

Article

Effect of Green Entrepreneurial Orientation and Absorptive Capacity on Green Innovation and Environmental Orientation Among Educated Gen Z's in Europe

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Abstract: The study evaluates the interest of business-educated Gen Z in pursuing careers in various industries and their potential to accelerate Green Innovation (GI). It specifically focuses on Gen Z in Europe, who are business-educated and pursuing their career in different industry sectors, and aiming to address climate change and sustainable practices. By adopting Green Entrepreneurial Orientation (GEO) and building Absorptive Capacity (AC), companies can significantly contribute to improving Environmental Orientation (EO) by appealing to Gen Z—their future employees and customers. The study aims to survey 280 business-educated Gen Z people in Europe. The findings of the study show that the relationship between absorptive capacity and environmental orientation is not always significant, and the impact can be negligible, specifically when the firms have a low commitment to environmental strategies and have a limited strategic emphasis on sustainable practices. The study aims to encourage innovation and sustainable growth among firms, opening the door to a more sustainable future and attracting goodwill from environmentally oriented Generation Z. The publication/article presents the results of the project financed from the subsidy granted to the Krakow University of Economics.

Keywords: green entrepreneurial orientation; absorptive capacity; green innovation; environmental orientation; environmental issues; firm performance; sustainable future



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1. Introduction

Gen Z includes individuals born between the 1990s and early 2010s, the first generation to grow up with smartphones, the internet, and social media as an integral part of their lives. The only generation that is not only aware of technological advancement but also aware of global climate issues, such as sustainability and environmental concerns. In Europe, Gen Z has become increasingly influential, specifically in environmental responsiveness, shaping consumer behavior, and altering societal values. Their exposure to information and education has made them more conscious of the urgent need for sustainable practices, leading many of them to prioritize green innovation and environmental orientation that contribute positively to the environment. Gen Z's environmental orientation and commitment to sustainable practices are expected to play a crucial role in advancing green innovation and promoting sustainability across Europe as they enter different industry sectors [1,2].

In the last two decades, climate change has emerged as a worldwide concern, demanding innovative solutions from every sector to ensure sustainable development [3]. Consequently, many firms have started taking green initiatives to reduce environmental

damage. Global environmental concerns are a debate that centers on human activity and business [4]. Businesses are under tremendous pressure these days to adopt environmentally sustainable practices. According to international government environmental rules and regulations, industries need to follow environmental management methods and practices, government environmental rules and regulations, and consumer pro-environmental behavior to make their position in the industry sector [5]. Environmental issues, including pollution, deforestation, ozone layer depletion, biodiversity loss, global warming, pollution, and waste disposal, are now recognized issues on a worldwide scale [6]. Consequently, many firms have started taking green initiatives to reduce environmental damage. Green entrepreneurial orientation represents a strategic pathway for business to align their business practices with United Nation's (UN) sustainable development goals [7,8].

Investment in green innovation has become a prerequisite for attaining a sustainable competitive advantage. Green innovation benefits firms by improving their corporate image and enabling them to seize new market opportunities, leading to improved environmental performance [3]. However, developing green innovation could be challenging from the management perspective for businesses, as it entails a high degree of uncertainty and novelty and requires unique resources and capabilities [9]. It also requires firms and individuals to go beyond the existing knowledge base and explore new knowledge sources to effectively introduce new environmental initiatives [10].

The sustainable development goals (SDGs) program combines social, economic, and environmental goals, focusing on the triple bottom line. Business and entrepreneurship are key players in economic development, promoting sustainability practices and environmental responsibility [11]. Prospective entrepreneurs must now ensure that their business interests are in line with environmental sustainability in the future. So, the goal is to enhance its green value and contribute to overcoming environmental issues. However, existing literature provides limited information about the firm's internal capabilities needed to address the environmental concerns [9].

The research study fills the literature gap by evaluating Gen Z's aptitude in pursuing their careers in different industry sectors in Europe as the function of green entrepreneurial orientation and absorptive capacity of an organization. This research will investigate the ways in which select variables interplay, resulting in firms' environmental orientation and demonstrating their salience in molding corporate values in tune with Gen Z's behavioral traits. The study resonates with SDG 13 (Climate Change), which highlights the urgency of taking action to combat climate change [2,12]. Moreover, the study intersects with SDG 9 (industry, innovation, and infrastructure), underscoring the significance of fostering green innovation to upgrade the service delivery processes to enhance environmental performance [13].

Research Aim and Objectives

The proposed research aims to evaluate the significance of interest among Gen Z in pursuing their careers with companies characterized by their level of green innovation, green entrepreneurial orientation, absorptive capacity, and environmental orientation. This aim will be achieved through the following objectives:

- To evaluate the current perspective toward green innovation and environmental orientation of business-educated Gen Z in Europe;
- To measure the effect of green entrepreneurial orientation and absorptive capacity on green innovation in the opinion of Gen Z;
- To analyze the mediating effect of green innovation on the relationship between green entrepreneurial orientation and absorptive capacity and environmental orientation, in the opinion of Gen Z;

- To identify the potential areas that industries need to improve to enhance their environmental orientation;
- To assess the effect of absorptive capacity on the environmental orientation of companies in the opinion of Gen Z.

