudes toward political ideologies regarding CSRO dimensions

Although H4 was not supported for the sample under study, statistically significant differences were found between two groups of students surveyed (i.e., students with a political ideology and students without a political ideology). These results show that students with political beliefs place more importance on ethics than students without

political beliefs do, but no previous research was found in the literature to help substantiate these results.

4.2.5 Scientific field of study

As summarized in Table 13, the ANOVA test results include significant statistical differences between students studying in different academic programs, especially regarding the economic CSRO dimension ($p = 0.001$).

>>>> Insert Table 13 around here—*Differences between students from different academic fields of study regarding CSRO dimensions*

In addition, the results shown in Table 14 reveal that students in life science and healthcare programs (mean = 1.98) place less value on the economic CSRO dimension, while students studying exact sciences and engineering (mean = 2.38) value this dimension the most.

>>>> Insert Table 14 around here—*Comparison of means for students from different academic programs regarding CSRO dimensions*

H5 postulated that students enrolled in economics and business sciences programs would be more economic CSR oriented than students from other academic fields. Although the data failed to provide statistical support for this hypothesis, economics and business sciences and exact sciences and engineering students are much more concerned about issues underlying the economic CSO dimension than life science and healthcare students are. Thus, the first two groups appear to have a greater awareness of stakeholders' importance to organizational performance (e.g., consumers, employees, society, and suppliers). In addition, exact sciences and engineering students are generally seen as being sensitive to "numbers" and efficiency and effectiveness issues, which may contribute to their greater interest in performance issues and explain why the present results do not support H5.

4.2.6 Volunteerism

Regarding the respondents' participation in volunteer activities, the t -test results listed in Table 15 show statistically significant differences for the economic ($p = 0.006$), legal ($p = 0.039$), and philanthropic ($p = 0.008$) CSRO dimensions.

>>>> Insert Table 15 around here—*Differences between students' participation in volunteer activities regarding CSRO dimensions*

The above results reveal that students who do not participate in volunteer activities are more concerned about economic (mean for those not participating in volunteerism = 2.30 vs. mean for those participating in volunteerism = 2.04) and legal issues (mean = 2.50 vs. mean = 2.39) than are students who do participate in volunteer activities. In contrast, students who participate in volunteer activities are more concerned about issues underlying the philanthropic CSRO dimension (mean for those participating in volunteerism = 2.36 vs. mean for those who not participating in volunteerism = 2.20) than are students who do not participate in volunteer initiatives. These findings are in agreement with the results of other studies conducted in different contexts and reported in the literature (e.g., Gillespie Finney et al., 2014). The current findings thus appear to

support H6, which postulated that students participating in volunteer activities would have a stronger orientation toward philanthropic responsibility.

Notably, students reporting participation in volunteer activities are also more concerned about ethical issues (mean for those participating in volunteerism = 2.63 vs. mean for those not participating in volunteerism = 2.50) connected to the ethical CSRO dimension ($p = 0.060$). However, this result does not have significant statistical support, which would require a 0.05 significance level.

Table 16 summarizes the results for each research hypotheses. Therefore, of the 6 hypotheses formulated, only 3 were supported by the data collected (i.e., H2, H3, and H6). H1 was only partially supported because only a few personal values were significantly correlated with CSRO dimensions.

>>>> **Insert Table 16 around here**—*Hypotheses summary*

5. Discussion

The results obtained confirm that, as the students' economic CSRO increases, their philanthropic and ethical orientation decreases. This is corroborated by Schmidt and Cracau's (2018) study of business students from Germany and Qatar and Van den Heuvel et al.'s (2014) research on employees of an international financial services company. Concomitantly, the present study found that, as the ethical dimension's importance increases, the philanthropic dimension also intensifies, which shows that, for Portuguese higher education students, ethical responsibility is positively correlated with philanthropy.

The results also provide empirical evidence that the factors under study lead higher education students to focus more on one dimension and neglect the others (see Table 17). According to Tang and Tang (2017), specific factors play an important role by influencing individuals' behavior regarding CSR-related issues.

>>>> **Insert Table 17 around here**—*Summary of main results*

The results obtained for the gender, religion, and voluntarism factors corroborate the findings reported in the existing literature. For example, in the case of gender, some studies (e.g., van den Heuvel et al., 2014; Larrán et al., 2018; Schmidt and Cracau, 2018) in various contexts (e.g., students, consumers, employees, and entrepreneurs) have found that female individuals are more strongly oriented toward ethics and philanthropy, while males tend to have a more intense economic orientation.

