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How humane entrepreneurship fosters sustainable supply chain management for a circular economy moving towards sustainable corporate performance

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ABSTRACT

Growing environmental and social issues pose a challenge to the business world as to how to sustain and grow in an environment characterised by uncertainties. Drawing upon a systematic literature review, this study prioritises on examining the impact of humane entrepreneurship (HumEnt) on sustainable corporate performance (SCP) for small and medium-sized enterprises (SMEs) in emerging economy because this extent remains scant in the current literature. Furthermore, it also explores whether sustainable supply chain management (SSCM) mediates the relationship between HumEnt and SCP. Simultaneously, examining whether green corporate social responsibility (GCSR) moderates HumEnt's influence on SSCM. This study follows quantitative approach using Smart PLS version 3.3.2 to analyse Structural Equation Modelling to investigate the structural relationships. There were 468 valid responses obtained from the main survey. The survey participants are those who hold senior levels at the selected enterprises. The results reveal that HumEnt has a positive and meaningful relationship with SSCM and SCP. In addition, SSCM partially mediates the relationship between HumEnt and SCP. Besides, GCSR positively and significantly affects SSCM, and simultaneously moderates HumEnt's influence on SSCM. Given the above discussion on the gap, the main finding of this study is a novelty in the field. These contributions may be of interest to business practitioners, business leaders and academics. In this context, circular economy practices are essential in promoting SSCM to achieve sustainable performance. This study seeks to provide an influence map on how GCSR involves realizing HumEnt to promote SSCM for a circular economy to achieve greater sustainability.

1. Introduction

Population growth and increased economic activities are significantly associated with environmental and social issues (Bretschger and Pittel, 2020; Pizzi et al., 2021). Therefore, stakeholders are increasingly concerned in the fulfilment of entrepreneurs' responsibilities in their business operations for sustainable values in terms of society, environment and economy (Abbas and Sagsan, 2019). In the circular economy (CE) context, entrepreneurs represent one of the main categories of interest (Neumeyer et al., 2020) and are central actors in the entrepreneurial ecosystem (Joon, 2018). In this sense, entrepreneurs play a vital role within a circular economy where widespread innovation is required, especially the entrepreneur's perception of economic opportunities from waste that has been overlooked by traditional entrepreneurs (Millette et al., 2020). In addition, entrepreneurs are important links in developing a partnership network with corporations to enable resource efficiency, reduce emissions and save energy that facilitates viable business models (Veleva and Bodkin, 2018). In this context, entrepreneurship is expected to be sustainable and align with the sustainable development goals of the country and the world (Kim et al., 2018; Pizzi et al., 2021). Amongst the diverse approaches to entrepreneurship, humane entrepreneurship (HumEnt) is considered to be a sustainable practical approach that occurs for sustainable socio-economic development. As proposed by Kim et al. (2018), HumEnt aims to prioritise social and environmental aspects, at the same time focusing on job creation for a better quality of life. HumEnt stimulates businesses to be led by leadership that values a responsible management of resources and promotes more ecologically and more socially humane responsible development.

Recent literature outlines that HumEnt refers to a state in which effective human resource management (HRM) practices positively associate with employee engagement, positive innovation and growth (Kim et al., 2021). Furthermore, entrepreneurship is positioned at the

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List of abbreviations

Abbreviations	*Description of abbreviations*
CE	Circular Economy
CSR	Corporate Social Responsibility
GSCR	Green Corporate Social Responsibility
HRM	Human Resource Management
HumEnt	Humane entrepreneurship
RBV	Resource-Based View
SMEs	Small and Medium-sized Enterprises
SCM	Supply Chain Management
SCP	Sustainable Corporate Performance
SSCM	Sustainable Supply Chain Management
SSCMCE	Sustainable Supply Chain Management for Circular Economy

centre of a CE, particularly, a new-era entrepreneurship capable of accelerating the transition to a CE is paid a lot of attention. Even so, the mechanism by which HumEnt plays such an important role is still ambiguous in the current literature. From the CE perspective, supply chain management (SCM) and HRM are important categories of CE practices that play an important role in improving corporate performance (Del Giudice et al., 2021; Marrucci et al., 2021). In addition, CE and SCM are closely related as they both rely heavily on the effective management of business processes (Del Giudice et al., 2021). As reported by Manavalan and Jayakrishna (2019), CE associates with the supply and demand of supply chain industries to enhance efficiency of resource use. CE is increasingly recognised as an optimal alternative to the traditional linear model in moving towards sustainability (Farooque et al., 2019; Lahane et al., 2020). The association between CE and SCM is also emphasised through CE's primary focus on resource efficiency optimisation, energy conservation and efficient management of material flows in supply chain systems amongst supply chain stakeholders (Zhu et al., 2010). As stated by Hazen et al. (2021), circular economy initiatives revolve around reconfiguring core supply chain processes to underpin sustainable consumption and production patterns. In SCM, CE emphasizes responsible manufacturing and distribution which enables businesses to redesign and reorganise their operations including SCM to enhance resource efficiency, reduce waste, and save energy and emissions (Jabbour et al., 2019). Consequently, this leads to enhancing a competitive business advantage and growth (Manavalan and Jayakrishna, 2019).

Previous studies argued for the need to integrate CE and SCM (De Angelis et al., 2018; Sauvé et al., 2016). However, the current literature on SCM in CE remains limited (Geissdoerfer et al., 2018). The intersection between CE and SCM has received little attention in the current literature. Amongst the few relevant pieces of literature, Ripanti and Tjahjono (2019) suggest that CE values can be considered in redesigning supply chain patterns and logistics. However, how to embed these values in the SCM needs further study (Hazen et al., 2021). Besides, De Angelis et al. (2018) found that there is a lack of a bridge between SCM and CE in the current literature, while there is a great need for practical information to introduce the integration of SCM and CE into the practical context. Given the above discussions, in this research context, the adopted concept of SCM is sustainable instead of conventional (traditionally linear) because sustainable supply chain management (SSCM) has extended the concept of linear SCM (solely focuses on economic benefits) to support CE principles (Allen et al., 2021). As reported by Batista et al. (2018), "SSCM engages in corporate governance and management of social responsibility issues for supply chain operations". Above all, SSCM integrates benefits of the environment and society into supply chain processes which, on this basis, enables businesses to achieve long-term outcomes (Kirchoff et al., 2016; Seuring and Müller, 2008). In this respect, the concept of SSCM for CE (SSCMCE) reflects the state in which CE values and CE principles are incorporated into SCM as a means of extending the boundaries of SSCM by diminishing the use of virgin materials and increasing the circularity of resources amongst stakeholders in the supply chain (Genovese et al., 2017). Consequently, this can lead to maximising the value creation of raw materials and products, reducing waste and emissions and conserving energy, that ultimately results in enhancing firm competitive advantage and corporate performance. In this respect, corporate performance is considered as compatible with the sustainable development goals, so SSCMCE assumed to mediate the relationship between HumEnt and sustainable performance (SCP). In addition, green corporate social responsibility (GCSR), from the theoretical point of view of the stakeholders, can be assumed to moderate the influence of HumEnt on SSCMCE. As noted by Manavalan and Jayakrishna (2019), in the supply chain field, the positive implications of the CE concept are focused especially for businesses which practise CSR as their key in addressing the environmental, social and economic benefits.