2. Literature Review

2.1. Resource-Based View (RBV) and Dynamic Capability Theory

The RBV has been extensively applied in the literature to understand the motivation of Gen Z who possess unique knowledge, skills, and sustainability-focused values that act as vital resources to empower them to innovate and adopt eco-friendly practices to improve the firms' environmental orientation. RBV proposes that the valuable, rare, inimitable, and non-substitutable resources determine firms' success and Gen Z's who are well versed in contemporary environmental challenges capable of leveraging their skilled knowledge and competencies as resources to drive sustainability action and goals and provide green entrepreneurial initiatives [14]. As per RBV, organizations are composed of various resources and competencies, and the distinctiveness of these resources provides a sustainable competitive position [15]. The literature further suggests that firms that perform better on environmental grounds tend to have unique resources and capabilities that enable them to achieve sustainability objectives [16]. Also, RBV posits that the emphasis on green entrepreneurship and absorptive capacity accelerates green innovation, which ultimately improves the environmental orientation and accelerates sustainability [9,17]. The proposed study presents the aforementioned resources and capabilities by Green Entrepreneurial Orientation and Absorptive Capacity, which mesh with dynamic capability theory that stresses the salience of the ability to adapt, integrate, and reconfigure the competencies of the organization. Dynamic capability theory posits that the organizations' ability to change and adapt in response to external opportunities and challenges influences the firm's performance [18]. The literature suggests that firms' flexibility and proactive approach to environmental issues aligned with dynamic capabilities benefit the organizations [19,20]. These dynamic capabilities accelerate continuous innovation, bringing new opportunities to enhance environmental orientation and enhance firm performance in tune with Gen Z's behavioral traits and expectations [21].

2.2. Environmental Orientation

According to [22], environmental orientation (EO) for an organization can be evaluated by integrating environmental concerns into strategic planning and operational practices, promoting sustainable business practices, green product development, and environmental impact reduction. Environmental orientation is a corporate value that emphasizes minimizing a firm's environmental impact and incorporating environmental issues into strategy. It can be divided into internal and external dimensions [22,23]. Internal environmental orientation (IEO) refers to the company's internal values, ethical behavior standards, and commitment to environmental protection. It is often reflected in annual reports and the environmental activities of employees and management. IEO is a crucial aspect of a firm's overall commitment to environmental conservation [5,23,24]. External environmental orientation (EEO) refers to a manager's perception of external stakeholders, their importance in responding to their interests, and their relationship with suppliers, government, and community. Key elements include sustainable development, environmental protection, societal responsibility, and a positive firm image [5,24,25].

Green Innovation and Environmental Orientation

Environmental orientation is a strategic necessity. It is proposed as an essential prerequisite for green innovation, reflecting a company's attitude and internal climate

toward addressing environmental challenges that are significant to many stakeholders. In this context, stakeholder theory comes into play, emphasizing that companies must meet the expectations and concerns of diverse stakeholders to maintain their competitive advantages. This further underscores the importance of environmental orientation in today's business landscape [5,26,27]. As competitive advantage is linked to environmental orientation, a study by [28], suggests there is a positive correlation between corporate social responsibility (CSR) and firm performance, suggesting that strong corporate social responsibility (CSR) practices can provide competitive advantage. To improve their green innovation performance, shareholders anticipate that companies will consider resource usage and any potential environmental impact of a product or service to ensure that environmental harm is minimized [29], and regulations of environmental orientation positively affect green innovation; thus, the study hypothesized the following:

H1. *Green Innovation positively influences Environmental Orientation.*

2.3. Green Innovation

The concept of green innovation (GI) refers to the more affordable and gradual transition from present methods to environmentally sustainable ones. Green innovation can be easily obtained for a considerable cost and assists organizations in protecting the environment more successfully; green innovation might evolve into a more practical and affordable instrument for businesses to achieve environmental sustainability [30]. In the business sector, green innovation focuses on energy reduction, solar technology, efficient heating systems, and waste minimization. It also involves employee participation, knowledge sharing, and green marketing to improve image, attract customers, and reduce costs [31]. In the service industry context, the proposed study defines green innovation as advancements in service delivery methods aimed at reducing waste, conserving energy, and protecting the environment [32,33]. Green innovation focuses on both—improving profitability and reducing the negative impact on the environment simultaneously [34].

2.4. Green Entrepreneurial Orientation

Green entrepreneurial orientation (GEO) denotes the organizational structures, processes, and behaviors that demonstrate green innovativeness, risk-taking, and proactiveness. These characteristics guide educated Gen Z to provide sustainable business decisions proactively and aim to enhance the business's environmental orientation [35,36]. Social responsibility and entrepreneurial orientation focus combine to provide green entrepreneurial orientation. A company's decision-making process that balances social responsibility with innovation, proactive rivals, and business risks is known as "green entrepreneurial orientation." Conversely, an organization's entrepreneurial attitude is correlated with its capacity for innovation, foresight, and risk-taking in novel endeavors [11]. The study conceptualizes green entrepreneurial orientation (GEO) across these three key dimensions: green proactiveness, green innovativeness, and green risk-taking. Green proactiveness signifies the business's eagerness to exploit the opportunities to enhance environmental orientation ahead of competitors. A proactive stance accelerates the adoption of innovative, environment-friendly practices, directly improving green innovation performance [37]. Green innovativeness drives businesses to explore innovative solutions to environmental problems by investing in green technologies and collaborating with other organizations [17]. Businesses can develop their innovative capabilities to drive green innovation, aligned with the stakeholders' evolving sustainability expectations [38]. Green risk-taking reflects the business's willingness to take well-calculated risks in pursuit of its environmental goals. When businesses embrace the risk-taking attitude, they tend to push the boundaries and

take groundbreaking sustainable initiatives [39]. A pro-risk attitude motivates businesses to take environmental initiatives even in uncertain situations, driving green innovation performance [39]. Collectively, these three environmental orientations (EO) dimensions create a synergetic effect, enhancing the business capability to accelerate green innovation, which ultimately enhances the business performance [40].