Regarding religiousness, the current study found that higher education students with a Catholic religious orientation attach greater importance to philanthropic responsibility, and students without a Catholic religious orientation attach greater importance to legal responsibility. The literature on this topic (i.e., religion's influence on CSRO) includes research on other religions, such as Islam (Sheikh and Beise-Zee, 2015) or Hinduism (Verma and Singh, 2016), and/or other countries, such as Pakistan (Sheikh and Beise-Zee, 2015) or Indonesia (Arli and Tjiptono, 2018). However, all these studies concluded that individuals with a religious orientation have a stronger philanthropic and ethical orientation.

In the case of volunteerism, the present results are in line with Gillespie Finney et al.'s (2014) research, which confirmed that individuals who participate in volunteer activities and engage in community affairs have personal beliefs and attitudes more closely related to charity and sharing. However, according to the cited authors, people

without prejudices are usually more likely to volunteer because they try to understand and relate to others regardless of their ethnicity or religion.

The present results for the factors of political ideology and academic field of study are different from what is reported in the literature. In the case of political ideology, H4 was not supported by the present study's sample, but statistically significant differences were found between two groups surveyed: students with a political ideology and students without a political ideology. These results show that students who subscribe to a political ideology place more importance on ethics than do students without political ideologies. No studies were found in the literature to substantiate these results further. The literature that includes political ideologies confirms a difference between liberal and conservative individuals or left versus right. For example, Jiang et al. (2018) found that Chinese managers with a socialist ideology have a more pervasive CSR mentality. According to Chin et al. (2013), liberal individuals are more concerned about civil rights and more aware of social issues.

Finally, concerning the academic field of study, a large number of previous studies (Larrán et al., 2018; Schmidt and Cracau, 2018; Teixeira et al., 2018) have dealt with the orientation or perceptions of students enrolled in business programs (e.g., accounting or business management) because these individuals are likely to become company managers. According to McDonald and Scott (1997) and Schmidt and Cracau (2018), business students show a stronger economic CSRO than do non-business students. However, the present study's results do not coincide with the existing literature. The findings include that students in exact sciences and engineering programs are more strongly oriented toward economic responsibilities than are students from other fields of study (i.e., life science and healthcare and economics and business sciences). This difference in results may be related to how students in the economics and business sciences included in this study had previously had contact with subject matter related to ethics and social responsibility, which may have influenced their orientations. Thus, a longitudinal study needs to be conducted to clarify whether contact with CSR or ethics courses influences students' CSRO.

This research's results, therefore, contribute to the definition of higher education students' profiles based on the importance they attach to each dimension of CSRO:

- Economic dimension: male students with the excitement personal value, who are enrolled in exact sciences and engineering programs and who do not volunteer
- Legal dimension: non-religious students who do not volunteer
- Ethical dimension: female students with the personal values of warm relationships, self-fulfillment, respect from others, and a sense of accomplishment, as well as political ideologies
- Philanthropic dimension: female, religious students with the warm relationships and/or self-fulfillment personal values, who also volunteer

The definition of these profiles facilitates a fuller understanding of students' characteristics regarding each CSRO dimension. This information can be used to predict the future of entrepreneurs and society at large and thus to define strategies that contribute to a better balance between the four orientations.

6. Conclusions

Students are the future of society and companies, so understanding which factors contribute to increasing CSRO and how important this is to young people becomes crucial. The present study, therefore, sought to analyze a set of factors that can influence higher education students' CSRO. The results suggest that all the factors under study affect at least one CSRO dimension, but only some factors, including gender, religion,

and volunteerism, present correlation values that support the research hypotheses. In terms of personal values, this study also found that warm relationships, self-fulfillment, respect from others, and a sense of accomplishment negatively influence CSRO's economic and legal dimensions and positively affect the philanthropic and ethical dimensions. These findings show that students with these values are more concerned about social and ethical responsibilities.

Higher education institutions, whose main mission is to educate and train people, have the duty to foster ethical, responsible, and sustainable behaviors in students. In order to do this, degree programs must increasingly bet on education methods that enhance CSRO and provide a more complete understanding of CSR dimensions. This can be done through CSR courses and volunteer activities that allow students not only to develop personal skills but also to gain a stronger orientation toward philanthropic responsibility, as shown in this study's results.