Despite the importance of HumEnt, the current literature on the field of HumEnt is in favour of breadth rather than depth. In addition, how HumEnt fosters sustainable socio-economic development is rarely studied empirically in the current literature. In the context of supply chain, the connection between entrepreneurship-related and SCM needs further studies due to the rarity of current literature on this area and is still in its infancy, while entrepreneurial performance can be significantly influenced by SCM practices (Cortes et al., 2021). Further, although the literature on CE domain has been proliferating in recent decades due to its potential benefits for sustainable development (Alcalde-Calonge et al., 2022), however, its incorporation into SCM still needs further examination (De Angelis et al., 2018; Sauvé et al., 2016). Moreover, such incorporation to the extent of association with HumEnt and GCSR for firm's sustainable performance has not been explored in the current literature, drawn upon a systematic literature review. From a broader approach, enterprises play a crucial role in the national economy, especially small and medium enterprises (SMEs), for their great contribution to GDP and employment to society (Dadhich and Hiran, 2022; Mishra, 2019). However, in spite of such great contribution of SMEs, their adverse impact on the environment is also significant such as pollution, emissions, waste of resources, and climate change (Pizzi et al., 2021; Ormazabal et al., 2018). As noted by Tanco et al. (2021), SMEs especially need to integrate sustainable practices into their business operations management. Therefore, fostering SMEs to shift to a CE model becomes urgent to change traditional-based practices to circular practices as a pivotal foundation to facilitate the realisation of the sustainable development goals (Pizzi et al., 2021). The transition to a more sustainable and circular economic model is hard to achieve without an intensive understanding of the key drivers influencing the adoption of circular practices by SMEs (Pizzi et al., 2021). Furthermore, within the supply chain of enterprises in a CE, the human-related factor holds an important position whereby relationships, engagement, HRM are also of importance (Zeng et al., 2017). However, empirical research into this is rare in the current literature. Furthermore, as stated in Kristensen and Mosgaard (2020), the circularity of the economy in the new era is not only about the more conscious use of resources and energy, but also about the systematic insertion and effective introduction of sustainable practices for sustainable value creation. Therefore, the integration of GCSR and SSCMCE to this extent is of relevance.

In response, this study aims at filling this gap by intensively examining how HumEnt associates with SSCMCE for SCP with the involvement of GCSR as a moderator. The main objective of this study is the in-depth discovery of the mechanism of HumEnt in fostering SCM to be sustainable for CE towards a sustainable performance. Specifically, this study reviews the intermediary mechanism of SSCMCE in the relationship between HumEnt and SCP and the moderating mechanism of GCSR on the influence of HumEnt on SSCMCE. Most importantly, this study aims to highlight the ethical approach of business that is expressed in

human-centric entrepreneurship, the entrepreneurial ecosystem and more broadly, business ethics. As reported by Beschorner (2006), the world becomes unjust as it is more dominated by the business world at the speed of globalisation, therefore, reconsidering ethical standards ranging from individual entrepreneurship to the entrepreneurial ecosystem and business ethics become important topics. The big question asks how businesses can achieve sustainable performance on the basis of fulfilling their responsibilities to various stakeholders while ensuring business ethics are nurtured from the entrepreneurship. The comprehensive answer to this question has not yet been found in the current relevant literature. In this context, equity is embedded in the implementation of responsibility by entrepreneurs and businesses to various stakeholders, and also to the environment and communities in which they operate. The stated objective can be addressed by responding to the following questions:

RQ1. How does HumEnt associate with SSCMCE for SMEs to achieve SCP?

RQ2. How does SSCMCE mediate the relationship between HumEnt and SCP in the context of SMEs?

RQ3. How does GCSR moderate the influence of HumEnt on SSCMCE in the context of SMEs?

This study therefore provides the following important novel contributions. First, it contributes to expanding the current literature on entrepreneurship by providing additional empirical evidence of the mechanism by which integrating the SSCMCE factor to mediate the relationship between HumEnt and SCP, with GSCR simultaneously moderating the influence of HumEnt to SSCMCE. This contribution is the originality of this study as this mechanism is yet to be explored by the existing literature. The findings of this study therefore go beyond the current literature in the domains of humane-entrepreneurship and entrepreneurship in general, by contributing empirical evidence to the nascent knowledge of its further workability in the context of sustainable supply chain management for the circular economy towards sustainable value creation for stakeholders. Furthermore, the integration of GCSR to this extent to moderate the impact of HumEnt on SSCMCE reinforces the novelty of this study.

The structure of this study has six main sections. Section 1 is the introduction. Section 2 presents the underpinning theory, relevant concepts, discussions for the development of research hypotheses, research models and scales. Section 3 describes the research design and methodology. Section 4 interprets the results. Section 5 discusses the findings of the study and proposes theoretical and managerial implications. Section 6 concludes the study and outlines limitations to suggest future research scope.

2. Literature review

2.1. Underpinning theory

The underpinning theories applied in this study are ethical theory (Beschorner, 2006), stakeholder theory (Freeman, 1984) and resource-based view (RBV) theory (Barney, 1991). As stated by Beschorner (2006), business ethics can be viewed from two aspects, i.e. justification and application. It is argued that the term, business ethics, refers to a state in which the business attempts to create a fruitful synthesis between profits and ethical concerns. Business ethics requires entrepreneurial thinking developed on the basis of interests of all stakeholders instead of sole profit maximisation as per the traditional approach. Furthermore, in the context of cultural and moral diversity, business ethics requires entrepreneurship taking into account the current practices of actors in a given society or community oriented towards consistency.

From stakeholder theory perspective, entrepreneurship is expected to be considering the interests of different stakeholders by integrating issues of interest to stakeholders such as environmental-related and social-related issues into its business strategy. In the modern era, it is difficult for businesses to achieve success if they are outside the normative values of society and the issues that concern stakeholders. Approaching the subject from the stakeholders' theoretical point of view, enterprises and stakeholders have an interrelationship of influence. Stakeholders are defined as those who can be affected by the business operations and can affect the performance of the business in various ways (Freeman et al., 2020; Le, 2022). In this context, with its human-centric characteristics in business strategy, HumEnt guides business activities towards creating values to aid a better quality of life for mankind. Importantly, such an improved quality of life is referred to as a holistic approach that includes economic, environmental and social welfare aspects.

From an RBV perspective, non-physical resources are crucial in forming and enhancing a competitive advantage because of the difficulty of imitation and substitution. In this context, entrepreneurship, CSR practices and SSCM practices are strategic resources of the enterprise as the core foundation of the soul and backbone of the enterprise that drive sustainable corporate performance. From a broader perspective, HumEnt is a crucial strategic resource that can create an entrepreneurial ecosystem by inspiring and empathising between the initiator and its stakeholders. In particular, the good implementation of HRM practices creates engagement between enterprises and stakeholders, including employees. As a result, this can create a synergy of entrepreneurship towards increasing value-creating activities in a sustainable manner for a better quality of life in the sense of sustainability.

The above description of the concepts of the underlying theories for this study thereby shows their relevance by explaining the relationships between HumEnt, SSCMCE and SCP. In addition, they can assist in explaining the possibility of association of GCSR and HumEnt in the relationship impacting SSCMCE. In this respect, HumEnt practices and the incorporation of CE principles into SCM practices demonstrate the strong commitment and engagement of the business in addressing the benefits and concerns of different stakeholder groups towards sustainability. In addition, practicing GCSR persistently and consistently towards internal and external stakeholders enables businesses to strengthen the fundamentals of human, processes, systems, networks, and importantly stimulate and nourish environmental-oriented entrepreneurship amongst the stakeholders in the supply chain. From this approach, GCSR can be assumed to associate with HumEnt in influencing on SSCMCE. Above all, when the interests and concerns of different stakeholder groups are addressed, businesses deserve strong cooperation and collaboration from internal and external stakeholders towards the common goal of sustainable development. In this context, business practices are perceived responsibly and ethically for all other stakeholders, whereby economic benefits are generated from the fundamentals of environmentally and socially respectful, responsible and ethical business practices.

2.2. Humane entrepreneurship (HumEnt)

Entrepreneurship is, in essence, defined as value-creating activity that promotes economic development (Kim et al., 2021). Following Parente et al.'s (2020) study, HumEnt is an emerging concept that refers to a state in which entrepreneurial mindset shifts from business focus to integration with the interests of stakeholders, the planet and the society at large. In addition, as stated by Kim et al. (2018), HumEnt is defined as a sustainable and virtuous integration of entrepreneurship, leadership and HRM, whereby its successful implementation leads to a beneficial increase in wealth and the creation of quality jobs, sustained in a continuous cycle. This approach is considered as a sustainable practical concept that emerges for sustainable socio-economic development. As proposed by Kim et al. (2018), HumEnt aims at prioritising social and environmental aspects, while at the same time focusing on job creation for a better quality of life. HumEnt stimulates businesses to be led by

leadership that values responsible management of resources and promotes more ecological and more socially-humane responsible development. As noted by Kim et al. (2021), HumEnt refers to a state in which effective HRM practices have a positive association with employee engagement, positive innovation and growth. HumEnt extends beyond the literature of the domain of company and employee aiming to understand fundamentally how people's actions and characteristics impact on socio-economic growth.

