UNIVERSIDADE CATÓLICA PORTUGUESA

Ecopreneurship: Assessing what we know and what the future will bring

Constança Belchior

Católica Porto Business School

2023

UNIVERSIDADE CATÓLICA PORTUGUESA

Ecopreneurship: Assessing what we know and what the future will bring

Master's Final Work in the modality of Dissertation presented to Universidade Católica Portuguesa to fulfil the requirements for the degree of master's in Management

by

Constança Belchior

under the supervision of
Assistant Professor Dr. Božidar Vlačić

Católica Porto Business School, Universidade Católica Portuguesa

March 2023

Acknowledgements

First and foremost, I would like to acknowledge my supervisor, Assistant Professor Dr Božidar Vlačić for his constructive feedback and invaluable guidance. His expertise and encouragement have enabled me to improve my expertise, which I am passionate about, and my academic writing skills.

I would like to express my sincere gratitude to my family and friends that have been an immense source of encouragement, motivation and support during the all-dissertation time. Their unwavering support was crucial to my success, and I am truly blessed to have such amazing people, in my life.

Finally, I want to take this opportunity to convey my deepest appreciation to Católica Porto Business School for the exceptional academic experience and opportunities it has provided me. Studying at this prestigious university has been an honour, and I am grateful for the knowledge, experiences, and memories I have gained here.

Resumo

Em matéria recente e em permanente evolução, surgem preocupações de relevo mundial relacionadas com a sustentabilidade ambiental. Efetivamente, devido a preponderância desta temática na economia e na sociedade, existem cada vez mais eco empreendedores que estão focados na resolução dos mais diversos problemas ecológicos recorrendo à promoção de uma postura ambientalmente consciente e sustentável.

Consequentemente, a academia reconheceu a relevância do ecoempreendorismo e a necessidade de explorar esta área de investigação do empreendorismo verde, de forma a criar alternativas mais eficientes de promover o desenvolvimento sustentável e a responsabilidade social.

Com efeito, esta dissertação confere uma análise detalhada de 58 artigos publicados em jornais conceituados da área da Gestão, que enriquecem a compreensão, conceptualização e quantificação do conhecimento existente desta dimensão do Empreendorismo Sustentável.

De facto, esta tese recorre a uma análise bibliométrica que incluí as seguintes análises: citação, co citação, *bibliographic coupling* e análise de palavras chave. Os resultados evidenciam que para que o ecoempreendorismo prospere, condicionalismos tais como o acesso limitado a financiamento, os entraves legislativos e escassez de recursos e conhecimento deverão ser ultrapassados.

Concluindo, ao aglutinar diferentes faces do ecoempreendorismo, esta dissertação esclarece os desafios primordiais que o ecoempreendorismo enfrenta e as oportunidades existentes que enriquece a investigação futura na área.

Número de palavras: 205

Palavras-Chave: ecopreendorismo; empreendorismo-ecológico; empreendorismo ambiental; revisão sistemática da literatura; empreendorismo verde

Abstract

As the world grapples with urgent environmental concerns, ecopreneurs have emerged as key players in the transition to more sustainable systems. Due to the rising demand for environmental awareness and sustainable development, entrepreneurs have started green enterprises that deal with both social and environmental concerns. As a result, academia has recognized the need to research many dimensions of green entrepreneurship, giving rise to the ecopreneurship field, to create effective ways to promote sustainable development and social responsibility.

This thesis examines the increasing scholarly attention toward the ecopreneurship research field, providing a systematic literature review of 58 top journal manuscripts that enrich the understanding of the scope and conceptualize the ecopreneurship construct. This thesis sheds light on several constraints that ecopreneurship researchers need to address, such as access to financing, complex regulatory barriers, limited market demand, a lack of technical expertise, and limited resources.

In addition, by performing a bibliometric analysis, including citation, co-citation analysis, bibliographic coupling, and co-word analysis, this study underlines the necessity of building an enabling environment for ecopreneurship by addressing institutional barriers that stifle the expansion of venture creation. Ultimately, this dissertation contributes to the existing literature by clarifying the major challenges and opportunities in the field of ecopreneurship research, which could be used to guide future research and policy development in this area.

Number of words: 217 words

Keywords: Ecopreneurship; Ecological entrepreneurship; Environpreneurship; Green entrepreneurship, Systematic literature review, co-friendly

Table of Contents

Index of Tables and Figures

"Ecopreneurs are supposed to turn conflicts into synergies*" (Dhahri, 2018)*

1. Introduction

Ecopreneurship has recently emerged as a means of hastening the transition to a more environmentally friendly future. Then, to bridge the gap between environmental values and business principles, this concept entails establishing a business based on environmental values (Vlasov et al., 2021). Ecopreneurs are expected to play a significant role in reshaping industries, economies, and communities to be more sustainable. Although this can result in cost accruals, it is also responsible for a firm's economic growth. As a result, ecopreneurship evolved as a response to several critical global challenges, such as environmental degradation, climate change, biodiversity conservation, waste reduction, mobility carbon footprint, and social injustice (Galkina, 2021; Renfors, 2019; Vlasov et al., 2021).

The emergence of new entrepreneurial thinking can be explained by the environmental justice movement. Sustainable development, corporate social responsibility (CSR), and environmental, social, and governance (ESG) have all become must-discussion topics in boardrooms and public debate. Thereby, all kinds of businesses are now acutely aware of the need to match new customers' beliefs and ESG expectations (Zeng et al., 2022).

Customers are seeking products that align with their values as they become more environmentally conscious of their purchases. This creates a market opportunity for eco-friendly products, which ecopreneurs can exploit. Nevertheless, to make a profit in this fiercely competitive market, ecopreneurs must develop solutions to overcome the lack of information that frequently arises between producers and customers. This can be accomplished by designing innovative business models to serve the eco-friendly market (Davies et al., 2020) and employing innovative marketing strategies such as using social media and other digital platforms to communicate their products' sustainability credentials.

As sustainable development concerns become increasingly important to both corporations and policymakers, identifying challenges and potential opportunities for ecopreneurship becomes increasingly important (DiVito, 2021; Hall et al., 2010; Hoogendoorn et al., 2020; Pacheco et al., 2010). As a result, this thesis will seek evidence to answer: What has been discovered about ecopreneurship, and what will the future bring?

Addressing this gap will require a comprehensive review of existing findings on the subject. Hence, a systematic literature review (SLR) will be conducted to investigate the rationale for the emergence of the ecopreneurship field, as well as to delve into the evolution of the ecopreneur concept and the dissemination of many writers' perspectives on ecopreneurs' motivations and particular characteristics.

Next, citation analysis will evaluate the most significant publications in the ecopreneurship literature. This entails a comprehensive examination of the most influential publications on the topic, including an assessment of the correlation between two publications by analysing their bibliographical background (co-citation analysis). Additionally, an assessment of the relationship between citing publications through shared references is carried out (bibliographic coupling).

In addition, it is worth noting that the analysis of notable scholarly references on the subject employs a thorough scrutiny of keywords (co-word analysis). Lastly, the analysis presented in this thesis showcases the thematic evolution of both emergent subjects, such as technological development and core themes like innovation.

Therefore, the thesis' findings show that environmental degradation may be ascribed to market failure and ecopreneurs should look for new markets or better ways to serve current ones. In our contemporary society, consumer demand for sustainable and innovative solutions is a major cause of the circular economy corporate strategy. Furthermore, ecopreneurs were discovered to weigh

competing priorities in their sustainability decision-making and select a specific sustainability profile based on factors such as prior knowledge, sustainability orientation, entrepreneurial intention for sustainability, desired value creation, and perceived business support. Hence, delving into the existing literature, the need for employing a methodological approach to research in the field of ecopreneurship that explores the relevance of the institutional environment, innovation, collaborations, sustainable business practices, and other types of innovation becomes apparent.

This thesis offers several contributions to the ecopreneurship field. Firstly, the critical importance of innovation in developing long-term sustainable solutions is emphasized, and many types of innovation that promote long-term development through entrepreneurial activity are conceptualized, such as product, process, business model, and organizational innovation. Second, this thesis underlines the need for businesses to adopt an ecopreneurial orientation (EO) to achieve long-term value generation for both the firm and its stakeholders while tackling social and environmental concerns. The dedication of a corporation to decreasing its environmental impact, investing in sustainable technologies, and producing new environmentally friendly goods and services is referred to as EO. Finally, the thesis stresses the need for a holistic approach to investigating social entrepreneurship and sustainable development.

The thesis is organized as follows: the next section on the Evolution of Ecopreneurship reviews previous findings on the topic, followed by a methodology section where the chosen systematic literature review (SLR) method and the bibliometric analysis approach are explained. Afterwards, the results section presents bibliometric analysis and findings, while section 5 offers insights for future research agenda, encouraging researchers to explore the future of ecopreneurship and its potential influence on sustainable development.

2. Evolution of the Ecopreneurship: Emergence of the field and prior reviews

Ecopreneurship is a term that has gained traction in recent years, but it is riddled with ambiguity. The ambiguity in the literature on ecopreneurship stems from the authors' differing definitions and methodologies (Abdelkafi, 2018; Davies et al., 2020; Ekawati et al., 2017).

For example, according to Isaak (1998), the concept of ecopreneurship first emerged in the late 1990s as a type of proactive, environmentally oriented corporate strategy (1998). As the definition evolved, scholars began to distinguish the fundamental qualities that separate ecopreneurs` enterprises from other new endeavours.

Thereby, ecopreneurs, according to Kearins (2010), are crucial change agents required to advance toward a sustainable society, with environmental conservation as a primary goal. Dixon (2006) contends that idealistic ideas may be transformed into important economic assets, allowing major corporations to embrace ethical purchasing methods that go beyond standard green procurement.

Similarly, Gibbs (2006) defines ecopreneurs as entrepreneurs who combine environmental consciousness with their business activities to shift the economic development paradigm to a more environmentally friendly one. As a result, Gibbs (2006) adds to the existing ecopreneurship understanding by distinguishing ecopreneurs from sustainable entrepreneurs based on the breadth of their sustainability endeavours. This means that ecopreneurs are more concerned with environmental sustainability, whereas sustainable entrepreneurs take a more holistic approach that considers social, economic, and environmental sustainability concerns.

On other hand, Poldner (2015) categorizes ecopreneurs into four kinds based on soft/hard structural impacts and economic *versus* sustainability focus. The first type of ecopreneur has a soft impact, which means that their firm has a good influence on the environment without sacrificing economic aims. These ecopreneurs prioritize sustainability over economic feasibility. The second type of ecopreneur belongs to those with a hard effect, which means that their company has a direct influence on the environment. They aim to offset this negative impact, however, by adding sustainable principles to their operations. The third type of ecopreneur prioritizes sustainability by decreasing waste or harnessing renewable resources while focusing on economic goals. Lastly, the fourth type of ecopreneur focuses on economic viability while simultaneously making major contributions to environmental sustainability. They are intended to achieve a compromise between the two by identifying long-term solutions that are also financially feasible.

Thus, however, DiVito (2016) observes that ecopreneurs are driven not just by economic profit or development, but also by social standards and government incentives. According to Rodriguez-Garcia (2019), the three pillars of ecopreneurship are innovation, environmental stewardship, and long-term sustainability. For this reason, DiVito (2019) expands on his definition by stating that ecopreneurs pursue their opportunities to address extremely complex ecological concerns with uncertain outcomes, long-term perspectives, and substantial commercial volatility.

Not only are ecopreneurs` enterprises distinguished from other new ventures by their significant environmental focus and dedication, but they also have a more market-oriented and personality-driven style of value creation through environmental products that are strongly reliant on market niches (Vlasov et al., 2021).

A plethora of `ecopreneurship´ definitions bring together the meanings of different types of ecopreneurs and their motivations. This section provides an edited collection of ecopreneurship definitions presented in Table 1.

