processes

MDPI

Review

Sustainable Management of Manufacturing Processes: A Literature Review

Lasma Tiuncika * and Santa Bormane

Faculty of Social Sciences, Riga Stradins University, LV-1007 Riga, Latvia; santa.bormane@rsu.lv
* Correspondence: lasma.tiuncika@rsu.edu.lv

Abstract: Industrial economic activity is one of the primary causes of environmental degradation and a source of issues related to social inequality. Nevertheless, research has shown that the application of the sustainable entrepreneurship model can significantly improve environmental and social conditions while maintaining continuous and sustainable economic growth. Despite that, statistics show relatively low engagement in sustainable entrepreneurship, potentially due to a lack of expertise among entrepreneurs. Due to the low engagement, available sustainability performance metrics are not a relevant measurement tool. Thus, the purpose of this study is to identify a set of criteria that evaluate expertise levels in sustainable entrepreneurship within the manufacturing industry. Through the application of monographic and secondary data analysis methods, the authors carried out a literature review. The findings indicated that sustainable management is a key component to the triple-bottom-line (TBL) framework that is used as a conceptual basis for sustainable entrepreneurship. Additionally, the authors identified 19 criteria of sustainable entrepreneurship within four dimensions of sustainability (environmental, social, economic, and management). Despite the limitations, with a more refined literature review, the criteria could be applied as a comprehensive resource to estimate expertise in sustainable entrepreneurship in future studies on small and medium enterprises (SMEs).

Keywords: sustainability; sustainable development; sustainable entrepreneurship; sustainable management; sustainable production; triple-bottom-line approach

Citation: Tiuncika, L.; Bormane, S. Sustainable Management of Manufacturing Processes: A Literature Review. *Processes* **2024**, *12*, 1222. https://doi.org/10.3390/pr12061222

Academic Editor: Diane Mynors

Received: 17 May 2024
Revised: 10 June 2024
Accepted: 13 June 2024
Published: 14 June 2024

1. Introduction

Modern society is challenged by numerous environmental and social threats such as global warming, climate change, poverty, depletion of natural resources, and other issues that compromise further development. The current problems are attributed to industrial economic activity which continuously fails to respect the limitations of the planetary boundaries in an effort to meet the current needs [1]. As a result, the sustainability concept was introduced to balance the environmental, social, and economic dimensions that altogether are referred to as the triple-bottom-line (TBL) framework [2].

In recent years, the framework has been widely applied to entrepreneurial research due to the extensive benefits that sustainability-oriented entrepreneurship may potentially have in relation to sustainable development efforts. With respect to the theory, a concept of sustainable entrepreneurship was developed. It positions sustainable development as a business opportunity rather than a threat or an obstacle to entrepreneurial activities.

Despite the popularity of the topic, the clarity of the concept remains to be an issue among the researchers. The main reason was pointed out to be the disagreement among the definitions caused by concept complexity, uncertainty of the demands, and contextual differences [3]. Following the TBL framework, the general production procedures in sustainable entrepreneurship must adopt sustainability practices synchronously within each of the three domains—environmental, social, and economical—where performance in each is positioned above profit maximization [2].

In the environmental domain, the central focus is the planet; thus, beyond simply advocating for environmentally friendly behavior, the main goal is to address the negative externalities caused as a result of production. Optimization of production processes through reductions in material waste and carbon footprint, clean technologies, rational and responsible use of resources, and substitution of natural resources with renewables are some examples that a company can use to reverse ecological degradation and benefit environmental sustainability [4–6].

In the social domain, the central element is people; thus, companies are expected to protect human rights and empower social change through various social initiatives and cooperation with stakeholders. Most of the change can already be effected within companies by setting cultural norms through labor-inclusive workspaces, socially conscious treatment, and investment in employees [7,8].

In the economic domain, the central object will largely remain to be profit. Thus, actions must align with sustainability principles while maintaining revenue streams. This can be achieved through the identification of market imperfections and the promotion of innovative market solutions along with the delivery of functional products and respective maintenance services to reduce end-user consumption. At the policy level, companies should target the maximization of material and energy efficiency and transition toward a circular economy in an effort to close the resource loops [2,5].

Meeting TBL values is imperative in sustainable entrepreneurship [2], though not all researchers agree with this concept. For example, some also position culture as a pillar of sustainable entrepreneurship [9]. On the other hand, the ESG (environment, society, and governance) concept is often applied to measure the sustainability performance of enterprises [10,11]. As a revised TBL model, it considers three pillars—environment, social issues, and corporate governance—where governance refers to the top management's decisions on addressing sustainability concerns [12].

