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Humane Entrepreneurship in the Circular Economy: The Role of Green Market Orientation and Green Technology Turbulence for Sustainable Corporate Performance

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Abstract: The modern business world is confronted with growing social and environmental issues, which pose a serious challenge to pursuing sustainable growth. Drawing from the natural resource base view and stakeholder theory, this study examines the effect of humane entrepreneurship on sustainable corporate performance through the mediating mechanism of green market orientation and the moderating role of green technology turbulence. Cross-sectional data were obtained from Turkish small- and medium-sized enterprises (SMEs) across various sectors. This research adopts a quantitative approach. In total, 393 valid responses obtained from managers of SMEs were utilized to examine the above relationships. The results indicate that humane entrepreneurship has a positive effect on sustainable corporate performance. Humane entrepreneurship has a positive effect on green market orientation. Green market orientation has a positive effect on sustainable corporate performance. The relationship between humane entrepreneurship and sustainable corporate performance is partially mediated by green market orientation. The relationship between humane entrepreneurship and sustainable corporate performance is further strengthened in a highly green technology turbulent environment. The indirect positive effect of humane entrepreneurship on sustainable corporate performance through green market orientation is the strongest when green technology turbulence is high. Simultaneously examining the mediation and moderation relationships, we provide novel insights that extend traditional entrepreneurial vision to a more environmentally conscious humane entrepreneurship approach. The study provides a comprehensive picture of how green market orientation and green technology turbulence are involved in using humane entrepreneurship to achieve superior sustainable corporate performance in the circular economy context.

Keywords: humane entrepreneurship; green market orientation; sustainable corporate performance; green technology turbulence; Turkish small- and medium-sized enterprises

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1. Introduction

In recent years, there has been a rise in scholarly interest in environmental issues in both developed and developing countries (e.g., [1,2]). Specifically, conserving the national environment has emerged as a serious issue. As a result, there is a growing concern regarding how stakeholders fulfill their entrepreneurial responsibilities concerning their business operations to promote sustainable environmental, societal, and economic values [3].

Within the circular economy (CE) system, entrepreneurs are considered one of the primary subjects of interest [4] and are considered focal players in entrepreneurial ecosystems [5]. From this standpoint, entrepreneurs perform an essential function in the circular economy where a wide range of innovations are needed, particularly their propensity to recognize opportunities arising from wastes that have been disregarded by traditional entrepreneurs [6,7]. Further, entrepreneurs play a crucial role in establishing a network of partnerships with firms that promote energy conservation, resource efficiency and successful business development [8]. From this perspective, entrepreneurship is required

to prioritize sustainability and blend with the sustainable development objectives of the country of operation and the global community [9,10]. Given the current circumstances, academics have begun to theorize a novel approach, human entrepreneurship [11], which proposes that traditional entrepreneurship should be improved by integrating a human element. Humane entrepreneurship advocates the generation of prosperity both in economic and human dimensions while adhering to ecological and social development principles.

The current literature highlights that humane entrepreneurship integrates the implementation of efficient human resource management practices (HRMPs) with positive innovation, employee engagement and growth [12]. However, humane entrepreneurship transcends the usual studies of employees and the firms; it aims to gain insights into how stakeholders' characteristics and behaviors at a deeper level influence societal and economic development and their effect on society [12]. Further, entrepreneurship is positioned at the core of the CE, with particular emphasis on modern entrepreneurship that can accelerate the transition into a CE, which is attracting scholarly attention. Based on the concept of CE, entrepreneurship and human resource management represent key aspects of the CE and play a crucial role in promoting corporate performance [9,13]. Despite this, the current literature on the mechanisms through which humane entrepreneurship plays this crucial role is still ambiguous. Additionally, empirical research on how humane entrepreneurship improves sustainable social–economic growth is rare in the current body of knowledge [9]. Green market orientation (GMO) relates to the firm recognition of crucial environmental issues confronting the firm [14]. The advent of green customers has altered the competitive dynamics in the business field [15]. Therefore, in the current landscape of green business, firms must pay attention to environmental initiatives to improve performance, particularly in the CE context. GMO drives firms to embrace sustainable business practices due to its role in increasing public awareness regarding the need to protect the environment, ultimately affecting business performance [16,17]. From this perspective, the link between humane entrepreneurship and sustainable corporate performance may be mediated by GMO.

While emerging empirical research has suggested humane entrepreneurship influences sustainable corporate performance [9], studies have rarely explored the contextual conditions under which humane entrepreneurship will be more or less likely to be related to sustainable corporate performance, particularly in the CE context. The concept of green technology turbulence refers to the dynamic nature of the industrial environment or market, characterized by uncertainty and potential risks associated with adopting and implementing green technologies [18]. Since organizations are subject to the influence of environmental conditions, which can impact their business operations [19], this study builds a moderated mediation model by drawing on a natural resource-based view and stakeholder theory to investigate the impact of humane entrepreneurship on sustainable corporate performance by exploring the GMO as a mechanism (mediator) and green technological turbulence as a contextual condition (moderator) in the context of manufacturing SMEs in Turkey. Specifically, the current research aims to provide answers to the following questions:

1. How does humane entrepreneurship influence green market orientation and sustainable corporate performance in the context of SMEs?
2. Does green market orientation mediate the link between humane entrepreneurship and sustainable corporate performance in the context of SMEs?
3. Does green technology turbulence strengthen the link between humane entrepreneurship, green market orientation and sustainable corporate performance?

Taken together, we aim to advance the emerging literature on humane entrepreneurship and sustainable performance literature in at least three different ways. First, most of the current reports in the literature on humane entrepreneurship are case studies (e.g., [11,20,21]; by investigating the effect of humane entrepreneurship on sustainable corporate performance in the context of Turkish SMEs (an emerging economy that has so far received limited attention), we advance the emerging empirical research in this research area. In addition, we aim to theoretically and empirically advance the humane

entrepreneurship literature in the environmental management context by exploring the relationship between humane entrepreneurship and green market orientation. Second, the current research bridges the missing link between humane entrepreneurship and sustainable corporate performance by uncovering green market orientation as a mediating mechanism. Third, we aim to uncover the role of green technology turbulence as a crucial environmental factor (contingency) that moderates the mediation link. Lastly, we advance the applicability of NRBV theory and stakeholder theory by offering new knowledge into the crucial role of humane entrepreneurship in the circular context.

2. Literature Review and Research Hypotheses Development

2.1. Underpinning Theory

The theoretical foundations of this study are the natural resource-based view (NRBV) [22] and stakeholder theory [23]. The resource-based view focuses on how organizations' capabilities and internal resources are associated with sustained competitive advantages [24,25]. However, the resource-based view is constrained to offering explanations for organizational-level outcomes and does not account for the environmental consequences of organizations' activities. On the contrary, the NRBV acknowledges the natural environment and can be considered as a competitive advantage theory that focuses on an organization's connection with the natural environment [22].

Based on the NRBV framework, non-physical resources are critical in establishing and developing competitive advantages due to the challenges associated with imitating and substituting these resources. From this standpoint, entrepreneurship and sustainability initiatives are crucial strategic resources for enterprises, serving as the cornerstone and driving force behind sustainable corporate performance. From a more general point of view, humane entrepreneurship is an important strategic resource that can facilitate the creation of an entrepreneurial network by serving as a source of inspiration and sensitivity between the creator and the stakeholders [9]. Specifically, effective human resource management initiatives establish participation between firms and other stakeholders (including employees). Consequently, this may generate an entrepreneurial synergy that promotes the expansion of value-creating efforts in a sustainable way.