In terms of considering enterprise resources, human is seen strategically valuable resources, particularly critical in today's volatile environment. In this context, employees are considered as the main source of the enterprise's competitiveness, therefore, their commitment and actions are very important which affects the performance of the business in various ways (Kim et al., 2021). In the modern era, scope of application of entrepreneurship concept extends beyond the traditional way of focusing on startups into broader domains such as innovation in business model and practices, etc., as long as it creates desired values. At the corporate operation level, entrepreneurship can be integrated into the business process and the human spirit. In addition, the improvement of entrepreneurship culture in on-going businesses is considered to be a key driver of sustainable growth and development (Kim et al., 2021). Above all, with the integration of entrepreneurship, leadership and HRM, HumEnt is crucial in changing corporate culture and establishing engagement between businesses and employees. This has a great significance in pertaining employee involvement, igniting their enthusiasm at work, fostering a sense of the role and the importance of their contribution, improving employee satisfaction and involving employees in attaining company's goals (Stankiewicz and Moczulska, 2012; Kahn, 1990).

From a resource-based point of view, HumEnt is seen as a firm-specific resource which is unique, inimitable, uncopiable and irreplaceable. Therefore, each resource can only work in the given context from which it was created. In this context, the HumEnt variable was adopted from Parente et al. (2020); Kim et al. (2018); Kuckertz and Wagner (2010) and made it relevant to the present research scope. Accordingly, its construct developed to reflect aspects including corporate culture, governance, strategy and entrepreneurial orientation on the basis of balancing the environmental, social and the economic benefits to address the concerns and interests of different stakeholders. In this respect, HumEnt can help to establish fundamentals for SSCM oriented towards a CE and sustainable development. At the firm level, this flow ultimately leads to sustainable corporate performance in such a way that respects the environmental and social issues and, consequently, generates long-term economic outcomes. Therefore, HumEnt is a vital resource which ensures that SSCMCE can result in achieving sustainable corporate performance.

2.3. Green corporate social responsibility practices (GCSR)

GCSR is defined as the integration of green initiatives into management practices towards different stakeholders as long as such initiatives can address their interests and concerns, simultaneously facilitating enterprises to reach sustainable performance. In the context of SSCM for CE, expanding CSR activities beyond the borders of the organization towards the supply chain is paramount (Daddi et al., 2021). Conforming to the stakeholder framework, CSR is categorised as internal-CSR for employees and external-CSR for consumers, suppliers, social communities, partners and environment (Farooq et al., 2017; Le, 2022), as long as they and the business have an influential relationship with each other. In this study, practicing CSR for employees includes education to form green behaviour, provision of comprehensive professional and skill development roadmap and green working environment, stimulation of creative and innovative thinking towards solving social and environmental issues, and facilitation of work-life balance. In addition, CSR practices towards external-stakeholders are inclusive of efforts in continual improvement of processes and systems to meet stakeholder expectations, and stay consistent in green behaviour throughout all activities along the supply chain.

As reported by El Akremi et al. (2018), consistent implementation of green practices for internal-CSR over time are embedded in organisational culture. This leads to a positive impact on employees' attitudes towards the enterprise (Sen et al., 2006) and becomes a guideline for employees' behaviour towards the environmental and social betterment. This results in stimulating employees to optimise business processes to improve overall efficiency (Wang et al., 2020) and foster employee innovation in the way that they perform their work to enhance sustainable values in terms of economy, environment and society (Tellis et al., 2009). Based on this flow, internal-CSR can be assumed to be positively associated with HumEnt influence on SSCMCE for sustainable performance. On the other hand, for enterprises that practice external-CSR, they feel pressure from external stakeholders reflected in their expectations, accordingly, fostering enterprises' innovations in response to the expectation and the need of the stakeholders. In return, this creates the foundation for SSCMCE (Thong and Wong, 2018), ultimately leading to positive cooperation from stakeholders that facilitate firms to attain the sustainable performance.

From the stakeholder theory perspective, CSR activities towards internal and external stakeholders can promote the implementation of SSCMCE involving the engagement of different stakeholders. Given the above discussions, GCSR practices which are geared towards internal and external stakeholders, addressing their interests and concerns, can promote a closer relationship between the business and stakeholders. This promotes stronger cooperation and collaboration between the business and its stakeholders, consequently, strengthening the engagement of stakeholders in business activities. As a result, GCSR can boost the extent of HumEnt's influence on SSCMCE and facilitate SSCMCE implementation, ultimately leading to sustainable corporate performance. In this context, the GCSR variable was adopted from Farooq et al. (2017); Turker (2009) and adjusted it to fit this research context. In this regard, the construct of GCSR was developed to reflect most aspects of business operations from management practices, corporate strategy, products and human capital development (internal and external) on the basis of CE principles.

2.4. Sustainable supply chain management for circular economy (SSCMCE)

Sustainable supply chain management (SSCM) is conceptually described as a blend of objectives of CSR and green SCM (Das, 2018) that is enabling businesses to attain their economic, social and environmental sustainability goals at the micro-level. Badiezadeh et al. (2018) states that SSCM is perceived differently from conventional SCM, whereby SCM mainly prioritises economic benefits while SSCM focuses on a broader beneficial range that covers the three aspects of economic, social and environmental benefits. SSCM plays a crucial role in addressing sustainable growth and driving the necessary innovations that are environmentally and socially responsible in a multilevel model (Bui et al., 2020). It has been suggested that SSCM practice focuses on solving environmental, social and economic issues by integrating them into activities related to SCM (Bendul et al., 2017). In the modern era, SSCM pays special attention to the flow of tangible and intangible resources instead of depending on tangible resources like traditional management (Li and Liu, 2019). According to Tsai et al. (2021), this leads to a global trend towards SSCM.

In the new era, the circularity of the economy is about the systematic integration of sustainable practices into management practices and effective implementation for sustainable value creation and the consciousness of resource consumption (Kristensen and Mosgaard, 2020). In a CE, supply chains are established and interconnected, which enables improved resource efficiency through strategies that increase recycling, reduce waste and reuse (Tseng et al., 2018). In addition, engaging supply chain enterprises in businesses' SCM may promote CE from a

perspective of life cycle of products and services (Daddi et al., 2021). SSCM refers to a state in which resources are used more efficient by stakeholders at different stages along the chain by prolonging its value for use in one form or another as long as it continues to create value. In this regard, the concept of SSCMCE pertains to the efficient management of resources and sustainable consumption by stakeholders along the upstream and downstream value chain. According to Manavalan and Jayakrishna (2019), SSCMCE's focus is on addressing sustainability by reducing negative impacts on the environment through process improvement in manufacturing, rather than by using hazardous materials, producing eco-friendly products, prioritising the use of renewable resources, fostering recycling of used products and reusing materials.

From the perspective of a business as an entity in society, the practice of SSCMCE demonstrates responsible entrepreneurship to stakeholders by addressing issues that suit their interest such as social, environmental and economic challenges for sustainable development. In this context, entrepreneurship is mentioned not only to involve the head of the business, but also that of the human spirit in the organization. As reported by Kuzma and Sehnem (2022), CE prioritises the transformation of traditional (linear) production and consumption models to a circular sustainable model of production and consumption patterns. The linear consumption and production model is a straight-line model that focuses only on resource extraction, production, consumption and disposal (Jørgensen and Pedersen, 2018). Consequently, this model depletes resources, increases waste and emission, threatening the healthy development humanity and the health of the planet (Julianelli et al., 2020). On the other side, sustainable consumption and production patterns under CE promote the extension of the life cycle of products and materials in various ways such as the application of technology, and improving processes, methods and practices (Kravchenko et al., 2020). Importantly, this improves the thinking and positive attitude of human resources, simultaneously raising the awareness of stakeholders.

In this context, SSCMCE was adopted from Kristensen and Mosgaard (2020); Kravchenko et al. (2020); Tseng et al. (2018) and was adapted to the scope and context of the study. In this respect, its construct was developed to reflect aspects of operations management such as processes, technology, networks, methods, connections, knowledge sharing and management, input supplier selection criteria and the use of renewable resources. In this sense, SSCMCE can help to enhance resource efficiency and productivity, promote circularity of materials amongst stakeholders in the supply chain to maximise their value creation in such a way that maintains them for as long as possible in the economy, diminish waste and emissions and switch to renewable energy. This results in leading to SCP in such a way that reduces operational cost and environmental cost, enhances entrepreneurial performance, and improves social and environmental performance. The SSCMCE construct includes items related to improving resource efficiency, using renewable resources, reducing waste, expanding cross-sector network and standards, adopted from Kristensen and Mosgaard (2020); items relate to engaging stakeholders into the processes, applying technology, adopted from Kravchenko et al. (2020); items relate to network interaction adopted from Tseng et al. (2018).