Green Entrepreneurial Orientation and Green Innovation

GEO can significantly improve organizational structure and culture, leading to the creation of sustainable processes that enhance business performance and foster values [41]. This orientation builds the organizational capacity to exploit emerging opportunities and trends as new generations arrive in the market [41]. In this view, GEO could be considered a dynamic capability that helps companies in seizing environmentally relevant opportunities. Organizations with a green entrepreneurial orientation often view market failures contributing to environmental degradation as an opportunity to introduce new green products, processes, or business models, leading to more optimal use of natural resources and reduced emissions [42]. Green entrepreneurial orientation discourages firms from engaging in activities that may harm the environment [43]; while discussing the relationship between GEO and green innovation, it is considered GEO a critical factor in accelerating green innovation and reducing the adverse environmental impact [44]. Based on these arguments, this study considers GEO as a factor that accelerates green innovation, leading to improved environmental performance, and hypothesizes the following:

H2. *Green entrepreneurial orientation positively influences green innovation.*

Green entrepreneurship orientation (GEO) aims to enhance the impact of green innovation performance (GIP) on environmental performance (EP) by harmonizing their relationships with the external environment [44]. The entrepreneurship sector must align with sustainable development goals by integrating economic and environmental objectives through the implementation of green entrepreneurship models [11]. The prior study revealed that policymakers must shift biases and provide incentives to private enterprises for green innovation, potentially benefiting state-owned businesses through subsidies. Recognizing the private sector's role is crucial [45]. Thus, the study hypothesized the following:

H3. *Green Entrepreneurial Orientation positively influences Environmental Orientation.*

2.5. Absorptive Capacity

According to [46], absorptive capacity refers to an organization's capacity to recognize, acquire, assimilate, integrate, and apply external knowledge to the commercial end. Later, [32,47], expanded [46], work by introducing two absorptive capacity (AC) dimensions—potential absorptive capacity and realized absorptive capacity. Potential absorptive capacity involves knowledge acquisition and assimilation for strategic flexibility [48], whereas realized absorptive capacity encompasses the knowledge transformation and exploitation to attain new insights, which could be used to improve the firm performance [48].

Absorptive Capacity and Green Innovation

The literature suggests that absorptive capacity is an organizational capability that accelerates green innovation [49]. The adoption of green innovation practices requires extensive internal and external knowledge that comes from multiple domains. Firms with absorptive capacity tend to assimilate this new external knowledge, integrate it into existing knowledge, and finally transform it to make well-informed innovation decisions [50]. The study of [51], confirms that green innovation relies heavily on absorptive capacity, which is enhanced by both social and human capital and moderated by both. Various studies

(like [8,50], have confirmed the effect of absorptive capacity on green innovation. The study hypothesizes the following:

H4. *Absorptive capacity positively influences green innovation.*

Absorptive Capacity and Environmental Orientation

Prior study [52], aids in adopting sustainable business practices, prevents environmental harm and climate change, and contributes to the production of eco-friendly products. To leverage external knowledge for innovation, absorptive capacity is discussed as a multi-dimensional construct that contributes to the firm's ability [47]. Individuals with diverse knowledge, balanced external orientation, and internal cohesion are more resilient to environmental disasters, highlighting the importance of learning at both individual and community levels. The ability to absorb information and the community's ability to use it are more effective than just providing resources [53]. In the context of environmental sustainability, absorptive capacity is the multilevel learning process [54], that acts for individuals who are more likely to generate new knowledge, while organizational absorptive capacity is more likely to extend existing knowledge. Previous studies show that managers should foster environmental competencies by engaging with stakeholders, promoting responsible practices, and fostering knowledge acquisition and responsible behavior among employees [55]. Thus, this research hypothesized the following:

H5. *Absorptive Capacity has a significant impact on Environmental Orientation.*

2.6. Theoretical Framework

Based on the preliminary review of the literature, the study develops the following theoretical framework in Figure 1.

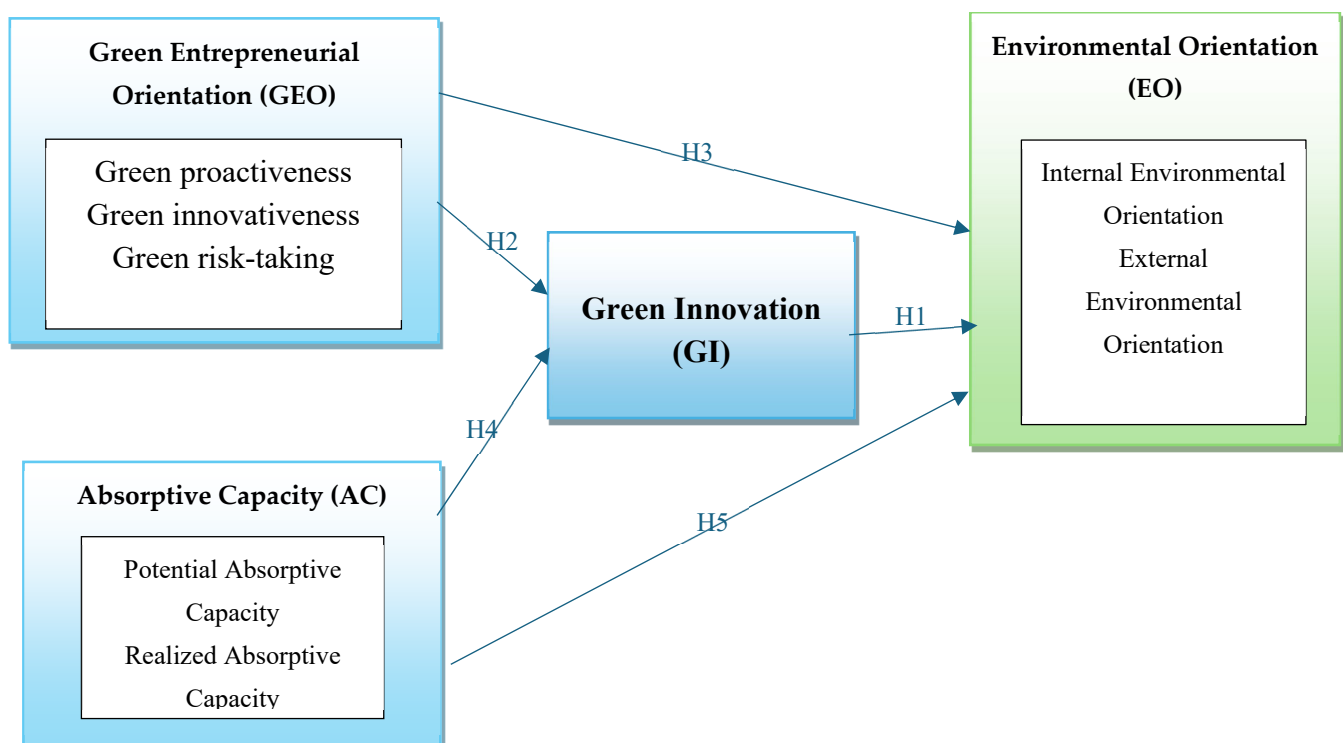


Figure 1. Theoretical framework.

