

Is sustainability a cost, an obligation, or an opportunity? Evidence on sustainable entrepreneurship orientation from Poland

Anna Doś, Francesco Pattarin

ABSTRACT

Objective: The objective of the article is to find if Polish managers exhibit a sustainable entrepreneurship orientation and to comprehend the factors driving this orientation.

Research Design & Methods: We conducted a factor analysis and regression analysis on data from an original survey on 301 managers of Polish companies.

Findings: We identified two orientations towards sustainability, *i.e.* as an opportunity, and a cost. Personal values, demographic characteristics, personal experience, and education affect perceptions of sustainability.

Implications & Recommendations: Some managers who work for large and middle enterprises see sustainability as an opportunity and are ready to take responsibility for facing social and environmental challenges. Companies and government need to find a way to unlock this potential. Having international experience and working for a company that is regularly involved in corporate social responsibility promotes such orientation.

Contribution & Value Added: This study is the first to diagnose sustainable entrepreneurship orientation in Poland – a country which urgently needs to adopt a sustainable development model. It is also the first study to analyse the societal factors behind sustainable entrepreneurship orientation.

Article type: research article

Keywords: business sustainability; corporate social responsibility; sustainable entrepreneurship orientation; personal values; managerial experience; sustainable development

JEL codes: L21, M14, M21

Received: 6 December 2022

Revised: 18 October 2023

Accepted: 31 October 2023

Suggested citation:

Doś, A., & Pattarin, F. (2024). Is sustainability a cost, an obligation, or an opportunity? Evidence on sustainable entrepreneurship orientation from Poland. *Entrepreneurial Business and Economics Review*, 12(1), 17-33. <https://doi.org/10.15678/EBER.2023.120102>

INTRODUCTION

While the business and its practices used to be viewed as obstacles in achieving sustainable development, today, scholars stress that they can be the solutions. Companies can become sustainable development agents if sustainability and business goals are aligned. Such alignment requires a particular perception of sustainable development by businesspeople. The perception of business contribution to sustainability can theoretically be at least three-fold: as a cost, an obligation, or an opportunity (Bos-Bouwers, 2010). The last type of perception allows for recognizing and seizing new business opportunities by incorporating sustainability-related goals (Kraus *et al.*, 2018). Recently, the entrepreneurship literature has devoted increased attention to businesspeople who are inclined to build a competitive advantage by targeting sustainability challenges (Pratono *et al.*, 2019). The broad term used to describe such inclination is sustainable entrepreneurship orientation (SEO) (Criado-Gomis *et al.*, 2017; Nasser, 2021); this construct broadly refers to the integration of entrepreneurial orientation (creating value by exploring and exploiting new emergent opportunities) and sustainability orientation (focus on environmental and social sustainability) (Criado-Gomis *et al.*, 2018). The emerging research on SEO is gaining

increasing visibility because scholars recognize it as a factor in determining sustainable entrepreneurship initiatives in new or already established organisations (Demirel *et al.*, 2019; Parboteeah *et al.*, 2012; Kraus *et al.*, 2018). Sustainable entrepreneurship can effectively transform business development models (Muñoz & Cohen, 2018). However, businesspeople can perceive the role of business and sustainability in different ways and consequently not always be ready to participate in such transformations. This issue is particularly relevant for already established organisations, which have a significant impact on society and the environment. Therefore, we must address some key questions. Are managers inclined to seek business opportunities with social and environmental components? Why are they and not others? The main goal of this article was to investigate if managers show SEO and what are the factors behind it. We focused on Poland, which is a country characterized by diverse perceptions about sustainability because of its recent history of transition from a centralized planned economy to a market-based system. The orientation of business responsibility has changed over this process, gradually incorporating views typical of western European countries. However, Poland is exposed to a significant risk of becoming a laggard in the transition towards sustainable Europe (McCauley *et al.*, 2023).

Our research contributes to the ongoing debate about the strategic approach to sustainability goals. Previous studies use questionnaires designed to grasp SEO only and do not account for alternative orientations toward sustainability, which may result in diverse forms and levels of commitment to sustainable business practices. Indeed, the relative importance of SEO is under-investigated. Moreover, extant studies collect data mainly from young and small-sized firms, often disregarding larger companies with better capabilities to undertake sustainability-oriented entrepreneurial actions. Thus, the knowledge about drivers of SEO among business managers needs to improve to uncover new ways of promoting sustainability (Ameer & Khan, 2022).

We aimed to offer two contributions. Firstly, we provided insight into the individual perceptions of relations between business and sustainability among managers. We found evidence that managers perceive sustainability either as an opportunity or a cost but not as an obligation. Next, we studied the psychological and sociological drivers of SEO perceptions. This way, we hope to offer insights about how SEO can be stimulated. Our research is focused on managers and owners of middle and large enterprises in large cities in Poland. Therefore, our results inform about high-impact individuals in a country that needs a stimulus for taking a sustainable path of development.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In the business context, sustainability focuses on a set of ethical values and principles which guide business action in a responsible way, incorporating the environmental and societal consequences of actions alongside economic goals (Font & McCabe, 2017). Many recent empirical studies show how sustainable strategies pay off financially (Bartolacci *et al.*, 2020). However, this does not necessarily translate into business engagement in sustainable practices. Indeed, a long-standing stream of research in psychology has highlighted that individuals often form specific beliefs not so much based on evidence, but rather on their consolidated views (Knight, 2006). In these cases, attitudes, beliefs and inclinations are key in understanding foundations for business engagement contributing to sustainable development. Managers often must decide on whether to trade off short-term profits and expenditures for sustainability-related activities with (if at all) long-term and rather uncertain benefits (Feder & Weißenberger, 2019). Therefore, a critical point is how managers perceive the relationship between sustainability and business goals, *i.e.* as a cost, an obligation, or an opportunity (Bos-Bouwens, 2010). Perceiving business sustainability as the cost is related to self-centric profit maximisation that has traditionally been promoted as the fundamental objective of business. The well-known Friedman's view is representative of this approach. According to it, 'the only responsibility of business towards society is the maximisation of profits to the shareholders within the legal framework and the ethical custom of the country' (Friedman, 1970). In this vein, pro-social and pro-environmental activity of business can be seen as a waste of resources (McWilliams *et al.*, 2006). Thus, some managers may perceive sustainability as cost only and choose profit over environmental and societal impact (Fuentes *et al.*, 2019). The opposite way of perceiving business by managers regards sustainability as an obligation,

which results in prioritising the ethical imperative. Such perception is fuelled by the idea that accommodating environmental and social concerns has intrinsic value (Hahn *et al.*, 2018). Ethical concerns of some managers inevitably contradict the economic imperative of sheer profit objectives (De Bakker *et al.*, 2019). While budgetary allocations often must be made to achieve social and environmental goals, the moral duty fulfilment can trigger compromising financial goals (Jones & Felps, 2013). The third approach is sustainability as an opportunity. This relates to incorporating environmental and societal demands to re-think products, services, and the business model of firms so that trade-offs can potentially become new business strategies. This approach enables the development of commercially viable ventures that advance the causes of both environmental protection and social justice (Muñoz & Dimov, 2015). Managers' inclination to align sustainability and business goals fits SEO as a behavioural construct rather than as an organisational quality (Wu *et al.*, 2019). Managers showing SEO not only establish new ventures but also conduct sustainable entrepreneurial activities within existing organisations and transform their business models consequently (Criado-Gomis *et al.*, 2018). In this vein, SEO closely relates to strategic approaches to corporate social responsibility (CSR) (Hooi *et al.*, 2016; Kraus *et al.*, 2018). Schrettle *et al.* (2014) indicate that only organisations with a proactive approach to sustainability consistently incorporate a commitment to sustainable development. Consequently, SEO among managers contributes to the country's sustainable development.