Based on the stakeholder theory framework, entrepreneurship is anticipated to prioritize the interests of various stakeholders by taking into consideration concerns related to society and the environment with a corporate approach. In the current age, businesses face challenges in attaining success if they deviate from societal norms and fail to address stakeholder concerns. From a theoretical standpoint, it can be observed that enterprises and stakeholders share a reciprocal relationship of impact. Stakeholders consist of individuals or groups who can be impacted by a business's activities and possess the ability to influence the business's performance through diverse means [26,27]. From this standpoint, humane entrepreneurship, with its human-driven approach to business technique, directs corporate operations toward creating value that enhances the quality of life for humanity. The enhanced quality of life is commonly known as a holistic strategy, consisting of social, environmental, and economic elements [9].

The above discussion of the frameworks regarding foundational theories for the current research demonstrates their applicability in explaining the links between humane entrepreneurship, green market orientation, green technology turbulence, and sustainable corporate performance.

2.2. Humane Entrepreneurship (HumEnt)

Entrepreneurship has been studied in different contexts, such as corporate entrepreneurship [28], academic entrepreneurship [29] and social entrepreneurship [30]. The majority of existing entrepreneurship theories have focused on the creation of new business opportunities rather than the development of individuals within the organization [31]. However, scholars acknowledge that traditional entrepreneurship, which is an opportunity-

based (business-oriented) rationality, needs to be improved by incorporating a human-centered logic, which is referred to as humane entrepreneurship [9].

Humane entrepreneurship is an emerging concept related to a state under which an entrepreneurship attitude transforms from commercial concentration to integration with the stakeholders' interests, the earth and society. In this study, humane entrepreneurship relates to the sustainable and synergetic integration of entrepreneurship, human resource management and leadership, where the successful application results in an advantageous increase in revenues and generation of employment opportunities, maintained in a continuous cycle [11]. This strategy is viewed as a sustainable, practical approach to sustainable social–economic development.

Humane entrepreneurship encourages businesses to prioritize leadership that focuses on responsible resource management and supports environmentally and socially responsible developments. Essentially, the combination of entrepreneurship, leadership and human resource management renders humane entrepreneurship necessary in transforming corporate culture and fostering meaningful interaction between organizations and their workforce. This is very important in employee engagement because it motivates workers, makes them feel like they matter, increases job satisfaction and helps the business reach its goals [9].

Based on the NRBV framework, humane entrepreneurship is viewed as an inimitable and unique firm-specific resource. Hence, such a resource can only be useful in its intended context [9]. From this standpoint, the humane entrepreneurship construct was adopted from [9,12] to suit the specific focus of the current study. To this end, the variable was designed to reflect elements such as corporate culture, strategy, governance and entrepreneurial orientation aimed to achieve a balance between social, environmental and economic outcomes while also addressing the interests and concerns of various stakeholders. From this perspective, humane entrepreneurship can contribute to establishing foundational values for green market orientation that are focused on the circular economy and sustainable growth. At the organizational level, this process can then lead to achieving sustainable corporate performance by addressing social and environmental concerns, thereby generating long-term economic results. Thus, humane entrepreneurship is a crucial resource that can ensure that a green market-oriented circular economy can lead to sustainable corporate performance.

2.3. Green Market Orientation (GMO)

Green market orientation has emerged as a crucial concept in the marketing and environmental management literature, building upon the traditional market orientation [32]. Green market orientation extends the market orientation concept by integrating sustainability. Green market orientation denotes an organization's holistic and philosophical approach to developing, communicating and providing services and products with a low impact on the environment [33]. Such an approach shapes an organization's strategic technique while conducting its business [34].

The green market orientation approach enables organizations to recognize and respond to societal and environmental concerns. From this standpoint, some scholars argued that GMO can help organizations establish distinctive competencies, align operations with environmental pressures, fulfill sustainability goals and satisfy stakeholders' requirements [32,35]. Green market orientation makes it possible for businesses to acquire green information regarding customers, suppliers and market trends [36].

The existing literature has presented various conceptualizations of market orientation from several perspectives. Kohli and Jaworski [37] propose a conceptualization of market orientation that involves the practical application of the marketing concept and a series of behavioral activities. In addition, market orientation has been regarded as a distinct collection of organizational cultures when considered as a form of culture [38]. Other authors have conceptualized it as a pillar with three fundamental components: internal market orientation, tactical market orientation and strategic market orientation [16].

The current study conceptualizes green market orientation from entrepreneurship and strategic management perspectives. From both perspectives, actively searching for product–market opportunities enables organizations to become market oriented and focus on consumer requirements. Such strategic posture allows organizations to acquire internal and external information, which can be further distributed to meet the needs and expectations of various stakeholders [39,40]. This aligns with the NBRV theory. Humane entrepreneurship can develop firm capability, which transforms the market information processing capabilities (i.e., green market orientation) in a circular economy.

2.4. Sustainable Corporate Performance (SCP)

Corporate sustainability is a growing concern for stakeholders, although its definition remains unclear [41]. In the contemporary world, sustainable corporate performance amplifies metrics for business performance beyond financial benefits to include environmental, social and governance goals and stakeholders' requirements [9,42]. Additionally, sustainable corporate performance integrates several metrics related to social, environmental, operational and competitive performance [9]. From this standpoint, sustainable corporate performance can maintain its advancement in market share and financial benefits.

In this study, sustainable corporate performance prioritizes assessing business performance metrics that are connected to both national and universal sustainable development targets. As a result, firms can derive positive outcomes from sustainably addressing stakeholders' requirements. To this end, sustainable corporate performance was developed to reflect the indicators of resource efficiency and social and environmental performance, as well as the interests of stakeholders [9,43].

2.5. Humane Entrepreneurship and Sustainable Corporate Performance

Humane entrepreneurship incorporates virtuous and sustainable attributes of entrepreneurship, human resource management and leadership, which can result in high-quality job generation and improved profitability in a continuous cycle [11]. At the corporate level, humane entrepreneurship governs firms' business operations towards the creation of values that contribute to an improvement in the quality of life for all people through the integration of a holistic approach that takes into account economic, social and environmental aspects [9]. In empirical research conducted among Vietnamese SMEs, Le et al. [9] discovered that humane entrepreneurship is a strong predictor of sustainable corporate performance. Similarly, research carried out by Kim and Dong [44] reported that humane entrepreneurship positively impacts both non-financial and financial performance.

Furthermore, from the NBRV perspective, humane entrepreneurship is considered a valuable firm-level resource, particularly vital in today's volatile business environment. From this standpoint, humane entrepreneurship, through its integration of circular economy principles into its business activities, cultivates robust dedication and involvement of the business in addressing the concerns and benefits of various stakeholders about sustainability [12], which serves as a core foundation for the attainment of sustainable corporate performance [9,44]. In line with the discussion above, this study argues that through humane entrepreneurship, businesses can be led by leadership that prioritizes resource management and encourages socially and ecologically responsible development towards achieving sustainable corporate performance. Thus, it is posited that

H1. *Humane entrepreneurship has a positive effect on sustainable corporate performance.*

2.6. Humane Entrepreneurship and Green Market Orientation

Despite the growing interest in humane entrepreneurship across various fields [6,20,45], the connection between humane entrepreneurship and green market orientation has not been empirically explored among scholars. In a case study, Kim et al. [11] suggest that humane entrepreneurship is vital in creating synergistic networks with firms to foster reduced emissions and improve resource efficiency that promotes viable business models.

Given the notion that green market orientation stresses organizational responsibilities to several stakeholders, including customers, and further facilitates enterprises' achievement of social targets [32], and given that both humane entrepreneurship and green market orientation prioritize stakeholder involvement, it is a reasonable assumption that humane entrepreneurship and green market orientation are complementary and could share some relationship.