The above framework will be tested by conducting an empirical investigation, details of which are provided in the next section.

3. Methodology

3.1. Research Design

The study was structured using the research onion framework, a comprehensive and systematic approach to research design introduced by Saunders. This framework guided the research process, ensuring a well-structured and comprehensive study [56]. The study adopted the positivism research paradigm and the deductive approach, which provided a structured and objective way to answer the research questions in the quantitative method to measure the effect of green entrepreneurial orientation and absorptive capacity on the green innovation and environmental orientation of companies among business educated Gen Z's in Europe. The survey will be cross-sectional in nature, and a non-probability convenience sampling technique will be used to conduct the research. The quantitative data collection operationalizes the constructs across multiple dimensions, gaining a broader understanding of how educated Gen Z perceive a firm's environmental orientation [57]. Previous studies [58,59] also adopted the quantitative survey approach to measure the effect of entrepreneurial orientation and absorptive capacity that provides the theoretical support to this choice. This approach enhanced the validity of the study by ensuring that the conclusions drawn were based on logical reasoning and empirical evidence.

3.2. Sample and Data Collection

The target sample consisted of business-educated members of Generation Z who already had a minimum of 6 months of work experience. The data were collected through an online survey to broaden access and avoid travel costs. This approach saves time and enables access to a larger pool of participants without encountering physical proximity issues [60]. Access to the target population of students in their last year before graduation, as well as recent graduates, was gained through the university.

3.3. Survey Instruments and Details of the Scale

The close-ended survey questionnaire was developed by adapting the previously proposed scales. To measure the Green Entrepreneurial Orientation (GEO) [35], a three-dimensional scale (proactiveness, innovativeness, and risk-taking) is adopted. Absorptive capacity is measured by adapting the [61], two-dimensional scale (potential absorptive capacity and realized absorptive capacity). To measure green innovation, the scale was adopted by [32]. To measure the environmental orientation, the two-dimensional scale (internal environmental orientation and external environmental orientation) was adopted by [5,23]. All the constructs have been treated as uni-dimensional constructs in this study. The response to all items is measured by using a five-point Likert agreement scale as used by [42], who conducted research in a similar context to analyze how the effects of green entrepreneurial orientation and absorptive capacity create an impact on green innovation and environmental orientation among educated Gen Z in Europe. The adaptation of previously proposed scales establishes validity and reliability.

Green entrepreneurial orientation has three sub-constructs: green proactiveness, green innovativeness, and green risk-taking. The items of each construct were three. Absorptive capacity has two sub-constructs: potential absorptive capacity and realized absorptive capacity, and the items of each construct were five and six, respectively. Green innovation was used as a mediator in this model, which had seven items. Environmental orientation has two sub-constructs: internal environmental orientation and external environmental orientation, having items six and seven, respectively. A few items were deleted after careful

consideration of the numbers, including items whose cross-loading and VIF values were not appropriate for obtaining the model fit. The data was coded in a way that 1 meant strongly disagree and 5 meant strongly agree. Gen Z's gender, nationality, age, education level, and preferred business sector were included in the demographic variables. The items of the questionnaire were modified based on the educated Gen Z's preference. The items for each scale have been added in Appendix A.

3.4. Demographics Details of Data

Figure 2 shows the data for all the demographic variables that have been included in Table 1 for (N = 280).