Poland is an internationally important and interesting context to study SEO, because it has been infused with rich and often conflicting beliefs on the role of business. Until 1989, under a command-economy system, Polish state-owned enterprises focused on achieving social goals set by the government. The process of transitioning to a market-based system, which began in 1989, radically changed the dominating narratives. Fierce competition, lack of support from the government, and the belief that profit maximisation is the principal objective of private companies dramatically reduced firms' prosocial activities (Potocki, 2015). However, over the last decade, the business environment in Poland has evolved rapidly; significant trends towards sustainable and responsible business have emerged (Doś & Pattarin, 2021). Possibly, these changes have shaped new mindsets about the role of business in society with respect to sustainability issues.

Another crucial point to address is the factors that motivate managers to demonstrate SEO. Wu *et al.* (2019) show the effect of Machiavellianism ('the aim justifies means'), psychopathy, and narcissism on SEO. Extant literature argues that key personal characteristics of sustainable entrepreneurs are their personal values (Thelken & de Jong, 2020). Thus, the primary drivers of SEO to investigate are personal values. Values are 'beliefs that a specific mode of conduct or end-state of existence is personally and socially preferable to alternative modes of conduct or end-states of existence' (Rokeach, 1973, p. 160). Values are stable and central in a person's cognitive structure (Dietz & Stern, 1995), and causal antecedents to views and attitudes, and, ultimately, behaviour (Stern *et al.*, 1995). We drew on Schwartz (1994) who identified ten basic human values organised into four high-order groups (Table 1).

As far as businesspeople are concerned, self-transcendent values work to identify and exploit business opportunities closely linked to environmental and social issues (Liobikienė *et al.*, 2020; Yasir *et al.*, 2022). Tenner and Hörisch (2021) find that supporters of sustainability-oriented ventures hold low levels of self-enhancement values. Thus, we hypothesised:

- H1:** There is a negative relationship between self-enhancement values and SEO among Polish managers.
- H2:** There is a positive relationship between self-transcending values and SEO among Polish managers.

The theories of judgement formation highlight that it is jointly affected by both psychological traits and social context (Bandura, 2002). Thus, studying psychological traits as stand-alone drivers of SEO gives only limited and possibly confounding insights. In our study, we accounted for basic elements of social context potentially affecting SOE, *i.e.* individual experiences exposing individuals to views and evaluations within their social environment (Wood & Bandura, 1989). Obviously, education is such an experience. Godos-Díez *et al.* (2015) showed how in, comparison with other kinds of education, a business studies background may affect the way stakeholders' interests are considered and moral judg-

ments are made. It also seems possible that managers who studied humanities are less inclined to focus exclusively on profits (Rivera & De Leon 2005). Lewis *et al.* (2014) show that CEOs with legal education act more conservatively and are less likely to agree on environmental disclosure.

Table 1. Motivational types of values sectioned in high-order groups

High-order group	Value	Motivation
Self-enhancement	Power	Social status and prestige, control, or dominance
	Achievement	Personal success through demonstrating competence according to social standards
	Hedonism	Pleasure and sensuous gratification for oneself
Openness to change	Stimulation	Excitement, novelty, and challenge in life
	Self-direction	Independent thought and action-choosing, creating, exploring
Self-transcendence	Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and nature
	Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact
Conservation	Tradition	Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide
	Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms
	Security	Safety, harmony, and stability of society, relationships, and self

Source: own elaboration based on Schwartz (1994).

The psychological literature provides evidence that familiarity with an object creates more positive attitudes towards it (Heath *et al.*, 2011). In that case, acting in a social environment where responsible business practices are common, potentially increases managers' favour to sustainability. Polish managers can get exposed to such environments in two ways. Firstly, they can work for a company fostering business sustainability. Secondly, they can enter international social environments where companies are committed to sustainability daily. Many Polish managers have lived, studied, or gained professional experiences in Western European countries, well-known for their commitment to sustainability, and later came back to work in Poland; such experience could have exposed them to sustainability issues or orientations.

Manager's personal experiences with the business itself can also play a role. The experience can be positive or negative. Negative experiences drive scepticism and lead to devaluing companies (Chu *et al.*, 2014). Scepticism about business in general fosters opinions that business responsibility for the environment and society is simply window-dressing and that business roles are narrow (Elving, 2013). One easy-to-observe and well-tested proxy of negative experience-driven dissatisfaction is turnover (Hom & Kinicki, 2001).

The literature widely reports the effect of gender on sustainable business practices (Amorelli & García-Sánchez, 2021). Women undergo different socialization processes than men; through these processes, women learn that they are expected to be helpful, kind, interpersonally sensitive, nurturing, and concerned about others' welfare (Lämsä *et al.*, 2008). Considering that diverse dimensions of managers' experience can impact their perception of business sustainability, we hypothesized that:

H3: Personal experience is a significant antecedent of managers' perception of business sustainability.

RESEARCH METHODOLOGY

We collected information about managers' perceptions of business sustainability and psychological and environmental factors that may shape them. To this end, we conducted a survey using a questionnaire consisting of three major sections.

The first part of the questionnaire asked for managers' perceptions of the role of business in society with a focus on sustainability issues, the second part for the personal values of managers, and the third

part for managers' experience and demographic profile. The first part of the questionnaire aimed at obtaining information about the managerial perception of business sustainability according to the schema developed by Hernández-Perlines and Rung-Hoch (2017) and Wu and co-authors (2019). We elicited the position of managers about SEO, corporate social responsibility (CSR), and the environment. Social and governance issues were in line with the Quazi and O'Brien (2000) approach. We asked the respondents to express agreement or disagreement about each of the eight statements on a 7-point Likert scale (see the Appendix for details). The second part of the questionnaire aimed at obtaining information about personal values. We measured personal values using ten items adapted from the World Values Surveys Questionnaire (WVSA, 2008; Schwartz, 1994) using, again, a 7-point Likert scale. The third part of the questionnaire was about respondents' experiences and demographic profile. To capture managers' profiles, we focused on the type and level of education, gender, international experience (working or studying abroad), individual turnover (number of companies where the manager had worked for), the position of a manager in a company (middle, upper, company owner), and age.

The questionnaire was submitted by direct interview to owners and managers of middle and large companies located in seven major cities in Poland (Warsaw, Krakow, Wroclaw, Katowice, Lodz, Poznan, and Gdansk) in December 2018. The survey sample was 500 managers; 301 of them participated, which is about 60%.

We compared respondents and non-respondents by firm size (sales), economic sector and type of ownership, and we did not find any significant pattern. Therefore, our sample may be considered random. This does not exclude that some personal features of managers may have affected participation. However, the features of participating managers were quite ample and diverse. Males constituted 43.5% of respondents, and the median age of respondents was 42 years with a minimum of 28 and a maximum of 65 years. Company owners constituted about 21% of the sample, while 79% were middle to upper managers – almost equally distributed. Furthermore, educational profiles were quite diversified, both in terms of educational level and type of studies. Most managers had a university degree (73.4%), 9.9% had a bachelor and the rest a postgraduate degree. Managers with university or postgraduate degrees were mostly trained in economics or law, while technical sciences and economics bachelors constituted 51.4% and 33.3% respectively among bachelors.