2.5. Sustainable corporate performance (SCP)

The concept associated with corporate sustainability is increasingly concerning for stakeholders; however, its meaning is still not clearly defined (Madaleno and Vieira, 2020). In today's dynamic world, SCP expands business performance metrics from financially-focused to financial and non-financial as long as it can contribute as much as possible to the sustainable development goals amongst "environment, social and governance" and also meets stakeholder expectations (Khaled et al., 2021; Jha and Rangarajan, 2020; Le et al., 2022). In addition, according to Das (2018), SCP encompasses various criteria of environmental, social, operational and competitive performance in the context of SSCM. In this respect, SCP can sustain its growth in market performance and financial outcomes. In this research context, SCP prioritises measuring business performance indicators that are linked to national and global sustainable development goals. In turn, the benefits of the enterprise can be generated from the process of addressing the interests of stakeholders in a sustainable way. Consequently, SCP was constructed to include indicators of resources efficiency, environmental and social performance and stakeholders' interests (Zeng et al., 2017; Hourneaux et al., 2018; Wang, 2019; Abbas, 2020; Le, 2022). Likewise, SCP is dependent on the association of HumEnt, SSCMCE and GCSR. SCP is the result of HumEnt's mechanism of influence on SSCMCE and a moderating mechanism of GCSR in this effect. Given the above discussion, SCP may be involved in the implementation of sustainable development goals related to responsible production and consumption, hunger and the environment.

2.6. Hypothesis development

HumEnt fosters a responsible management of resources and is a more ecologically and socially humane responsible development. As stated by Kim et al. (2018), HumEnt integrates sustainable and virtuous aspects of entrepreneurship, leadership and HRM that can lead to an increase in benefits such as wealth and quality job creation in a continuous cycle. HumEnt is considered to be a sustainable practical concept that emerges for sustainable socio-economic development by prioritising social and environmental aspects, at the same time as focusing on job creation for a better quality of life. As noted by Kim et al. (2021), HumEnt refers to a state in which effective HRM practices have a positive association with employee engagement, positive innovation and growth. In the context of SSCMCE, HumEnt enables aspiring humans to believe what initiators believe and generates engagement between businesses and humans, thus consequently fostering SSCMCE. At the corporate level, HumEnt largely discusses impacts on pertaining employee involvement, igniting their enthusiasm at work, fostering a sense of the role and importance of their contribution, improving employee satisfaction and involving employees the attainment of their company's goals (Stankiewicz and Moczulska, 2012; Kahn, 1990). As a result, this facilitates SSCMCE which ultimately leads to SCP.

According to Badiezadeh et al. (2018), SSCM is perceived differently from conventional SCM whereby SCM majorly prioritises economic benefits while SSCM focuses on a broader beneficial range covering the three aspects of economic, social and environmental benefits. From this approach, SSCM plays a crucial role in addressing sustainable growth and driving the necessary innovations that are environmentally and socially responsible in a multilevel model (Bui et al., 2020). As proposed by Bendul et al. (2017), SSCM practice focuses on solving environmental, social and economic issues by integrating them into activities related to SCM. In the context of CE, SSCM refers to a state in which resources are used more efficiently by stakeholders at different stages along the chain by prolonging its value for use in one form or another as long as it continues to create value. SSCMCE refers to a state in which resources are more efficiently managed and consumption is more sustainably performed by stakeholders along the upstream and downstream value chain. SSCMCE prioritises addressing sustainability by reducing negative impacts on the environment through process improvement in manufacturing, not using hazardous materials, producing eco-friendly products, prioritising the use of renewable resources, fostering the recycling of used products and reusing materials (Manavalan and Jayakrishna, 2019). In this context, the practice of SSCMCE demonstrates responsible entrepreneurship to stakeholders by addressing issues of their interest such as social, environmental and economic challenges for sustainable development. HumEnt embodies human-centric entrepreneurial vision in all business and management activities which forms the core foundation for the realisation of SSCMCE towards achieving SCP. In addition, according to Cortes et al. (2021), entrepreneurial performance depends significantly on SCM practices. Based on this flow of discussions, the hypotheses associated with the

mediation effects of SSCMCE in the link between HumEnt and SCP are assumed as follows:

Hypothesis 1. (H1) HumEnt has a positive relationship with SSCMCE.

Hypothesis 2. (H2) SSCMCE has a positive relationship with SCP.

Hypothesis 3. (H3) HumEnt has a positive relationship with SCP.

Hypothesis 4. (H4) SSCMCE mediates the link between HumEnt and SCP.

According to Kim et al. (2021), the effort of the enterprise in satisfying the expectations of the stakeholders means enhancing the advantages of the enterprise in terms of HRM such as providing a good working environment. This is crucial in attracting and retaining talent for the business, ultimately leading to the success of the business in a way that increases value to the stakeholders in various ways. SSCM is conceptually described as a blend of objectives of CSR and green supply chain management (Das, 2018) that enabling businesses to attain their economic, social and environmental sustainability goals at the micro-level. According to Badiezadeh et al. (2018), SSCM is perceived differently from conventional SCM whereby SCM majorly prioritises economic benefits while SSCM focuses on a broader beneficial range that covers the three aspects of economic, social and environmental benefits. From this approach, SSCM plays a crucial role in addressing sustainable growth and driving the necessary innovations that are environmentally and socially responsible in a multilevel model (Bui et al., 2020). According to Bendul et al. (2017), SSCM practice focuses on solving environmental, social and economic issues by integrating them into activities related to SCM.

Based on this flow of discussions, the hypotheses associated with the moderating role of GCSR in the influence of HumEnt on SSCMCE are assumed to be as follows:

Hypothesis 5. (H5) GCSR has a positive association with SSCMCE.

Hypothesis 6. (H6) GCSR moderates the influence of HumEnt on SSCMCE.

2.7. Development of structural model

Based on the above discussion, the structural model of this research was developed consisting of four main variables, in which HumEnt is an independent variable, SCP is a dependent variable, SSCMCE is a mediating variable and GCSR is a moderating variable. The model was developed as depicted in Fig. 1 below.

3. Research design and method

3.1. Variables and scales

The scales of the variables involved in the present model were developed based with reference to the relevant literature and adjusted to be appropriate with the scope of the present study. Accordingly, the scale of HumEnt includes 6 items covering 3 aspects of business orientation, sustainability orientation and human resource orientation (Parente et al., 2020; Kim et al., 2018; Kuckertz and Wagner, 2010). SSCMCE has an 8 item-scale that was adapted from Kristensen and Mosgaard (2020); Kravchenko et al. (2020); Tseng et al. (2018). Likewise, SCP has an 8 item-scale that was adapted from Zeng et al. (2017); Hourneaux et al. (2018); Wang (2019); Abbas (2020). The scale of GCSR has 8 items and was adapted from Farooq et al. (2017); Turker (2009). These scales are described in Table 1 below.

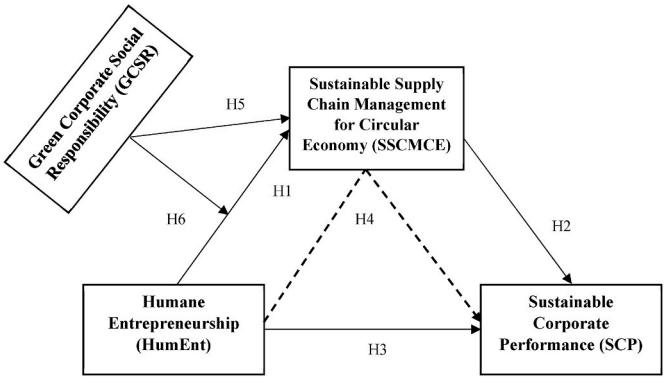

Fig. 1. Proposed structural model.