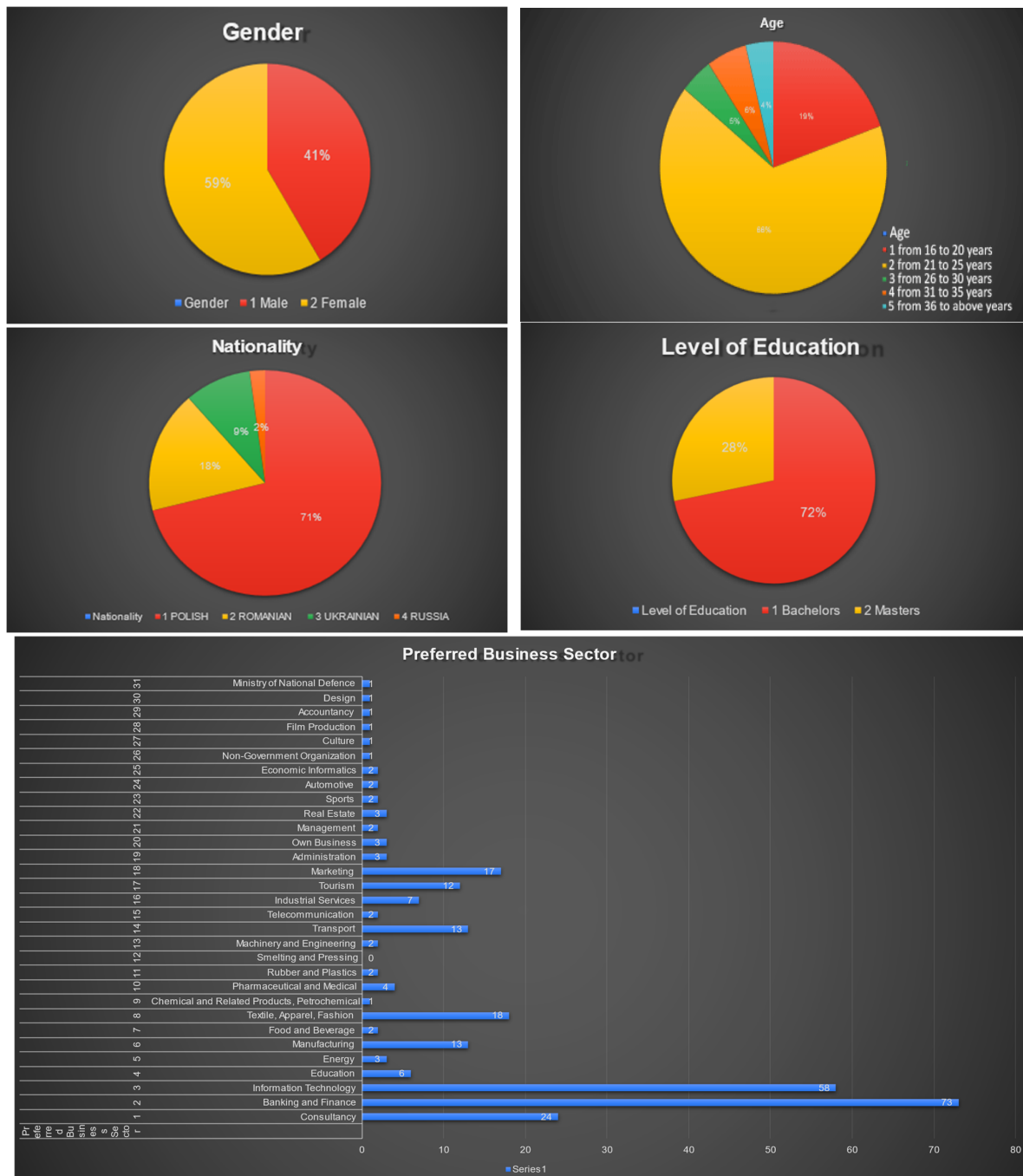


Figure 2. Details of the statistical demographics of the data.

Table 1. Details of the statistical demographics of the data.

Variables	Categories	Frequency	Percentage
Gender	Male	116	41%
	Female	164	59%
	Total	280	100%
Age	From 16 to 20 Years	55	19%
	From 21 to 25 Years	185	66%
	From 26 to 30 Years	13	5%
	From 31 to 35 Years	16	6%
	From 36 to Above Years	11	4%
	Total	280	100%
Nationality	POLISH	199	71%
	ROMANIAN	49	18%
	UKRAINIAN	26	9%
	RUSSIA	6	2%
	Total	280	100%
Level of Education	Bachelors	201	72%
	Masters	79	28%
	Total	280	100%
Preferred Business Sector	Consultancy	24	8.5%
	Banking and Finance	73	26%
	Information Technology	58	20%
	Education	6	2.1%
	Energy	3	1%
	Manufacturing	13	4.6%
	Food and Beverage	2	0.7%
	Textile, Apparel, Fashion	18	6.4%
	Chemical and Related Products, Petrochemical	1	0.35%
	Pharmaceutical and Medical	4	1.4%
	Rubber and Plastics	2	0.7%
	Smelting and pressing	0	0%
	Machinery and Engineering	2	0.7%
	Transport	13	4.6%
	Telecommunication	2	0.7%
	Industrial Services	7	2.5%
	Tourism	12	4.2%
	Marketing	17	6%
	Administration	3	1%
	Own Business	3	1%
	Management	2	0.7%
	Real Estate	3	1%
	Sports	2	0.7%
	Automotive	2	0.7%
	Economic Informatics	2	0.7%
	Non-Government Organization	1	0.35%
	Culture	1	0.35%
	Film Production	1	0.35%
	Accountancy	1	0.35%
	Design	1	0.35%
	Ministry of National Defence	1	0.35%
	Total	280	100%

3.5. Measurement Model

The measurement model is shown in Figure 3.

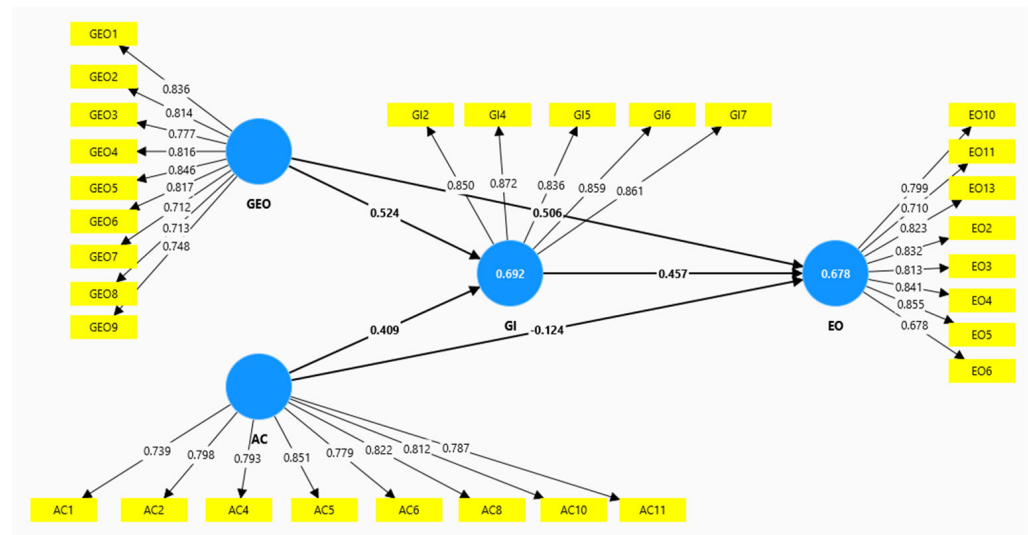


Figure 3. Measurement model.