RESULTS AND DISCUSSION

Our analysis of managers' orientation towards sustainability is twofold. Firstly, we performed exploratory (EFA) and confirmatory (CFA) factor analysis of managers' attitudes towards society. Next, we turned to regression analysis of the hypotheses about the relationship between attitudes and managers' features.¹

In the first step, we aimed to identify synthetic constructs and related scales based on the questionnaire items; such scales should be meaningful representations of managers' attitudes or, as we call them, 'perceptions.' Table 2 displays the descriptive statistics for the eight items used in our analysis.

We checked the correlation pattern of these items and found meaningful links among some of them. Moreover, multicollinearity did not seem to be an issue (Figure 1). We also evaluated standard measures of sampling adequacy (MSA). The lowest MSA value was 0.547 for 'Seek profit' and the highest was 0.824 for 'social welfare'. The total MSA was 0.765. According to the common practice, we deemed all measures satisfactory and concluded that our sample was adequate for factor analysis.

We used the principal axis method (PA) to perform EFA. Based on the parallel scree plots of the correlation matrix eigenvalues, very simple structure, Velicer MAP, and Bayes information criterion (BIC) statistics, we tried models characterized by two and three factors. The two-factors were better than the three-factor models according to the root mean square of residuals (RMSR), root mean square error of approximation (RMSEA), BIC, and the Tuckey-Lewis index (TLI) of factor reliability (Table 3). While RMSR, RMSEA, and TLI were quite close and equally acceptable for two and three factors, BIC

¹ We conducted all calculations in the R environment (R Core Team, 2023). We used the packages psych for EFA (Revelle, 2023) and lavaan (Rosell, 2012) for CFA and car for regressions (Fox & Weisberg, 2019).

strongly suggested two factors. With two factors, PA explained 36% of the total sample variation and 46% with three. In the two-factor models, the second factor accounted for 27% of the total explained variation versus 73% of the first, while in the three-factor models, the second and third factors explained 52% of it versus 48% of the first. Therefore, the underlying construct representation was clearer in the two-factor models than in the three-factor ones and was preferred even if it sacrificed 10% points of total variance explained. We confirmed this conclusion with our examinations of the factor loadings produced by EFA for two and three factors, in which the third factor was not easy to interpret as a meaningful underlying construct. Finally, we passed the chi-squared test of the two-factor model versus the null model at less than the 0.001 size.

Table 2. Descriptive statistics of eight questionnaire items on 301 subjects

Items	Mean	Standard Deviation	Median	Skewness	Kurtosis	Interquartile Range
Seek profit	5.06	1.43	5	-1.11	0.98	1
Legal bounds	4.20	1.53	4	-0.29	-0.75	2
Stakeholder value	5.04	1.34	5	-0.71	0.10	2
Social welfare	5.00	1.31	5	-0.48	-0.37	2
Government fails	4.54	1.43	5	-0.40	-0.33	2
Assets in business	4.69	1.42	5	-0.70	0.17	2
CSR moat	5.00	1.28	5	-0.63	0.36	2
CSR profit	5.06	1.31	5	-0.79	0.43	2

Source: own study.

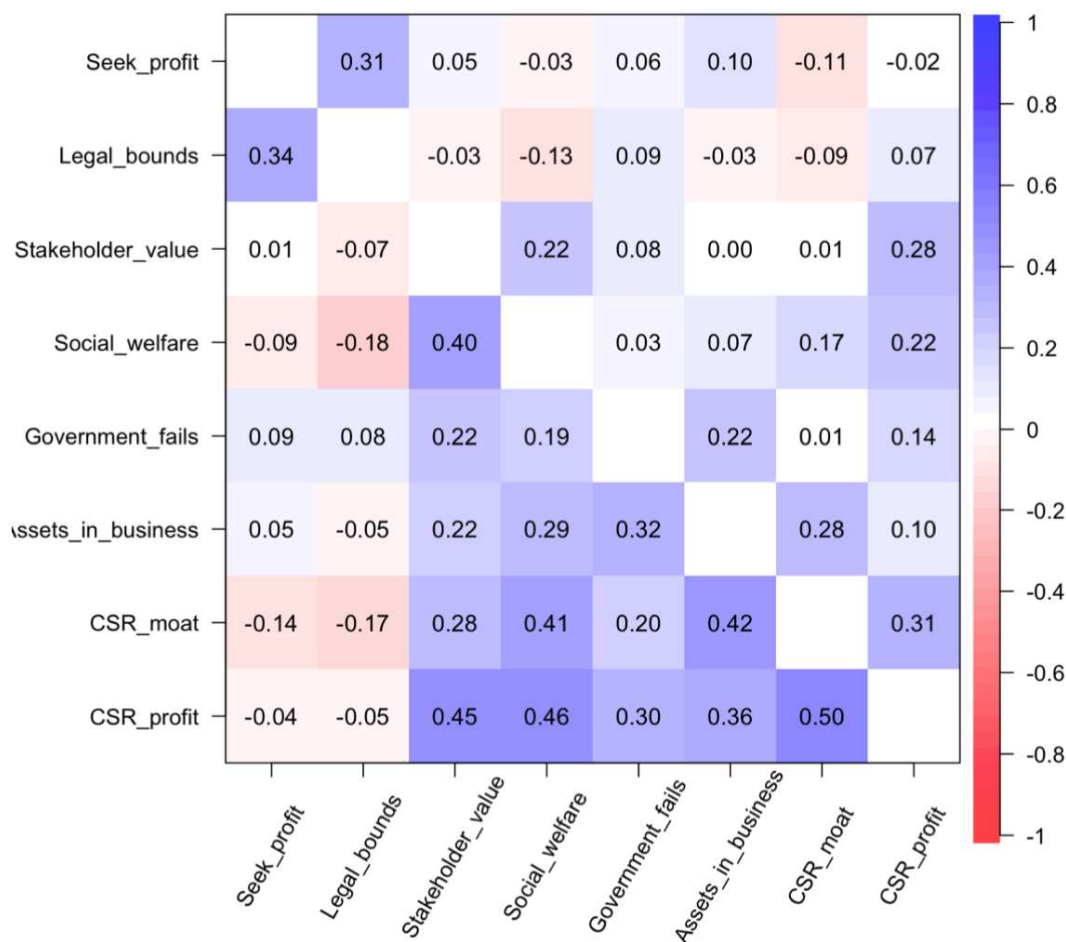


Figure 1. Correlations and partial correlations of questionnaire items

Note: Correlations are in the lower and partial correlations in the upper triangle.

Source: own elaboration.

Table 3. The EFA comparison of two- and three-factor models

Criterion	Number of Factors	
	2	3
RMSR	0.04	0.02
RMSEA	0.06	0.02
BIC	-45.53	-31.92
TLI	0.92	0.99

Note: based on 301 subjects and eight items. We based all criteria on the decomposition of the correlation matrix by factors, *i.e.* relative mean squared residual (RMSR), root mean square error of approximation (RMSEA), Bayes information criterion (BIC), and Tuckey-Lewis index (TLI).

Source: own study.

The first set of EFA models assumed there was not any correlation between factors, while the second set allowed for it. In the first case, we used Varimax, in the second Oblimin factor rotations. We estimated all models by maximum likelihood. Although item measures were not continuous, we did so, because the 7-point Likert scale can be fairly accommodated this way if data do not show strong asymmetries or fat-tails as it generally was in our case.