This example highlights the management's role in directing the organization's sustainability strategy and overall attitude, which can further impact sustainability efforts and outcomes [13–15]. Although financial and economic aspects are also considered within the ESG framework [16], authors argue that the economic dimension should be separated from environmental, social, or governance aspects. As a result, adding to the basis of the TBL framework, the management dimension must be considered as a separate aspect of the sustainable entrepreneurship concept.

Moreover, researchers have identified numerous advantages of sustainable entrepreneurship. There is evidence that the implementation of sustainability-oriented values at a firm level has positive implications for the environmental performance of employees [13,17]. Proactive engagement with stakeholders can benefit society in terms of sustainable living, health, and overall well-being. Additionally, social initiatives targeted at reducing negative impacts have been shown to deliver positive value for enterprises and society in terms of increased customer loyalty and strengthened competitive advantage [4,15].

However, these findings alone are not sufficient to promote the integration of sustainable entrepreneurship into current business processes. Although about 30% of enterprises undertake due diligence in all three dimensions of sustainability, only 3.7% of established and 3.6% of starting enterprises in the world put forward sustainability goals beyond financial profitability [2,18–20]. Thus, there is no substantial progress in the transition to more sustainable entrepreneurship practices.

Statistics indicate a lack of understanding of how to begin the transition towards sustainable entrepreneurship. Education not only fosters the desire for innovations but also helps detect market opportunities and tools that are necessary for the achievement of entrepreneurial goals [21,22]. Thus, the authors suggest that entrepreneurs have limited expertise in sustainable entrepreneurship, which is essential for the promotion of sustainable behaviors that contribute to a transition towards sustainable business practices.

The education issue also highlights the present research problem—the need for concept clarification and indicators of expertise in sustainable entrepreneurship. Since sustainable

entrepreneurship has only been adopted by a small percentage of companies, the assessment of sustainability performance may not be applicable to facilitate the transition process. First and foremost, it is rather important to understand the competence levels before developing a methodology to assist the transformation towards sustainable entrepreneurship. As a result, the main objective of this study is to develop a set of criteria that estimate the expertise levels in sustainable entrepreneurship.

The authors suggest that clarification of criteria would facilitate the adoption of the sustainable entrepreneurship model. This would determine whether the efforts are in line with the sustainability agenda and how radical changes must be made in current business practices. It has not yet been possible to tackle this issue because previous studies have primarily focused on preliminary research on interactions between different factors or the assessment of sustainability performance in general.

The present research is distinctive as it aims to fill the educational gap with the identified criteria that indicate expertise levels in sustainable entrepreneurship. As a result, this study contributes to the current literature by summarizing various factors that have been discovered in previous research in one place and providing future directions for studies on the progress and challenges of sustainable entrepreneurship model application procedures.

2. Materials and Methods

To achieve the objective of this study, monographic and secondary data analysis methods were applied in order to conduct a literature review. The review covered a careful and thorough examination of recent publications in sustainable entrepreneurship. Based on an analysis of the available literature on different aspects and factors associated with sustainable entrepreneurship, the main objective is to identify and group criteria that indicate the level of expertise in sustainable entrepreneurship. The present study serves as a basis for the second research phase, which focuses on the development of a metric system for the evaluation of expertise levels in sustainable entrepreneurship in further studies.

A monographic method was carried out to perform the primary literature review. The studies used in the review were selected based on the relevant keywords, timeframe, type of document, and language. The articles were selected from databases such as ScienceDirect, JSTOR, and ResearchGate according to keyword search terms “sustainability”, “sustainable entrepreneurship”, “sustainable business”, “sustainable management”, “green enterprise”, “green competencies”, “sustainable strategy”, “sustainable model”, “entrepreneurship”, “TBL”, “ESG”, “circular economy”, “resource optimization”, and “product functionality”. The articles were further filtered based on the year of publication to include articles published from 2019 to 2024.

All available and relevant publications were restricted to only peer-reviewed articles written in English. All irrelevant articles were further eliminated by reading titles and abstracts. After the complete reading of the remaining publications, 73 articles met the review criteria. Most of the publications were extracted from *The Journal of Cleaner Production*, followed by *Sustainability* (Switzerland). The publications were further used for literature analysis in sustainable entrepreneurship, including the review and collection of the latest findings regarding the various factors and their relationship to different aspects of sustainable entrepreneurship.

A secondary data analysis method was used to narrow down the numerous previously discovered factors to a single list of criteria that relate to the expertise level in sustainable entrepreneurship the best. In total, the authors identified 19 criteria and grouped them into four dimensions of sustainability—environment, social, economic, and management. Each of the criteria was defined through 2 to 3 performance-characterizing statements that could serve as a measurement method in further research.