Given the gaps identified in the existing literature, researchers need to conduct empirical studies that address individuals' orientation toward social responsibility in European countries, especially university students' CSRO since these are the future of society (e.g., entrepreneurs, consumers, officials, and policymakers). In this context, the present research's findings contribute to the scientific knowledge of which factors most influence these students' CSRO, as well as defining student profiles for each dimension of CSRO. In addition, this study tested a model including personal values different from those commonly examined in CSRO research.

This research's results thus provide empirical evidence that contributes to strengthening the existing literature through a clearer understanding of factors that influence CSRO and a more expansive approach to CSR specifically among Europe's higher education students. Those responsible for higher education institutions and government decision-makers can also have a better grasp of the factors that influence CSRO. This can help policymakers to implement measures that create a balance between the four CSR dimensions (i.e., economic, legal, ethical, and philanthropic). The present analysis of higher education students' CSRO further facilitates predictions of future societal behaviors and business models.

During this research, a few limitations were identified, which should be considered when interpreting the results and designing future studies. The first limitation is the cross-sectional nature of the study, which does not provide insights into the evolution of students' CSRO. Longitudinal research would be important to understand the influence of higher education institutions' policies on students' CSRO while at university. The second limitation is that the sample was restricted to a single university. Similar studies performed in other contexts would enhance the generalizability of the present results and develop a more solid theoretical framework. For example, research would be needed on other universities, other kinds of higher education institutions (e.g., polytechnic universities with more practical training and profession-oriented programs), and on both private and public institutions. Studies could also be conducted in different geographical or socioeconomic contexts in order to understand the potential influence of social, economic, and cultural issues.

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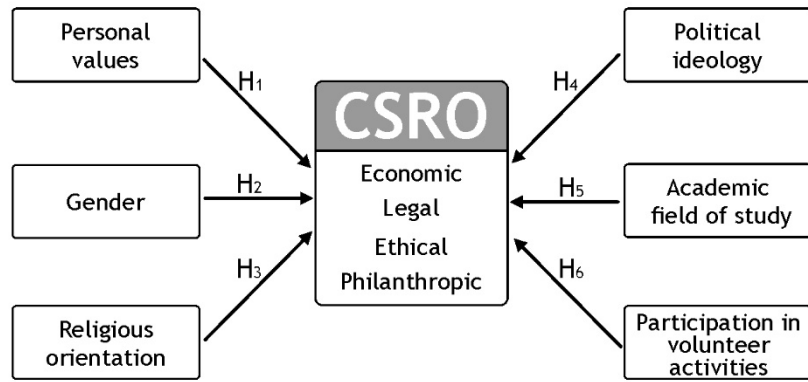


Figure 1: Conceptual model

Highlights

- Gender, religion and volunteerism are significantly related with students' CSRO
- Women, religious students and volunteers have a greater philanthropic orientation
- Women appear to have a stronger ethical orientation
- The research allowed defining student profiles for each CSRO dimension

Table 1: Research focused in Students' CSRO (Continue ...)