While factor correlation is often an issue when constructing psychometric scales, this was not the case for our data. Indeed, the estimated correlation from the Oblimin rotation was tiny (-0.15) and not statistically different from zero. Preferring an orthogonal factor structure was also suggested by CFA. According to EFA results, for CFA, we assumed the following model structure:

Factor 1: Sustainability as Opportunity ~ CSR profit + CSR moat + Social welfare + Stakeholder value + Assets in business + Government fails

Factor 2: Sustainability as Cost ~ Legal bounds + Seek profit

in which Factor 1 and Factor 2 were allowed to correlate.

We estimated the model by maximum likelihood with the Satorra-Bentler correction for robustness. The CFA estimated correlation between factors was -0.216 and its standard error was 0.105. Thus, it was quite small and only marginally significant given the sample size of 301 subjects (the *P*-value of the z-score test is 0.04). After constraining factors to be uncorrelated, we did not reject the restrictions implied by the model structure against the saturated model at the 0.001 significance of the deviance-based chi-square test.

Table 4 presents the loadings of the two extracted factors from the eight questionnaire items by PA with bootstrapped 95% confidence intervals and standard analysis of variance statistics. The pattern of factor loadings clearly identified two meaningful constructs, *i.e.* 'sustainability as opportunity' and 'sustainability as cost,' which we will describe below.

Table 4. Results of factor analysis

Items	Factor 1: Opportunity		Factor 2: Cost		Items variance shares		Items total variance
	Estimate	Interval	Estimate	Interval	Common	Unique	
Seek profit	0.00	(-0.09. 0.08)	0.55	(0.25. 0.94)	0.31	0.69	1.0
Legal bounds	-0.07	(-0.19. 0.01)	0.61	(0.29. 0.88)	0.38	0.62	1.0
Stakeholder value	0.54	(0.42. 0.67)	-0.02	(-0.26. 0.19)	0.3	0.7	1.0
Social welfare	0.60	(0.47. 0.74)	-0.20	(-0.38. -0.03)	0.40	0.6	1.2
Government fails	0.42	(0.27. 0.56)	0.19	(-0.07. 0.38)	0.21	0.79	1.4
Assets in business	0.53	(0.38. 0.69)	0.02	(-0.20. 0.26)	0.28	0.72	1.0
CSR moat	0.64	(0.53. 0.75)	-0.22	(-0.39. -0.08)	0.45	0.55	1.2
CSR profit	0.76	(0.67. 0.85)	-0.33	(-0.28. 0.14)	0.58	0.42	1.0

Note: PA extracted factors loadings on items with 95% bootstrapped confidence intervals based on 500 replicas. Multiple R-squares of items with factors were 0.784 for Factor 1 and 0.542 for Factor 2. Loadings and variances were based on standardized values of items.

Source: own study.

Having assessed the validity of the proposed scales, we checked their reliability. The evidence provided by the commonality-uniqueness decomposition suggested that factors were reliable (Table 4). This was supported by three common measures of reliability, *i.e.* Cronbach's alpha, omega total, and split half. The alpha and omega reliability statistics were at acceptable levels, *i.e.* 0.68 and 0.74 respectively. The distribution of the split half statistic with Spearman-Brown correction on 5000 permutations had a minimum of 0.55 and a maximum of 0.78, which was an acceptable range.

Sustainability as opportunity is characterized by seeing the responsibilities of business extending beyond the sheer search for profit within legal boundaries. It encompasses beliefs that assuming broad responsibilities is an effective basis for competing in the market and enhances profitability, and that businesses should take on the role of a social leader and protect stakeholders, and that companies are capable and legitimate to do so because they have enough resources to do it, especially when other institutions fail to respond to social issues. This perception aligns with SEO and encourages the active pursuit of projects that benefit society, leading to enhanced competitiveness and, ultimately, increased profitability.

Sustainability as a cost points to perceptions about the role of business in society that emphasizes strict attendance to the economic interest of the capital providers. Existing law and regulations are perceived as already putting a sufficient check on business behaviour, so that additional corporate responsibilities toward broader stakeholders and society in general, are not worth considering. This perception leads to not seeing SEO as a relevant objective for company managers and possibly hindering their actions to gain a competitive advantage through pro-environmental and/or pro-social projects.

We found that the two factors were cast into two scales normalized in the range [-100, 100], in which values less than zero represented negative and values above zero – positive perceptions (see the Appendix for details). For brevity, we called the first scale “sustainability as opportunity” (SaO) and the second ‘sustainability as cost. (SaC) Although SaO and SaC imply opposite views about SEO, they may coexist in a manager's overall attitude. Indeed, 26.8% of managers were positive about SaO and negative about SaC. In total, 29.8% of managers were negative about SaO and positive about SaC, and the rest of them were either fully positive or negative about both (43.4%).

In the second step, we investigated the determinants of managers' attitudes toward SEO through regression analysis, in which the dependent variables were the SaO and SaC scales. We were especially interested in the effect of value-related scales on perceptions.

Regressions included several control and explanatory variables. Because most independent variables were qualitative factors, and some included many levels, the more variables we included in a regression equation, the quicker the number of regressors increased. This implies that although the sample size was not small (301 cases), estimators may not have been very precise (*i.e.* they had large variances). Some independent variables may have been strongly dependent. This also reduces precision. To resolve these issues, we adopted three estimation methods and compared their results to single-out significant independent variables: least-squares, stepwise variable selection on least-squares, and ridge regression.

Regression models differed because of their dependent variable (*i.e.* either SaO or SaC) and the sets of independent variables. The baseline model included the most variables. Restricted 1 and Restricted 2 were paired-down versions of it where some subsets of non-significant variables were consecutively excluded. Overall, we estimated six models, *i.e.* three for opportunity and three for cost.

In all regressions, we centred quantitative variables around the mean and scaled by their standard deviation to improve fitness. We encoded quantitative variables into binary variables, so that we dropped the first level to avoid linear dependencies in the model matrix. Therefore, in interpreting regressions, coefficients of qualitative variables shall be interpreted as differential effects with respect to the baseline reference. Table 5 presents the results of regression analysis with least-squares. Stepwise and ridge regression provided similar outcomes.