Typically, green-oriented enterprises strive to comprehend the explicit and latent requirements of customers and undertake the necessary measures to offer better solutions [46], such as the implementation of humane entrepreneurship practices to fulfill such needs [9,20]. As part of an organization's strategic posture, humane entrepreneurship ensures employees are systematically and utterly dedicated to achieving their firm's objectives [47], by integrating sustainability initiatives into its business models to satisfy green customers [48]. Additionally, Papadas et al. [16] suggest that a corporate environmental approach positively influences green marketing. Based on the above discussion, it is reasonable to suggest that humane entrepreneurship enables enterprises to become market oriented and focus on the needs of customers, suppliers and environmental trends. Thus, we posit that

H2. *Humane entrepreneurship has a positive effect on green market orientation.*

2.7. Green Market Orientation and Sustainable Corporate Performance

In the environmental management literature, empirical studies concerning the link between green market orientation and sustainable corporate performance have yet to be extensively carried out. However, Raj and Srivastava [49] suggest that market-oriented firms are inclined to acquire knowledge from external sources and integrate it with the existing knowledge. Further, Ozdemir et al. [50] claim that partners with similar knowledge improve the ability to absorb knowledge in alliances. Based on this, Papadas et al. [35] suggest that continuous dedication to green marketing strategies can boost profitability and competitiveness, which is a strategic business strategy that enhances sustainable performance. Similarly, Lin et al. [51] suggest that enterprises with a green market orientation culture can implement sustainable activities and practices that enhance their ability to retain valuable customers and obtain higher profits.

Green market-oriented firms can reconfigure knowledge to sense opportunities and assimilate customer needs. Consequently, strong green market-oriented firms possess the capabilities to establish practices that facilitate the development of products that satisfy customer requirements [52]. Furthermore, some studies have provided evidence suggesting that firms with a market-oriented approach tend to exhibit superior social performance. For example, in a study conducted by Bhattarai et al. [53], empirical data were gathered from a sample of 164 firms in the United Kingdom. The study's findings revealed that market orientation within these firms is crucial in promoting their social performance. Following Pantouvakis et al. [54], and based on stakeholder theory, we argue that in a circular economy, the integrated efforts by several players to establish and sustain a robust green market orientation culture is crucial to enhance sustainable corporate performance. Thus, we posit that

H3. *Green market orientation has a positive effect on sustainable corporate performance.*

2.8. Green Market Orientation as a Mediator

Wiklund and Shepherd [55] state that a firm's orientation is a fundamentally embedded guiding principle that influences business management philosophy, decision making and corporate culture. It determines the enterprise's goals, approach, actions and responses to market opportunities and environmental contingencies [56]. A green market orientation implies that an enterprise establishes and develops environmental capabilities, services, or products to obtain superior sustainable corporate performance. Enterprises

with a green market orientation can detect the significance of environmental management, monitor green competitors and portray an image of environmental friendliness to the customers [56]. From this perspective, such organizations are likely to set environmental targets on their operational activities or internal production, strive to accomplish targets and devote additional resources to nurture green practices and sustainable performance.

Within the existing body of literature, scholars have identified internal environmental management as a notable practice to delineate corporate environmental activities (e.g., [57]). In the context of a circular economy, this study suggests green market orientation as a crucial strategic tool and internal firm capability that, if appropriately implemented, can aid in mitigating the environmental concerns of stakeholders based on its beneficial effect on green practices and organizational outcomes [16,58,59]. Since humane entrepreneurship represents a human-centric approach to entrepreneurship in all management and business operations [9], we argue that by obtaining information on the environmental concerns of stakeholders, making sure that environmental knowledge is disseminated throughout the firm, providing employees with necessary capabilities and skills and informing the changes to stakeholders, one can successfully implement humane entrepreneurship practices in achieving sustainable corporate performance.

Furthermore, at the firm level, humane entrepreneurship to a large extent discusses employees' involvement, cultivating dedication and the significance of their contribution in achieving firm objectives [47]. Green market orientation helps the firm-wide transmission of core environmental values deeply rooted in the corporate culture [16]. The decision entails reorientating employees toward promoting environmental values in the firm [16,59] and humane entrepreneurship by offering environmental leadership practices [9] toward attaining sustainable corporate performance. Based on this, in a circular economy, it is evident that to address the concerns of stakeholders appropriately, enterprises must be proactive by internalizing a green market culture instead of a reactive approach in addressing environmental concerns. Hence, this study argues that organizations' proactiveness in integrating environmental concerns or issues of external stakeholders into an organization's internal decisions and green practices is crucial for achieving sustainable corporate performance. Therefore, this study proposes that the humane entrepreneurship–sustainable corporate performance relationship can be better explained via the mediating role of green market orientation. From the NRBV's perspective, market-oriented enterprises are more inclined to possess the capability to deploy firm-level resources (such as humane entrepreneurship), which can then improve sustainable corporate performance. Thus, we posit that

H4. *Green market orientation mediates the link between humane entrepreneurship and sustainable corporate performance.*

2.9. Green Technology Turbulence (GTT) as a Moderator

Green technology turbulence relates to the speed at which the industrial environment or market undergoes changes, thereby reflecting the presence of uncertainty and potential risks associated with green technologies within the business environment [18]. Despite the positive effort by humane entrepreneurship toward sustainable corporate performance enhancements, some scholars (e.g., [12,60]) contend that the projected sustainable benefits are frequently met with high uncertainty under the conditions of technology turbulence. Specifically, green technology turbulence may enforce constant changes in how humane entrepreneurship practices are implemented, as a low or high influence of green technology turbulence on the implementation of humane entrepreneurship may have varying effects on sustainable corporate performance.

The extant literature has floated the idea that in the quest for sustainable firm performance through leveraging green market orientation, firm green entrepreneurial orientation practices should be given sufficient attention (e.g., [61]). However, there is still a lack of literature on green technology turbulence, humane entrepreneurship, green market orientation and sustainable corporate performance, even though numerous studies have

suggested that firm leaders must drive internal resources to adjust to the evolving technological requirements (e.g., [51]). In the case of humane entrepreneurship implementation, rapid technological changes would test organizations' technological acquisition capability. For instance, following Lisi et al. [62], in a high green technology turbulent condition, organizations might concentrate on meeting and keeping up with external technical requirements and simultaneously assessing and overcoming emerging technical barriers associated with implementing humane entrepreneurship toward achieving sustainable corporate performance. Under high technology turbulence, organizations might be able to use green practices (e.g., humane entrepreneurship) to acquire know-how, information and resources related to the market [62,63]. Therefore, green-oriented firms must adapt their green practices to consistently align with new technological advancements [64]. Similarly, green technology turbulence is an essential component of environmental change that may present opportunities for firms to adapt to or acquire new technologies that can further promote sustainable targets [65]. Additionally, acquiring the latest and advanced technologies can facilitate the implementation of corporate-wide process standards for sustainable objectives [64].