3.2. Target population and sampling

The target population for this study is small and medium-sized enterprises (SMEs) in the food value chain in emerging markets. The key criterion applied to determine the size of an enterprise is the total number of employees, according to OECD (2021). Following this standard, enterprises with 10–49 employees are defined as small businesses, and enterprises with 50–249 employees are defined as medium-sized enterprises. In this study, SMEs were chosen as the target population for this study because they are the driving force behind the country's economic development (Manzoor et al., 2021). However, they are also responsible for the significant adverse environmental impact from their supply chain operations (Lewis et al., 2015). In addition, the emerging economy context was chosen for this study because of the need for scientific knowledge and practical mechanisms in how to achieve sustainable performance for businesses in emerging economies (Das et al., 2020). Furthermore, this study focuses on the food value chain due to its specific characteristics including its complexity, vulnerability, its necessity for mankind and the possibility of food shortages relative to population growth emerging as a global problem (Leach et al., 2020; Garnett et al., 2020).

The target respondents to the survey are those who hold senior positions in the selected enterprises. The sampling process was carried out through the necessary steps and went through the predefined criteria in order to maximise both the sample eligibility and the quality of the sample. Sampling sources were identified as associations of SMEs in the food industry. Subsequently, through the associations' information exchange platforms, the researcher sent an open letter about this research and also sent invitations to businesses in the association to invite them to participate as respondents. Businesses were asked to respond within ten days of receiving the invitation if they wanted to accept the invitation to participate, with an update on their business information. Furthermore, in order for businesses to feel secure in participating, in the open letter, the researcher emphasised that this is a serious scientific research aiming to provide an insight and the practical mechanisms towards sustainable performance for enterprises in the given context. In this respect, the researcher expects that the respondents can be honest in their responses to each survey question, and simultaneously, the researcher commits that the information provided from the respondents will be kept strictly confidential and used only for the right purpose for this study. As a result, there were 600 eligible samples obtained for the main survey.

3.3. Survey instrument

This study applied a quantitative method approach. The main data used in this study was primary data collected from the survey. The main instrument used for the survey was the questionnaire. The questionnaire was designed consisting of two main parts, in which part 1 was used to collect information about the sample participating in the survey and part 2 was to collect data for quantitative analysis. It was carefully developed using the necessary steps to ensure its eligibility for quality data. The questionnaire was evaluated by an expert for its appropriateness in terms of content and academic requirements. In addition, the

Table 1
Variables and items.

Variables	Items	Descriptions	Sources
Humane entrepreneurship (HumEnt)	**HumEnt1**	Empathy is embedded in corporate culture.	Parente et al. (2020); Kim et al. (2018); Kuckertz and Wagner (2010)
	HumEnt2	We provide empowerment and enablement.	
	HumEnt3	We maintain equity in the company.	
	HumEnt4	We integrate benefits of stakeholders, environment and society into our business decision making processes.	
	HumEnt5	We are proactive in orienting our business model to circular economy principles.	
	HumEnt6	We recognise that changing for stakeholder sustainability is a must from the point of view of business ethics and accountability.	
Sustainable supply chain management for circular economy (SSCMCE)	**SSCMCE1**	We maintain the continuous improvement of operational processes to improve resource efficiency and productivity.	Kristensen and Mosgaard (2020); Kravchenko et al. (2020); Tseng et al. (2018)
	SSCMCE2	We utilise advanced technology in managing stages of the supply chain.	
	SSCMCE3	We create a network across business sectors to promote recycling, reusing and upgrading for new demands.	
	SSCMCE4	We maintain the optimality of the methods used to reduce wastage.	
	SSCMCE5	We engage upstream and downstream stakeholders into processes that foster the prolongation of the valuable life cycle of products and raw materials.	
	SSCMCE6	We maintain knowledge sharing in the field with stakeholders along the supply chain.	
	SSCMCE7	We adjust the entry criteria to give preference to suppliers who persistently perform sustainable practices.	
	SSCMCE8	We prioritise the use of renewable resources.	
Sustainable corporate performance (SCP)	**SCP1**	The efficiency of resource usage increases over time.	Zeng et al. (2017); Hourneaux et al. (2018); Wang (2019); Abbas (2020)
	SCP2	There is a growth in contribution to social welfare.	
	SCP3	Environmental efficiency gets improved over time (reducing pollution, emissions and dust).	
	SCP4	There is a growth of employee benefits and income policy over time.	
	SCP5	There is a growth in revenue over time.	
	SCP6	There is a growth in profit over time.	
	SCP7	Growth in market-share over time	
	SCP8	Growth in customer base over time	
Green corporate social responsibility (GCSR)	**GCSR1**	We integrate green initiatives into management practices towards internal-stakeholders and external-stakeholders.	Farooq et al. (2017); Turker (2009)
	GCSR2	We incorporate GCSR practices into corporate strategy.	
	GCSR3	We inspire stakeholders with a sense of proactive innovations for sustainable value creation.	
	GCSR4	We create favourable conditions for stakeholders to promote sustainable practices.	
	GCSR5	There is a consistency between core values, behaviours and actions that benefit the environment, society and the economy.	
	GCSR6	We offer attractive incentives to stimulate sustainable entrepreneurial thinking amongst the stakeholders.	
	GCSR7	We provide an education roadmap to enhance stakeholder knowledge about a circular economy, sustainable consumption and production patterns.	
	GCSR8	We produce safe and eco-friendly products.	

questionnaire was piloted to assess its suitability from an implementation perspective. The participants in the pilot survey were those with similar backgrounds to the target population. This process was intentionally carried out to ensure that the questionnaire was appropriate in terms of clarity and so the survey participants were likely to respond.

3.4. Data collection and analysis

The primary data was collected through an internet-based questionnaire survey. The survey was conducted from August 2021 to December 2021. Based on the sample list eligible to participate in the survey as described above, the researcher sent 600 questionnaires with an open letter to emphasise the seriousness and practical orientation of this study, and to emphasise the commitment to the confidentiality of information provided by survey participants. At the same time, the tool was set up to help with monitoring and reminders to help to achieve as high a response rate as possible for a robust data set for quantitative analysis. At the end of the survey, 516 responses were collected, which accounted for an 86% response rate. After filtering out invalid response sheets (incomplete answers), there were 468 valid sheets remaining, accounting for a final response rate of 78%.

The data obtained from the survey was included in the quantitative analysis using Smart PLS (partial least squares), version 3.3.2 to analyse Structural Equation Modelling (SEM). This was chosen for this study due to its suitability for models with complex structural relationships (Hair et al., 2017). This guideline aligns with Peng and Lai (2012)'s notion emphasising that using PLS allows researchers to estimate models of high complexity. The model in the present study includes direct and indirect relationships and a moderation impact that is considered complex. In addition, PLS-SEM was chosen for this study due to its advantages over CB-SEM for operations management researches (Peng and Lai, 2012). Above all, PLS-SEM is considered suitable to be used for this study.

4. Results

4.1. Representative characteristics of samples

The representativeness of the collected sample in this study has the following characteristics. Accordingly, the representative characteristics of the survey sample include gender, age and position of the respondents, as well as tenure of the enterprises and enterprise size. Table 2 below presents the further details about the components of these characteristics. To the best of the author's knowledge, these features are a good representation of the desired population because they reflect the characteristics of the population at which this study is aimed. This justification was assessed based on a reference to the statistical reports of the Vietnam General Statistics Office and the opinion or the experts (Vietnam General Statistics Office, 2021).

Table 2
Representative characteristics.

Characteristic	n = 468	Percentage (%)
Gender		
Male	242	51.71
Female	226	48.29
Age of respondents (years)		
34 - < 40	86	18.38
40 - < 45	117	25.00
45 - < 50	158	33.76
>50	107	22.86
Components of respondents		
Chief executive officer	265	56.62
Managing director	203	43.38
Components of collected samples		
Agriculture	245	52.35
Fisheries and seafood	181	38.68
Others	42	8.97
Age of enterprises (years)		
8 - < 15	95	20.30
15 - < 20	108	23.08
20 - < 25	126	26.92
>25	139	29.70
Size of enterprises		
Small	326	69.66
Medium	142	30.34

4.2. Assessment of measurement model

Measurement model evaluation was performed using the indices of Cronbach's Alpha, composite reliability (C.R), correlation coefficient, factor loading, average variance extract (AVE), Fornell and Larcker criterion and Heterotrait-monotrait ratio of correlations (HTMT). In this section, critical assessments were made to validate the reliability of the scales, convergent validity and discriminant validity. The reliability of the scale was assessed in the manner of the guidance of Hair et al. (2019). Therefore, if the scales have Cronbach's Alpha greater than 0.7, C.R greater than 0.7 and correlation coefficient greater than 0.3, then the scale is reliable. In this study, all of the Cronbach's Alpha and C.R values are greater than 0.7 and the correlation coefficient is greater than 0.3. Therefore, the scales involved in the present study are reliable.