With the present literature review, the authors aim to develop a self-report questionnaire matrix that estimates the expertise levels in sustainable entrepreneurship. The metric system is currently in the development process in the second research phase and will be applied to test the knowledge and expertise in sustainable entrepreneurship. In further re-

search phases, the authors will investigate the underlying conditions that prevent successful integration of the sustainable entrepreneurship model into manufacturing industries.

3. Results

3.1. Sustainable Management

The findings of the literature review indicate that the TBL approach is not sufficient to illustrate the sustainable entrepreneurship model. In theory, sustainable management is a vital contributor to sustainable development efforts in general and, therefore, presents as a key indicator of performance in sustainable entrepreneurship [23].

Research illustrates that corporate governance highly influences an organization's behavior, including sustainability reporting initiatives, and is significantly linked to the overall sustainability performance [23,24]. Overall, governance represents the top management's responsibility towards stakeholder interests, accountability, transparency, and fairness. Corporate governance is also reported to mediate social responsibility efforts and financial performance, in the sense that efforts tend to result in better financial outcomes [25]. Thus, it can be concluded that the top management, as an internal control mechanism, assures that all internal objectives related to sustainability are reached [23].

As a result, the authors suggest that management must be considered as a separate dimension in the sustainable entrepreneurship concept that may potentially regulate the performance in environmental, social, and economic dimensions. Figure 1 illustrates the comparison between the theoretical model presented by Farny and Binder and the authors' proposed model of sustainable entrepreneurship [3].

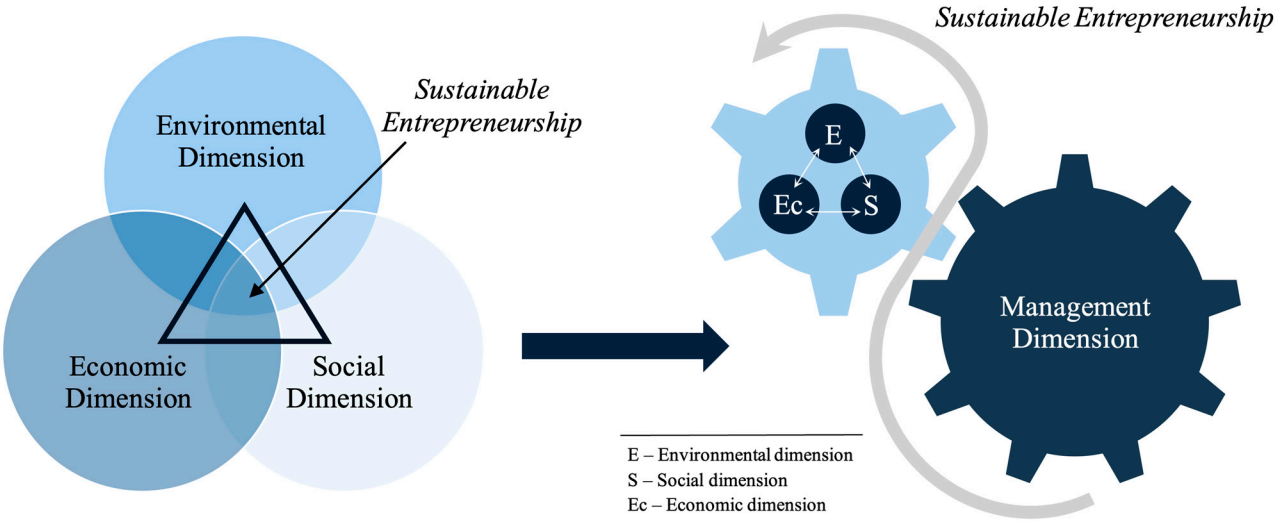

Figure 1. Comparison of the theoretical and proposed models of sustainable entrepreneurship.

The authors suggest that the relationship between sustainable management and general environmental, social, and economic sustainability performance generates the potential and success for sustainable entrepreneurship for three reasons. First, the locus of control of the top management; second, the relationship between the top management's actions and the outcomes at an operational level; and third, the resourcing and cooperative capabilities. Thus, sustainable management should not be merely viewed as a factor but as a separate dimension and a fundamental building block to the sustainable entrepreneurship theory.

3.1.1. The Locus of Control of the Top Management

The locus of control of the top management is expressed through the belief of to what extent the top management is in control of the business processes. By adapting Rotter's (1966) theory, the external locus of control points to the belief that the top management is not in control of consequences and performance resulting from business operations,

whereas the internal locus of control indicates that the top management fully controls business operations and therefore the consequences and performance [26].