In the case of humane entrepreneurship practices, it is anticipated that in high green technology turbulence, market-oriented firms would focus on the expressed needs and potential behaviors of stakeholders such as competitors and customers. This is because stakeholders' potential needs and expressed needs in a highly turbulent market can offer direction to obtain or sustain competitive advantage in a changing competitive landscape and better implement circular economy practices [66–68]. Based on the discussion above, the current study proposes that green technology turbulence can strengthen the relationships in our integrated conceptual model, as demonstrated in Figure 1. Thus, we propose the following:

H5. *The link between humane entrepreneurship and green market orientation is further strengthened by green technology turbulence.*

H6. *The link between humane entrepreneurship and sustainable corporate performance is further strengthened by green technology turbulence.*

H7. *The indirect positive effect of human entrepreneurship on sustainable corporate performance through green market orientation is the strongest when green technology turbulence is high.*

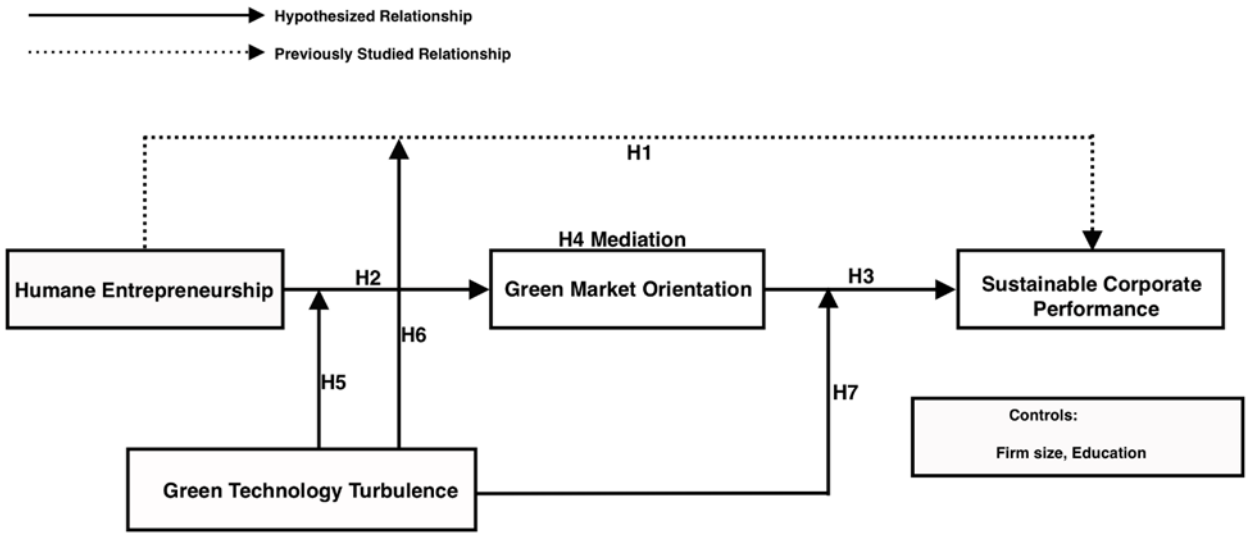

Figure 1. Conceptual model.

3. Method

3.1. Research Context

The choice of Turkish small/medium-sized enterprises across various sectors as our research context is based on several reasons. First, SMEs drive a nation's economic development and job creation [69]. Specifically, SMEs are crucial drivers of sustainable economic growth in Turkey, making up 99% of the businesses, generating 65% of the value added and accounting for 75% of the country's workforce [70]. The contributions to the overall empowerment in the country are notably greater than the European Union's of 65% [71]. Despite this, Lewis et al. [72] highlighted that they are also culpable for significant adverse effects on the environment caused by their supply chain activities. Second, Turkey, an emerging economy, was selected for the current research due to the need for empirical understanding and relevant mechanisms regarding how businesses in emerging markets can accomplish sustainable performance. Third, the Turkish SMEs not only serve as the main driver of job creation and economic growth but also attract major investment to deploy digital advanced technologies [73]. Thus, it is worth examining how these Turkish SMEs can strive to accomplish sustainable performance by integrating entrepreneurs' responsibilities in their business activities that promote sustainable benefits concerning the environment, society and the economy.

3.2. Sample and Data Collection

The current research employed a quantitative methodology. Primary data were obtained through the use of a survey. The primary tool used for data collection in the survey was questionnaires. The questionnaire was structured into two different sections. The first section sought to obtain the sample involved in the survey. The second section focused on collecting data for quantitative analysis. The survey was carefully designed using well-established instruments from the existing literature. An expert with a background within the scope of this study was invited to evaluate the questionnaire and determine its suitability concerning academic and content requirements.

Data were collected from middle-level and upper-level managers of selected firms in Istanbul, Ankara and Izmir. The selected firms were those listed as SMEs by the Trade Register Gazette of Turkey in the selected cities (https://www.tobb.org.tr/KobiArastirma/Sayfalar/Eng/SMEsinTurkey.php (accessed on 29 May 2023)). Data were collected from 26 June 2023 to 12 September 2023. A total of 741 SMEs were considered in the selection process, which collectively employed 3920 individuals. The Slovin formula, a well-known formula for calculating sample size, was employed to determine the sample size of 393. In a recent study, Jung and Ahn [74] relied on this to establish the appropriate sample size for their research.

$$n = \frac{\mathrm{N}}{1 + \mathrm{N}(\mathrm{e})^2} \tag{1}$$

$$n = \frac{3920}{(\{1+3920*0.05)^2} \qquad \mathrm{N} = 363 \tag{2}$$

Through purposive sampling, 570 questionnaires were distributed through on site and via electronic means. In total, 421 responses were recovered but, due to incomplete responses, 28 responses were removed, resulting in 393 valid responses and a response rate of 68.95%.

The respondents' information is illustrated in Table 1. In terms of gender, most of the respondents were males, 377 (95.93%), and 16 (4.07%) were females. In terms of education, most of the respondents 249 (63.36%) had a bachelors degree, 94 (23.92%) had a masters degree, 2 (0.51%) had a PhD degree and 48 (12.21%) had other forms of educational qualification. In terms of firm size, there were 79 (20.10%) firms with less than 50 employees, 298 (75.83%) with between 51 and 100 employees and 16 (4.07%) with over 100 employees. In terms of the nature of the business; 58 (14.76%) were based in electrical and electronic

equipment, 101 (25.70%) in textiles, 81 (20.61%) in food and beverages, 37 (9.41%) in building materials, 28 (7.12%) in pharmaceuticals and 88 (22.39%) in the mechanical, metal and engineering fields.

Table 1. Respondents' information.

(*n* = 393)	Category	Frequency	Percentages
Gender	Male	377	95.93
	Female	16	4.07
Education	Bachelor	249	63.36
	Master	94	23.92
	PhD	2	0.51
	Others	48	12.21
Firm size (Number of employees)	<50	79	20.10
	Between 51 and 100	298	75.83
	Over 100	16	4.07
Nature of business	Electrical and electronics equipment	58	14.76
	Textiles	101	25.70
	Food and beverages	81	20.61
	Building materials	37	9.41
	Pharmaceutical	28	7.12
	Mechanical, metal and engineering	88	22.39

3.3. Measures

We adopted well-established and validated measures from the literature to develop the research's constructs. Since the present study focuses on Turkish SMEs, we employed the back-translation approach, as proposed by Brislin [75], to enhance the translation's quality and reliability.

Humane entrepreneurship was measured with 5 items adopted from [11,20,76]. A sample item was "we are proactive in orienting our business model to circular economy principles". The respondent rated the items on a 5-point Likert scale from 1 = "Not at all" to 5 = "Very high".

Green market orientation was measured with 10 items adopted from Deshpandé and Farley [77] and Fatoki [78]. A sample item was "my company communicates customer satisfaction data to all employees regularly". The respondent rated the items on a 5-point Likert scale from 1 = "Strongly disagree" to 5 = "Strongly agree".

Green technology turbulence was measured with 3 items adopted from Sheng et al. [79]. A sample item was "most green technological innovations in our industry are radical changes on existing techniques'. The respondent rated the items on a 5-point Likert scale from 1 = "Not at all" to 5 = "Very high".

Sustainable corporate performance was measured with 8 items adopted from Zeng et al. [80]; Hourneaux et al. [81]; Wang [43]; and Abbas [3]. A sample item was "The efficiency of resource usage increases over time". The respondent rated the items on a 5-point Likert scale from 1 = "Not at all" to 5 = "Very high".

3.4. Non-Response Bias

To ensure our sample represents the population it was drawn from, we conducted an independent t-test by comparing early and late responses to check for non-response bias. This statistical assessment was used to examine the survey items related to the predictor (humane entrepreneurship) and the outcome measures (sustainable corporate performance).

There was no significant difference in t values found between both early and late responses. Thus, there is no indication of response bias in the data collected.