In addition, the results show that factor loading and AVE are respectively above 0.7 and 0.5. Therefore, the convergent validity is valid (Hair et al., 2014). Table 3 below illustrates the relevant results that support the above analysis on the scale validity and the convergent validity.

Besides, discriminant validity was assessed by evaluating the values according to the Fornell and Larcker and HTMT criterion. As a consequence, the analytical results in accordance with the Fornell and Larcker criterion show that the square root of AVE values (shown on top of each column and in bold in Table 4) is larger than the correlation coefficients, thus discriminant validity is guaranteed (Fornell and Larcker, 1981).

Following Henseler et al. (2016), discriminant validity is supported if the achieved value of HTMT is smaller than 0.85. Thus, the Heterotrait-monotrait ratio of correlations (HTMT) was tested to further evaluate the discriminant validity. The results show that the values from HTMT analysis are smaller than 0.85 as presented in Table 5, meaning that discriminant validity is confirmed.

Table 3
Cronbach's Alpha, factor loading, C.R, AVE.

Variables	Items	Factor loading	Cronbach's Alpha	C.R	AVE
Humane entrepreneurship (HumEnt)	**HumEnt1**	0.780	0.893	0.918	0.651
	HumEnt2	0.786			
	HumEnt3	0.829			
	HumEnt4	0.812			
	HumEnt5	0.822			
	HumEnt6	0.811			
Sustainable supply chain management for circular economy (SSCMCE)	**SSCMCE1**	0.838	0.937	0.948	0.694
	SSCMCE2	0.843			
	SSCMCE3	0.836			
	SSCMCE4	0.817			
	SSCMCE5	0.823			
	SSCMCE6	0.846			
	SSCMCE7	0.827			
	SSCMCE8	0.835			
Sustainable corporate performance (SCP)	**SCP1**	0.859	0.939	0.950	0.702
	SCP2	0.871			
	SCP3	0.867			
	SCP4	0.842			
	SCP5	0.796			
	SCP6	0.845			
	SCP7	0.796			
	SCP8	0.824			
Green corporate social responsibility (GCSR)	**GCSR1**	0.809	0.926	0.939	0.659
	GCSR2	0.825			
	GCSR3	0.815			
	GCSR4	0.836			
	GCSR5	0.780			
	GCSR6	0.817			
	GCSR7	0.814			
	GCSR8	0.798			

Table 4
Fornell and Larcker criterion.

	GCSR	HumEnt	SCP	SSCMCE
GCSR	0.812			
HumEnt	−0.551	**0.807**		
SCP	−0.298	0.757	**0.838**	
SSCMCE	−0.172	0.673	0.769	**0.833**

Table 5
Heterotrait-monotrait ratio of correlations (HTMT).

	GCSR	HumEnt	SCP	SSCMCE
GCSR				
HumEnt	0.605			
SCP	0.316	0.825		
SSCMCE	0.182	0.735	0.819	

4.3. Goodness of fit analysis

In this section, goodness of fit was assessed by evaluating GoF (Wetzels et al., 2009); NFI (Hair et al., 2019), R^2 (Falk and Miller, 1992); SRMR (Henseler et al., 2016). As noted by Wetzels et al. (2009), a GoF greater than 0.36 represents that the model has a large fit; a GoF greater than 0.25 represents a medium fit; and there is a small fit if the model achieves a GoF larger than 0.1. The result indicates a GoF of 0.69, and comparing with the thresholds proposed by Wetzels et al. (2009), this model has a large fit. In addition, the result shows a SRMR of 0.035 (<0.08) and a NFI of 0.935 (>0.9) which show that the model has a good fit (Henseler et al., 2016; Hair et al., 2019). Besides, R^2 values are obtained respectively, as 0.695 for SCP and 0.518 for SSCMCE (>0.1) (Falk and Miller, 1992). Above all, the stated analysis concludes that the model involved in the present research has a high fit.

4.4. Assessment of structural model

In this section, before evaluating the structural model, multicollinearity and common method bias were assessed by utilising the variance inflation factor (VIF). Current literature suggests that if the VIF value is smaller than 3.3, multicollinearity and common method bias are not problematic (Hair et al., 2014a,b; Kock, 2015). In this study, the VIF is less than 3.3 (in a range from 1.550 to 1.829), thus multicollinearity and common method bias are not problematic in this study. This conclusion supports the notion that we proceed with the next step to evaluate the structural model and research hypotheses. For this purpose, analytical results using bootstrapping technique was used. The results show that all the paths between variables in the corresponding relationships are positive (+coefficients), significant (p-value < 0.05), confidence intervals (lower and upper bound). Table 6 below presents the sufficient results to justify this analysis. This proves that all research hypotheses have research significance. In particular, VAF (variance accounted for) was used to evaluate the extent of mediation in accordance with Hair et al. (2014). In addition, Figs. 2 and 3 below respectively show the diagram of SEM analysis results without using bootstrap technique and using bootstrap technique.

The results presented in Table 6 above were used to evaluate the structural model and the proposed research hypotheses. Thereby, hypothesis 1 is supported which asserts that HumEnt positively and significantly affects SSCMCE ($\beta = 0.774$, $t = 18.377$, $p < 0.001$). In addition, the result supports hypothesis 2 confirming that SSCMCE positively and significantly affects SCP ($\beta = 0.476$, $t = 11.140$, $p < 0.001$). Likewise, the relationship between HumEnt and SCP were found to be positive and significant in this research ($\beta = 0.436$, $t = 12.068$, $p < 0.001$) which supports hypothesis 3. In addition, hypothesis 4 is supported ($\beta = 0.368$, $t = 9.531$, $p < 0.001$, $20\% \leq VAF = 46\% \leq 80\%$) confirming that SSCMCE partially mediates the link between HumEnt and SCP. Taking further evaluation on the mediation role of SSCMCE in the stated relationship, the lower and upper confident intervals were utilised. The results show that the values of confident intervals do not contain zero, meaning that this strengthens the mediation influence of SSCMCE on the relationship between HumEnt and SCP.

In analysing the moderation role of GCSR on the impact of HumEnt on SSCMCE, bootstrapping analysis results were analysed. The results show a p-value smaller than 0.05 that indicates a significant effect. Meanwhile, a coefficient greater than 0 indicates a positive effect ($\beta = 0.095$, $t = 2.849$, $p < 0.05$). This result confirms that GCSR moderates the influence of HumEnt on SSCM_CE that supports hypothesis 6. Therefore, a stronger GSCR will lead to a stronger effect of HumEnt on SSCMCE. In association with the validation of the moderation influence of GSCR on the impact of HumEnt on SSCMCE, the results show that GCSR has a positive and significant relationship with SSCMCE ($\beta = 0.250$, $t = 5.400$, $p < 0.001$). This finding supports hypothesis 5.

5. Discussions and implications

The major finding confirms the association of HumEnt, SSCMCE and GCSR in fostering corporate sustainable performance, the extent of which is still scarce in the current literature. Specifically, in this association, SSCMCE mediates the relationship between HumEnt and SCP, while GCSR moderates the influence of HumEnt on SSCMCE. The finding of the mediation role of SSCMCE in the HumEnt-SCP relationship indicates that HumEnt drives the SSCMCE implementation which ultimately leads to sustainable performance. While the finding of the moderation role of GCSR in the impact of HumEnt on SSCMCE indicates that strengthening GCSR can drive stronger effects of HumEnt on SSCMCE that ultimately leads to sustainable performance. Moreover, the results show a very strong influence of HumEnt on SSCMCE through a high coefficient of impact ($\beta = 0.774$). In addition, the extent of impact of SSCMCE on sustainable performance has the second strongest coefficient after that of HumEnt-SSCMCE.

The results show that the components of the developed constructs involved in the present study are observable and measurable. This study operationalises the mechanism leading to sustainable corporate performance in the way that SSCMCE mediates the relationship between HumEnt and SCP, and GCSR moderates the extent of HumEnt's influence on SSCMCE. The structural relationships amongst the variables in this study are explainable by ethical theory, stakeholder theory and resource-based view theory. In this respect, practising humane entrepreneurship and incorporating CE principles into supply chain management practices can help businesses grow sustainably in such a way that improves resource efficiency and productivity, enhances the

Table 6
Bootstrapping results.