So far, measuring the environmental, social, and economic performance indicators has been the commonly suggested way to estimate and explain sustainable entrepreneurship. Instead, research shows that there is a necessity to pay closer attention to managerial practices, especially in the manufacturing sector. The prerequisite to any type of action, whether it concerns environmental, social, or economic sustainability, is the management's strategic decision-making process. Any business activity is carried out through a sequence of planned and coordinated strategic actions and arises from deliberate leadership rather than being something that is a byproduct of external events. Following this logic, sustainable management serves as a critical driver of sustainable entrepreneurship, especially when the top management expresses a high internal locus of control [14,17].

As a result, it can be concluded that the integration of the sustainable entrepreneurship model into current business processes entails high levels of long-term commitment and support from the top management [13]. In addition to that, there is no other organizational level within a company that would have enough influence, knowledge, expertise, or action abilities to address and execute such a complex business model. Only the top management facilitates the implementation of strategic goals, allocates the resources, and sets organizational norms and standards that altogether direct the further identity, reputation, and success.

3.1.2. The Relationship between the Top Management Action and the Outcomes at an Operational Level

Corporate governance has been shown to have a critical role regarding the outcomes at an operational level [25]. For example, managerial practice can not only foster but also sabotage the integration of the sustainable entrepreneurship model into regular practice. Top management performance is an indispensable factor in an organization's functioning, and it regulates how well the administrative efforts translate to the operational level or to what extent they will actually be carried out in practice. For example, if the top management does not have an objective outlook on the company's culture and tends to falsely idealize the overall sustainability performance, any policy or sustainability initiatives will likely fail to reach the operational level [12,15].

Poor performance in sustainable management may also be reflected in the form of greenwashing—a misleading and deceptive tactic that is used to present the company and its products as more environmentally friendly than they are in reality. Usually, companies adopt different sustainability attributes and labels that falsely indicate environmental protection efforts [27]. As a result, their overall sustainability is compromised and requires a clear set of transparency and accountability standards specifically within the top management.

3.1.3. The Resourcing and Cooperative Capabilities

Another important aspect that must be considered in the sustainable entrepreneurship model is the management's relation to the overarching governance. If sustainable entrepreneurship is viewed as an entity within an ecosystem, then we can assume that there will be external stimuli that the entrepreneurs must respond to. In this case, the ecosystem consists of the company itself, governmental, international, and non-governmental institutions and organizations, stakeholders, consumers, and other relevant interested parties. Each plays a particular role in the functioning of an enterprise [1,21,28].

The institutional context provides standards and regulations that determine the production process of goods [5]. For example, the government lays normative regulations and implements new targeted policies that not only are legally binding to companies but also provide context to the sustainability demands [21,28,29]. The first responder to such legal demands will be the top management. A clear understanding of the overarching regulations within the top management will therefore determine the following sustainability efforts and proper integration of law into practice [5].

Governmental policy can also be perceived as an assistive guide towards sustainable entrepreneurship, especially for companies that have difficulties with taking proactive action, for example, due to financial or educational restrictions [2,8,29]. Thus, close cooperation with institutions must be maintained at all times and the company's engagement levels may directly point to the importance of sustainability within the top management.

3.2. Sustainable Entrepreneurship Criteria

The secondary data analysis revealed numerous factors that contribute to the understanding of sustainable entrepreneurship. To better understand and illustrate the indicators of sustainable entrepreneurship, the authors compiled the discovered factors and values within 19 criteria split among four subgroups of sustainable entrepreneurship—environmental, social, economic, and management dimensions (Figure 2). This approach helps to sufficiently cover the various aspects of sustainable entrepreneurship in one set of criteria.