3.5. Common Method Bias (CMB)

We employed a combination of procedural and statistical methods to address CMB issues associated with cross-sectional data. Regarding procedural techniques, a multi-item approach was adopted to measure all constructs. Further, prior to data collection, the participants were informed that there were no "right" or "wrong" answers and complete anonymity would be ensured. To minimize instrument bias, we followed Hulland et al.'s [82] procedure by obtaining responses for the predictor and the outcome variables at different periods of time.

For the statistical procedure, we employed confirmatory factor analysis (CFA). Specifically, we loaded all the measurement items on a common latent factor, and then examined the significance of its structural parameters. A poor goodness of fit result was obtained (χ^2/df = 7.723, TLI = 0.356, CFI = 0.404, NFI = 0.399, RMSEA = 0.145), whereas the adopted model shows a good fit (as illustrated in Table 2), thus indicating that all the items cannot be attributed to a single factor. In addition, Harman's single-factor test was performed. The results revealed that the first factor accounted for 23.874% of the total variance, which was less than the 50% recommended by Podsakoff et al. [83], implying that CMB is not a major concern in this study.

Table 2. Assessment of reliability and validity.

Code	Construct	Cronbach's Alpha	CR	AVE	Skewness	Kurtosis	Factor Loadings
HE	Human Entrepreneurship	0.850	0.842	0.520			
HE1					−0.500	−0.375	0.800
HE2					−0.247	−0.126	0.611
HE3					−0.479	−0.328	0.791
HE4					−0.373	−0.186	0.753
HE5					−0.146	−0.346	0.626
GMO	Green Market Orientation	0.954	0.955	0.678			
GMO1					−0.591	−0.324	0.846
GMO2					−0.625	−0.290	0.838
GMO3					−0.621	−0.252	0.844
GMO4					−0.621	−0.321	0.869
GMO5					−0.418	−0.399	0.757
GMO6					−0.671	−0.120	0.871
GMO7					−0.585	−0.022	0.796
GMO8					−0.460	−0.464	0.810
GMO9					−0.635	0.085	0.836
GMO10					−0.368	−0.556	0.755
GTT	Green Technology Turbulence	0.869	0.871	0.692			
GTT1					−0.435	−0.458	0.857
GTT2					−0.596	−0.063	0.788
GTT3					−0546	−0.230	0.849
SCP	Sustainable Corporate Performance	0.952	0.952	0.713			

Table 2. *Cont.*

Code	Construct	Cronbach's Alpha	CR	AVE	Skewness	Kurtosis	Factor Loadings
SCP1					−0.211	−0.896	0.866
SCP2					−0.243	−0.893	0.857
SCP3					−0.059	−0.692	0.836
SCP4					−0.162	−0.731	0.799
SCP5					−0.114	−0.925	0.848
SCP6					−0.174	−0.862	0.830
SCP7					−0.172	−0.777	0.846
SCP8					−0.160	−0.781	0.869

Note: HE = humane entrepreneurship, GMO = green market orientation, GTT = green technology turbulence, SCP = sustainable corporate performance, CR = composite reliability, AVE = average variance extracted. χ^2 = 713.067, df = 292, χ^2/df = 2.442, Normed Fit Index = 0.920, Relative Fit Index = 0.910, Incremental Fit Index = 0.951, Tucker–Lewis Index = 0.945, Comparative Fit Index = 0.951, Goodness of Fit Index = 0.875, Adjusted Goodness of Fit Index = 0.849, Root-Mean Square Error of Approximation = 0.061, Parsimony Normed Fit Index = 0.826, Parsimony Goodness of Fit Index = 0.728, Parsimony Comparative Fit Index = 0.854.

Furthermore, we adopted Lindell and Whitney's [84] marker variable procedure. This involved selecting a variable that is not theoretically linked to the constructs being studied. Based on this, "gratification shopping" (a theoretical variable unrelated to the constructs under observation) was obtained. The marker variable was measured by using three distinctive items; "To me, shopping is a way to relieve stress", "I go shopping when I want to treat myself to something special" and "When I am in a down mood, I go shopping to make me feel better". Based on Lindell and Whitney's [84] recommendation, should the marker variable be found to have a significant correlation with the constructs under observation, it implies that the survey's participants have a tendency to answer the items in a specific way which can result in misleading relationships among the constructs. The results obtained showed that there was no significant correlation (i.e., <0.08) between the marker variable and the main constructs of interest.

3.6. Reliability and Validity (Measurement Model)

We employed CFA to validate the reliability and validity of the measurement items in the research model. The validity results are demonstrated in Table 2. Chin [85] recommended that the Cronbach's alpha values should be above 0.7 to ensure internal consistency. The Cronbach's alpha values of all constructs were between 0.850 and 0.954, indicating that the study constructs demonstrate internal consistency.

For validity, we employed convergent and discriminant validity. Fornell and Larcker [86] recommended that factor loadings for each item should be above 0.6, composite reliability (CR) should be 0.7 and average variance extracted (AVE) should be above 0.5 for convergent validity to be ensured. As illustrated in Table 2 and Figure 2, the factor loadings for all items were between 0.611 and 0.871. All variables' CR was between 0.842 and 0.955. All variables' AVEs were between 0.520 and 0.713. The results indicate that the variables exhibit acceptable levels of convergent validity. For discriminant validity, the results (Table 3) demonstrate that the square root of AVE of each variable was higher than the correlations with other surrounding correlations.

The model fit indices of the conceptual model were computed using CFA with maximum likelihood. The evaluation of model fit was conducted using approximate fit heuristics [87]. The model fit was assessed using various fit statistics. Absolute fit statistics (such as χ^2/df, AGFI, GFI and RMSEA were used to evaluate the overall fit of the model. Incremental fit (NFI, CFI, IFI, RFI and TLI) and parsimony fit (PGFI, PCFI and PNFI) were utilized to examine the model fit. Bagozzi and Yi [87] recommended that AGFI and GFI should be over 0.8; NFI, CFI, IFI and TLI should be over 0.9; and PGFI, PCFI and PNFI should be over 0.5. As illustrated in Table 2, all the fit metrics were well above the

recommended thresholds, thus indicating that the research model fitted well with the data collected.