Table 5. Results of regression analysis

Coefficients	Baseline		Restricted 1		Restricted 2	
	Sustainabil- ity as Op- portunity (SaO)	Sustaina- bility as Cost (SaC)	Sustainabil- ity as Op- portunity (SaO)	Sustaina- bility as Cost (SaC)	Sustainabil- ity as Op- portunity (SaO)	Sustain- ability as Cost (SaC)
(Intercept)	-0.053	0.055	-0.071	-0.025	-0.152	-0.017
St. Err.	0.264	0.242	0.224	0.211	0.164	0.149
P-value	0.842	0.819	0.752	0.908	0.356	0.907
Power	0.016	0.077	0.025	0.079	0.041	0.065
St. Err.	0.067	0.077	0.066	0.074	0.065	0.072
P-value	0.813	0.319	0.702	0.285	0.536	0.369
Achievement	-0.004	0.049	-0.016	0.035	-0.022	0.044
St. Err.	0.061	0.062	0.060	0.061	0.060	0.060
P-value	0.948	0.429	0.793	0.571	0.709	0.465
Hedonism	-0.146	0.169	-0.144	0.156	-0.155	0.145
St. Err.	0.065	0.070	0.064	0.068	0.063	0.066
P-value	0.025	0.015	0.024	0.021	0.014	0.028
Stimulation	-0.003	0.122	-0.009	0.122	-0.002	0.131
St. Err.	0.061	0.064	0.060	0.062	0.060	0.059
P-value	0.954	0.057	0.879	0.051	0.973	0.027
Self-direction	0.087	0.014	0.083	0.013	0.090	0.029
St. Err.	0.058	0.074	0.056	0.071	0.055	0.068
P-value	0.131	0.853	0.140	0.856	0.102	0.676
Universalism	0.169	0.160	0.156	0.173	0.166	0.163
St. Err.	0.058	0.080	0.057	0.075	0.056	0.073
P-value	0.004	0.046	0.006	0.022	0.003	0.026
Benevolence	0.211	-0.117	0.224	-0.113	0.216	-0.120
St. Err.	0.059	0.066	0.058	0.065	0.057	0.062
P-value	0.000	0.074	0.000	0.083	0.000	0.052
Tradition	0.187	0.083	0.171	0.080	0.150	0.074
St. Err.	0.060	0.072	0.059	0.066	0.058	0.062
P-value	0.002	0.252	0.004	0.226	0.010	0.233
Conformity	-0.044	0.243	-0.025	0.251	-0.015	0.263
St. Err.	0.066	0.081	0.065	0.074	0.065	0.071
P-value	0.508	0.003	0.702	0.001	0.812	0.000
Security	0.012	0.184	0.010	0.172	0.000	0.177
St. Err.	0.059	0.072	0.058	0.068	0.059	0.067
P-value	0.834	0.011	0.867	0.012	0.998	0.008
logAge	0.010	-0.017	-0.010	0.005		
St. Err.	0.064	0.075	0.059	0.068		
P-value	0.876	0.825	0.869	0.945		
Gender: Female	0.194	0.030	0.116	0.062		
St. Err.	0.111	0.123	0.101	0.104		
P-value	0.079	0.811	0.254	0.550		
Education level: University	-0.194	0.008	-0.180	-0.012		
St. Err.	0.156	0.131	0.149	0.118		
P-value	0.212	0.954	0.226	0.922		
Education level: MBA/Postgraduate	0.064	-0.243	0.240	-0.305		
St. Err.	0.268	0.386	0.248	0.366		
P-value	0.810	0.529	0.333	0.404		
Education level: PhD	0.155	0.200	0.239	0.191		
St. Err.	0.273	0.180	0.264	0.174		
P-value	0.570	0.268	0.366	0.272		

Education field: Law	0.114	-0.299				
St. Err.	0.182	0.229				
P-value	0.532	0.192				
Education field: Natural sciences	-0.107	-0.269				
St. Err.	0.169	0.172				
P-value	0.527	0.119				
Education field: Other	0.368	0.074				
St. Err.	0.271	0.368				
P-value	0.175	0.840				
Education field: Social sciences and humanities	-0.005	-0.116				
St. Err.	0.187	0.163				
P-value	0.977	0.476				
Education field: Technical sciences	-0.192	-0.002				
St. Err.	0.131	0.145				
P-value	0.142	0.988				
Experience: International	0.340	-0.055	0.326	-0.017	0.398	-0.010
St. Err.	0.120	0.141	0.116	0.131	0.111	0.123
P-value	0.005	0.697	0.005	0.895	0.000	0.937
Jobs: 2	-0.044	0.267	-0.102	0.258	-0.048	0.271
St. Err.	0.149	0.150	0.145	0.148	0.143	0.143
P-value	0.765	0.075	0.482	0.081	0.740	0.058
Jobs: 3	-0.055	-0.180	-0.062	-0.191	-0.041	-0.181
St. Err.	0.159	0.179	0.155	0.168	0.147	0.153
P-value	0.730	0.315	0.690	0.254	0.780	0.236
Jobs: [4. +Inf]	-0.302	0.084	-0.299	0.073	-0.285	0.070
St. Err.	0.162	0.168	0.159	0.164	0.146	0.150
P-value	0.062	0.614	0.060	0.656	0.051	0.640
Level in company: Middle manager	0.001	-0.030				
St. Err.	0.152	0.161				
P-value	0.997	0.851				
Level in company: Upper manager	-0.137	0.073				
St. Err.	0.149	0.169				
P-value	0.358	0.665				
Size assets: (180. +Inf]	0.156	0.049				
St. Err.	0.113	0.139				
P-value	0.169	0.726				
CSR implementation: Occasionally	0.009	-0.004	0.021	0.045	0.001	0.043
St. Err.	0.161	0.174	0.153	0.159	0.153	0.147
P-value	0.954	0.982	0.892	0.779	0.993	0.772
CSR implementation: Regularly	0.351	-0.213	0.402	-0.165	0.427	-0.147
St. Err.	0.176	0.192	0.161	0.158	0.161	0.147
P-value	0.047	0.267	0.013	0.297	0.008	0.316
Residuals St. Err.	0.835	0.835	0.836	0.832	0.842	0.829
R-squared	0.37	0.37	0.35	0.356	0.329	0.349
Adjusted R-squared	0.303	0.302	0.301	0.308	0.292	0.312
F-statistic	5.49	5.48	7.15	7.36	8.72	9.51
Degrees of freedom	(29. 271)	(29. 271)	(21. 279)	(21. 279)	(16. 284)	(16. 284)
P-value	0.000	0.000	0.000	0.000	0.000	0.000

Note: All quantitative variables were expressed as z-scores. The reference levels of qualitative variables in the baseline model were: Gender: Male, Education level: Secondary, Education field: Economics. Experience: Domestic. Jobs: 1. Level in company: Company_owner. Size assets: (0. 180]. Csr implementation: Never. HC-adjusted coefficient standard errors and F-tests are used for 'cost' models. The sample size was 301 subjects.

Source: own study.

The SaO regressions passed both the Breusch-Pagan test for constant variance and spread-level plots checks, while in the SaC regressions, there was a hint of heteroscedasticity. Therefore, we used robust estimates of the variance-covariance matrix of estimators in this case (Long & Ervin, 2000). Residual analysis did not show any functional-form misspecification. The normality of errors was strongly supported across all models. Finally, common residual-based diagnostics did not reveal any significant outliers-related problems.

The results of all models for SaO showed that two variables related to personal values had a strong and very significant positive effect. These were universalism and benevolence. These are both self-transcendent values which emphasize concern for the welfare of others, social justice, equality, and nature. These motivations do not contradict business purposes but help focus on seeking business opportunities through sustainability. Interestingly, also Tradition, which is related to responsiveness to immutable expectations from the past, positively impacts opportunity. This suggests that Polish tradition, in which social solidarity holds a unique position, is a nurturing environment for SEO. Hedonism had a negative effect on SaO. This motivational type is associated with valuing pleasure or sensuous gratification for oneself and is a trait of self-enhancement values. Our results showed that such motivation reduces SEO.

These findings strongly supported Hypothesis 1 and 2. Our results differ from the findings by Garçon *et al.* (2021) who studied Brazilian entrepreneurs and showed that personal values do not have any significant impact on social entrepreneurship orientation but are partially in line with Kirkwood and Walton (2010) who suggest that sustainable entrepreneurs are driven by eco-centric, self-transcendent, and openness to change values.