Source	Purpose	Data source	Method	Results
Burton, Farh, & Hegarty (2000)	Comparing CSRO between U.S. and Hong Kong business students	Survey of 322 undergraduate business students at a US and a Hong Kong large university	Correlations, CFA analysis, t-test	<ul style="list-style-type: none"> Many differences between both cultures (e.g. Hong Kong students give economic responsibilities more weight and noneconomic responsibilities less weight than U.S. students)
Paintal, & Bhullar (2017)	Finding differences between male and female management students' CSRO	Survey of 600 MBA students of selected Universities of Punjab	T-test	<ul style="list-style-type: none"> Significance of the Legal component While male students value more the Economic component, female students value more the Ethical component
Angelidis, & Ibrahim (2004)	Exploring the relationship between students' CSRO and their degree of religiousness	Survey of 473 business students from five universities in the eastern United States	ANOVA	<ul style="list-style-type: none"> Significant relationship between degree of religiousness and attitudes toward the economic and ethical components of CSR.
Walker et al. (2003)	Analysing Greek students' perceptions of corporate social responsibility	Survey of 305 undergraduate and postgraduate students at the University of Piraeus	Correlations	<ul style="list-style-type: none"> Students tend to downgrade the relative importance of criteria other than economic ones. CSRO's similarities between Greek students and others
Kolodinsky et al. (2010)	Understanding factors that may predict students' CSRO	Survey of 298 undergraduate students at a large southeastern US university	Correlations, t-test, regression analysis	<ul style="list-style-type: none"> Positive relationship between ethical idealism and CSR attitudes Negative relationship between ethical relativism and CSR attitudes Negative relationship between Materialism and CSR attitudes
Bir, Suher, & Altinbaşak (2009)	Analysing the effect of CSRO on the attractiveness of companies to potential employees	Survey of 220 students from Business Colleges at two public and two private Turkish Universities.	Correlations	<ul style="list-style-type: none"> Organizations with economic power and acting according to ethical values are attractive even if not focused on CSR Females value more CSRO' discretionary dimension and value organizations exhibiting higher discretionary behaviours
Alonso-Almeida, Fernández De Navarrete, & Rodríguez-Pomeda (2015)	Examining CSRO of undergraduate business students without any CSR/Ethics training	Survey of 535 students at the Autonomous University of Madrid	ANOVA	<ul style="list-style-type: none"> Stakeholders' perspective deserves a huge attention for students Female students are more concerned with CSR issues Differences between years of study concerning shareholders' value maximization
Kaifi et al. (2014)	Exploring international business students' CSRO, and the influence of factors as gender, or culture	Survey of 180 undergraduate students in California	Correlations, t-test	<ul style="list-style-type: none"> Female students' higher commitment to corporate social responsibility Students born in a high-context culture have a higher commitment to corporate social responsibility
Li, Pomeroy, & Noble (2011)	Comparing Chinese and domestic students' CSRO in Australia	Survey of 160 students at an Australian university	Chi-square test, ANOVA, MANOVA	<ul style="list-style-type: none"> While previous research has found that age, gender, and study major of students may influence perceptions of CSR, this research found these variables are not as significant as cultural background.

Table 1: Research focused in Students' CSRO (... Continuation)

Source	Purpose	Data source	Method	Results
Gholipour, Nayeri, & Mehdi (2012)	Identifying/analyzing CSRO determinants among Iranian business students	Survey of 320 bachelor, master, and PhD students from the 4 most important public business schools in Iran	Correlations, ANOVA	<ul style="list-style-type: none"> Gender, age and living background have no impact on CSRO, while religiosity, machiavellianism and relativism do influence CSR significantly.
Yoder, Strandholm, & VanHemert (2017)	Studying if CSR teaching is able to change students' attitudes towards CSR	44 bachelor students in Business Administration at a regional campus of a large Midwestern university	Correlations, t test, Post Hoc test	<ul style="list-style-type: none"> Despite initial attitudes towards CSR being so high, certain subsets of students experience significant improvements as a result of the course
Chirieleison, & Scrucca (2017)	Comparing the impact of ethics/CSR education and personal perspectives on students' attitudes	Survey of 200 undergraduate students studying at the Department of Economics of the University of Perugia (Italy)	Correlations, t test	<ul style="list-style-type: none"> Education has a positive, although limited impact Strong relationship between personal perspectives and CSRO Higher influence of personal perspective in shaping students' CSRO
Burton, & Hegarty (1999)	Examining the effect of factors as gender, or socially desirable reporting on students' CSRO	219 junior and senior business students from a large Midwestern university	Correlations, t test	<ul style="list-style-type: none"> There are differences in orientation across gender and degree of Machiavellian orientation; Social desirability had a minimal effect on the responses.
Ham, Pap, & Pezić (2015)	Examining business students' attitudes towards CSR and possible influential factors	Survey of 253 undergraduate and graduate students at the Faculty of Economics in Osijek	Correlations, t test, ANOVA	<ul style="list-style-type: none"> Students do perceive the importance of CSR Students' willingness to incorporate CSR in their future job Gender, religiousness, and year of study do have an effect on CSRO
Hatch, & Stephen (2015)	Examining the effectiveness of incorporating CSR courses into the curriculum in higher education	Survey of 124 undergraduate students at Butler University in Indianapolis	ANOVA, regression analysis, MANOVA	<ul style="list-style-type: none"> Implementing curricular programs is beneficial to students but affects them differently based on their gender and age. Students' CSRO influence their perceptions of how responsible companies should behave for both societal and consumer welfare.
Haski-Leventhal, Pournader, & McKinnon (2017)	Examining the role of gender and age in determining four indicators of business students' moral approach (inc. CSRO)	International survey of 917 postgraduate students in the context of PRME (Principles of Responsible Management Education)-signatory schools	Confirmatory factor analysis, ANOVA, MANOVA, Post hoc test	<ul style="list-style-type: none"> Female students placed a higher value on ethical responsibilities Female students are more welcoming regarding curriculum changes focused on CSR-related studies Higher ranking of positive CSR attitudes by older students