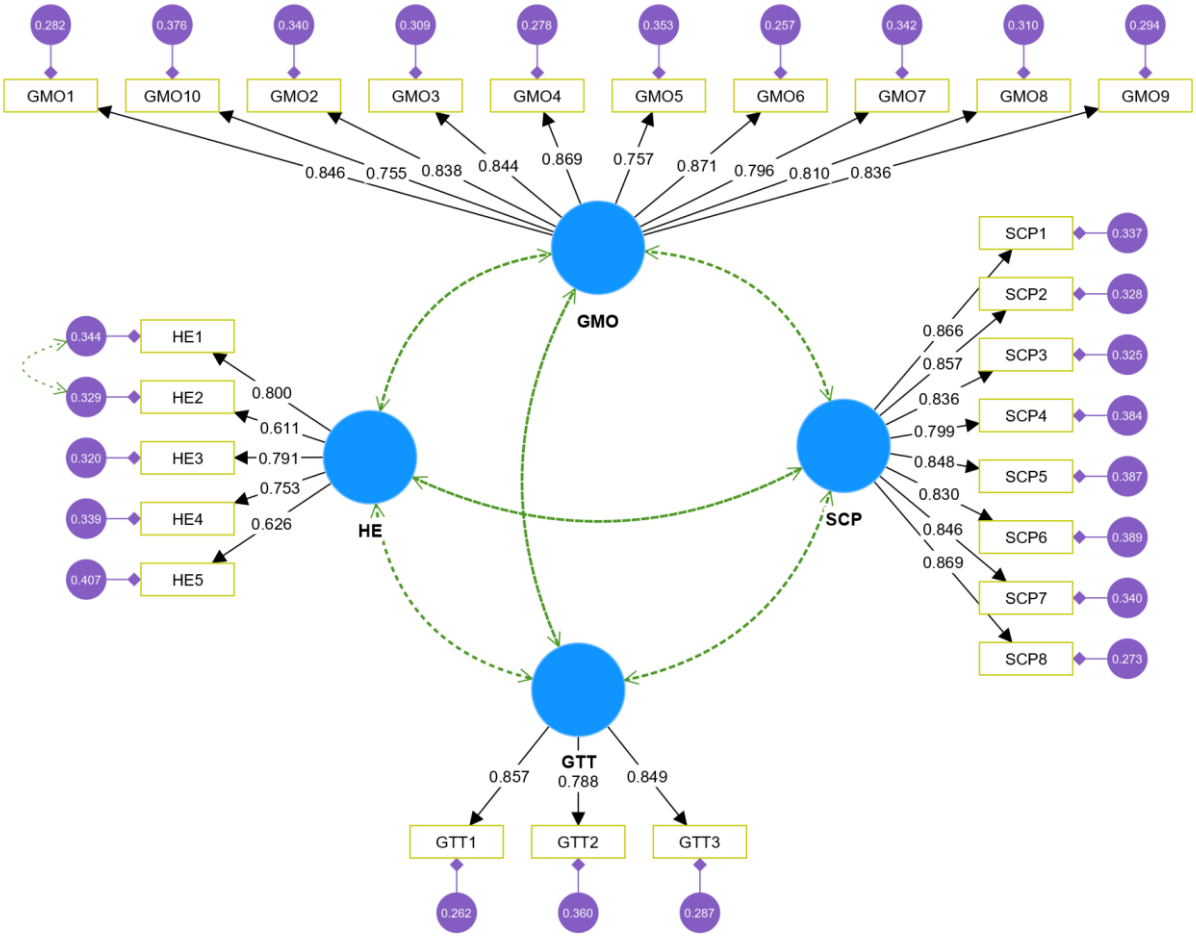

Figure 2. Standardized estimates (factor loadings).

Table 3. Discriminant validity.

Variable	M	SD	HE	GMO	GTT	SCP	Firm Size	Education
HE	3.584	0.689	**(0.721)**					
GMO	3.659	0.840	0.539 **	**(0.823)**				
GTT	2.112	0.952	0.599 **	0.684 **	**(0.832)**			
SCP	4.002	0.722	0.109 **	0.220 **	0.187 **	**(0.844)**		
Firm size	4.412	2.149	0.019	0.040	0.040	0.009	-	
Education	2.852	0.762	0.067	0.059	0.20	0.201 **	0.024	-

Note: ** = 0.01 level, SD = standard deviation, M = mean, the numbers in bold are square root of AVEs.

4. Results and Discussion

4.1. Direct and Mediation Effects

To examine H1–H4, we adopted Model number 4 of the PROCESS macro [88]. The results of the direct and mediation effects are illustrated in Table 4. Specifically, it was found that humane entrepreneurship has a positive effect on sustainable corporate performance ($\beta = 0.338$, $t = 5.445$, $\rho < 0.001$, CI [216, 46]), so H1 was supported. Humane entrepreneurship has a positive effect on green market orientation ($\beta = 0.338$, $t = 5.445$, $\rho < 0.001$, CI [216, 46]), so H2 was supported. Green market orientation has a positive effect

on sustainable corporate performance (β = 0.600, t = 11.787, ρ < 0.001, CI [500, 701]), so H3 was supported.

Table 4. Direct effects and mediation model.

Predictor	Outcome M: Green Market Orientation					Outcome Y: Sustainable Corporate Performance				
	Coef.	**SE**	**t**	**ULCI**	**LLCI**	**Coef.**	**SE**	**t**	**LLCI**	**ULCI**
Constant	0.313	0.145	2.158 *	0.028	0.597	0.172	0.147	1.172	−0.117	0.460
Human Entrepreneurship	0.899	0.039	20.538 ***	0.724	0.981	0.338	0.062	5.445 ***	0.216	0.460
Green Market Orientation						0.600	0.051	11.787 ***	0.500	0.701
F	554.116					322.526				
R^2	0.586					0.623				
Indirect effect			Boot SE			Boot LLCI			Boot ULCI	
0.561			0.064			0.438			0.691	

Note: * $p < 0.05$, *** $p < 0.001$.

To explore the mediating role of green market orientation, it is essential to examine the significance of the indirect effect. In addition, it was examined whether green market orientation was a partial or full mediator of the humane entrepreneurship–sustainable corporate performance relationship. The mediation analysis was conducted based on 5000 bootstrap resamples; at the inclusion of green market orientation as a mediation in the link between humane entrepreneurship and sustainable corporate performance, the direct effect remains significant. The bias-corrected percentile results for the mediating effect are as follows: βindirect = 0.561, SE = 0.064, BLLCI = 0.438, BULCI = 0.691. The confidence interval does not include zero, as demonstrated in Table 4. Therefore, the results support H4, indicating that green market orientation partially mediated the link between humane entrepreneurship and sustainable corporate performance.

4.2. Moderation Analyses

For the moderation analyses, we adopted Model 59 to examine the moderating effects' hypotheses. To address the issue of multi-collinearity, the variables were mean-centered to generate the interaction terms. Three interaction terms were created as a result; (1) humane entrepreneurship × green technology turbulence on green market orientation, (2) humane entrepreneurship × green technology turbulence on sustainable corporate performance, and (3) green market orientation × green technology turbulence on sustainable corporate performance. In the moderated mediation model, firm size and education were included as covariates. The moderated mediation model results are presented in Table 5.

In model 1 of Table 5, it can be seen that humane entrepreneurship has a positive effect on green market orientation (BHE-GMO = 0.309, t = 4.884, ρ < 0.001, CI [0.194, 0.380]) and this effect was moderated by green technology turbulence (BHE × GTT-GMO = 0.055, t = 1.226, ρ > 0.05, CI [−0.186, 0.064]), revealing that green technology turbulence did not moderate the direct effect of humane entrepreneurship on sustainable corporate performance. Hence, H5 was not supported.

In Model 2 of Table 5, it can be seen that human entrepreneurship has a positive effect on sustainable corporate performance ($B_{HE\text{-}SCP}$ = 0.309, t = 4.884, ρ < 0.001, CI [0.194, 0.380) and this effect was moderated by green technology turbulence ($B_{HE\times GTT\text{-}SCP}$ = 0.178, t = 3.891, ρ < 0.01, CI [0.107, 0.195]). In addition, we conducted simple slope tests following the approach of Aiken and West (1991), which was recently used by Al Tera et al. (2024). These tests involved using (±1) standard deviations below and above the mean to represent the moderation effects visually. After probing the interaction effect, the results presented in Figure 3 indicate that the positive effect of human entrepreneurship on sus-

tainable corporate performance is stronger at higher levels of green technology turbulence ($\beta_{\text{simple slope}}$ = 0.228, t = 4.104, $p < 0.001$, CI [0.120, 0.259]). However, at lower levels of green technology turbulence, the positive effect was weaker ($\beta_{\text{simple slope}}$ = 0.167, t = 3.699, $p < 0.001$, CI [0.088, 0.205]), which supports H6.

Table 5. Moderated mediation model.