Table 1:Ecopreneurship definition collection

AUTHOR	DEFINITION
Vlasov (2021, p.3)	"Ecopreneurship is broadly defined as starting a business based on environmental values. Ecopreneurs bridge what is considered to be conflicting worlds of the natural environment and the enterprise with an intent to "radically" transform industries, economies, and communities. As result, they are expected to play an important role in the transitions of energy provision, mobility, food, housing, communication, water, and finance."
Galkina (2021, p.302)	"Strong environmental orientation and commitment are the very features to distinguish ecopreneurial firms from other new ventures."
Renfors (2019, p.1)	"Ecopreneurship is also a market-oriented and personality-driven form of value creation through environmental products. Ecopreneurs offer innovative products and services to established markets and rely heavily on market niches. These entrepreneurs observe market opportunities, and they can respond to new demands and markets quickly."
Rodríguez-García (2019, p.1)	"The concept of ecopreneurship is based on three pillars: innovation, caring for the environment, and long-term sustainability. The term ecopreneurship is a portmanteau word formed from combining eco (as in ecological) and entrepreneurship. The term eco comes from the Greek word ***eikos***, which translates as home. Ecology is the branch of science that studies how our home functions in the sense of our environment and surroundings."
DiVito (2019, p.1059)	"Ecopreneurs pursue opportunities to resolve highly uncertain ecological problems with ambiguous outcomes, long-term horizons, and high business uncertainty. Ecopreneurs are most likely to act and innovate when profits can be gained, suggesting that they establish for-profit ventures."
Abdelkafi (2018, p.34)	"The term ecopreneurship is often used to describe investing in, or starting enterprises related to, natural resources rather than innovating as such"
Galkina (2016, p.3)	"Ecopreneurship is understood as venturing as venturing activity based on environmental awareness … by examining how individuals recognize, exploit, and create economic growth while simultaneously creating environmental benefits."
DiVito (2016, p.571)	"The goal of the ecopreneur is to preserve nature and pursue opportunities to resolve highly uncertain ecological problems with ambiguous outcomes. Ecopreneurs are most likely to act and innovate when profits can be gained, suggesting that ecopreneurs establish for-profit ventures. However, economic profit or growth provides only a partial explanation of their motivation; show that social norms and government incentives also motivate ecopreneurship."
Poldner (2015, p.244)	"D. Taylor and Walley have defined four types of ecopreneurs drawing on the divide between soft/hard structural influences and an economic versus a sustainability orientation."
Kearins (2010, p. 523)	"Ecopreneurs as examples of critical change agents needed to move toward a sustainable society. Ecopreneurs see the protection of the natural environment as an important goal in its own right, not because there is money to be made at the same time."
Isaak (1998, p.88)	"Social activists, who aspire to restructure the corporate culture and social relations of their business sector through proactive, ecologically oriented business strategies."
Dixon (2006, p.328)	"idealistic values can be translated into valuable economic assets, principally by offering large corporations the opportunity to adopt a means of ethical purchasing that is offering of social and environmental benefits goes well beyond traditional green procurement."

AUTHOR	DEFINITION
Gibbs (2006, p.65)	"Ecopreneurs, defined here as those entrepreneurs who combine environmental awareness with their business activities in a drive to shift the basis of economic development towards a more environmentally friendly basis. Certainly 'ecopreneurship is . . . distinguished from other forms of corporate environmental development by the company's vivid commitment to environmental progress and its strong desire for business growth' but again there may be much less difference between ecopreneurs and sustainable entrepreneurs. "

Next, Table 2 displays notable reviews in the field of ecopreneurship, as well as data on their sources and methodologies. These noteworthy reviews provide a detailed overview of the existent problems regarding sustainable orientation and corporate social and environmental responsibility and provide practical advice for ecopreneurial corporations, aiming to set a clear path for the following research, which will be performed in sections 4 and 5.

Firstly, considering the contemporary paradigm it is crucial to examine the strategies pursued by start-ups dealing with unexpected challenges and seeking out opportunities while pursuing sustainable development strategies. The Covid 19 crisis has brought substantial hurdles and inconveniences to businesses across all industries. However, because of their low financial resources and lack of established client bases, start-ups were extremely vulnerable. As a result, a portrait of how start-ups have reacted and their efforts to survive is required.

Guckenbiehl's article provides unique insight by offering a thorough examination of the business model improvements that start-ups have undertaken to counter the pandemic's challenges. The author interviewed start-up founders in depth and examined the data to uncover common tactics and the major findings acknowledged that, while the pandemic has presented significant challenges, it has also created new opportunities for start-ups to innovate and pivot their business models.

Hence, sustainability orientation (SO) plays a critical role within the ecopreneurship paradigm since enables ecopreneurs to achieve competitive advantage through the development of new profitable and sustainable items,

services, and business models. Although this is a multifaceted concept and challenging to measure, according to Khizar et al. (2022), assessing SO might enable ecopreneurs to identify areas for improvement, evaluate the effect of sustainability efforts, and communicate their sustainable practices to stakeholders.

However, scholars recognize the hurdle of measuring sustainability orientation challenges and underline the need of adopting proper measures to assess sustainability success. Schaltegger et al (2022) that corporate sustainability management accounting (CSMA) might be employed to assess sustainability performance at several levels, including individual, organizational, and societal.

By providing relevant information on sustainability performance, CSMA may assist firms in incorporating a sustainability-oriented perspective into their decision-making processes. This allows ecopreneurs to identify areas for development, assess the effectiveness of sustainability activities, and communicate their sustainable practices to stakeholders. Nevertheless, many challenges must be carefully addressed to ensure that CSMA is used in an effective and relevant manner, such as data availability, data quality, and the usefulness of sustainability indicators in specific situations.

Table 2:Notable Reviews of Ecopreneurship

Studies	Term of the concept	Sample	Database	Method of analysis	Findings or outcomes about cognition
Guckenbiehl, P.	Start-up ventures Open innovation Social behaviour theories Network theory Knowledge-based view theory Resource-based view theory Knowledge spill over theory of entrepreneurship Corporate Venture Capital (CVC)	90 academic articles	SCOPUS EBSCO (Business Source complete)	Keyword co-occurrence network	This article adds to the existing body of knowledge by exploring how start-ups have changed their strategies in response to the COVID-19 pandemic and to discover new prospects. The primary goal is to learn how start-ups have adapted their business strategies in response to the pandemic's challenges as well as to seek new opportunities. Furthermore, this article makes a dual contribution: by providing an integrative framework that summarizes the relationship between start-up knowledge and innovation by glossing over the Sustainable Orientation (SO) literature, exploring SO limitations, and identifying a knowledge gap in measuring eco-innovation. The major finding is that start-ups have proven an exceptional level of resilience and adaptability in responding to the pandemic's difficulties.
Khizar, H.	Sustainability Orientation (Orientation (SO) Sustainable Development	53 journal articles	Web of Science SCOPUS	Systematic Literature Review (SLR)	This article problematizes the lack of consensus in current research on the Sustainable Orientation (SO) concept. Hence, the three major challenges were identified: a lack of agreement on SO definition and dimensions, a limited number of measurement instruments for capturing SO, and a

Studies	Term of the concept	Sample	Database	Method of analysis	Findings or outcomes about cognition
	Sustainability strategy Knowledge-based view (KBV)				lack of empirical evidence on the antecedents and outcomes of SO. To address these issues, further research is proposed to have a better understanding of rigorous SO measurement methods, environmental factors that influence SO development, and the role of SO in determining organizational and individual performance.
Schaltegger, S.	sustainable entrepreneurship social entrepreneurship environmental entrepreneurship multilevel framework	161 articles	Elsevier Science Direct Scopus EBSCO Business Source Complete Emerald Insight Wiley Online Library	SLR	This article presents an SLR on corporate sustainability management accounting (CSMA) and its relationship to sustainability outcomes. There is a scarcity of empirical data on the relationship between CSMA and sustainability outcomes, and further investigation is needed to better understand the relationship between CSMA and sustainable results, as well as the establishment of a standardized framework for CSMA. In addition, further study is required to grasp the function of CSMA in multi-level linkages for sustainability is required, as is the establishment of a standardized framework for CSMA.

3. Methodology

The Systematic Literature Review (SLR) method is most suited to answering this thesis' research topic. This approach allows for synthesising and integrating, uncovering knowledge gaps, and creating existing research new frameworks (Paul, 2020). The SLR approach is successful at revealing domain knowledge acquisition, including where, when, and how it was acquired (Rojon et al., 2021) and ensures an unbiased and representative sample of reviews (Hiebl, 2021; Mallett et al., 2012).

In addition, different types of systematic reviews exist, with the narrative review being the most used (Anderson, 2023). Furthermore, Kunisch et al., 2023[1] identified several SLR aims such as classifying, representing, problematizing, configuring, aggregating, integrating, interpreting, and explaining. Accordingly, this review entails classifying and conducting a critical analysis to identify gaps and inconsistencies in existing research.

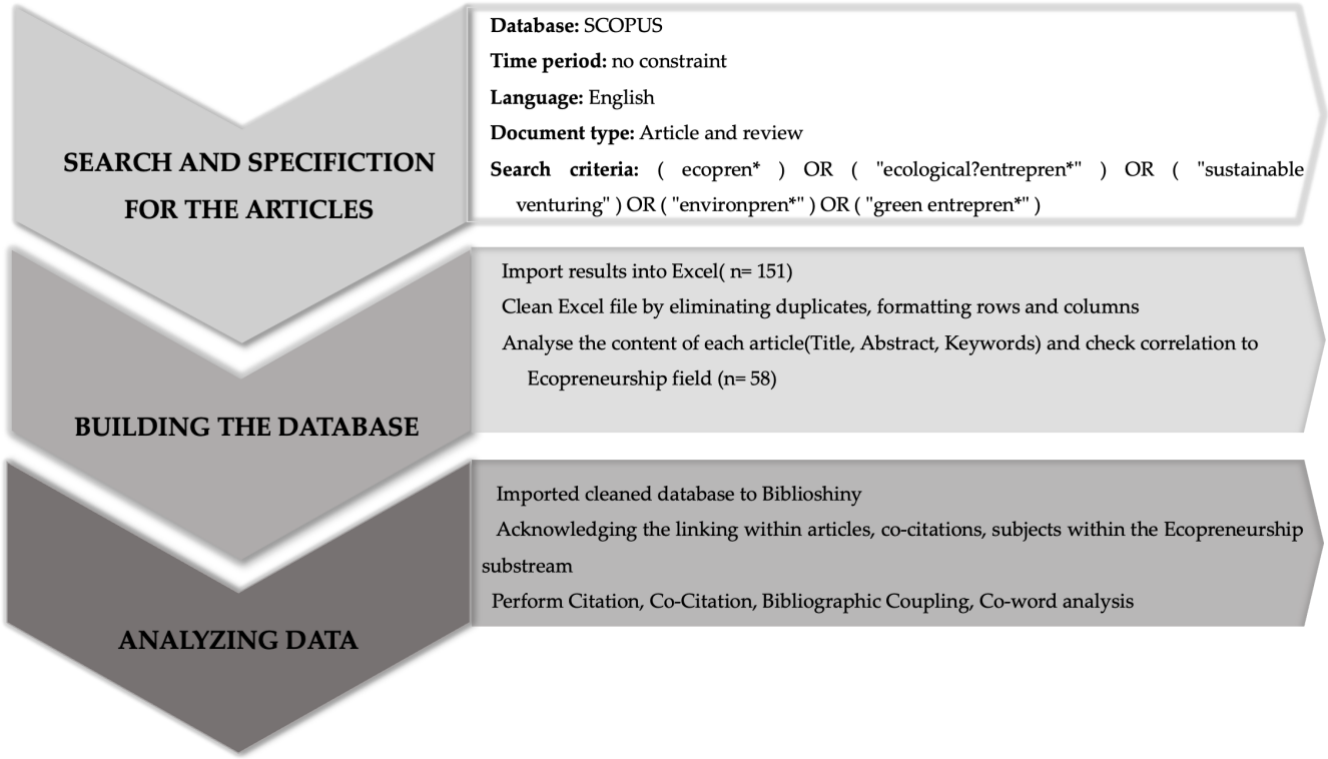
Thus, conducting a systematic review entails a thorough examination of the context in which citations are used in existing literature, to identify key themes and trends in the literature that can assist them in developing a comprehensive understanding of the research topic has evolved across time (Snyder, 2019) and drives into discovering knowledge patterns by collecting, codifying and analysing data founded in existent literature (Aguinis et al., 2023).

Likewise, representing is marked by analysing the conceptual connections between data and serving endeavours to construct a depiction of the ecopreneurship field´s components and relationships to make it conceivable for researchers (Davis et al., 2014; Kunisch et al., 2023; Snyder, 2019).

Aimed to inquire about and map the existent "intellectual territory", representing and illustrating different Bibliometric types of analysis such as citation, co-citation, bibliographic coupling, and co-word. Hence, these methods aid in identifying key themes and trends in the literature, resulting in a thorough understanding of the research topic.

[1] Further elaboration on specificities of SLR purpose are available in Kunisch et al. (2023)

Figure 1:Methodology Protocol



3.1. Data Selection and Curation

The database selected was taken through the Scopus database and the search terms used are as follows: “ecopren*”, “ecological?entrepen*”, “sustainable venturing”, “environpren*” and “green entrepren*”. Data extraction was performed in November 2022 with a focus on manuscripts written in English and published in academic journals. As a result, 151 articles were identified.

By only considering the articles published in Academic Journal Guide 2021 ranked with more than three stars, outlined in **table 3**, and after a careful reading of the titles and abstracts phase to eliminate duplicates and to warrant the relevance for the Ecopreneurship field, the final database of 58 articles was identified, with a full list of selected articles available in the Appendix.