Hypothesis	Paths	Coefficient	t-statistics	p-value	CI 2.5%	CI 97.5%	VAF %	Conclusion
H1	HumEnt - > SSCMCE	0.774	18.377	0.000	0.691	0.854	n/a	Accepted
H2	SSCMCE - > SCP	0.476	11.140	0.000	0.384	0.558	n/a	Accepted
H3	HumEnt - > SCP	0.436	12.068	0.000	0.361	0.503	n/a	Accepted
H4	HumEnt - > SSCMCE - > SCP	0.368	9.531	0.000	0.289	0.443	46	Accepted
H5	GCSR - > SSCMCE	0.250	5.400	0.000	0.155	0.338	n/a	Accepted
H6	HumEnt* GCSR - > SSCMCE	0.095	2.849	0.004	0.029	0.160	n/a	Accepted

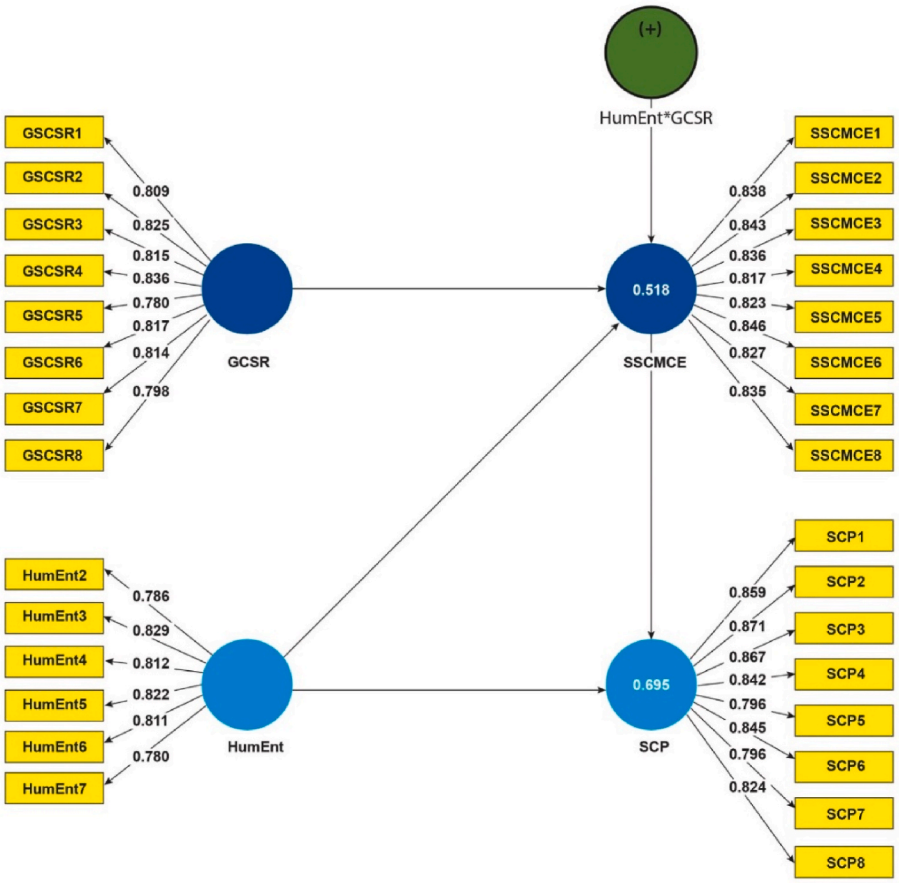

Fig. 2. Diagram of SEM analysis results without using bootstrapping technique.

circularity of raw materials, prolongs product lifecycle, reduces operational costs and environmental costs, stabilises the supply chains of the enterprise and improves market performance from innovative entrepreneurial opportunities. Above all, responsible and ethical business practices are fundamental in achieving sustainable corporate performance. Theoretically, this logic is in line with the perspectives of stakeholder theory, ethical theory and RBV theory.

In particular, this study supports the notion of Manavalan and Jayakrishna (2019) which states that, in the supply chain field, the positive implications of the CE concept are focused especially for businesses which practise CSR as their key to addressing benefits of the environment, society and the economy. The logic revealed by this study supports the view of Mura et al. (2020) in the sense that CE practices should be perceived by firms as an entrepreneurial opportunity rather than a cost. In this sense, CE practices could be considered as representative of the source of value creation for firms, especially SMEs. The overall finding of this study supports previous studies to some extent. In this respect, it advocates the arguments of Aranda-Usón et al. (2020); Geissdoerfer et al. (2017) in the sense that it implies the importance of the extent to which CE principles are applied in the decision-making process of the enterprise in facilitating the development of context-specific plans at the macro level promoting the circular economy. Therefore, this study supports the notion of Camilleri (2020) that the practical and timely support from the government should be in place for businesses based on the status to facilitate businesses in implementing CE principles. From the business management point of view, this study advocates the arguments of Ghisellini et al. (2016); Pacheco et al. (2017) which emphasise that practising CE principles helps businesses to promote their competitive advantage in ways, so they redesign, reorganise and innovate to benefit from the values of CE principles, and optimise the efficiency of resource use and interaction.

This study supports the findings of the recent study by Kim et al. (2021) that humane-centric entrepreneurship has a positive and significant association with employee engagement, innovation and growth in business performance. However, the present study researched beyond the explore-extent by examining this entrepreneurship further in the context of practicing SCM to be sustainable for CE, while simultaneously incorporating the examination of the involvement of GCSR in this scenario. Furthermore, the current study viewed beyond the framework of human-employee default by extending to human-stakeholders. In this context, stakeholders refer to the internal and external human-subjects of the enterprise, which includes employees. Besides, this study supports previous work by Kim et al. (2018) where human-centred entrepreneurship is oriented through empathy, enablement, empowerment and equity. However, this study examines beyond this framework of entrepreneurship attached in the field of human resources by incorporating the CE orientation into this entrepreneurship for sustainable business performance associated with the sustainable development goals of the country and the world.

In this regard, this study supports the notion of Geissdoerfer et al. (2018); Jabbour et al. (2019) by empirically demonstrating that the incorporation of the CE concept into humane-entrepreneurship and sustainable management practices of supply chain is a key element of sustainable development. Accordingly, an enterprise can enhance its outstanding competitive advantage from its efforts in redesigning and reorganising its operations such as manufacturing, SCM and training, to improve resources efficiency, enhance productivity, reduce waste and emissions. This leads to differentiating the business from all others, enhancing its reputation and increasing its ability to capture the CE business opportunities. To achieve this, businesses need reorganisation

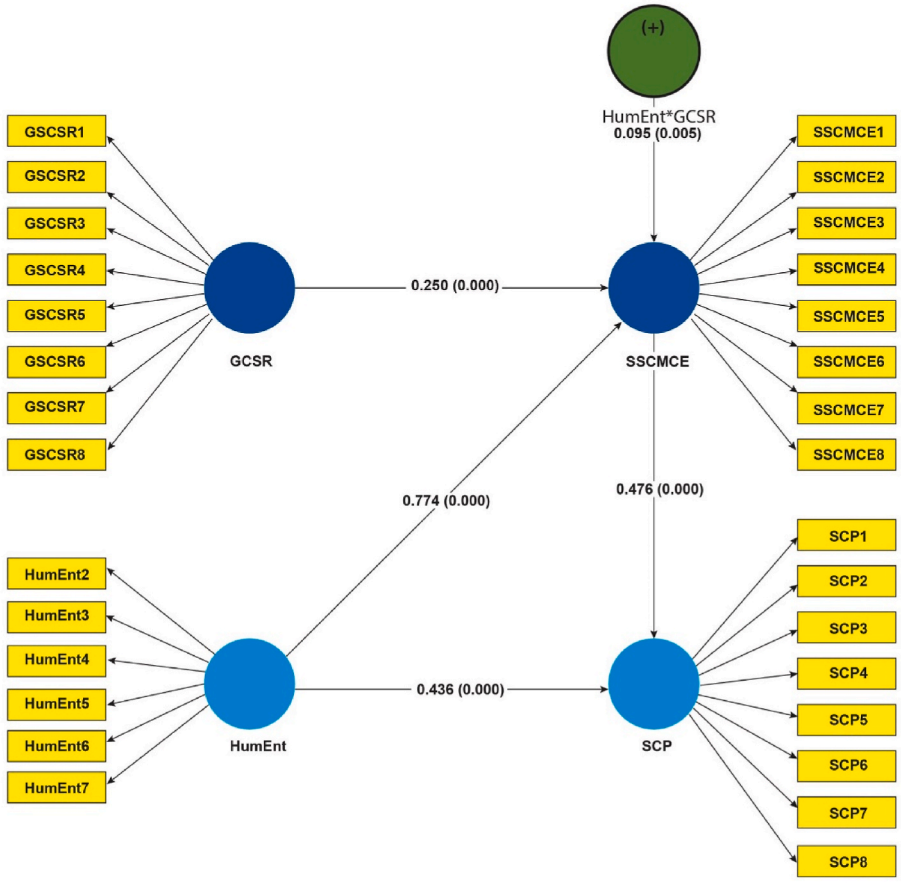

Fig. 3. Diagram of SEM analysis results using bootstrapping technique.