Bootstrap Resamples: 5000						
	β (se)	**t**	***p***	**LLUL**		**R^2**
Model 1: mediator model	Outcome: Green Market Orientation					
Human Entrepreneurship	0.721 (0.050)	15.994	0.000	0.528	0.780	0.599
Green Technology Turbulence	0.320 (0.045)	4.421	0.000	0.188	0.390	
Interaction: Human Entrepreneurship × Green Technology Turbulence	0.055 (0.018)	1.226	0.059	−0.186	0.064	
Covariates:						
Firm Size	0.031 (0.011)	0.302	0.600	−0.080	0.034	
Education	0.055 (0.021)	0.510	0.318	−0.101	0.063	
Model 2: Outcome variable model	Outcome: Sustainable Corporate Performance					
Human Entrepreneurship	0.309 (0.059)	4.884	0.000	0.194	0.380	0.380
Green Market Orientation	0.496 (0.052)	10.664	0.003	0.412	0.623	
Green Technology Turbulence	0.269 (0.043)	4.199	0.001	0.151	0.284	
Interaction: Human Entrepreneurship × Green Technology Turbulence	0.178 (0.044)	3.891	0.010	0.107	0.195	
Green Market Orientation × Green Technology Turbulence	0.218 (0.046)	4.100	0.006	0.123	0.303	
Covariates:						
Firm Size	0.080 (0.009)	0.904	0.694	−0.010	0.033	
Education	0.061 (0.011)	0.499	0.406	−0.088	0.075	
The Conditional direct effect of Humane Entrepreneurship on Sustainable Corporate Performance						
Green Technology Turbulence (−1SD)	0.167 (0.041)	3.699	0.014	0.088	0.205	
Green Technology Turbulence (+1SD)	0.228 (0.045)	4.104	0.001	0.120	0.259	
The Indirect effect through Green Market Orientation						
Index of moderated mediation	0.070 (0.024)			0.055	0.071	
The Conditional indirect effect of Humane Entrepreneurship on Sustainable Corporate Performance Through Market Orientation						
Green Technology Turbulence (−1SD)	0.210 (0.045)	4.106	0.003	0.088	0.128	
Green Technology Turbulence (+1SD)	0.449 (0.051)	9.816	0.000	0.300	0.659	

Note: n = 393; UL = upper level of confidence interval, UP = lower level of confidence interval.

Furthermore, Figure 4 demonstrates the interaction for H7, which is plotted at (±1) standard deviations below and above the mean of green technology turbulence. As demonstrated in Table 5, the indirect effect of green market orientation on the humane entrepreneurship–sustainable corporate performance relationship was stronger at higher levels of green technology turbulence ($\beta_{\text{simple slope}}$ = 0.449, t = 9.816, $p < 0.001$, CI [0.300, 0.659]), while the relationship is weakened at low levels of green technology turbulence ($\beta_{\text{simple slope}}$ = 0.210, t = 4.106, $p < 0.01$, CI [0.088, 0.128]), which supports H7.

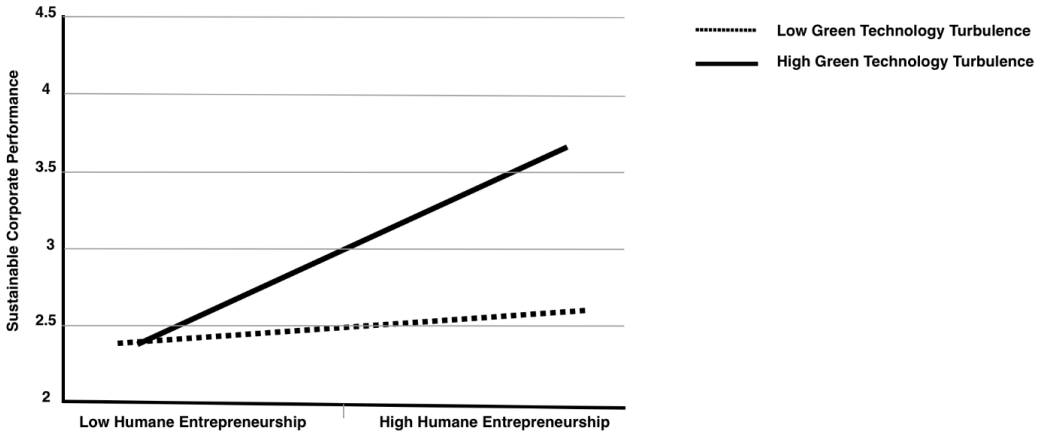

Figure 3. The contingency role of green technology turbulence on humane entrepreneurship–sustainable corporate performance relationship.

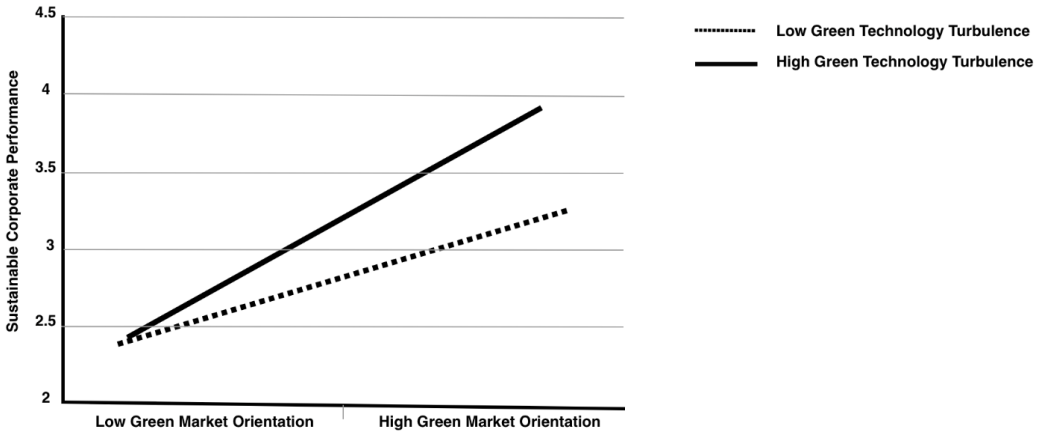

Figure 4. The contingency role of green technology turbulence on the indirect effect of the humane entrepreneurship–sustainable corporate performance relationship via green market orientation.

4.3. Discussion

In line with the emerging research that stresses the integration of entrepreneurship and environmental management [9,61], the current study examines how humane entrepreneurship influences sustainable corporate performance in Turkish SMEs. To obtain a holistic view of the aforementioned link, our study underlies the mediating mechanism of green market orientation and the external environmental condition of green technology turbulence.

The results indicated that humane entrepreneurship positively affects sustainable corporate performance. This result is similar to the finding of Le et al. [9] and substantiates the conclusion of Habib et al. [61] and Tjahjadi et al. [89]. The alignment of this result pattern could imply that practicing humane entrepreneurship is fundamental in developing necessary resources and support towards implementing concrete circular economy practices and sustainable developments. Above all, humane entrepreneurship can allow a firm to expand sustainably, reducing environmental costs and promoting resource efficiency and productivity from entrepreneurial opportunities [9]. Humane entrepreneurship has a positive effect on green market orientation. This finding provides empirical support for the argument that a firm environmental approach positively affects green marketing [16]. The result suggests that when humane entrepreneurship forms part of a firm strategic posture, crucial information is disseminated throughout the firm while also ensuring that all employees are systematically and better positioned to address stakeholders' concerns.

Green market orientation has a positive effect on sustainable corporate performance. This is consistent with prior research findings [61,68,90] which discovered that to adapt to evolving customer demands, market-oriented enterprises have been observed to establish

a commitment to sustainable developments. In this respect, to implement a circular economy successfully, organizations need an environment-centric strategy that converts the broader aspect of market orientation to precise measures that boost sustainable corporate performance.

It was found that green market orientation partially mediates the humane entrepreneurship–sustainable corporate performance relationship. Through motivation from market orientation, humane entrepreneurial firms can take more intuitive actions toward sustainable development. Congruent with Jiang et al. [91], market knowledge is an enabler of entrepreneurial activities such as green innovation and novel ideas that foster sustainable competitive advantage. Therefore, implementing humane entrepreneurship practices and integrating circular economy practices into market orientation can promote firms' sustainable growth in a manner that enhances resource efficiencies and productivity. Additionally, this result also provides support for prior studies [89,92]. Green market orientation drives to improve green entrepreneurial capabilities to create process innovation and green products to reduce the adversarial effect of operational processes on the environment.