3.6. Data Analysis Method

After the model was created, a confirmatory factor test was carried out using Smart PLS 4.0 for the statistical analysis. The construct reliability value is above 0.70 [62], the Cronbach alpha value is above 0.7 [62], and the Average variance extracted value is above 0.50 [63] has been reported in Table 2, which states that all the values are considered acceptable, significant and above the threshold values means that the constructs are significant and valid that shows in Figure 3. The Heterotrait–monotrait (HTMT) method was utilized to assess discriminant validity, demonstrating the constructs through the multitrait and multimethod matrix [64].

Table 2. Composite reliability and validity.

Constructs	Number of Items	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Absorptive Capacity (AC)	11	0.918	0.921	0.637
Environmental Orientation (EO)	13	0.917	0.930	0.634
Green Entrepreneurial Orientation (GEO)	9	0.923	0.928	0.621
Green Innovation (GI)	7	0.908	0.909	0.732

Table 3 demonstrates discriminant validity using the Heterotrait–monotrait ratio (HTMT) developed by [64]. To assess the HTMT when using as a criterion, the resulting value should be lower than the HTMT 0.85 suggested by [65] or the HTMT 0.90 suggested by [66]. The above table shows that all the values of discriminant validity are lower than the threshold values of 0.80 and 0.90, which indicates that the discriminant validity is valid for this study.

Table 3. Discriminant validity (Heterotrait–monotrait ratio (HTMT)—Matrix).

	AC	EO	GEO	GI
AC				
EO	0.512			
GEO	0.626	0.830		
GI	0.781	0.794	0.823	

4. The Results of the Analysis

4.1. The Measurement Model

The study used Smart PLS 4.0 for statistical analysis and partial least square PLS-SEM for relationship explanation as it effectively handles complex models with multiple constructs and relationships with latent variables, making it suitable for analyzing the specific subgroup of educated Gen Z in Europe. Tests included internal consistency, indicator reliability, convergent validity, and discriminant validity. The model assessed hypotheses with factor loading and latent structures. Results showed substantial and appropriate items with values greater than 0.60, which are reported in Table 4 [67].

Table 4. Factor loadings.

	AC	EO	GEO	GI
Absorptive Capacity (AC)				
AC1	0.739			
AC2	0.798			
AC4	0.793			
AC5	0.851			
AC6	0.779			
AC8	0.822			
AC10	0.812			
AC11	0.787			
Environmental Orientation (EO)				
EO2		0.832		
EO3		0.813		
EO4		0.841		
EO5		0.855		
EO6		0.678		
EO10		0.799		
EO11		0.710		
EO13		0.823		
Green Entrepreneurial Orientation (GEO)				
GEO1			0.836	
GEO2			0.814	
GEO3			0.777	
GEO4			0.816	
GEO5			0.846	
GEO6			0.817	
GEO7			0.712	
GEO8			0.713	
GEO9			0.748	
Green Innovation (GI)				
GI2				0.850
GI4				0.872
GI5				0.836
GI6				0.859
GI7				0.861

4.2. The Structural Model

The structural model is shown in Figure 4.

Table 5 gives the path coefficient for the model. The path coefficient values should be at least 0.05 of the level of significance. In the bootstrapping method, a two-tailed test approach was used to obtain the path coefficient. The critical value for the significance level of 5 percent ($\alpha = 0.05$) is 1.96, and the table below shows that all the paths are significant and positive as the values are above 1.96 except for the path of (AC $\rightarrow$ EO), which has the lowest value than 1.96 [68].

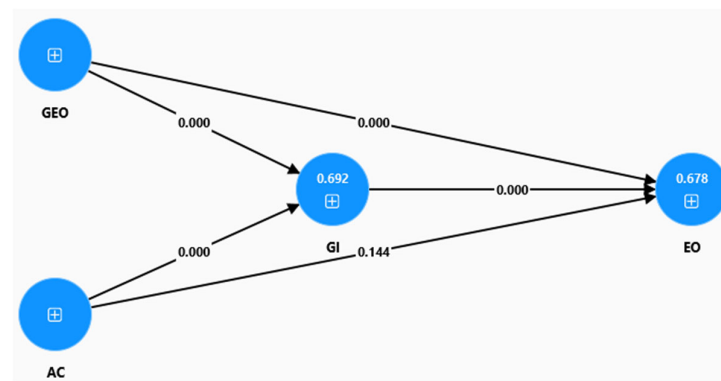


Figure 4. Structural model.

Table 5. Path coefficient.

Hypothesis	Constructs Relationship	<i>t</i> Statistics (O/STDEV)	<i>p</i> -Values
H1	GI → EO	4.946	0.000
H2	GEO → GI	10.289	0.000
H3	GEO → EO	8.283	0.000
H4	AC → GI	6.961	0.000
H5	AC → EO	1.465	0.144

The above Table 5 shows that all structural paths are significant and valid in accordance with the threshold values ($t > 1.96$ and $p < 0.05$). Except for the path of AC → EO, which shows an insignificant relationship. Green innovation has a positive and significant impact on environmental orientation as well as on absorptive capacity. The table shows the direct significant and positive paths of green entrepreneurial orientation with green innovation and environmental orientation. The paths are stated as (GI → EO), (GEO → GI), (GEO → EO), and (AC → GI), which confirms the accepted hypothesis. The path of (AC → EO) confirms the rejections of the hypothesis and shows an insignificant relationship. The bootstrapping results indicate the significant and direct influence of green innovation with p and t values of ($p < 0.005$, $t > 1.96$). Hence, confirmed the summarized results of hypothesis in the below Table 6.

Table 6. Results.