Table 2: Main predictors of students' CSR orientation in previous research

[illegible]

Table 3: Sample structure

Academic field of study	Academic degree	Number of students	Sample	Response rate	Programs
Life science and healthcare	Undergraduate	199	106	53%	Sports sciences, nursing
	Graduate	43	11	26%	Nursing
Exact sciences and engineering	Undergraduate	135	66	49%	Communications and multimedia, computer engineering
	Graduate	35	13	37%	Communications and multimedia, computer engineering
Economics and business sciences	Undergraduate	92	77	84%	Economics, management
	Graduate	68	44	65%	Economics and business sciences, management
Total		572	317	55%	

Table 4: Study variables

Variables	Type of variable	Answer options	Observations
CSRO	Twenty items, which are divided into four statements corresponding to the four dimensions of CSRO	Distribution of 10 points across 4 statements	Developed by Aupperle (1982) and Aupperle et al. (1985)
Personal values	(1) Sense of belonging, (2) excitement, (3) warm relationships, (4) self-fulfillment, (5) being well respected, (6) fun and enjoyment of life, (7) security, (8) self-respect, and (9) a sense of accomplishment.	Nine-point Likert type scale (no importance vs. very important)	Developed by Kahle (1986)
Gender	Nominal and dichotomous variables	Male or female	
Religion	Nominal and dichotomous variables	With Catholic religious orientation or without Catholic religious orientation	
Political ideology	Nominal variable	Far-left, left, center-left, center, center-right, right, far-right, and no political ideology	
Volunteerism	Nominal and dichotomous variables	Yes or no	
Academic field of study	Nominal variable	Life science and healthcare, exact sciences and engineering, and economics and business sciences	

Table 5: Sample profile by academic degree

		Undergraduate		Graduate		Total	
		N	%	N	%	N	%
Gender	Male	118	47.4%	28	41.2%	146	46.1%
	Female	131	52.6%	40	58.8%	171	53.9%
Age	20 years old or younger	95	38.1%	0	0.0%	95	30.0%
	21–22 years old	108	43.4%	19	27.9%	127	40.0%
	Over 22 years old	46	18.5%	49	72.1%	95	30.0%
Religion	Religious	168	67.5%	53	77.9%	221	69.7%
	Not religious	81	32.5%	15	22.1%	96	30.3%
Political ideology	With political ideology	112	45.0%	35	51.5%	147	46.4%
	Without political ideology	137	55.0%	33	48.5%	170	53.6%
Academic field of study	Life science and healthcare	106	42.6%	11	16.2%	117	36.9%
	Exact sciences and engineering	66	26.5%	13	19.1%	79	24.9%
	Economics and business sciences	77	30.9%	44	64.7%	121	38.2%
Participation in volunteer activities	Yes	98	39.4%	31	45.6%	129	40.7%
	No	151	60.6%	37	54.4%	188	59.3%
Total		249	100%	68	100%	317	100%

Note: N = number

Table 6: Correlations between CSRO dimensions

CSRO dimensions	Mean	SD	Economic	Legal	Philanthropic	Ethical
Economic	2.20	0.827	1			
Legal	2.46	0.492	-0.073 ^{ns}	1		
Philanthropic	2.27	0.533	-0.535***	-0.264***	1	
Ethical	2.55	0.626	-0.679***	-0.081 ^{ns}	0.266***	1

Notes: SD = standard deviation; *** = $p < 0.001$; ** = $0.001 \leq p < 0.010$; * = $0.010 \leq p < 0.050$; ns = $p \geq 0.050$

Table 7: Correlations between personal values and CSRO dimensions

Personal values	CSRO dimensions			
	Economic	Legal	Philanthropic	Ethical
Sense of belonging	0.080 ^{ns}	-0.011 ^{ns}	0.005 ^{ns}	0.025 ^{ns}
Excitement	0.137*	-0.052 ^{ns}	-0.085 ^{ns}	0.012 ^{ns}
Warm relationships	-0.211***	0.011 ^{ns}	0.165**	0.136*
Self-fulfillment	-0.123*	-0.165**	0.118*	0.209***
Respect of others	-0.119*	-0.099 ^{ns}	0.086 ^{ns}	0.162**
Fun and enjoyment of life	0.042 ^{ns}	-0.036 ^{ns}	-0.106 ^{ns}	0.032 ^{ns}
Security	-0.180**	0.110 ^{ns}	0.048 ^{ns}	0.101 ^{ns}
Self-respect	-0.116*	0.089 ^{ns}	0.037 ^{ns}	0.109 ^{ns}
Sense of accomplishment	-0.080 ^{ns}	-0.203***	0.082 ^{ns}	0.134*