Furthermore, the findings of this study indicate that even though humane entrepreneurship impacts sustainable corporate performance and indirectly through green market orientation, the impacts are further strengthened under high green technology turbulence. An explanation for these findings could be that high technology turbulence is a catalyst that triggers entrepreneurial leaders to consistently seek adaptation to new technologies and further knowledge to improve sustainable corporate performance. The results could also suggest that high green technology turbulence strongly influences entrepreneurial leaders to establish a corporate-learning culture in their firms in a manner that new skills and adaptation to new technologies that provide access to a wide range of knowledge and information are obtained and dispersed across the organizations to provide mutual learning required for achieving sustainable corporate performance. Thus, in a highly turbulent green technology environment, learning from stakeholders such as customers becomes more crucial for firms because of the requirement to swiftly adapt to the evolving needs of the changing market.

5. Insights and Impact: Theory to Practice

5.1. Theoretical Contributions

This study offers various theoretical contributions that are not available in the current literature. First, the current research is among the initial efforts that contribute to the existing literature of empirical knowledge on humane entrepreneurship via a new perspective on the facilitative role of corporate green efforts through its enhancing impact on market orientation for circular economy towards achieving sustainable benefits for stakeholders. However, scholars have just recently started to explore strategic orientations and the implementation of circular economy practices in SMEs [93,94]. Specifically, the current study extends the empirical understanding of entrepreneurship for circular economy in SMEs, which so far has received limited attention in the current body of knowledge. The findings of the current research underscore the need for an entrepreneurial vision transition from profit-centric to sustainability-centric. Here, entrepreneurial vision prioritizes collective stakeholder values over individual benefits. To this end, corporate values can be delivered by generating values for stakeholders sustainably.

Second, the current study is the first to examine and provide empirical evidence for the study's integrated conceptual model. In the current literature, most of the studies on humane entrepreneurship are case studies (e.g., [11,20]), and empirical research on humane entrepreneurship is still in its infancy. This study significantly extends the scientific knowledge of NRBV and stakeholder theory by expanding these theories' validity and adaptability. Particularly, using NRBV theory and stakeholder theory as theoretical foundations, the current study considers humane entrepreneurship as an organization-specific resource to nurture a firm's green practice capability and offers empirical evidence that humane entrepreneurship is a critical enabler of green market orientation and ultimately superior sustainable corporate performance.

Third, although the emerging literature found that humane entrepreneurship is critical to achieving sustainable corporate performance [9], how this relationship develops has not been firmly established. This study explores and verifies that green market orientation is an important mediating mechanism of the humane entrepreneurship–sustainable corporate performance relationship. Thus, this study demonstrates that green market orientation can fuel environmentally sustainable business practices toward achieving sustainable performance in the case of circular economy practices. As environmental and competitive pressures mount, firms increasingly recognize the effect of their operations on the natural environment and explore green practices to obtain a competitive advantage [56]. Based on stakeholder theory, adopting green market orientation will not only promote a systematic approach to pursuing environmental targets (internal green practices) but also require extending these efforts to other stakeholders, such as suppliers, to tackle environmental concerns towards achieving sustainable corporate performance. Thus, we advance prior insights by offering evidence that supports that green market orientation is a complementary mechanism. By providing empirical evidence that green market orientation explains the link between humane entrepreneurship and sustainable corporate performance, the present study findings help clarify *how* this effect occurs in the extant literature. Thus, we fill the void in the literature identified by Le et al. [9].

Fourth, this study enriches the human entrepreneurship and environmental management literature by uncovering under what conditions the effect of humane entrepreneurship on sustainable corporate performance works. Green technology turbulence further strengthens the humane entrepreneurship–sustainable corporate performance relationship. The ever-changing business environment of green technology makes humane entrepreneurship more effective in enhancing sustainable corporate performance. Thus, we answer commonly asked questions in the literature regarding under what conditions it pays to be green. Lastly, the indirect positive effect of humane entrepreneurship on sustainable corporate performance through green market orientation is the strongest when green technology turbulence is high. In a highly green technology turbulent environment, it is crucial for firms seeking to improve their sustainable corporate performance to do it through green market orientation.

5.2. Implications for Practice and Policy Makers

The findings of this study offer crucial insights for managers in emerging economies, particularly in Turkey, regarding how they can best employ their entrepreneurial posture to foster sustainable values. First, SMEs in Turkey should acknowledge and promote entrepreneurial vision in a competitive and uncertain environment to enable green market orientation. The current research findings suggest that the management of SMEs should integrate green practices and management initiatives for internal and external stakeholders because green market orientation is a crucial complementary mechanism enhancing the impact of humane entrepreneurship on sustainable corporate performance.

Second, considering the role of employees in the realization and implementation of firms' strategic goals and objectives, from a corporate governance perspective, firms need to adopt a proactive approach by offering necessary coaching, training and developmental initiatives that align with employees' status and contribute to the enhancement of their values and the refinement of their philosophy. This alignment is crucial to ensure congruence with the values and philosophy the organizational leaders uphold. This is crucial because employees serve as a crucial resource in the initiation of ideas and the generation of value, as they actively implement the strategies and goals set forth by the organization.

Third, it is crucial for the management of SMEs to carefully consider the mechanism regarding how humane entrepreneurship and green market orientation collectively drive sustainable performance. To this end, the business model should be adapted accordingly. The empirical findings indicate green market orientation is a crucial mediating mechanism of the humane entrepreneurship–sustainable corporate performance relationship. Managers should develop a strong green market orientation-based strategy that enhances their

firm capabilities to obtain current and relevant market intelligence necessary to acquire precise insights into customers' and other stakeholders' green requirements and preferences. Because stakeholders such as customers from emerging markets are currently demonstrating a growing interest in environmentally friendly practices, it is of utmost importance for managers to actively observe market trends and developments, allowing for adequate satisfaction of such needs [32]. Hence, practitioners should dedicate more resources to promoting green market orientation to improve sustainable corporate performance.

Fourth, green technology turbulence strengthens both the direct and indirect effect of humane entrepreneurship on sustainable corporate performance. Hence, practitioners should pay attention to the interaction effects of humane entrepreneurship and green technology turbulence on sustainable performance. The findings indicate that high technology turbulence helps managers to integrate their circular entrepreneurship transformation more efficiently and effectively in promoting sustainable performance. Hence, to completely achieve the benefits of humane entrepreneurship practices on green market orientation and sustainable performance, SME managers should pay attention to shifts in customers' preferences and technological advancements. Doing so will facilitate their effort to achieve superior sustainable performance.

Innovation in the system and technological innovation are required by businesses to realize sustainable development targets both at the national and global levels [9,95]. Resources, including financial resources, are needed for this. Therefore, policymakers should assess the current situation to develop timely and practical policies to help firms execute innovation as required. Accordingly, policymakers should take a strategic stance in encouraging circular economies by setting off initiatives at the corporate level.

6. Limitations and Future Directions

This study has certain limitations that can yield avenues for future research. First, this research obtained sample data from a single country, which limits the generalization of the results to other geographical settings. Future studies can test our conceptual framework in other emerging economies (particularly other Eastern European countries). Second, this study adopts a cross-sectional research method; future studies could employ longitudinal research to promote the robustness of the current research. Third, the current research explored the mediating role of green market orientation on the link between humane entrepreneurship and sustainable corporate performance. Further research should consider other relevant mediators and moderators. Such research would enrich and provide additional fruitful insights into the study area. Fourth, research on humane entrepreneurship toward achieving sustainable values is still in its infancy; more studies are required to enhance its rationality and effectiveness in the circular economy context.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

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