Paths	Hypothesis	Results
H1	Green Innovation has a significant impact on Environmental Orientation. (GI → EO)	Accepted
H2	Green Entrepreneurial Orientation has a significant impact on Green Innovation. (GEO → GI)	Accepted
H3	Green Entrepreneurial Orientation has a significant impact on Environmental Orientation. (GEO → EO)	Accepted
H4	Absorptive Capacity has a significant impact on Green Innovation. (AC → GI)	Accepted
H5	Absorptive Capacity has an insignificant impact on Environmental Orientation. (AC → EO)	Rejected

4.3. Summarized Results of the Hypothesis

Table 7 shows the Environmental Orientation (EO) has a value of R-square 67.8%, which means it is substantial; Green Innovation (GI) has a value of R-square 69.2%, which means it is substantial; and according to the study, R-square of 0.67 and above is considered substantial, R-square values below 0.67 and around 0.33 are considered average, and R-square values below 0.33 and around 0.19 are considered weak [69].

Table 7. R-Square effect size.

Constructs	R-Square
EO	0.678
GI	0.692

The study used statistical analysis to assess the reliability of a theoretical model, determine the dependability of indicators, and evaluate discriminant validity [64]. Results showed a significant relationship between GEO, GI, AC, and EO but an insignificant relationship between absorptive capacity and environmental orientation.

5. Discussion

The results of the first research question show that green innovation is positively related to environmental orientation and shows that environmental orientation is a crucial strategic requirement for green innovation, reflecting a company's internal climate and attitude toward addressing significant environmental challenges for business-educated Gen Z [5,26,27]. The second research question results show that both green entrepreneurial orientation and absorptive capacity are positively influenced by green innovation in the opinion of Gen Z. Green entrepreneurial orientation has the ability to transform the organization, create value, and enhance business performance [41]. It has a dynamic capability that helps companies seize environmentally relevant opportunities [41]. On the other hand, absorptive capacity has the ability to accelerate green innovation [49]. Green innovation requires a comprehensive understanding of various domains, which firms with absorptive capacity can integrate, transform, and make informed decisions [50]. The third research question shows that green innovation is positively related to both green entrepreneurship orientation and absorptive capacity and is also positively influenced by the dependent variable of environmental orientation in the opinion of Gen Z. The mediating effect of green innovation shows that it can enhance an entrepreneur's economic performance by utilizing both tangible and intangible resources [70–72]. Businesses will operate more profitably if they acknowledge the physical resources they lack and use technology to make those resources work to their benefit [73]. The fourth research question investigates whether it would be accurate to say that green innovation, which involves improving products or processes, contributes to environmental advantages [74]. Green innovation is the best way to adopt for the enhancement of the economy as it reduces cost, boosts productivity, and reshapes the production processes; therefore, businesses can increase their competitive advantage by producing green products [30]. The study investigates that it is imperative for policymakers to modify their biases and offer greater incentives to private enterprises. It is attainable that state-owned businesses could benefit more from green innovation. The government must acknowledge the vital role played by the private sector and the necessity of providing support to private businesses in order to stimulate green innovation [45]. The fifth research question results show that absorptive capacity has an insignificant impact on environmental orientation and that absorptive capacity is a multilevel learning capability [54]. A study by [61], focused on dynamic capabilities and explored how the absorptive capacity influences knowledge integration within the organization. The study noted that the firm has an impact on sustainable practices, and strategic environment shifts are not always significant, especially when a firm has a limited strategic emphasis on sustainability. The organizations would develop environmental competencies through involvement with stakeholders and daily responsibility practices by recognizing responsibility and acquiring knowledge that can lead to responsible behavior. Organizations should provide employees with opportunities to absorb new knowledge on responsible practices to develop responsible management competencies among individuals

or employees [55] because individuals highlight learning at both individual and community levels with their diverse knowledge and balanced internal and external orientation. A study by [46], investigates that absorptive capacity is crucial for innovation, but the direct impact of absorptive capacity on the non-core strategic areas, such as environmental orientation, has a less significant impact without the strong management emphasis on such goals. The findings of [47], suggest that absorptive capacity influence on sustainability practices can be minimal or negligible if a firm has a low commitment to environmental strategies.

5.1. Conclusions

To conclude, the study sheds light on the connection between green entrepreneurial orientation, absorptive capacity, green innovation, and environmental orientation among educated Gen Z in Europe as they pursue their careers in diverse industry sectors. The study responds to the critical global need to address climate change and sustainable development issues. Resource-based view (RBV) and dynamic capability theory provide the theoretical foundation for this research. RBV suggests creating a competitive advantage in firms such as innovativeness and sustainability-oriented practices. Firms can effectively leverage resources such as recognition, assimilation, and capability in applying external knowledge through absorptive capacity to enhance green innovation. On the other hand, dynamic capability theory responds to changes in environment and market demand and then emphasizes the adoption and transformation of these resources. Both theories provide insights that there is a need for an organization to depend on resource integration and dynamic adaptation in order to create the ability to innovate and align with sustainable practices to resonate with Gen Z values of sustainability and proactive environmental engagement. Anticipated survey findings potentially transform business practices, accelerating green innovation and improving environmental orientation, contributing to a sustainable future.

5.2. Practical and Theoretical Contribution

The study contributes theoretically by investigating the intricate connection between green entrepreneurial orientation, absorptive capacity, green innovation, and environmental orientation, with a specific focus on business-educated Gen Z in Europe as they pursue their careers in diverse industry sectors. By discussing the internal capabilities needed to handle the environmental challenges, the study augments the knowledge of sustainable innovation and entrepreneurship, both needed to address climate change. In a practical sense, the study offers insights into current sustainability practices and the incorporation of green entrepreneurial orientation and absorptive capacity in the curriculum of business-educated Gen Z and the cooperation between businesses and universities on that matter. The results can help the firms to better address the environmental issues in their operations and corporate values to garner goodwill from Gen Z consumers and employees. The recommendations empower companies to improve their knowledge to attract and retain the top talent from the competitive market, aligning the business enterprises with strong employer branding in business practices having growing sustainability concerns while strengthening the competitiveness in the industry sectors that are driven by innovation and environmental consciousness. Overall, the study contributes to developing an innovative and sustainable future for companies as the business-educated Gen Z are about to pursue careers in diverse industry sectors.