Notes: *** = $p < 0.001$; ** = $0.001 \leq p < 0.010$; * = $0.010 \leq p < 0.050$; ns = $p \geq 0.050$

Table 8. Correlations between personal values' factors and CSRO' dimensions

Personal values	CSRO' dimensions			
	Economic	Legal	Philanthropic	Ethical
Self-directed	0.125*	-0.036 ^{ns}	-0.046 ^{ns}	0.022 ^{ns}
Social affiliation	-0.096 ^{ns}	-0.069 ^{ns}	0.047 ^{ns}	0.140*

***: $p < 0.001$; **: $0.001 \leq p < 0.010$; *: $0.010 \leq p < 0.050$; ns: $p \geq 0.050$

Table 9: Differences between genders regarding CSRO dimensions

	Male		Female		Levene's Test for equality of variances		T-test for equality of means			
	N	Mean	N	Mean	F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Economic	146	2.48	171	1.95	8.028	.005	5.726	227.522	.000	.52668
Legal	146	2.51	171	2.41	.528	.468	1.876	315	.062	.10356
Philanthropic	146	2.17	171	2.36	1.057	.305	-3.227	315	.001	-.19102
Ethical	146	2.39	171	2.69	.687	.408	-4.369	315	.000	-.29979

Note: F = F -statistic; Sig. = significance; df = degrees of freedom

Table 10: Differences between religious and non-religious students regarding CSRO dimensions

CSRO dimensions	Students with religious orientation (N = 221)		Students without religious orientation (N = 96)		Levene's test for equality of variances		T-test for equality of means			
	Mean	SD	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Economic	2.17	.84	2.26	.79	.351	.554	-.878	315	.380	-.08888
Legal	2.41	.41	2.56	.62	11.851	.001	-2.142	132.8	.034	-.14910
Philanthropic	2.31	.50	2.17	.59	2.117	.147	2.243	315	.026	.14526
Ethical	2.57	.64	2.52	.59	.283	.595	.703	315	.483	.05383

Table 11: Differences between different political ideologies regarding CSRO dimensions

Political ideology	Economic		Legal		Philanthropic		Ethical	
	N	M \pm SD	N	M \pm SD	N	M \pm SD	N	M \pm SD
Far-left	1	2.65 \pm 0.0	1	2.20 \pm 0.0	1	2.45 \pm 0.0	1	2.65 \pm 0.0
Left	39	2.14 \pm 0.7	39	2.48 \pm 0.5	39	2.20 \pm 0.5	39	2.67 \pm 0.6
Center-left	12	2.13 \pm 0.7	12	2.75 \pm 0.2	12	2.20 \pm 0.4	12	2.70 \pm 0.6
Center	22	2.08 \pm 0.6	22	2.43 \pm 0.5	22	2.41 \pm 0.6	22	2.52 \pm 0.8
Center-right	20	2.16 \pm 0.9	20	2.48 \pm 0.4	20	2.11 \pm 0.5	20	2.90 \pm 0.9
Right	49	2.29 \pm 1.2	49	2.35 \pm 0.5	49	2.31 \pm 0.6	49	2.56 \pm 0.6
Far-right	4	2.19 \pm 0.9	4	2.65 \pm 0.4	4	2.25 \pm 0.2	4	2.40 \pm 0.9
F(6.139)		.227		1.397		.798		0.838
<i>p</i>		.967		.220		.573		.542

Notes: M = Mean; SD = Standard Deviation

Table 12: Differences between students' attitudes toward political ideologies regarding CSRO dimensions

CSRO dimensions	Students with political ideologies (N = 147)		Students without any political ideology (N=170)		Levene's test for equality of variances		T-test for equality of means			
	Mean	SD	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Economic	2.19	.89	2.20	.78	1.001	.318	-.140	314	.889	-.01311
Legal	2.45	.47	2.46	.51	.009	.923	—	314	.863	-.00956
Philanthropic	2.26	.52	2.28	.55	.156	.693	-.357	314	.722	-.02149
Ethical	2.64	.66	2.48	.59	.607	.436	2.23	314	.026	.15728