Table 3:Source Academic Journal Guide 2021

Journal	*Ranking AJC*	*Exemplary manuscripts*
Academy of Management Annals	4*	(Vedula et al., 2022)
Academy of Management Perspectives	4	(Gamble & Muñoz, 2022)
British Journal of Management	4	(Bouguerra et al., 2023)
Business and Society	3	(Poldner & Veenswijk, 2011) (Kearins et al., 2010)
Ecological Economics	3	(De Jesus et al., 2019)
Energy Economics	3	(Dong et al., 2021)
Entrepreneurship and Regional Development	3	(Cunningham et al., 2022)
European Journal of Marketing	3	(Davies et al., 2020)
European Journal of Operational Research	4	(Sarkis & Cordeiro, 2001)
Industrial and Corporate Change	3	(Zeng et al., 2022)
Journal of Business Ethics	3	(Tarnanidis et al., 2019)
Journal of Business Venturing	4	(Zeng et al., 2022)
Journal of Business Research	3	(Coudounaris et al., 2020)
Journal of Small Business Management	3	(De Lange & Valliere, 2020)
Research in the Sociology of Organizations	3	(Suckert, 2019)
Research Policy	4*	(Hoogendoorn et al., 2020)
Small Business Economics	3	(Truong & Nagy, 2021)
Technological Forecasting and Social Change	3	(Hörisch et al., 2017)
World Development	3	(Dhahri & Omri, 2018)

3.2. Data Analysis

The methodology employed combines data extraction, research findings coupling, and the identification and synthesis of knowledge gaps (Aguinis et al., 2020; Hiebl, 2021; Paul, 2020; Rojon et al., 2021). Hence, the goal is to extract important new insights from current scholarship and uncover links (Hulland et al., 2020) to provide potential contributions to future research. Besides that, bibliometric analysis was performed to extract insights from the collected data to

integrate a measure of objectivity further into the appraisal of scientific literature, offering the ability to boost rigour and mitigate researcher bias (Zupic & Čater, 2015).

Then, Bibliometric methods measure the existent literature by examining big data and exploring and organizing it conducive to extracting hidden patterns that will offer guidance during the literature review process (Donthu et al., 2021; Zupic & Čater, 2015). Although, there exist two categories for Bibliometric analysis, namely performance analysis and science mapping.

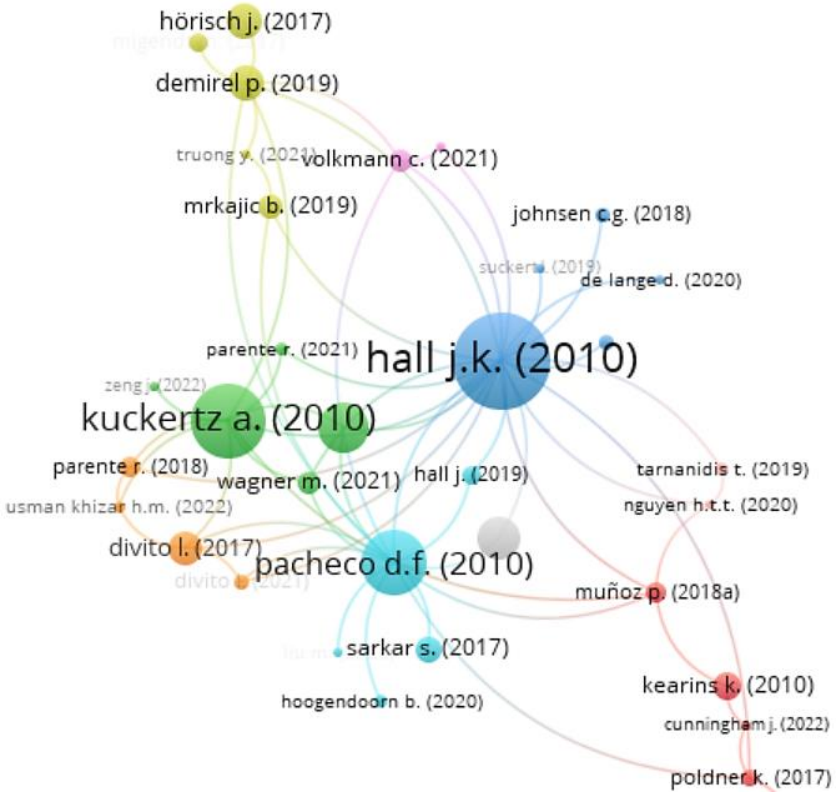
Performance analysis empowers researchers to evaluate the productivity and impact of the writing regarding a domain, method, and theory employing several quantitative metrics (e.g., average of the number of citations per year). Whereas Science Mapping concedes scholars' capacity to map the domain, method, and hypotheses based on the bibliographic data (Kraus et al., 2022). Considering the major purpose of this thesis, the method chosen is science mapping.

4. Results

4.1. Citation Analysis

In the interest of cultivating deeper insight into the Ecopreneurship research field and analysing either the scientific interactions between authors to provide reliable knowledge to the scientific field citation analysis was performed (Anderson et al., 2023).

Figure 2:Citation analysis illustration- authors' network



Furthermore, as presented in **Figure 2 and Figure 3**, the most influential publications on ecopreneurship theory are provided by authors such as Hall (2010) (649 citations), Kuckertz (2010) (389 citations), De Jesus (2018) (372 citations), Pacheco (2010) (301 citations), Sarkis (2001) (253 citations), Muñoz (2015) (178 citations), and Dhari (2018) (136 citations).

Hall´s 2010 article titled "Sustainable development and entrepreneurship: Past contributions and future directions" was cited from 649 articles and is the most cited article in this field of

research. This article explores the link between sustainable development and entrepreneurship published in mainstream Entrepreneurship journals and advocates potential future research directions.

Firstly, the crucial impact of this paper is owed to the audacity to ask the right question, specifically revolves around What encourages entrepreneurs to create sustainable economies, and how much potential would they have? Are there any barriers to sustainable companies gaining economic rents, and how do sustainability-minded entrepreneurs differ from their traditional counterparts? Therefore, this is a crucial inquiry to make around ecopreneurship since it explores the role that ecopreneurs may play in fostering sustainable economic growth and identifies any hurdles to success (Hall et al., 2010).

Secondly, recognizing the scarce knowledge in the sustainable entrepreneurship field at the time, these authors highlighted the ambiguity existing among sustainable entrepreneurship terms (Dean, 2007; Hall et al., 2010; Polonsky, 1998; Schaltegger, 2002). Thirdly, it laid out further investigation in the sub stream, recognizing that the majority of existing investigations that uncover the relationship between Entrepreneurship and Sustainable Development have been distributed outside of the standard entrepreneurship journals (Hall et al., 2010).

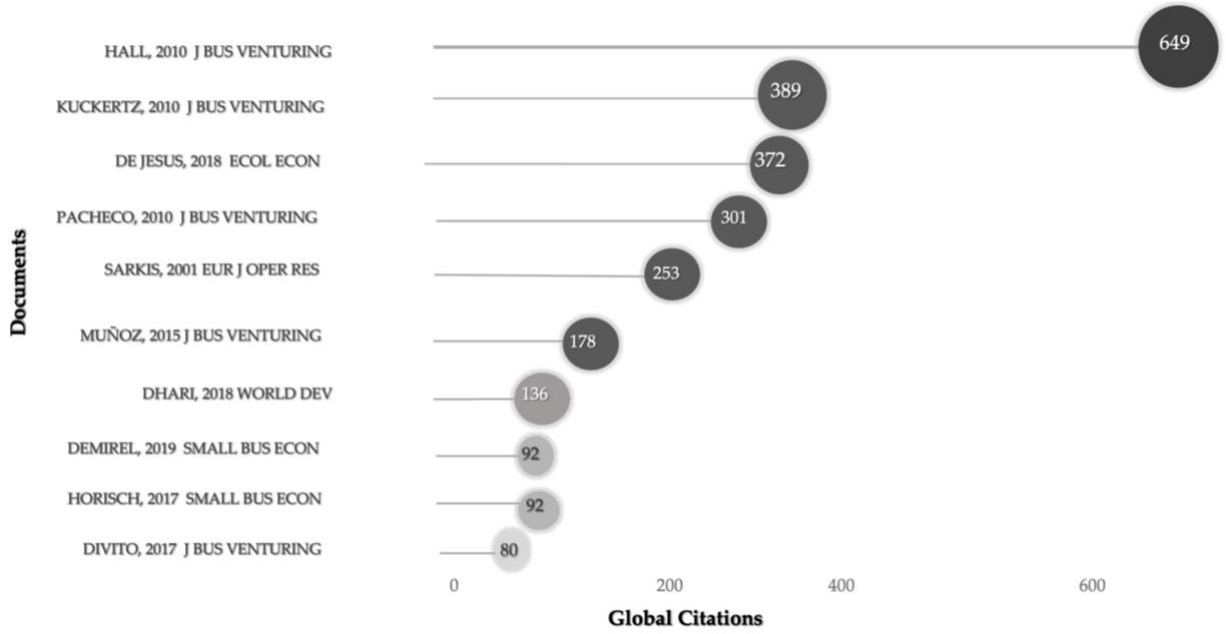
The strong link between entrepreneurial opportunity and incomplete market conditions and the asymmetry of market information translates into opportunities for economic and financial profit (Kuckertz, 2010; Dean, 2007; Sarkis, 2001). Then, recognizing the existence of industry life cycles and knowledge spill overs is crucial for gaining a deeper discernment of the difficulties involved in Ecopreneurship. By understanding the life cycle of an industry, entrepreneurs may better comprehend its maturity level and make educated decisions that will help them capitalize on opportunities and overcome market hurdles (Demirel et al., 2019).

Therefore, the researchers trace the source of environmental degradation by looking at market failure and suggest that ecopreneurs examine new markets or find superior means for serving the existing ones. Embedded in this market sustainable oriented perspective (Muñoz, 2015), it's crucial to evidence the customer desire for circular economy business models including

"product service systems", "performance-based contracting", "product as a service", and "servitisation" (de Jesus et al., 2019).

Conducive to addressing these market needs, the diligent and clashing duality of ecopreneurs and their assessment of competing priorities in sustainability decision-making implies they choose one profile, whether singular, flexible, or holistic (DiVito, 2017). Aiming to put into perspective the process of venture development, scholars have drawn different visions to draw a line between ecopreneurs and non-ecopreneurs, including their "prior knowledge", "sustainability orientation" (Hörisch, 2018; Kuckertz, 2010), "entrepreneurial intention for sustainability", "desired value creation", and "perceived business support" (Muñoz, 2015).

Figure 3:Number of global citations per paper

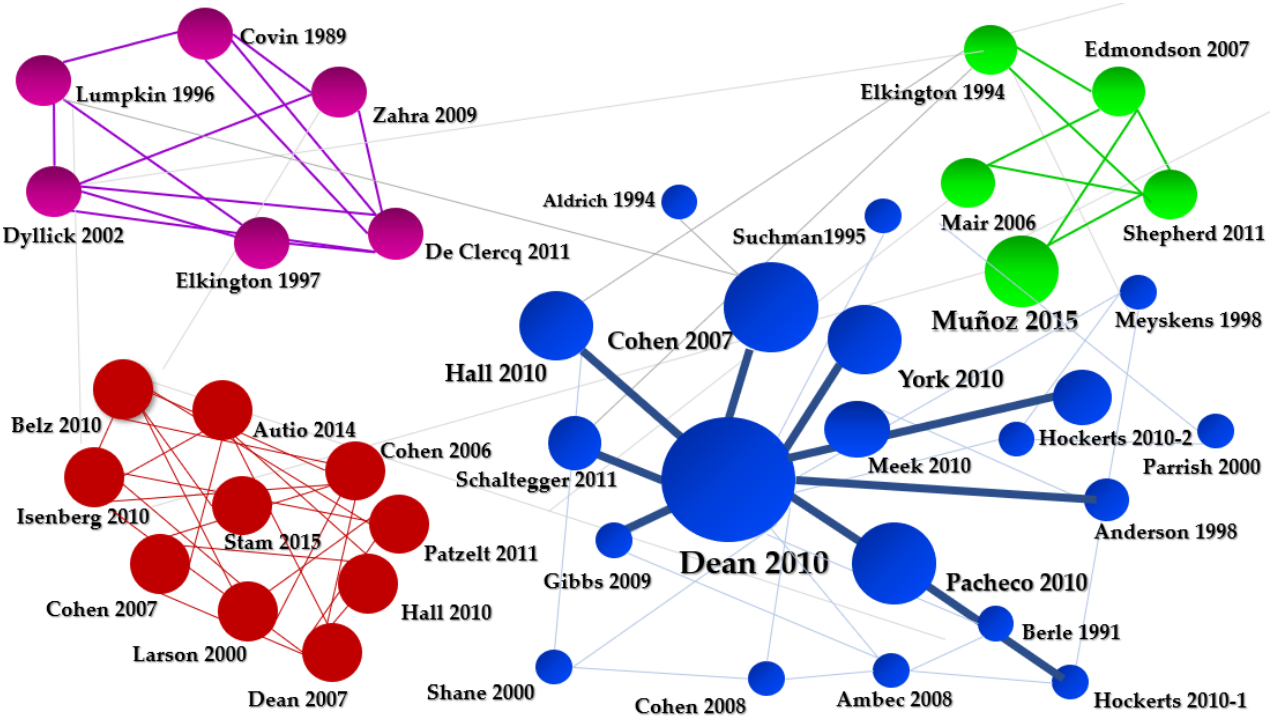


4.2. Co-citation

Co-citation consists of measuring the connection between two publications through bibliographical background, in the sense that, if two publications are mentioned collectively in one article, that means they have common aspects (Donthu et al., 2021; Zupic & Čater, 2015). The dimension of the circle represents the number of citations obtained, the thickness of the lines denotes the power of co-citation ties, the cluster of the circle identifies the cluster with which the article is associated, and additionally, the link and proximity between two articles pick out

the co-citation correlation between two articles. Thus, as illustrated in **Figure 4,** the Ecopreneurship co-citation network fashioned four clusters.