6. Limitations and Future Research Directions

There are some limitations to the study. First, this study was conducted on a cross-sectional time horizon, and the same study can be conducted on a longitudinal time horizon.

Second, the study uses the mono method to conduct the research; the same study can be conducted using a mixed method approach to overcome the issues and highlight the problems from different sets of populations and industries. Third, the population of the study contained data from the educated Gen Z, and the same study can be conducted from any other population, which means it can be conducted in future research. Finally, the study was conducted in Europe to mark more insights for future research. Gen Z remains relatively under-researched when confronted with Millennials or other mature generations. In order to generalize outside the EU, further research is needed to make comparisons between generations. The results of this study do not apply to new and developing countries, but the same study can be carried out in any other nation where the institutional climate encourages entrepreneurship in a manner similar to other industrialized nations. In fact, additional studies in the context of developing nations may shed light on issues and problems related to their challenging institutional framework that have not received enough attention. Where possible, these future options may be pursued in order to guarantee the reliability, validity, and trustworthiness of the study.

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Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Please mention your gender:

- Male
- Female

Please mention your nationality:

Please mention your age in years:

Please mention your level of education:

- Bachelors
- Masters

Please mention any industry/sector where you want to work in:

- Consultancy
- Banking and Finance
- Information Technology
- Education
- Energy

- Manufacturing
- Food and Beverage
- Textile, Apparel, Fashion
- Chemical and Related Products, Petrochemical
- Pharmaceutical and Medical
- Rubber and Plastics
- Smelting and Pressing
- Machinery and Engineering
- Transport
- Telecommunication
- Industrial Services
- Tourism
- Other:
- Scaling Information

Other _____

Please fill out the questionnaire by sharing your agreement to the asked statements.

- (1) Strongly disagree
- (2) Disagree
- (3) Neutral
- (4) Agree
- (5) Strongly agree

(Green Entrepreneurial Orientation) GEO	1	2	3	4	5
Green proactiveness					
The company I would like to work for should proactively seek green initiatives.					
The company I would like to work for should proactively seek opportunities to lead the market by offering innovative green products and services.					
The company I would like to work for should proactively invest in green technologies to reduce the impact on the environment.					
Green innovativeness					
The management of the company I would like to work for should encourage and support innovative solutions and ideas that promote environmental sustainability in the organization.					
The company I would like to work for should be open to adopting new environmentally friendly practices and technologies to enhance its environmental performance.					
The company I would like to work for should collaborate with other organizations and partners that offer cutting-edge, eco-friendly technologies and solutions.					
Green risk-taking					
The company I would like to work for should be willing to take risks in pursuing our environmental sustainability objectives, even in uncertain situations.					
The company I would like to work for should embrace the 'do-it-before-your-competitors' mindset when it comes to taking green initiatives, even if some risks are involved.					
The company I would like to work for should allocate budget to experiment and implement green solutions, recognizing some level of financial risk.					

(Absorptive Capacity) AC	1	2	3	4	5
Potential Absorptive Capacity					
We should frequently interact with the top management to acquire new knowledge.					
Employees should regularly visit other departments to promote knowledge sharing.					
We should be encouraged to collect information through various informal means (e.g., chats with colleagues and friends).					
We should arrange periodic meetings with key stakeholders (suppliers, clients, etc.) to acquire new knowledge from them.					
We should quickly recognize the market shifts (like demographics, legal or competitive dynamics).					
(Absorptive Capacity) AC	1	2	3	4	5
Realized Absorptive Capacity (RAC)					
We should record and store the recently acquired information for future use.					
We should be encouraged to constantly consider how to exploit new knowledge.					
We should quickly grasp the opportunities from new external knowledge.					
Everyone should clearly know how to perform the assigned roles, responsibilities, and activities.					
We should be trained to quickly respond to the customers' concerns.					
We should quickly implement new products and services in response to changing market needs.					
Green Innovation (Gi)	1	2	3	4	5
The company I would like to work for should use the material that produces the least amount of pollution.					
The company I would like to work for should use materials that are resource-efficient and energy-efficient.					
The company I would like to work for should regularly consider how products can be recycled and reused to save the environment.					
The company I would like to work for should check the overall service delivery process and optimize it to reduce waste.					
The waste should be recycled, treated, and reused.					
The company I would like to work for should the overall service delivery process be optimized to reduce hazardous emissions.					
The company I would like to work for should check that the overall service delivery process is optimized to reduce energy and water consumption.					
Environmental Orientation (Eo)	1	2	3	4	5
Internal Environmental Orientation					
Environmental issues are not very relevant to the major function of the firm.					
The company I would like to work for should make a concerted effort to make every employee understand the importance of environmental preservation.					
We should try to promote environmental preservation as a major goal across all departments in the company.					
The company I would like to work for should have a clear policy statement urging environmental awareness in every area.					
Environmental preservation should be a high priority for the activity in the firm.					
Preserving the environment should be a central corporate value in the firm.					

Environmental Orientation (Eo)	1	2	3	4	5
External Environmental Orientation					
The natural environment should not currently affect the firm's business activity.					
The financial well-being of the firm should not depend on the state of the natural environment.					
In the firm, environmental preservation should largely be an issue of maintaining a good public image.					
The company I would like to work for should have a responsibility to preserve the environment.					
Environmental preservation should be vital to the firm's survival.					
The company I would like to work for should take responsibility to its customers, stockholders and employees is more important than our responsibility toward environmental preservation.					
The company I would like to work for should strive for an image of environmental responsibility.					

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