Table 13: Differences between students from different academic fields of study regarding CSRO dimensions

CSRO dimensions		Sum of squares	DF	Mean square	F	Significance
Economic	Between groups	9.403	2	4.702	7.133	.001
	Within groups	206.960	314	.659		
	Total	216.36	316			
Legal	Between groups	1.332	2	.666	2.785	.063
	Within groups	75.107	314	.239		
	Total	76.439	316			
Philanthropic	Between groups	.984	2	.492	1.740	.177
	Within groups	88.805	314	.283		
	Total	89.790	316			
Ethical	Between groups	.263	2	.132	.334	.716
	Within groups	123.629	314	.394		
	Total	123.892	316			

Table 14: Comparison of means for students from different academic programs regarding CSRO dimensions

CSRO dimensions	Life science and healthcare (N = 117)		Exact sciences and engineering (N = 79)		Economics and business sciences (N = 121)	
	Mean	SD	Mean	SD	Mean	SD
Economic	1.98	.62	2.38	.64	2.29	1.04
Legal	2.42	.45	2.57	.48	2.42	.53
Philanthropic	2.34	.47	2.26	.54	2.21	.58
Ethical	2.58	.58	2.51	.62	2.55	.68

Table 15: Differences between students' participation in volunteer activities regarding CSRO dimensions

CSRO dimensions	Students participating in volunteerism actions (N = 129)		Students not participating in volunteerism actions (N = 188)		Levene's test for equality of variances		T-test for equality of means			
	Mean	SD	Mean	SD	F	Sig.	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean difference
Economic	2.0415	.62955	2.3027	.92619	3.712	.055	-2.790	315	.006	-.26119
Legal	2.3915	.39878	2.5011	.54314	5.292	.022	-2.070	313.53	.039	-.10959
Philanthropic	2.3640	.47253	2.2029	.56278	1.134	.288	-2.668	315	.008	.16103
Ethical	2.6329	.55027	2.4984	.66922	1.613	.205	1.887	315	.060	.13454

Table 16: Hypotheses summary

Hypotheses	Relationship	Result
H1: The personal values of higher education students influence their CSRO.	Personal values → CSRO	Partially supported
H2: Female higher education students attach greater importance to philanthropic and ethical responsibility than male higher education students do.	Female students → Philanthropic and ethical dimensions	Supported
H3: Higher education students with a Catholic religious orientation attach greater importance to philanthropic responsibility than do those who have no Catholic religious orientation.	Religious orientation → Philanthropic dimension	Supported
H4: Higher education students with more liberal political ideologies are more concerned about social and ethical responsibility than are higher education students with conservative ideologies.	Liberal political ideologies → Philanthropic and ethical dimensions	Not Supported
H5: Higher education students enrolled in economics and business sciences programs have a stronger economic CSRO than do students from other academic areas.	Economics and business sciences field of study → Economic dimension	Not Supported
H6: Higher education students who participate in volunteer activities are more committed to philanthropic responsibility.	Volunteerism → Philanthropic dimension	Supported

Table 17: Summary of main results

Factors	Main results
Personal values	<ul style="list-style-type: none"> • Warm relationships, self-fulfillment, being well respected, and a sense of accomplishment negatively influence the economic or legal CSR dimension and positively affect the philanthropic or ethical CSR dimension.
Gender	<ul style="list-style-type: none"> • Female higher education students are more strongly oriented toward ethics and philanthropy. • Male higher education students are more strongly oriented toward the economic CSRO dimension.
Religion	<ul style="list-style-type: none"> • Higher education students with a Catholic religious orientation attach greater importance to philanthropic responsibility. • Higher education students without a Catholic religious orientation attach greater importance to legal responsibility.
Political orientation	<ul style="list-style-type: none"> • Higher education students who subscribe to a political ideology place greater importance on ethics than do higher education students without a political ideology.
Academic field of study	<ul style="list-style-type: none"> • Students in exact sciences and engineering programs are more strongly oriented toward economic responsibilities than are students from other programs.
Volunteerism	<ul style="list-style-type: none"> • Higher education students who participate in volunteer activities are more concerned about philanthropic responsibility. • Higher education students who do not participate in volunteer activities are more concerned about economic and legal responsibility.