Some variables related to managers' experience also have significant effects on "sustainability as opportunity". Being a woman, having an international experience and working for a socially responsible company has a positive and significant impact on SEO. However, having a high individual turnover (changing jobs more than four times in one's career, indicating scepticism towards the business environment) has a significant negative effect on SEO. Women managers seem slightly keener than males in embracing sustainability as an opportunity. This result is in line with previous research which has found that gender is one of the important factors explaining differences in social responsibilities perception (Alonso-Almeida *et al.*, 2015). International experience and working for a company that is regularly involved in CSR both have strong, positive, and significant effects on SaO. These features relate to familiarity with CSR. Therefore, our results show that social environments where business social responsibility is institutionalized and successfully practiced help build SEO among managers. Overall, these findings support Hypothesis 3. Interestingly, education did not show any significant effect on SaO. This means that study programs in Poland were not adjusted to present societal needs in terms of sustainable transition.

"Sustainability as cost" (SaC) is the opposite view of SaO. Therefore, the results of regression analysis for this factor are a litmus test to better understand the antecedents of SEO in Poland. We found that hedonism and stimulation, which are self-enhancement values that emphasize the pursuit of one's own interests, both have significant positive effect on the SaC Security and conformity also do; these values express the motivations to preserve the *status quo* through maintaining traditional beliefs, complying with rules and expectations of others, and seeking safety and stability (Sagiv *et al.*, 2017). Thus, a profit-oriented attitude seems to be linked with neoliberal imperatives strongly reinforced in Poland during the 1990s and the lack of readiness to essay new ways of thinking about business goals and roles. Thus, our findings indicate that in Poland, sustainable business models may be seen as an innovative approach by managers who prefer stability.

Universalism also has a positive significant effect on SaC. Universalism is generally related to tolerance and protection of the welfare of people and nature. Universalistic managers can exhibit the SaC approach when caring for the shareholders' financial interests. To the contrary, benevolence has a negative effect on SaC. As this concept hinges on voluntary concern for others' welfare, we interpreted this result as the SaC viewpoint conflicting with the internalized motivational base for cooperative and supportive social relations.

The only experience-related factor that significantly increases SaC is having worked for two companies during a managerial career. Since there is no clear pattern in how the number of job changes impacts the managerial mindset, more research is needed to understand this effect.

Overall, although both certain personal values and experience-related variables affect positively Sustainability as opportunity" (SaO), the latter variables show stronger effects. Thus, they can become key SEO drivers in Poland. Interestingly, in almost all cases personal features that positively affect SaO affect negatively SaC and vice versa. Therefore, our results provide evidence that opposite personal profiles lead to opposing views on the role of business in society.

CONCLUSIONS

Factor analysis of survey data revealed that there are two distinctive groups of views on business, social, and environmental goals among Polish managers. The first is "Sustainability as an opportunity". People with this mindset are keen to participate in societal governance, not only within their closest environment but also indirectly reaching out to society in general. This mindset encompasses strong beliefs that entrepreneurship and sustainable development are not mutually exclusive. Sustainability as an opportunity fits SEO and is adequate for facing the globalisation challenges, the lack of regulation and privatisation, weak governments actions, and the strength of private capital. We also showed that an alternative viewpoint on sustainability exists among Polish managers: the "Sustainability as cost" view. This belongs to managers believing that maximising the value of providers of capital within the framework of legal requirements is the fundamental business responsibility and may result in creating negative externalities. We did not find any views of sustainability related to moral obligations suggesting that Poland is different from Western countries where such a view was found (Bos-Bouwers, 2010). The theoretical implication of this finding is that institutional contexts indeed alter the way of seeing sustainability by business practitioners.

Our analysis uncovered antecedents of SEO. We found evidence that SEO among Polish managers is strongly driven by such personal values as self-transcendent and tradition but also by personal experience and profile, notably having been exposed to social environments where business social responsibility is institutionalized and successfully practised. Our findings on personal values provide more detailed insights into how they affect the perception of business role in sustainable transition than previous studies. Our findings on experience-related drivers of sustainability as opportunity give hope that SEO as an individual inclination can be developed under favourable circumstances. Clearly, international experience and working for a company that is regularly involved in CSR promotes such orientation. The practical implication of our study is that sustainability-oriented companies as well as government actions may foster international mobility to promote SEO among entrepreneurs (*e.g.* promoting students' internships in companies that are regularly involved in CSR). Moreover, we showed that university programmes need material improvements to harness higher education for sustainable transition. Many companies strive for developing human resources policies that efficiently improve company's social performance and our results show that such policies should consider the experience of candidates for different positions, their gender, and their personal values.

This study has some limitations. Firstly, our sample included middle and large enterprises. Thus, our results cannot be safely extended to manager working at other types of companies. Surveys to study SEO are still in the development phase and broader designs can bring about new insights. Secondly, we studied a limited number of experience-related factors. The *prima facie* importance of such factors we highlight suggests that they are worth further investigation to help designing policies aimed to spread SEO among businesspeople. Thirdly, we were not able to account for the fact that sustainably oriented entrepreneurs may differ with respect to the dimension of sustainability they mostly focus on. Finally, we did not account for the level of discretion that individual managers have and thus we could not find what was the actual impact of SEO oriented managers on their organisations. This issues needs to be further investigated.