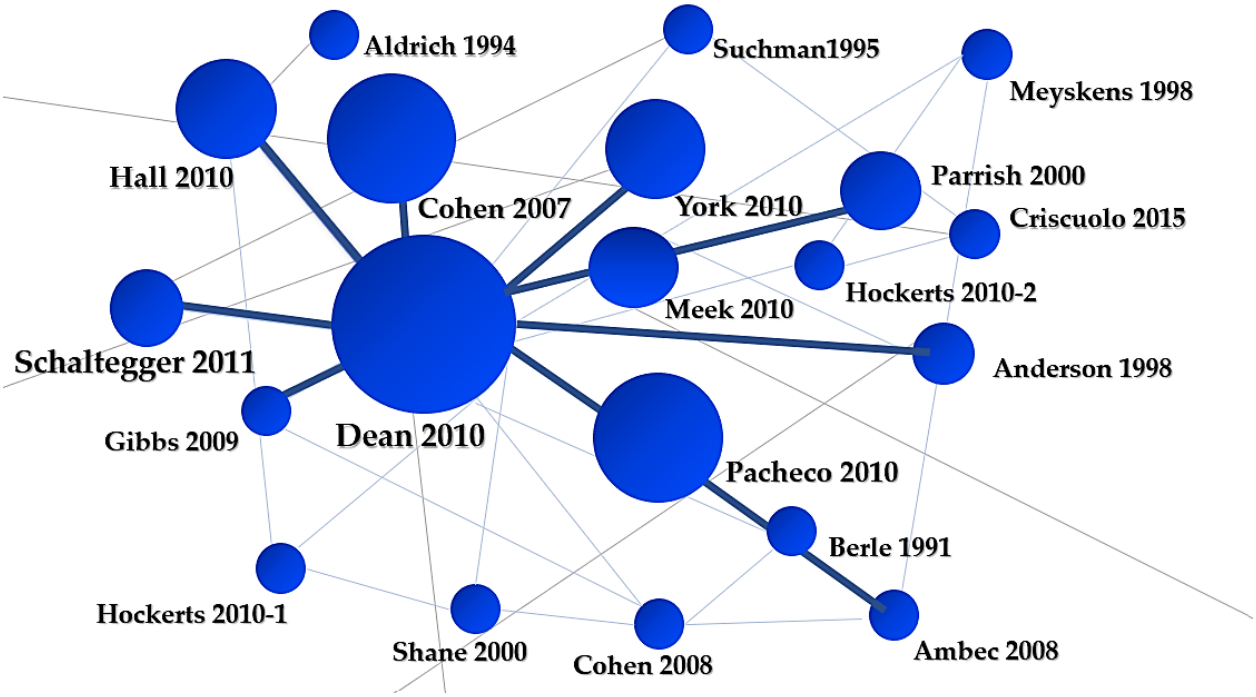
Figure 4:Co-citation network fashioned in four clusters



4.2.1. Institutional Context, Innovation, and Environmental Impact

The institutional context in which Ecopreneurship takes place shapes the opportunities and limits that entrepreneurs confront when launching new businesses. Hence, this implies that to be successful, ecopreneurs must manage a complex network of formal and informal institutions, including laws, cultural norms, and social conventions. Therefore, understanding the social context is essential since societal values toward risk-taking and innovation may impact entrepreneurs' propensity to undertake new businesses (Aldrich, 2007; Anderson et al., 2012).

Figure 5:Blue cluster: Institutional Context, Innovation, and Environmental Impact on Ecopreneurship



For this reason, cultures that appreciate creativity and innovation are more inclined to accept new sectors and make it easy for ecopreneurs to thrive (Aldrich, 2007; Anderson et al., 2012). Nonetheless, social norms that encourage environmentally friendly conduct might boost the chance of entrepreneurs pursuing sustainable ventures, since cultural norms can function as *green prisons*, limiting the possibilities for sustainable business, and entrepreneurs must break free from these green prisons by actively interacting with cultural norms and building new norms that promote sustainable growth (Gibbs, 2006; Meek et al., 2010; Pacheco et al., 2010).

Furthermore, since the ecopreneurship field aims to ensure the creation of innovative sustainable solutions, ecopreneurs must employ a systems approach that dissects the larger environment in which their operations take place to produce long-term and meaningful solutions (Cohen, 2006; Parrish, 2010; Shane & Venkataraman, 2000). Market defects can give chances for innovation and the creation of sustainable solutions, when there is a mismatch between the pricing of products and services and their real costs, or when there is a lack of knowledge or regulation around ecologically hazardous activities, market imperfections can occur (Cohen, 2007; Dean, 2007; Berle et al., 1991; Hall et al., 2010).

Additionally, aiming to propel the venture´s successful partnerships is crucial given they provide access to resources, knowledge, and networks. Beyond that, diversity in partnerships in terms of sorts of accomplices, skills, and distinct backgrounds will enrich green ventures and expedite sustainability innovation (Hockerts, 2010; Meyskens, 2013; Schaltegger, 2011).

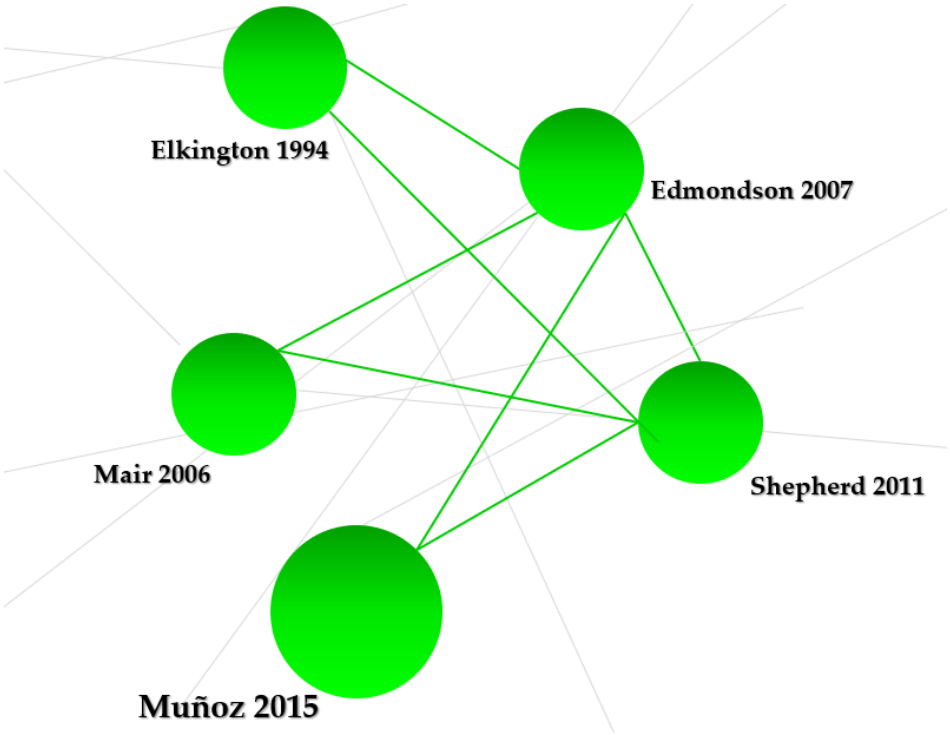
Likewise, the financial benefits of ecological business practices as well as the necessity of organizational legitimacy (perceived fairness and justice of a firm's decisions; Suchman (1995)) represent crucial considerations for sustainability-oriented organizations. Accordingly, companies that yield sustainable business practices likely will be perceived as authentic by their stakeholders, and it´s argued by several authors that firms that adopt environmentally sustainable business practices tend to outperform competitors and achieve competitive advantage (Lanoie, 2008; Criscuolo, 2015; York, 2010).

Subsequently, product innovation, process innovation, business model innovation, and organizational innovation are all sorts of innovation. Product innovation sustains the creation of new environmentally sustainable and socially responsible goods or services creation, whereas process innovation is the establishment of new and more sustainable production processes that lessen the negative environmental consequences of manufacturing. On the other hand, company model innovation hints at creative business models that support long-term growth. Finally, organizational innovation entails organizational structures and practices that improve long-term viability (Hall et al., 2010).

4.2.2. Intersection of Sustainability, Entrepreneurship, and Research Methodologies

Secondly, it is imperative to possess a thorough understanding of various elements that contribute to advancing sustainable development through entrepreneurial endeavours. These articles (e.g., Edmondson, 2007; Elkington, 1994; Mair, 2004; Muñoz, 2015; Patzelt & Shepherd, 2011) emphasize the significance of comprehending the motivations and objectives of individuals and organizations, as well as the need to identify and capitalize on opportunities for sustainable development.

Figure 6: Green Cluster Intersection of Sustainability, Entrepreneurship, and Research Methodologies on Ecopreneurship



Furthermore, it´s underscored by the referred authors (Edmondson, 2007; Elkington, 1994; Mair, 2004; Muñoz, 2015) the necessity of considering the entirety of the subject matter and ensuring a methodological fit that consists of a methodological framework to upskill researchers in learning new research fields, such as social and sustainable entrepreneurship.

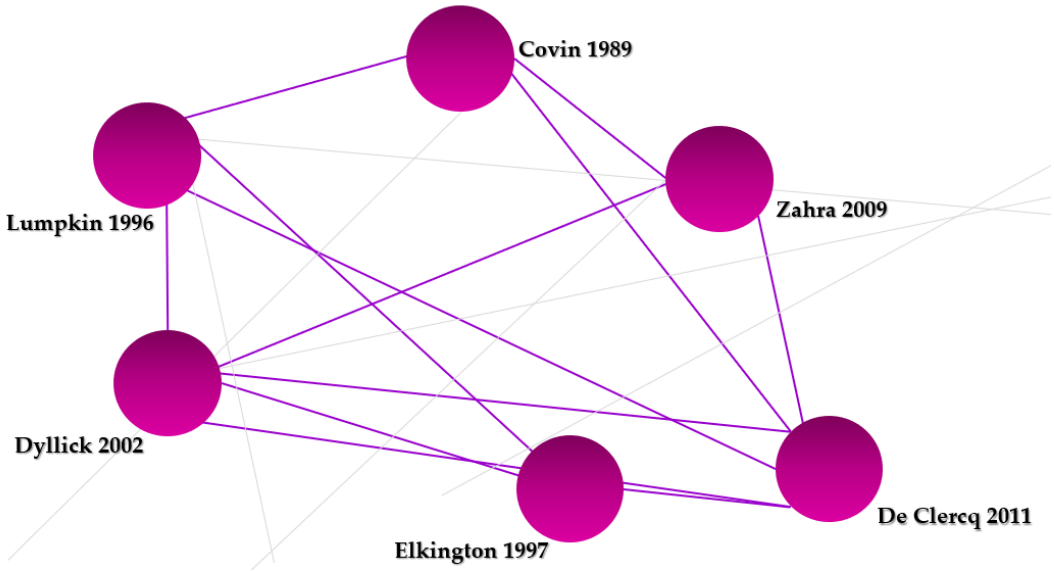
Therefore, one common thread among these articles is the emphasis on the importance of understanding and addressing different stakeholders´ perspectives in the pursuit of sustainable development (Edmondson, 2007). By unveiling the underlying reasons motivating individual ecopreneurs, such as personal experiences, values, and personal motivation (Mair, 2004) we can gain a better understanding of the driving forces behind sustainable business creation (Patzelt & Shepherd, 2011).

Rather than simply mimicking market trends, ecopreneurs have to proactively identify and capitalize on opportunities through innovation (Muñoz, 2015). In order to do so, ecopreneurs actively seek out partners and collaborators to assist in identifying and capitalizing on sustainable development opportunities, which may include partnerships with other businesses,

governments, and non-profit organizations (Patzelt & Shepherd, 2011). According to Mair (2004), ecopreneurs often rely on their networks and relationships to identify opportunities and access resources and support. This highlights the importance of building relationships with like-minded individuals and organizations that can help them achieve their goals.

4.2.3. Ethical considerations and challenges faced by ecopreneurs/ Entrepreneurial Orientation

Figure 7: Purple Cluster Ethical considerations and challenges faced by ecopreneurs/ Entrepreneurial Orientation



Thirdly, it is relevant that firms adopt an Ecopreneurial Orientation (EO) to promote prosperous firm performance and focus on long-term value creation for the company and its stakeholders while also addressing social and environmental obstacles (reducing the firm´s environmental effect and promoting social responsibility) (De Clercq, 2011; Dyllick, 2002; Elkington, 1997). Thus, that consists in the extent to which a company actively seeks out and develops chances to fulfil environmental and social goals by focusing on producing environmentally friendly new goods and services, as well as a commitment to decreasing the firm's environmental effect (Covin, 1991) and a desire to challenge the existent status quo and innovate while addressing these issues (Zahra et al., 2009).