in such a way that their processes are capable of benefiting from circular economic principles, the exchange of resources and interactions (Ghisellini et al., 2016). In this regard, the role of employee is crucial in realizing these practices. This analysis advocates the notion of Kim et al. (2021) who believes that employees are the main resource of the enterprises in the sense that the competitiveness and performance of the enterprise depend greatly on employees' commitment and actions. In addition, another approach by Dey et al. (2022) emphasizes the importance of employees in facilitating firms to enhance their competitiveness and sustainability. In this regard, they contend that employees as organization's frontline soldiers play an important role in generating initiatives and realizing the ideas and values, goals and objectives of the organization, which in turn, greatly affect the firm competitiveness and performance.

5.1. Theoretical implications

This paper has several theoretical implications. First, this study provides an extension of scientific knowledge of humane entrepreneurship through the new approach of the enabling role of green CSR by strengthening its effect on sustainable supply chain management for CE towards sustainable values for stakeholders. In particular, this study contributes to the advancement of SMEs' scientific knowledge of entrepreneurship in the age of CE, representing a strand of research which remains scarce in the current literature. The study's findings highlight the need for a shift in the entrepreneurial vision from a profit-focused one to a sustainability-focused one. In this regard, entrepreneurial vision focuses on stakeholder benefits as a whole rather than individual benefits. From this approach, the business benefits can be generated from delivering benefits for stakeholders in a sustainable way.

Second, this research provides an extension of the scientific knowledge of ethical theory, stakeholder theory and resource-based theory by extending the adaptability and validity of these theories. Specifically, in the context of supply chain in CE, where various actors and stakeholders involved along the upstream and downstream value creation chain, corporate sustainability initiatives also need to be viewed from the perspective of practices of given communities to foster the collective performance during the process of interactions. Furthermore, businesses respect the expectations of stakeholders and respond in a voluntary, responsible and ethical manner. In this context, humane entrepreneurship is oriented towards the various stakeholders who are affected by the business's operations and can affect the business's operations in one way or another. Importantly, in making efforts to implement management practice initiatives for their stakeholders, enterprises are required to reorganise their resources and redesign their structure and processes so as to be capable of benefiting from CE principles and interactions.

5.2. Managerial implications

This study has several managerial implications. First, this study provides an insight to business practitioners on entrepreneurial vision to be appropriate with the era of CE and the context that the sustainability of SCM is receiving much attention. Thus, the leadership of SMEs are proposed to take an adequate approach to the findings and implications of this study for the appropriate entrepreneurial vision and management practice. More specifically, to this extent, humane entrepreneurship is a key driver fostering SSCM towards sustainable values. Importantly, the green CSR is what governs the effect of HumEnt in this extent. Therefore, it is recommended for SMEs to incorporate green initiatives into management practices for internal and external stakeholders, because GCSR is an important lever strengthening HumEnt's influence on SSCMCE. In

addition, given the discussion on the importance of employee in realizing changes and implementing the organization's strategies and goals. Therefore, from a corporate governance perspective, organizations should be proactive in inventing appropriate status-based training, coaching and development strategies for employees in order to enhance employees' values and refine employees' philosophy to be in line with the values and philosophy of the leaders. This matters because it governs employees' behaviours and actions, while employees are critical resource in initiating ideas and generating values through implementing the organization's strategies and goals (Dey et al., 2022).

Second, leaders of SMEs are encouraged to consider carefully the mechanism of how HumEnt, GCSR and SSCMCE collectively work for sustainable performance. In this regard, business strategy should be adjusted accordingly. Having noted that, the urgent need for a circular entrepreneurship transformation for sustainable development is undoubted because of its prerequisite for environmental, social and economic sustainability. On this basis, the collective benefits generated are beneficial both to various stakeholders and also to the businesses at the micro and macro levels (Pizzi et al., 2021). In this regard, enterprises should rethink and re-plan their strategies and business models to integrate flexibly into the circular economic cycle (Mura and LongoZanni, 2020). With the characteristics of SMEs in emerging economies, in terms of size and simple structure of the operating apparatus, they deserve the advantage in implementing innovation. Therefore, the most challenging issue to this extent is the entrepreneurial vision that needs to be innovated first.

The third managerial implication of this study is aimed at policy makers from a macroeconomic perspective, businesses practice sustainable management incorporating circular economic principles into decision-making and operational processes that help to solve resource depletion, reduce dependence on foreign economies, generate economic and social benefits, while reducing adverse impacts on the environment (Aranda-Usón et al., 2020; Geissdoerfer et al., 2017). Importantly, this fundamental situation is critical for the realisation of sustainable development goals at the nation- and the world-levels. However, in implementation, it requires businesses to have fundamental innovation in systems and technology (Pacheco et al., 2017). This requires necessary resources, which includes financial resources. Therefore, it is suggested that policy makers review the panorama allowing for appropriate policies to provide timely and practical support for enterprises to implement innovation to this extent. In this regard, the role of policymakers to stimulate circular economies by triggering from the corporate level is of strategic orientation (Camilleri, 2020).

6. Conclusions and future scope of research

6.1. Conclusions

The main finding of this study has addressed the defined objectives and the research questions. Accordingly, it reveals a mechanism of humane entrepreneurship in fostering supply chain management to be sustainable for CE towards sustainable performance. In this regard, SSCMCE is demonstrated to mediate the relationship between humane entrepreneurship and sustainable corporate performance while green CSR moderates the influence of humane entrepreneurship on SSCMCE. Based on the findings of the study, theoretical and managerial implications are proposed as aforementioned. This research contributes to expanding the scientific knowledge in the field of humane entrepreneurship, and entrepreneurship in general, by empirically examining its association in a new context. In this way, CE principles are integrated into entrepreneurship to foster sustainable management practices for the sustainability of the various stakeholders in terms of environment, society and economy. Importantly, the entrepreneurship emphasised in this study is to put the sustainable interests of stakeholders at the heart of the business strategy, whereby addressing those interests for stakeholders also benefits the enterprises in a variety of ways in terms of, for example, competitive advantages.

In addition to theoretical contributions as outlined above, this study provides a practical mechanism on how humane entrepreneurship drives businesses to sustainable performance for SMEs in the food sector in an emerging economy. This contribution is of practical significance in responding to the demand of enterprises in the given context for scientific knowledge and practical applicability to survive and develop sustainably in response to the requirements of transforming from a linear economy to a circular economy model. From an extended perspective, the findings of this study are important not only for corporate sustainable performance, but also to the process of addressing sustainable development goals of the country, region and the world. Amongst these, the goals related to responsible production and consumption, the environment, hunger and poverty are the most relevant.

6.2. Limitations and future scope of research

This study has several limitations that can be considered as room for future research. First, this study approaches the quantitative method as the main research method, and future studies may consider combining research methods to diversify approaches in terms of methodology. Importantly, such an approach can diversify research findings. Second, this study prioritises SMEs in emerging economies, and future researchers should consider other contexts to enrich their approach in terms of context. What matters is how different the study's findings differ in different contexts. This study focuses on the food supply chain; future research may consider approaching other supply chains across different business sectors to diversify the extent of research. It is important to understand that different characteristics of different supply chains and different business sectors make different findings.

CRediT authorship contribution statement

Thanh Tiep Le: Conceptualization, Methodology, Data curation, Writing – review & editing, Visualization, Writing – review & editing, Writing – original draft, Data accuration and, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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