REFERENCES

- Alonso-Almeida, M.D.M., Fernández de Navarrete, F.C., & Rodríguez-Pomeda, J. (2015). Corporate social responsibility perception in business students as future managers: a multifactorial analysis. *Business Ethics: A European Review*, 24(1), 1-17. <https://doi.org/10.1111/beer.12060>
- Ameer, F., & Khan, N.R. (2022). Green entrepreneurial orientation and corporate environmental performance: A systematic literature review. *European Management Journal*, 41(5), 755-778. <https://doi.org/10.1016/j.emj.2022.04.003>
- Amorelli, M.F., & García-Sánchez, I.M. (2021). Trends in the dynamic evolution of board gender diversity and corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 28(2), 537-554. <https://doi.org/10.1002/csr.2079>
- Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology*, 51(2), 269-290. <https://doi.org/10.1111/1464-0597.00092>
- Bartolacci, F., Caputo, A., & Soverchia, M. (2020). Sustainability and financial performance of small and medium sized enterprises: A bibliometric and systematic literature review. *Business Strategy and the Environment*, 29(3), 1297-1309. <https://doi.org/10.1002/bse.2434>
- Bos-Brouwers, H.E.J. (2010). Corporate sustainability and innovation in SMEs: Evidence of themes and activities in practice. *Business Strategy and the Environment*, 19(7), 417-435. <https://doi.org/10.1002/bse.652>
- Chu, M.T., Blades, M., & Herbert, J. (2014). The development of children's scepticism about advertising. In M. Blades, C. Oates, F. Blumberg, & B. Gunter (Eds.). *Advertising to Children* (pp. 38-49). Palgrave Macmillan. London.
- Criado-Gomis, A., Cervera-Taulet, A., & Iniesta-Bonillo, M.A. (2017). Sustainable entrepreneurial orientation: A business strategic approach for sustainable development. *Sustainability*, 9(9), 1667. <https://doi.org/10.3390/su9091667>
- Criado-Gomis, A., Iniesta-Bonillo, M.Á., & Cervera-Taulet, A. (2018). Sustainable entrepreneurial orientation within an intrapreneurial context: effects on business performance. *International Entrepreneurship and Management Journal*, 14, 295-308. <https://doi.org/10.1007/s11365-018-0503-x>
- De Bakker, F.G., Rasche, A., & Ponte, S. (2019). Multi-stakeholder initiatives on sustainability: A cross-disciplinary review and research agenda for business ethics. *Business Ethics Quarterly*, 29(3), 343-383. <https://doi.org/10.1017/beq.2019.10>
- Demirel, P., Li, Q.C., Rentocchini, F., & Tamvada, J.P. (2019). Born to be green: new insights into the economics and management of green entrepreneurship. *Small Business Economics*, 52, 759-771. <https://doi.org/10.1007/s11187-017-9933-z>
- Dietz, T., & Stern, P.C. (1995). Toward a theory of choice: Socially embedded preference construction. *The Journal of Socio-Economics*, 24(2), 261-279. [https://doi.org/10.1016/1053-5357\(95\)90022-5](https://doi.org/10.1016/1053-5357(95)90022-5)
- Doś, A., & Pattarin, F. (2021). Drivers of CSR anchoring in transition economies: Evidence from Poland. *Business Ethics. The Environment & Responsibility*, 30(4), 507-521. <https://doi.org/10.1111/beer.12363>
- Elving, W.J. (2013). Scepticism and corporate social responsibility communications: the influence of fit and reputation. *Journal of Marketing Communications*, 19(4), 277-292. <https://doi.org/10.1080/13527266.2011.631569>
- Feder, M., & Weißenberger, B.E. (2019). Understanding the behavioral gap: Why would managers (not) engage in CSR-related activities?. *Journal of Management Control*, 30(1), 95-126. <https://doi.org/10.1007/s00187-019-00275-y>
- Font, X., & McCabe, S. (2017). Sustainability and marketing in tourism: Its contexts. paradoxes. approaches. challenges and potential. *Journal of Sustainable Tourism*, 25(7), 869-883. <https://doi.org/10.1080/09669582.2017.1301721>
- Fox, J., & Weisberg, S. (2019). *An R Companion to Applied Regression*. Third edition. Sage. Thousand Oaks CA. Retrieved from <https://socialsciences.mcmaster.ca/jfox/Books/Companion/> on November 22, 2022.
- Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. *New York Times Magazine*. September 13th. Retrieved from <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html> on November 11, 2022.
- Fuentes, S., & Valenzuela-Garcia, H. (2019). A crossroads for social entrepreneurship: profits versus ethics. *Open Journal of Business and Management*, 7(2), 848-860. <https://doi.org/10.4236/ojbm.2019.72058>
- Garçon, M.M., Nassif, V.M.J., & de Lima, T.J.S. (2021). Individual social entrepreneurial orientation in Brazil: measurement and the predictive role of personal values and attitude toward social change. *Journal of Entrepreneurship in Emerging Economies*, 14(2), 340-360. <https://doi.org/10.14211/regepe.v10i1.2008>

- Godos-Díez, J.L., Fernández-Gago, R., & Cabeza-García, L. (2015). Business education and idealism as determinants of stakeholder orientation. *Journal of Business Ethics*, 131, 439-452. Retrieved from <https://www.jstor.org/stable/24703513> on November 2, 2022.
- Hahn, T., Figge, F., Pinkse, J., & Preuss, L. (2018). A paradox perspective on corporate sustainability: Descriptive instrumental and normative aspects. *Journal of Business Ethics*, 148, 235-248. <https://doi.org/10.1007/s10551-017-3587-2>
- Heath, P., Houston-Price, C., & Kennedy, O.B. (2011). Increasing food familiarity without the tears. A role for visual exposure?. *Appetite*, 57(3), 832-838. <https://doi.org/v10.1016/j.appet.2011.05.315>
- Hernández-Perlines, F., & Rung-Hoch, N. (2017). Sustainable entrepreneurial orientation in family firms. *Sustainability*, 9(7), 1212. <https://doi.org/10.3390/su9071212>
- Hom, P.W., & Kinicki, A.J. (2001). Toward a greater understanding of how dissatisfaction drives employee turnover. *Academy of Management Journal*, 44(5), 975-987. <https://doi.org/10.2307/3069441>
- Hooi, H.C., Ahmad, N.H., Amran, A., & Rahman, S.A. (2016). The functional role of entrepreneurial orientation and entrepreneurial bricolage in ensuring sustainable entrepreneurship. *Management Research Review*, 39(12), 1616-1638.
- Jones, T.M., & Felps, W. (2013). Stakeholder happiness enhancement: A neo-utilitarian objective for the modern corporation. *Business Ethics Quarterly*, 23(3), 349-379. Retrieved from <https://www.jstor.org/stable/41968869> on November 3, 2022.
- Kirkwood, J., & Walton, S. (2010). What motivates ecopreneurs to start businesses?. *International Journal of Entrepreneurial Behavior & Research*, 16(3), 204-228. <https://doi.org/10.1108/13552551011042799>
- Knight, K. (2006). Transformations of the Concept of Ideology in the Twentieth Century. *American Political Science Review*, 100(4), 619-626. Retrieved from <https://www.jstor.org/stable/27644391> on November 2, 2022.
- Kraus, S., Burtscher, J., Vallaster, C., & Angerer, M. (2018). Sustainable entrepreneurship orientation: Reflection on status-quo research on factors facilitating responsible managerial practices. In *Sustainable Entrepreneurship* (pp. 75-98). Routledge.
- Lämsä, A.M., Vehkaperä, M., Puttonen, T., & Pesonen, H.L. (2008). Effect of business education on women and men students' attitudes on corporate responsibility in society. *Journal of Business Ethics*, 82(1), 45-58.
- Lewis, B.W., Walls, J.L., & Dowell, G.W. (2014). Difference in degrees: CEO characteristics and firm environmental disclosure. *Strategic Management Journal*, 35(5), 712-722. <https://doi.org/10.1002/smj.2127>
- Liobikienė, G., Liobikas, J., Brizga, J., & Juknys, R. (2020). Materialistic values impact on pro-environmental behavior: The case of transition country as Lithuania. *Journal of Cleaner Production*, 244, 118859. <https://doi.org/10.1016/j.jclepro.2019.118859>
- Long, J.S., & Ervin, L.H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician*, 54, 217-224. <https://doi.org/10.1080/00031305.2000.10474549>
- McCauley, D., Pettigrew, K.A., Todd, I., & Milchram, C. (2023). Leaders and laggards in the pursuit of an EU just transition. *Ecological Economics*, 205, 107699. <https://doi.org/10.1016/j.ecolecon.2022.107699>
- McWilliams, A., Siegel, D.S., & Wright, P.M. (2006). Corporate social responsibility: Strategic implications. *Journal of Management Studies*, 43(1), 1-18. <https://doi.org/10.1111/j.1467-6486.2006.00580.x>
- Muñoz, P., & Cohen, B. (2018). Sustainable entrepreneurship research: Taking stock and looking ahead. *Business Strategy and the Environment*, 27(3), 300-322. <https://doi.org/10.1002/bse.2000>
- Muñoz, P., & Dimov, D. (2015). The call of the whole in understanding the development of sustainable ventures. *Journal of Business Venturing*, 30(4), 632-654. <https://doi.org/10.1016/j.jbusvent.2014.07.012>
- Parboteeah, K.P., Addae, H.M., & Cullen, J.B. (2012). Propensity to support sustainability initiatives: A cross-national model. *Journal of Business Ethics*, 105, 403-413. <https://doi.org/10.1007/s10551-011-0979-6>
- Potocki, T. (2015). Corporate social responsibility in Poland: From theory to practice. In S.O. Idowu, R. Schmidpeter & M.S. Fifka (Eds.). *Corporate social responsibility in Europe* (pp. 245-269). Springer. https://doi.org/10.1007/978-3-319-13566-3_14
- Pratono, A.H., Darmasetiawan, N.K., Yudianto, A., & Jeong, B.G. (2019). Achieving sustainable competitive advantage through green entrepreneurial orientation and market orientation: The role of inter-organizational learning. *The Bottom Line*, 32(1), 2-15. <https://doi.org/10.1108/BL-10-2018-0045>
- Quazi, A.M., & O'Brien, D. (2000). An empirical test of a cross-national model of corporate social responsibility. *Journal of Business Ethics*, 25(1), 33-51. Retrieved from <https://www.jstor.org/stable/25074298> on November 4, 2022.