Therefore, the EO concept incorporates an assortment of variables, including the organization's dedication to decreasing its environmental effect, readiness to invest in

sustainable technology, and the capacity to develop new environmentally friendly goods and services (Lumpkin, 1996). Performing an in-depth investigation of the entrepreneurial orientation construct encompasses three pivotal components: innovativeness, proactiveness, and risk-taking. Innovativeness depicts a company's willingness to develop new products, services, or technology; proactiveness, on the other hand, relates to a company's willingness to take chances instead of just retaliating against changes in the environment. Finally, risk-taking implies the company's willingness to embark on undertakings that are fraught with uncertainty.

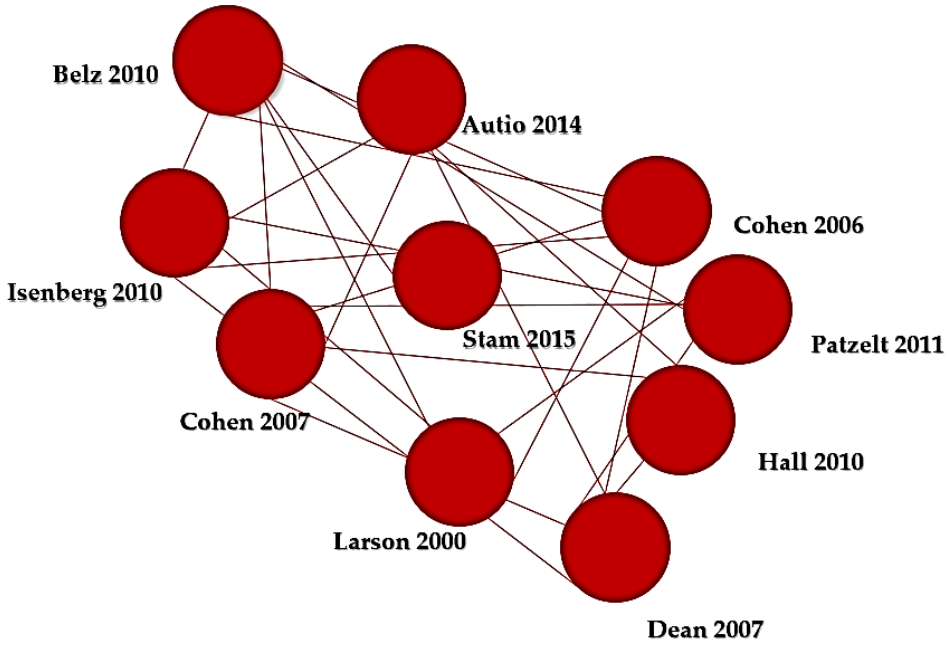
Hence, it is contended that organizations with a strong entrepreneurial orientation get superior performance results, such as higher growth and profitability(Elkington, 1997; Lumpkin, 1996). Although reluctance to change, as well as a lack of information and resources, can be substantial impediments to the adoption of sustainable practices, enterprises that can overcome these hurdles would benefit from enormous prospects such as enhanced reputation and increased competitiveness.

In conclusion, enforcing Corporate Sustainability demands a long-term vision and the willingness to adapt, readapt, and engage collaboratively with stakeholders. Corporate sustainability is a continuous process of improvement that assumes a desire to disrupt existing business paradigms, as well as principles and values alignment concretized by a leader's willingness to take risks and collaborate with stakeholders such as employees, consumers, suppliers, and local communities to prioritize sustainable solutions over compliance or one-time expenditure (Dyllick, 2002).

4.2.4. A comprehensive analysis of Entrepreneurial Ecosystems, Regional Policy, Innovation, and Market Imperfections

Fourthly, the red cluster portrays a comprehensive analysis of Entrepreneurial Ecosystems, Regional Policy, Innovation, and Market Imperfections. As underlined by Belz (2017), Larson (2000), Autio (2014), Cohen (2006), Isenberg (2010), and Stam (2015), a combination of fact-based and participatory techniques may contribute to a better understanding of the larger environment in which ecosystems and regional policies are executed.

Figure 8: A comprehensive analysis of Entrepreneurial Ecosystems, Regional Policy, Innovation, and Market Imperfections



Even though both articles (Belz, 2017; Larson, 2000) discuss the concept of SE and how it relates to finding and sizing opportunities, Belz (2010), presents a "convergent process model" for sustainable entrepreneurship to describe SE as a triple bottom line that represents the convergence of economic, social, and environmental goals. Larson (2000) debates the process of sustainable innovation through the lens of an entrepreneur by advocating that to overcome the main challenges of sustainable innovation, cooperation and collaboration among the different actors in the ecosystem need to be fostered.

This angle is also advocated by Autio (2014) who goes further and enunciates that the biggest challenges for ecopreneurs in addressing market failure could be systematized in the complexity of the entrepreneurial ecosystem (Autio, 2014; Cohen, 2006). Therefore, lack of data and information leads to limited stakeholder engagement and understanding of the nuances of tailoring and implementing policies in entrepreneurial ecosystems, or, in other words, can result in policies such as laws and regulations that do not suit stakeholders' needs and cause precarious achievement in advancing ecopreneurship (Stam, 2015).

Furthermore, scholars draw attention to core factors such as education, policymakers who foster entrepreneurial activity or access to capital and leveraging these distinctive qualities to

reduce environmental degradation and promote sustainable economic development to perceive a region's unique characteristics (Cohen, 2006; Dean, 2007; Hall et al., 2010; Isenberg, 2010).

Finally, market failure occurs when market systems block resource allocation, resulting in unexpected negative effects on society and the environment (negative externalities), information asymmetry, inefficient firms (inefficient level of output), and a failing price mechanism (Cohen, 2007; Dean, 2007; Hall et al., 2010).

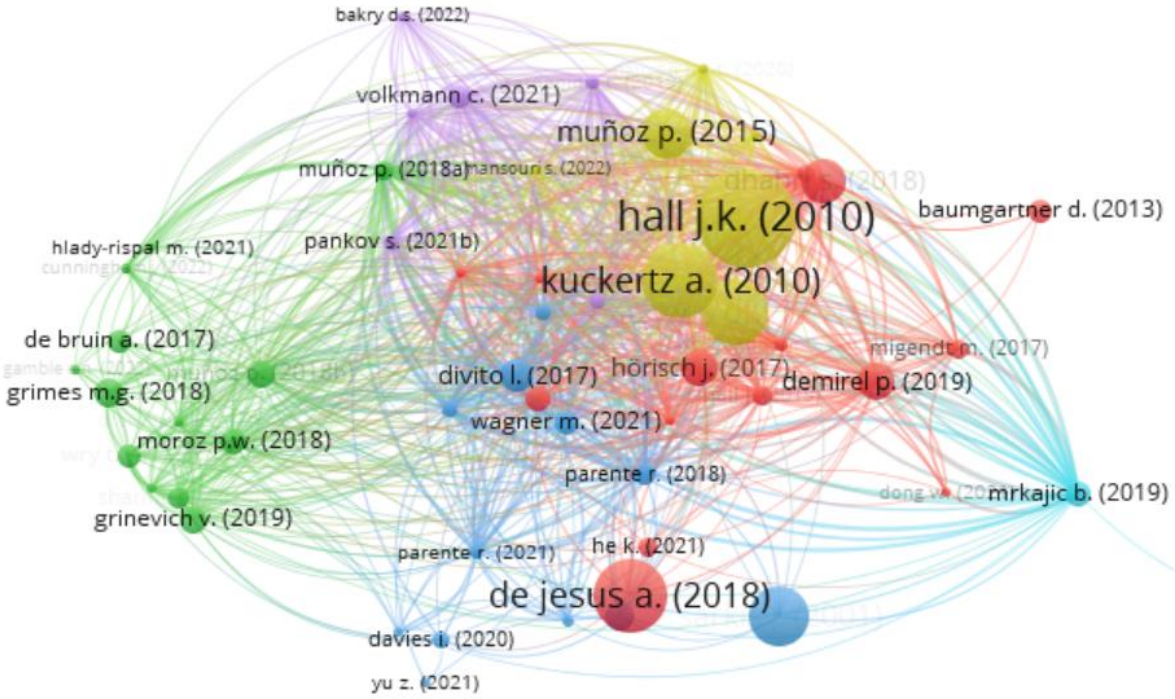
4.3. Bibliographic Coupling

According to shared references, bibliographic coupling aims to inspect the relationships among citing articles, allowing us to understand the present and future advancement of topics in the Ecopreneurship research field, and this analysis uses shared references to divide scientific articles into thematic clusters. Despite co-citation analysis, whose nucleus is the association built up by the authors who are citing inspected papers, bibliographic coupling analyses established a connection within the authors of the articles in focus. For this reason, niche articles could acquire visibility (Donthu et al., 2021; Kessler, 1963; (Zupic & Čater, 2015).

The higher the number of common papers cited by a third document, the higher the bibliographic coupling strength- that which demonstrates similarity in the subject relationship between two articles (Chang et al., 2015) and identifies changes in research knowledge (Zhao, 2008).

According to **Figure 10**, it is possible to detect that there are three emergent funding studies in the Ecopreneurship field, which are composed of the highly cited authors of the bibliographic coupling (de Jesus et al., 2019; Hall et al., 2010; Kuckertz, 2010). Then, to scrutinize the direction of bibliographic coupling, a quotation network is subjected to main path analysis, and the papers by Hall (2010) and Kuckertz (2010), which were each cited 649 and 389 times, respectively, can be seen as contributions to the field's emergent knowledge. By linking these two articles, scholars may obtain a better understanding of the difficulties and possibilities confronting ecopreneurs and contribute to the development of a sustainable economy.

Figure 9: Bibliographic coupling network



Consumers' growing awareness of environmental and social concerns and rising demand for environmental solutions present a market opportunity. However, Hall (2010) and Kurckertz (2010) bring up that there are considerable impediments to the growth of sustainable entrepreneurship, such as a lack of finance and support for these enterprises as well as a lack of awareness of the intricacies of sustainability-oriented firms.

Kurckertz (2010) concluded that having more business experience was crucial to assessing an individual's sustainability orientation, which is the degree to which an individual is motivated to engage in sustainably aligned activities. The individual's entrepreneurial aspirations were found to be positively correlated with this stronger sustainability orientation. Consequently, it is more reasonable that individuals with mature business experience glimpse the prospects and potential advantages of developing environmentally friendly firms.

Regarding the impact of eco-innovation and the promotion of green product consumption on the diversification of the circular economy and the accomplishment of sustainability goals, Stumpf et al. (2021) investigate the various avenues through which understanding the factors that drive eco-innovation will enable businesses and policymakers to promote sustainable practices more successfully.

Foremost, eco-innovation refers to the creation and implementation of innovative goods, services, or processes that improve environmental performance and support the transition to a circular economy (Hörisch et al., 2017). A circular economy, on the other hand, is an economic system that attempts to eliminate waste and conserve resources through closed-loop production and consumption processes (de Jesus et al., 2019).

Establishing an enabling climate for eco-innovation and providing firms with the necessary resources to overcome hurdles and adopt sustainable practices implies first understanding the characteristics that contribute to the effective creation and implementation of eco-innovations, such as lack of knowledge, a lack of money, or a lack of incentives, and second, requiring a collaborative effort between governments, firms, and stakeholders (de Jesus et al., 2019; Demirel et al., 2019; Hörisch et al., 2017). Furthermore, encouraging sustainable-oriented product development may contribute to Regional Development, particularly, by strengthening the region's competitiveness and capacity to attract new investment.

It is reinforced by some authors that the importance of shaping decision-making to make firms behave as green start-ups or reinvent themselves by adopting an ecopreneur orientation (Demirel et al., 2019) is more than a set of beliefs or sustainable values, sustainability-driven entrepreneurs (Parrish, 2010) need practice expertise to embody simultaneously sustainable and social purposes and competitive objectives, which means earning profits (Cohen, 2007; Dean, 2007).

Although ecopreneurs need to acknowledge that organization design is "an ongoing activity rather than a fixed outcome" (Parrish, 2010 p.513), this is supported by making trade-off choices beneath the rationale of social and sustainable objective maximizing. Furthermore, the achievement of the emerging sustainable venture forms will rest on whether the ecopreneurs are attempting to design organizations utilizing the design standards of traditional entrepreneurship and their strong sustainability orientation and prior business experience (Kuckertz, 2010; Hörisch, 2018).

Hence, within the sharing economy paradigm, multiple institutional logics endure and interact with one another, shaping the opportunities and constraints for ecopreneurship.

Ecopreneurs must use a process-oriented approach to properly balance these diverse views and establish a successful sharing economy platform. Therefore, this entails evaluating the interplay between its numerous components, such as market exchange logic, underlying technology, and social and psychological aspects that impact behaviour (Moroz, 2012).