- R Core Team (2021). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Vienna, Austria. Retrieved from <https://www.R-project.org/> no November 2, 2022.
- Revelle, W. (2023). *psych: Procedures for Psychological, Psychometric, and Personality Research*. Northwestern University, Evanston, Illinois. R package version 2.3.9. Retrieved from <https://CRAN.R-project.org/package=psych> on November 2, 2022.
- Rivera, J., & De Leon, P. (2005). Chief executive officers and voluntary environmental performance: Costa Rica's certification for sustainable tourism. *Policy Sciences*, 38(2-3), 107-127. <https://doi.org/10.1007/s11077-005-6590-x>
- Rokeach, M. (1973). *The Nature of Human Values*. 438, New York: Free press.
- Rossell, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48(2), 1-36. <https://doi.org/10.18637/jss.v048.i02>
- Sagiv, L., Roccas, S., Cieciuch, J., & Schwartz, S.H. (2017). Personal values in human life. *Nature Human Behaviour*, 1(9), 630. <https://doi.org/10.1038/s41562-017-0185-3>
- Schrette, S., Hinz, A., Scherrer-Rathje, M., & Friedli, T. (2014). Turning sustainability into action: Explaining firms' sustainability efforts and their impact on firm performance. *International Journal of Production Economics*, 147, 73-84. <https://doi.org/10.1016/j.ijpe.2013.02.030>
- Stern, P.C., Dietz, T., & Guagnano, G.A. (1995). The new ecological paradigm in social-psychological context. *Environment and Behavior*, 27(6), 723-743. <https://doi.org/10.1177/0013916595276001>
- Stern, P.C., Dietz, T., & Guagnano, G.A. (1995). The new ecological paradigm in social-psychological context. *Environment and Behavior*, 27(6), 723-743. <https://doi.org/10.1177/0013916595276001>
- Tenner, I., & Hörisch, J. (2021). Crowdfunding sustainable entrepreneurship: What are the characteristics of crowdfunding investors?. *Journal of Cleaner Production*, 290, 125667. <https://doi.org/10.1016/j.jclepro.2020.125667>
- Thelken, H.N., & de Jong, G. (2020). The impact of values and future orientation on intention formation within sustainable entrepreneurship. *Journal of Cleaner Production*, 266, 122052. <https://doi.org/10.1016/j.jclepro.2020.122052>
- Tormo-Carbó, G., Oltra, V., Klimkiewicz, K., & Seguí-Mas, E. (2019). Don't try to teach me. I got nothing to learn: Management students' perceptions of business ethics teaching. *Business Ethics: A European Review*, 28(4), 506-528. <https://doi.org/10.1111/beer.12236>
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, 14(3), 361-384. <https://doi.org/10.5465/AMR.1989.4279067>
- World Values Survey Association. (2008). World Values Survey 2005 official data file. v.20081015. Madrid: ASEP/JDS. Retrieved from <http://www.worldvaluessurvey.com> on November 12, 2008.
- Wu, W., Wang, H., Lee, H.Y., Lin, Y.T., & Guo, F. (2019). How Machiavellianism, psychopathy, and narcissism affect sustainable entrepreneurial orientation: the moderating effect of psychological resilience. *Frontiers in Psychology*, 10, 779. <https://doi.org/10.3389/fpsyg.2019.00779>
- Yasir, N., Xia, R., & Zhang, J. (2022). The impact of personal values and attitude toward sustainable entrepreneurship on entrepreneurial intention to enhance sustainable development: empirical evidence from Pakistan. *Sustainability*, 14(11), 6792.

Appendix:

Managers' opinions questionnaire items

We asked subjects to express their agreement or disagreement about eight items on a 7-point Likert scale, from 1 = completely disagree to 7 = completely agree. The questionnaire items were:

1. Seek profit: 'The main goal of a company is to make high profits.'
2. Legal bounds: 'Law and regulations are sufficient to make companies engage in CSR.'
3. Stakeholder value: 'Companies shall pursue the interests of stakeholders (e.g. employees) together with those of equity and debt investors.'
4. Social welfare: 'Companies shall take care of improving community welfare.'
5. Government fails: 'When government ESG policies are insufficient companies shall step in.'
6. Assets in business: 'Companies have enough resources to effectively pursue ESG objectives.'
7. CSR moat: 'A company improves its competitive advantage when it adopts CSR practices.'
8. CSR profit: 'Adopting CSR practices improves company's profits.'

Standardized factor scores

Let S_{ic} be the i -th manager's score on factor c and Z_{ic} its standardized value for $i = 1, 2, \dots, 301$ managers and $c \in \{\text{Opportunity, Cost}\}$ mindset factors. The standardized score Z is defined as:

- if $S_{ic} \geq 0$ then $Z_{ic} = 100 \times \frac{S_{ic}}{\min_i(S_{ic})}$
- if $S_{ic} < 0$ then $Z_{ic} = -100 \times \frac{S_{ic}}{\min_i(S_{ic})}$

This transformation scales positive or zero scores in the $[0,100]$ and negative ones in the $[-100, 0)$ range.


Authors

The contribution share of authors is equal. Anna Doś: conceptualisation, literature.
Francesco Pattarin: methodology, calculations, and discussion.

Anna Doś

Associate Professor at the Krakow University of Economics, Poland. Her research interests include social responsibility, sustainability, and finance.


Correspondence to: Dr hab. Anna Doś, atedra Rynków Finansowych, Krakow University of Economics, ul. Rakowicka 27, 31-510 Kraków, Poland; e-mail: dosa@uek.krakow.pl

ORCID  <http://orcid.org/0000-0002-4749-4234>

Francesco Pattarin

Professor at the University of Modena e Reggio Emilia, Italy. His research interests include banking, financial markets, and econometrics.

Correspondence to: Prof. dr. Francesco Pattarin, 'Marco Biagi' Department of Economics via Jacopo Berengario, 51, 41121 – Modena, Italy; e-mail: francesco.pattarin@unimore.it

ORCID  <http://orcid.org/0000-0002-6302-7900>

Acknowledgements and Financial Disclosure

The authors would like to thank the anonymous referees for their useful comments, which allowed to increase the value of this article.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Published by Krakow University of Economics – Krakow, Poland



Ministry of Education and Science
Republic of Poland

The journal is co-financed in the years 2022-2024 by the Ministry of Education and Science of the Republic of Poland in the framework of the ministerial programme "Development of Scientific Journals" (RCN) on the basis of contract no. RCN/SP/0583/2021/1 concluded on 13 October 2022 and being in force until 13 October 2024.

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