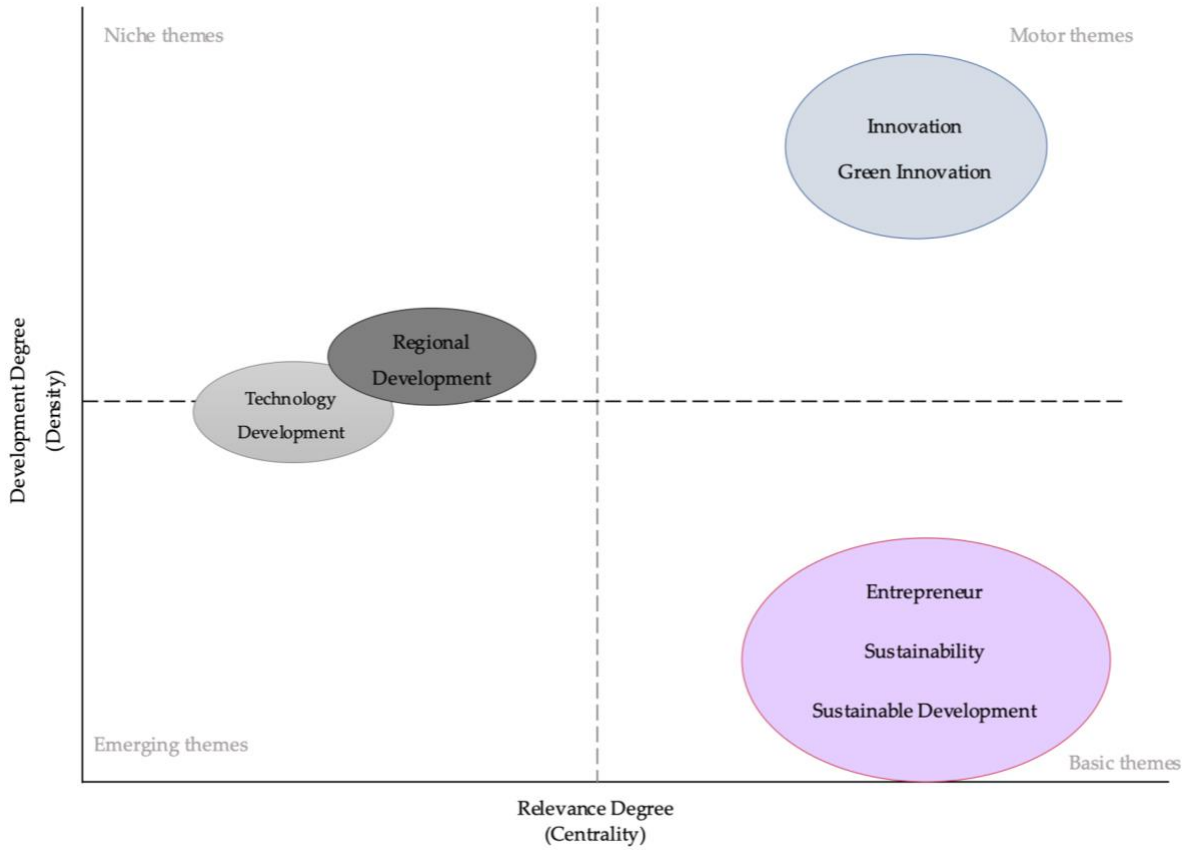
Therefore, it is under ecopreneurs' responsibility to ensure a favourable paradigm where firms interact with one another and are aware of their contributions to the circular economy by reducing waste and increasing the efficiency of resource use (Grinevich et al., 2019).

4.4. Co-Word

Co-word analysis consists of a content analysis technique that wields keywords extracted from papers to set up relationships and construct a conceptual form of a research field that narrows the conceptual structure of the domain (Zupic & Čater, 2015).

Taking into account that it can be applied to the keywords, document titles, full texts, or abstracts, the unit of analysis chosen is keywords plus (Aria, 2017; Baker et al., 2021; Emich et al., 2020).

Figure 10: Ecopreneurship research field Thematic Map



Considering **Figure 10**, a thematic map developed with *biblioshiny* software emerged as a result of a systematic review of relevant material, allowing identification of major themes and trends in ecopreneurship.

Particularly, in the top right quadrant are included motor themes due to their considerable centrality and density, such as Innovation and Green Innovation. These subjects are therefore strategic and are likely to be studied methodically and over time by a specific group of academics.

Second, the bottom right quadrant is considered the major theme, but the density of internal linkages is considerably low. Therefore, this may indicate the birth of a new set of research challenges, such as topics that explore `Entrepreneurship' and `Sustainable' and are included in Sustainable Development research fields, such as Ecopreneurship. Third, emerging or endangered themes are absent, and fourthly, the only theme that can be considered is regional development.

Several authors have argued that business innovation may effectively tackle environmental challenges through the implementation of ecological innovations. Such innovations have been variously labelled as eco-innovation (de Jesus et al., 2019; Schaltegger, 2011), entrepreneurial innovations (Galkina, 2016), green innovation (Hall et al., 2019; Schaltegger, 2011), collaborative innovation (DiVito, 2017; Volkmann et al., 2021), and innovation ecosystems (Bakry et al., 2022).

Firms must guarantee that their solutions are not just creative but also disruptive in a VUCA paradigm defined by volatility, uncertainty, complexity, and ambiguity. By requiring new development opportunities and enhancing a company's reputation, eco-innovation will help reduce financial costs while improving local performance. However, it will also strengthen efforts to reduce the environmental impacts of production processes, increase nature's resistance to environmental stresses, and achieve more efficient and responsible use of natural resources (de Jesus et al., 2019).

Regional economic revitalization and rural development are encouraged by ecopreneurial practices. This entails collaboration among businesses, governments, and communities to address issues while fostering sustainability and growth. Thus, this sort of partnership can offer guidance and provide resources to help entrepreneurs get started and expand their businesses(de Bruin, 2016; Schaltegger, 2011; Cunningham et al., 2022; Njs et al., 2020).

Technology development represents a critical component of Ecopreneurship as it provides ecopreneurs with the tools they need to foster environmentally responsible firm growth. Therefore, Green technology development, such as pathogen detection technology for sustainable forestry, has the potential to dramatically enhance the sustainability of different industries, including forestry (Hall et al., 2019).

Building upon ecopreneurs' weight on government regulatory practices regarding eco-technology, this innovation should “disrupt and render established technical and production competencies obsolete” (Clark, 1985). Nevertheless, the successful adoption of green technology needs governmental backing; authorities must foster an environment favourable to the development and acceptance of green technology, adding to the expansion of ecopreneurial activities (Hall et al., 2019). Overall, the core issue for green tech ventures is anchored less on

"green technology development" and more on the wider green innovation process, which endorses cost reduction and makes it simple for ecopreneurs to embrace new sustainable business models (Hall et al., 2019).

5. Discussion and Future Research

Through this analysis, a discussion of four directions that may trigger further research was uncovered (identified in **Figure 11)**.

Figure 11:Ecopreneurship Future Research directions agenda

5.1. Future research avenues regarding entrepreneurial orientation

Entrepreneurial orientation (EO) has been widely investigated, revealing that it has been associated with a variety of outcomes, including business performance, innovation, and competitiveness (DiVito, 2017). Then, organizations with a strong EO, therefore, appear to be more likely to be innovative and proactive in terms of sustainability and social responsibility (Vedula et al., 2022).

However, research on the link between EO and environmental collaboration has been negligible, particularly on how this relationship may change in different circumstances, such as

emerging markets, within multinational or local firms, depending on which sector. Future research might examine, first, the connection between EO and sustainability decision trade-offs in businesses apart from sustainable fashion; second, the role of EO in encouraging long-term entrepreneurship; and third, the effect of pressure from stakeholders on EO and sustainability decision-making. Then, it would empower us to grasp the findings' generalizability and relevance to different industries.

Although there is a huge gap in understanding the query, would entrepreneurial orientation be leveraged for social and sustainable benefit considering several different contexts? And why does entrepreneurial orientation condition environmental collaboration as a critical aspect for the future of ecopreneurship knowledge? The starting point should be examining the causes and forces that evolved this relationship, along with the opportunities and obstacles brought about by this collaboration. According to Covin (1991), it is crucial to explore the interplay between entrepreneurial orientation and environmental collaboration depending on a company's sector, location, or cultural background. For instance, a sustainable fashion enterprise may face different challenges and opportunities than a renewable energy company operating in a developing country. By scrutinizing the specific circumstances in which this relationship operates, academia can gain a deeper understanding of how to promote sustainable and socially responsible practices across diverse business environments.

Likewise, it would be beneficial to examine how this connection impacts financial performance and the wider environment and to determine how it may be fostered and maintained. Even though it´s relevant to study the convergence of these two categories and assess how social cause interest and entrepreneurial attitude impact the establishment and success of social and environmental initiatives; and how the confluence of social cause interest and entrepreneurial mentality impacts the use of technology and innovation to address social and environmental concerns.

5.2. Future research avenues regarding the relationship between venture capital and ecopreneurship

It has commonly been assumed that start-ups that acquire venture capital funding outperform those that do not in terms of growth, profitability, and innovation (Mrkajic et al., 2019). According to Dong et al. (2021), this correlation is established since venture capitalists contribute financially and provide knowledge that enables enterprises to overcome hurdles to environmental innovation; however, researchers may focus their attention on understanding to what extent firms could benefit from venture capitalists' experience by assisting them in developing and implementing environmental management systems.

Therefore, it´s proposed that governments should focus on encouraging venture capital investment with tax and subsidy incentives (such as carbon pricing) to foster economic growth and environmental sustainability. Extending these results further, by performing a cross-country analysis, researchers shall seek to answer the following questions: How will the relationship between venture capital investment and ecopreneurship unfold as the demand for environmentally friendly products and services escalates? To each extent will policymakers hinder or boost environmentally friendly firms by promoting venture capital investment? Which specific policies and regulations are more effective in supporting ecopreneurial action? Hence, the cleantech innovation process is complex and involves several parties, such as ecopreneurs, investors, and governments. As a result, for cleantech businesses to succeed, a deep understanding of the finance-innovation-policy nexus is required.

However, there are still many avenues for further investigation in this area sub-stream, such as the creation of standardized ESG (environmental, social, and governance) measurement and reporting standards, another area for scientific enhancement on this field`s agenda. Additional research is indispensable to examine the link between ESG factors and startup growth, while also trying to determine whether investors might utilize ESG variables to make more informed investment decisions.

5.3. Future research avenues regarding the impact of Ecopreneurship on economic performance

Ecopreneurship might considerably impact economic development, particularly in rural regions, and may assist in creating employment, boosting productivity, and promoting economic growth (Vedula et al., 2022).

Accordingly, further research may be undertaken on the following topics to examine the performance of educational programs in various situations and uncover the characteristics that influence the fostering of local economic growth: different sorts of university programs evaluation (entrepreneurship centres, courses, and business plan competitions); examine the effectiveness of various sorts of university programs in encouraging ecopreneurship, such as incubators, accelerators, and hackathons; and finally, cross-region and cross-country comparisons of university programs; and finally, how such programs affect regional economic growth, job creation, and social and environmental sustainability.

Extending these findings further, establishing the possibility of a public-private partnership that brings together the knowledge and resources of both the public and private sectors. Thus, it must be examined the elements that contribute to the effectiveness of public-private partnerships in encouraging ecopreneurship, as well as the challenges and constraints of such collaborations and recognizing the features of entrepreneurial groups and their relevance to local economic development.

5.4. Future research avenues regarding the market and consumer research on Ecopreneurship

Sustainable consumer behaviour seems crucial to accomplishing sustainability goals, and marketing could influence customer behaviour towards a more ecopreneurial paradigm(Davies et al., 2020).

A detailed analysis might investigate the drivers of sustainable behaviour, the design of sustainable products and services, the establishment of sustainable consumption patterns, and how marketing can be utilized to influence these psychological and social factors that drive sustainable behaviour among consumers. There is still room for researchers to inquire about the

importance of comprehending the barriers to sustainable behaviour and how these barriers can be overcome through marketing interventions.

Whilst the necessity of instilling ecopreneurial consumer habits in consumers cannot be overstated, how ecopreneurs can support behavioural change, nurture the embedding of ecopreneurial culture in daily life, and how to develop products and services that are both profitable and sustainable friendly remain tough queries.

This is not an easy undertaking since it involves a thorough grasp of different products and services environmental and social repercussions. In this regard, extensive study has been performed on the necessity for a life-cycle approach to the manufacture of sustainable products; however, further research is required to better explain how ecopreneurs successfully apply this strategy into practice and how it may be scaled up to have a large influence on the economy as a whole.

Besides, the existing qualitative methodologies remain limited in their ability to convey the various issues that entrepreneurs confront while establishing long-term firms. Accordingly, additional research should focus on developing new qualitative approaches for capturing these challenges and providing a more comprehensive understanding of environmentally friendly enterprises.

Furthermore, sustainable product creation necessitates the examination of both internal and external drivers, such as organizational culture, stakeholder pressures, regulatory frameworks, and customer demand. Additionally, it is essential to conduct case studies to scrutinize the impact of sustainable product development on company performance, encompassing measures such as profitability, market share, and customer loyalty, while evaluating the potential interrelation between sustainable product development and other aspects of sustainable business such as sustainable business model development, supply chain management, and stakeholder engagement.

Given the evolving nature of the ecopreneurship domain, it is imperative to discern prospective research avenues that can enhance our comprehension of ecopreneurship and its

ramifications for the environment and society. Considering that **Table 4** outlines pertinent inquiries related to ecopreneurship research.

Table 4: Ecopreneurship: future research trends and research question

Future Research Trends	Research Questions
Entrepreneurial orientation	What is the role of entrepreneurial orientation in promoting long-term entrepreneurship? How does pressure from stakeholders affect entrepreneurial orientation and sustainability decision-making? How does entrepreneurial orientation condition environmental collaboration in different contexts?
Relationship between venture capital and ecopreneurship	To what extent can firms benefit from venture capitalists' experience in developing and implementing environmental management systems? How will the relationship between venture capital investment and ecopreneurship evolve as the demand for environmentally friendly products and services escalates? How can governments promote venture capital investment in eco-friendly firms? How can standardized ESG measurement and reporting standards be utilized to assess ESG factors and startup growth?
The impact of Ecopreneurship on economic performance	How effective are different sorts of university programs in encouraging ecopreneurship? What are the characteristics that influence the fostering of local economic growth through ecopreneurship? What contributes to the effectiveness of public-private partnerships in encouraging ecopreneurship, and what are the challenges and constraints of such collaborations?
Market and Consumer Research on Ecopreneurship	What are the factors that influence consumers' purchase decisions of eco-friendly products and services? How can firms effectively market eco-friendly products and services to consumers? How can firms balance profit-making with environmental and social responsibility in their business strategies ?

6. Conclusion

The research field of ecopreneurship is an emerging area of sustainable entrepreneurship that has received prominence as a method of developing sustainable businesses that support sustainable development by combining environmental, social, and economic objectives that address global concerns such as environmental degradation and climate change.

The existing literature yields valuable insights into the ecopreneurship field by offering guidance regarding the ecopreneur definition and considering critical factors such as their prior knowledge, entrepreneurial intention for sustainability, desired value creation, and perceived business support. Also, Hall's (2010) paper is widely considered a pioneering work in this subject since it emphasizes the connection between sustainable development and entrepreneurship and stresses the importance of recognizing the hurdles that ecopreneurs confront in terms of access to resources, expertise, networks, and finance. Furthermore, his work emphasizes the value of information spillovers and industry life cycles in ecopreneurship, which may assist entrepreneurs in making educated decisions regarding the market entrance and development strategies.

This thesis concludes that the ecopreneurial landscape to certain extent impacted by cultural norms and social conventions on risk-taking, inventiveness, and environmental behaviour. As a result, enterprises that use sustainable business methods outperform their competition and achieve a competitive advantage; such organizations are perceived as authentic by stakeholders, resulting in a better perception and reputation.

Building upon, in an ecopreneurial context, examining market imperfections is the source for novel entrepreneurial ideas and creating laws that address them. However, much remains to be discovered in this field, research might look at the link between entrepreneurial orientation (EO) and environmental collaboration across a wide range of different industries and within the same industry among different firms. Second, it can explore the link between venture capital investment and ecopreneurship, including the efficiency of various rules and regulations in promoting ecopreneurial action.

Therefore, more study is needed to investigate the influence of ecopreneurship on economic performance, particularly in rural areas, as well as the function of university-linked programs in developing long-term entrepreneurship. Finally, it's necessary to investigate and establish standardized ESG measurement and reporting standards to identify essential ESG aspects for investors and start-ups.

Finally, this dissertation has several limitations that must be acknowledged. Specifically, due to the novelty of the ecopreneurship area, the number of publications reviewed in this thesis is relatively small and the exclusive employment of qualitative data and the absence of any quantitative empirical data may limit the generalizability of the findings to a wider population. As such, when attempting to apply the findings to different industries or businesses, it is important to be cautious. Additionally, the limitations of bibliometric research arise from the variability of human judgement and the properties of the database employed and the criteria used to cure data.

7. References

Aldrich, H. E., & Fiol, C. M. (2007). Fools Rush in? The Institutional Context of Industry Creation*. In Á. Cuervo, D. Ribeiro, & S. Roig (Eds.), *Entrepreneurship* (pp. 105–127). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-48543-8_5

Ambec, S., & Lanoie, P. (2008). Does It Pay to Be Green? A Systematic Overview. *Academy of Management Perspectives*, *22*(4), 45–62. https://doi.org/10.5465/amp.2008.35590353

Anderson, A. R., Drakopoulou Dodd, S., & Jack, S. L. (2012). Entrepreneurship as connecting: Some implications for theorising and practice. *Management Decision*, *50*(5), 958–971. https://doi.org/10.1108/00251741211227708

Anderson, M. H., & Lemken, R. K. (2023). Citation Context Analysis as a Method for Conducting Rigorous and Impactful Literature Reviews. *Organizational Research Methods*, *26*(1), 77–106. https://doi.org/10.1177/1094428120969905

Bouguerra, A., Hughes, M., Cakir, M. S., & Tatoglu, E. (2023). Linking Entrepreneurial Orientation to Environmental Collaboration: A Stakeholder Theory and Evidence from Multinational Companies in an Emerging Market. *British Journal of Management*, *34*(1), 487–511. https://doi.org/10.1111/1467-8551.12590

Cohen, B. (2006). Sustainable valley entrepreneurial ecosystems. *Business Strategy and the Environment*, *15*(1), 1–14. https://doi.org/10.1002/bse.428

Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, *22*(1), 29–49. https://doi.org/10.1016/j.jbusvent.2004.12.001

Coudounaris, D. N., Orero-Blat, M., & Rodríguez-García, M. (2020). Corrigendum to "Three decades of subsidiary exits: Parent firm financial performance and moderators" [J. Bus. Res. 110 (2020) 408–422]. *Journal of Business Research*, *114*, 312. https://doi.org/10.1016/j.jbusres.2020.04.033

Covin, J. G., & Slevin, D. P. (1991). A Conceptual Model of Entrepreneurship as Firm Behavior. *Entrepreneurship Theory and Practice*, *16*(1), 7–26. https://doi.org/10.1177/104225879101600102

Criscuolo, C., & Menon, C. (2015). Environmental policies and risk finance in the green sector: Cross-country evidence. *Energy Policy*, *83*, 38–56. https://doi.org/10.1016/j.enpol.2015.03.023

Cunningham, J., Xiong, L., Hashim, H., & Yunis, M. S. (2022). Narrating the 'social': The evolving stories of Pakistan's social entrepreneurs. *Entrepreneurship & Regional Development*, *34*(7–8), 668–685. https://doi.org/10.1080/08985626.2022.2077990

Davies, I., Oates, C. J., Tynan, C., Carrigan, M., Casey, K., Heath, T., Henninger, C. E., Lichrou, M., McDonagh, P., McDonald, S., McKechnie, S., McLeay, F., O'Malley, L., & Wells, V. (2020). Seeking sustainable futures in marketing and consumer research. *European Journal of Marketing*, *54*(11), 2911–2939. https://doi.org/10.1108/EJM-02-2019-0144

De Clercq, D., & Voronov, M. (2011). Sustainability in entrepreneurship: A tale of two logics. *International Small Business Journal: Researching Entrepreneurship*, *29*(4), 322–344. https://doi.org/10.1177/0266242610372460

de Jesus, A., Antunes, P., Santos, R., & Mendonça, S. (2019). Eco-innovation pathways to a circular economy: Envisioning priorities through a Delphi approach. *Journal of Cleaner Production*, *228*, 1494–1513. https://doi.org/10.1016/j.jclepro.2019.04.049

de Lange, D., & Valliere, D. (2020). Sustainable firms and legitimacy: Corporate venture capital as an effective endorsement. *Journal of Small Business Management*, *58*(6), 1187–1220. https://doi.org/10.1080/00472778.2019.1681880

Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, *22*(1), 50–76. https://doi.org/10.1016/j.jbusvent.2005.09.003

Dhahri, S., & Omri, A. (2018). Entrepreneurship contribution to the three pillars of sustainable development: What does the evidence really say? *World Development*, *106*, 64–77. https://doi.org/10.1016/j.worlddev.2018.01.008

DiVito, L. (2017). Entrepreneurial orientation and its effect on sustainability decision tradeoffs: The case of sustainable fashion firms. *Journal of Business Venturing*, 569–587.

Dong, W., Li, Y., Lv, X., & Yu, C. (2021). How does venture capital spur the innovation of environmentally friendly firms? Evidence from China. *Energy Economics*, *103*, 105582. https://doi.org/10.1016/j.eneco.2021.105582

Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, *11*(2), 130–141. https://doi.org/10.1002/bse.323

Edmondson, A. C., & Mcmanus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review*, *32*(4), 1246–1264. https://doi.org/10.5465/amr.2007.26586086

Elkington, J. (1994). Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development. *California Management Review*, *36*(2), 90–100. https://doi.org/10.2307/41165746

Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone.

Gamble, E. N., & Muñoz, P. (2022). When Tax-Exempt Nonprofits Detract Value from Society. *Academy of Management Perspectives*, *36*(1), 50–92. https://doi.org/10.5465/amp.2018.0027

Gardiner Means & Berle. (1991). *The Modern Corporation and Private Property* (0 ed.). Routledge. https://doi.org/10.4324/9781315133188

Gibbs, D. (2006). Sustainability Entrepreneurs, Ecopreneurs and the Development of a Sustainable Economy. *Greener Management International*, *2006*(55), 63–78. https://doi.org/10.9774/GLEAF.3062.2006.au.00007

Hall, J. K., Daneke, G. A., & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing*, *25*(5), 439–448. https://doi.org/10.1016/j.jbusvent.2010.01.002

Hockerts, K., & Wüstenhagen, R. (2010). Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. *Journal of Business Venturing*, *25*(5), 481–492. https://doi.org/10.1016/j.jbusvent.2009.07.005

Hoogendoorn, B., van der Zwan, P., & Thurik, R. (2020). Goal heterogeneity at start-up: Are greener start-ups more innovative? *Research Policy*, *49*(10), 104061. https://doi.org/10.1016/j.respol.2020.104061

Hörisch, J., Kollat, J., & Brieger, S. A. (2017). What influences environmental entrepreneurship? A multilevel analysis of the determinants of entrepreneurs' environmental orientation. *Small Business Economics*, *48*(1), 47–69. https://doi.org/10.1007/s11187-016-9765-2

Johnsen, C. G., Olaison, L., & Sørensen, B. M. (2018). Put Your Style at Stake: A New Use of Sustainable Entrepreneurship. *Organization Studies*, *39*(2–3), 397–415. https://doi.org/10.1177/0170840617717551

Kearins, K., Collins, E., & Tregidga, H. (2010). Beyond Corporate Environmental Management to a Consideration of Nature in Visionary Small Enterprise. *Business & Society*, *49*(3), 512–547. https://doi.org/10.1177/0007650310368988

Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *The Academy of Management Review*, *21*(1), 135. https://doi.org/10.2307/258632

Mair, J., & Noboa, E. (2004). Social Entrepreneurship: How Intentions to Create a Social Enterprise Get Formed. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.462283

Mansouri, S., & Momtaz, P. P. (2022). Financing sustainable entrepreneurship: ESG measurement, valuation, and performance. *Journal of Business Venturing*, *37*(6), 106258. https://doi.org/10.1016/j.jbusvent.2022.106258

Meek, W. R., Pacheco, D. F., & York, J. G. (2010). The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context. *Journal of Business Venturing*, *25*(5), 493–509. https://doi.org/10.1016/j.jbusvent.2009.09.007

Muñoz, P., & Dimov, D. (2015a). The call of the whole in understanding the development of sustainable ventures. *Journal of Business Venturing*, *30*(4), 632–654. https://doi.org/10.1016/j.jbusvent.2014.07.012

Muñoz, P., & Dimov, D. (2015b). The call of the whole in understanding the development of sustainable ventures. *Journal of Business Venturing*, *30*(4), 632–654. https://doi.org/10.1016/j.jbusvent.2014.07.012

Pacheco, D. F., Dean, T. J., & Payne, D. S. (2010). Escaping the green prison: Entrepreneurship and the creation of opportunities for sustainable development. *Journal of Business Venturing*, *25*(5), 464–480. https://doi.org/10.1016/j.jbusvent.2009.07.006

Parrish, B. D. (2010). Sustainability-driven entrepreneurship: Principles of organization design. *Journal of Business Venturing*, *25*(5), 510–523. https://doi.org/10.1016/j.jbusvent.2009.05.005

Patzelt, H., & Shepherd, D. A. (2011). Recognizing Opportunities for Sustainable Development. *Entrepreneurship Theory and Practice*, *35*(4), 631–652. https://doi.org/10.1111/j.1540-6520.2010.00386.x

Poldner, K., & Veenswijk, M. (2011). ModaFusion on the global catwalk: A narrative approach to studying the ethical fashion industry. *International Journal of Entrepreneurship and Small Business*, *14*(2), 230–244. https://doi.org/10.1504/IJESB.2011.042721

Sarkis, J., & Cordeiro, J. J. (2001). An empirical evaluation of environmental efficiencies and firm performance: Pollution prevention versus end-of-pipe practice. *European Journal of Operational Research*, *135*(1), 102–113. https://doi.org/10.1016/S0377-2217(00)00306-4

Shane, S., & Venkataraman, S. (2000). The Promise of Enterpreneurship as a Field of Research. *The Academy of Management Review*, *25*(1), 217. https://doi.org/10.2307/259271

Stam, E. (2015). Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique. *European Planning Studies*, *23*(9), 1759–1769. https://doi.org/10.1080/09654313.2015.1061484

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review*, *20*(3), 571. https://doi.org/10.2307/258788

Suckert, L. (2019). Playing the Double Game: How Ecopreneurs Cope with Opposing Field Logics in Moralized Markets. In S. Schiller-Merkens & P. Balsiger (Eds.), *The Contested Moralities of Markets* (Vol. 63, pp. 107–126). Emerald Publishing Limited. https://doi.org/10.1108/S0733-558X20190000063014

Tarnanidis, T., Papathanasiou, J., & Subeniotis, D. (2019). How Far the TBL Concept of Sustainable Entrepreneurship Extends Beyond the Various Sustainability Regulations: Can

Greek Food Manufacturing Enterprises Sustain Their Hybrid Nature Over Time? *Journal of Business Ethics*, *154*(3), 829–846. https://doi.org/10.1007/s10551-017-3443-4

Truong, Y., & Nagy, B. G. (2021). Nascent ventures' green initiatives and angel investor judgments of legitimacy and funding. *Small Business Economics*, *57*(4), 1801–1818. https://doi.org/10.1007/s11187-020-00373-5

Vedula, S., Doblinger, C., Pacheco, D., York, J. G., Bacq, S., Russo, M. V., & Dean, T. J. (2022). Entrepreneurship for the Public Good: A Review, Critique, and Path Forward for Social and Environmental Entrepreneurship Research. *Academy of Management Annals*, *16*(1), 391–425. https://doi.org/10.5465/annals.2019.0143

York, J. G., & Venkataraman, S. (2010). The entrepreneur–environment nexus: Uncertainty, innovation, and allocation. *Journal of Business Venturing*, *25*(5), 449–463. https://doi.org/10.1016/j.jbusvent.2009.07.007

Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, *24*(5), 519–532. https://doi.org/10.1016/j.jbusvent.2008.04.007

Zeng, J., Ren, J., & Ning, Z. (2022). Mediating effect of corporate social responsibility-based entrepreneurship on environmental improvement: Evidence from 475 heavy-polluting enterprises. *Journal of Business Research*, *149*, 506–517. https://doi.org/10.1016/j.jbusres.2022.05.014

Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, *18*(3), 429–472.

8. Appendixes

Authors	Title	Journal	Volume	Year	DOI
Aldrich, H. E., & Fiol, C. M.	Fools Rush in? The Institutional Context of Industry Creation*	Entrepreneurship	-	2007	10.1007/978-3-540-48543-8_5
Ambec, S., & Lanoie, P.	Does It Pay to Be Green? A Systematic Overview	Academy of Management Perspectives	22(4)	2008	10.5465/amp.2008.35590353
Anderson, A. R., Drakopoulou Dodd, S., & Jack, S. L.	Entrepreneurship as connecting: Some implications for theorising and practice	Management Decision	50(5)	2012	10.1108/00251741211227708
Anderson, M. H., & Lemken, R. K.	Citation Context Analysis as a Method for Conducting Rigorous and Impactful Literature Reviews	Organizational Research Methods	26(1)	2023	10.1177/1094428120969905
Bouguerra, A., Hughes, M., Cakir, M. S., & Tatoglu, E.	Linking Entrepreneurial Orientation to Environmental Collaboration: A Stakeholder Theory and Evidence from Multinational Companies in an Emerging Market	British Journal of Management	34(1)	2023	10.1111/1467-8551.12590
Cohen, B.	Sustainable valley entrepreneurial ecosystems	Business Strategy and the Environment	15(1)	2006	10.1002/bse.428

Authors	Title	Journal	Volume	Year	DOI
Cohen, B., & Winn, M. I.	Market imperfections, opportunity and sustainable entrepreneurship	Journal of Business Venturing	22(1)	2007	10.1016/j.jbusvent.2004.12.001
Coudounaris, D. N., Orero-Blat, M., & Rodríguez-García, M.	Corrigendum to "Three decades of subsidiary exits: Parent firm financial performance and moderators"	Journal of Business Research	114	2020	10.1016/j.jbusres.2020.04.033
Covin, J. G., & Slevin, D. P.	A Conceptual Model of Entrepreneurship as Firm Behavior	Entrepreneurship Theory and Practice	16(1)	1991	10.1177/104225879101600102
Criscuolo, C., & Menon, C.	Environmental policies and risk finance in the green sector: Cross-country evidence	Energy Policy	83	2015	10.1016/j.enpol.2015.03.023
Cunningham, J., Xiong, L., Hashim, H., & Yunis, M. S.	Narrating the 'social': The evolving stories of Pakistan's social entrepreneurs	Entrepreneurship & Regional Development	34(7–8)	2022	10.1080/08985626.2022.2077990
Davies, I.	Seeking sustainable futures in marketing and consumer research	European Journal of Marketing	54(11)	2020	10.1108/EJM-02-2019-0144
De Clercq, D.	Sustainability in entrepreneurship: A tale of two logics	International Small Business Journal	29(4)	2011	10.1177/0266242610372460

Authors	Title	Journal	Volume	Year	DOI
de Jesus, A.	Eco-innovation pathways to a circular economy: Envisioning priorities through a Delphi approach	Journal of Cleaner Production	228	2019	10.1016/j.jclepro.2019.04.049
de Lange, D.	Sustainable firms and legitimacy: Corporate venture capital as an effective endorsement	Journal of Small Business Management	58(6)	2020	10.1080/00472778.2019.1681880
Dean, T. J.	Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through...	Journal of Business Venturing	22(1)	2007	10.1016/j.jbusvent.2005.09.003
Dhahri, S.	Entrepreneurship contribution to the three pillars of sustainable development: What does...	World Development	106	2018	10.1016/j.worlddev.2018.01.008
DiVito, L.	Entrepreneurial orientation and its effect on sustainability decision tradeoffs: The case of...	Journal of Business Venturing		2017	
Dong, W.	How does venture capital spur the innovation of environmentally friendly firms? Evidence from...	Energy Economics	103	2021	10.1016/j.eneco.2021.105582
Dyllick, T.	Beyond the business case for corporate sustainability	Business Strategy and the Environment	11(2)	2002	10.1002/bse.323
Edmondson, A. C.	Methodological fit in management field research	Academy of Management Review	32(4)	2007	10.5465/amr.2007.26586086
Elkington, J.	Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development	California Management Review	36(2)	1994	10.2307/41165746

Authors	Title	Journal	Volume	Year	DOI
Elkington, J.	Cannibals with forks: The triple bottom line of 21st century business	Capstone		1997	
Gamble, E. N.	When Tax-Exempt Nonprofits Detract Value from Society	Academy of Management Perspectives	36(1)	2022	10.5465/amp.2018.0027
Gibbs, D.	Sustainability Entrepreneurs, Ecopreneurs and the Development of a Sustainable Economy	Greener Management International	(55)	2006	10.9774/GLEAF.3062.2006.au.00007
Hall, J. K.	Sustainable development and entrepreneurship: Past contributions and future directions	Journal of Business Venturing	25 (5)	2010	10.1016/j.jbusvent.2010.01.002
Hockerts, K.	Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainableentrepreneurship	Journal of Business Venturing	25	2010	10.1016/j.jbusvent.2009.07.005
Hoogendoorn, B.	Goal heterogeneity at start-up: Are greener start-ups more innovative?	Research Policy	49 (10)	2020	10.1016/j.respol.2020.104061
Hörisch, J.	What influences environmental entrepreneurship? A multilevelanalysis of the determinants of entrepreneurs' environmental orientation	Small Business Economics	48 (1)	2017	10.1007/s11187-016-9765-2

Authors	Title	Journal	Volume	Year	DOI
Johnsen, C. G.	Put Your Style at Stake: A New Use of Sustainable Entrepreneurhip	Organization Studies	39	2018	10.1177/0170840617717551
Kearins, K.	Beyond Corporate Environmental Management to a Consideration of Nature in Visionary Small Enterprise	Business & Society	49 (3)	2010	10.1177/0007650310368988
Lumpkin, G. T., & Dess, G. G.	Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance	The Academy of Management Review	21(1)	1996	https://doi.org/10.2307/258632
Mair, J., & Noboa, E.	Social Entrepreneurship: How Intentions to Create a Social Enterprise Get Formed	SSRN Electronic Journal		2004	https://doi.org/10.2139/ssrn.462283
Mansouri, S., & Momtaz, P. P.	Financing sustainable entrepreneurship: ESG measurement, valuation, and performance	Journal of Business Venturing	37(6)	2022	https://doi.org/10.1016/j.jbusvent.2022.106258
Meek, W. R., Pacheco, D. F., & York, J. G.	The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context	Journal of Business Venturing	25(5)	2010	https://doi.org/10.1016/j.jbusvent.2009.09.007
Muñoz, P., & Dimov, D.	The call of the whole in understanding the development of sustainable ventures	Journal of Business Venturing	30(4)	2015	https://doi.org/10.1016/j.jbusvent.2014.07.012
Pacheco, D. F., Dean, T. J., & Payne, D. S.	Escaping the green prison: Entrepreneurship and the creation of opportunities for sustainable development	Journal of Business Venturing	25(5)	2010	https://doi.org/10.1016/j.jbusvent.2009.07.006

Authors	Title	Journal	Volume	Year	DOI
Parrish, B. D.	Sustainability-driven entrepreneurship: Principles of organization design	Journal of Business Venturing	25(5)	2010	https://doi.org/10.1016/j.jbusvent.2009.05.005
Patzelt, H., & Shepherd, D. A.	Recognizing Opportunities for Sustainable Development	Entrepreneurship Theory and Practice	35(4)	2011	https://doi.org/10.1111/j.1540-6520.2010.00386.x
Poldner, K., & Veenswijk, M.	ModaFusion on the global catwalk: A narrative approach to studying the ethical fashion industry	International Journal of Entrepreneurship and Small Business	14(2)	2011	https://doi.org/10.1504/IJESB.2011.042721
Sarkis, J., & Cordeiro, J. J.	An empirical evaluation of environmental efficiencies and firm performance: Pollution prevention versus end-of-pipe practice	European Journal of Operational Research	135(1)	2001	https://doi.org/10.1016/S0377-2217(00)00306-4
Schaltegger, S., Christ, K. L., Wenzig, J., & Burritt, R. L.	Corporate sustainability management accounting and multi‐level links for sustainability – A systematic review	International Journal of Management Reviews	24(4)	2022	https://doi.org/10.1111/ijmr.12288
Shane, S., & Venkataraman, S.	The Promise of Entrepreneurship as a Field of Research	The Academy of Management Review	25(1)	2000	https://doi.org/10.2307/259271
Stam, E.	Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique	European Planning Studies	23(9)	2015	https://doi.org/10.1080/09654313.2015.1061484

Authors	Title	Journal	Volume	Year	DOI
Suchman, M. C.	Managing Legitimacy: Strategic and Institutional Approaches	The Academy of Management Review	20(3)	1995	https://doi.org/10.2307/258788
Suckert, L.	Playing the Double Game: How Ecopreneurs Cope with Opposing Field Logics in Moralized Markets	In S. Schiller-Merkens & P. Balsiger (Eds.), The Contested Moralities of Markets (Vol. 63, pp. 107–126)	N/A	2019	https://doi.org/10.1108/S0733-558X20190000063014
Tarnanidis, T., Papathanasiou, J., & Subeniotis, D.	How Far the TBL Concept of Sustainable Entrepreneurship Extends Beyond the Various Sustainability Regulations: Can Greek Food Manufacturing Enterprises Sustain Their Hybrid Nature Over Time?	Journal of Business Ethics	154(3)	2019	https://doi.org/10.1007/s10551-017-3443-4
Truong, Y., & Nagy, B. G.	Nascent ventures' green initiatives and angel investor judgments of legitimacy and funding	Small Business Economics	57(4)	2021	https://doi.org/10.1007/s11187-020-00373-5
Khizar, H. .	Addressing the conceptualization and measurement challenges of sustainability orientation: A systematic review and research agenda	Journal of Business Research	142	2022	https://doi.org/10.1016/j.jbusres.2022.01.029
Vedula, S.	Entrepreneurship for the Public Good: A Review, Critique, and Path Forward for Social and Environmental Entrepreneurship Research	Academy of Management Annals	16(1)	2022	https://doi.org/10.5465/annals.2019.0143

Authors	Title	Journal	Volume	Year	DOI
York, J. G.	The entrepreneur–environment nexus: Uncertainty, innovation, and allocation	Journal of Business Venturing	25(5)	2010	https://doi.org/10.1016/j.jbusvent.2009.07.007
Zahra, S. A.	A typology of social entrepreneurs: Motives, search processes and ethical challenges	Journal of Business Venturing	24(5)	2009	https://doi.org/10.1016/j.jbusvent.2008.04.007
Zeng, J., Ren, J., & Ning, Z.	Mediating effect of corporate social responsibility-based entrepreneurship on environmental improvement: Evidence from 475 heavy-polluting enterprises	Journal of Business Research	149	2022	https://doi.org/10.1016/j.jbusres.2022.05.014