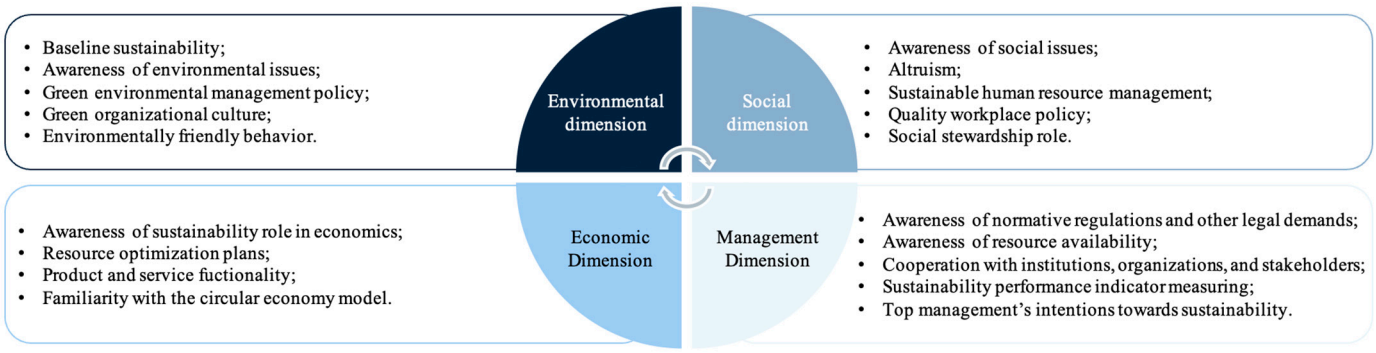

Figure 2. Sustainable entrepreneurship criteria.

3.2.1. Environmental Dimension

The focal point of the environmental dimension is the planet. Therefore, the environmental dimension within sustainable entrepreneurship is centered around the protection of ecological balance to improve environmental sustainability and ensure continuous resource availability for future generations. The aspects that determine the environmental performance in sustainable entrepreneurship can be organized into five criteria:

1. Baseline sustainability;
2. Awareness of environmental issues;
3. Green environmental management policy;
4. Green organizational culture;
5. Environmentally friendly behavior.

Overall, 20 articles (27%) touched upon specific aspects of business and production processes that are associated with the environmental dimension of sustainable entrepreneurship. Of all relevant publications, five articles covered factors associated with "baseline sustainability"; "awareness of environmental issues" as a sustainable entrepreneurship aspect was highlighted in five studies; "green environmental management policy" was the focus of three publications; "green organizational culture" was mentioned as a criterion for sustainable entrepreneurship in four studies; and "environmentally friendly behavior" in entrepreneurship was specifically discussed in three articles.

3.2.2. Social Dimension

The central element of the social dimension is people. Therefore, sustainable entrepreneurship should carry out business activities with respect to social equality, welfare, stability, and protection of human rights. The social responsibility aspects of sustainable entrepreneurship can be highlighted in the following five criteria:

1. Awareness of social issues;
2. Altruism;

3. Sustainable human resource management;
4. Quality workplace policy;
5. Social stewardship role.

With a minor overlap with the publications covering the environmental dimension, 17 articles (23%) covered sustainable entrepreneurship aspects that address social sustainability issues. "Awareness of social issues" as a part of sustainable entrepreneurship was identified in five articles; two articles covered "altruism" in depth as an important business aspect in relation to social sustainability; five articles discussed "sustainable human resource management" policy; "quality workplace policy" in the context of sustainable entrepreneurship was reviewed in two studies; and the importance of the acceptance of the "social stewardship role" in sustainable entrepreneurship was discussed in detail in three articles.

3.2.3. Economic Dimension

The main objective of the economic dimension in sustainable entrepreneurship is profit. Nonetheless, the objective is limited to the condition that economic growth must be sustainable and cannot be achieved on account of the exploitation of environmental or social resources. Sustainable entrepreneurship within the economic dimension can be outlined with the following four criteria:

1. Awareness of sustainability role in economics;
2. Resource optimization plans;
3. Product and service functionality;
4. Familiarity with the circular economy model.

The economic dimension is an essential part of any business activities and the identification of key aspects that contribute to the economic sustainability the strongest is a common consideration for most researchers. Nevertheless, only 17 articles (23%) provided a clear set of factors that serve as indicators for sustainable entrepreneurship. The "awareness of sustainability role in economics" was covered in four articles; "resource optimization plans" as an essential element to business was discussed in six articles; four studies covered "product and service functionality" in detail; and three provided statistical evidence for the "familiarity with the circular economy model" as a predictor of sustainable entrepreneurship.

3.2.4. Management Dimension

The management dimension is centered around strategic objectives and initiatives pushed forward by the top management to facilitate the employment of sustainability values within the company [13]. Although the management already plays a substantial role in each of the previously described criteria, the main distinction is the way in which each of the criteria is acquired and carried out. In other words, fulfilling the criteria of the social dimension results in social sustainability, whereas fulfilling the criteria of the management dimension results in the ability to carry out further actions designed to reach environmental, social, or economic sustainability objectives. As a result, sustainable management serves as a prerequisite for successfully carrying out further sustainability processes that contribute to sustainable entrepreneurship. Based on the literature, the expertise in sustainable management can be expressed through five criteria:

1. Awareness of normative regulations and other legal demands;
2. Awareness of resource availability;
3. Cooperation with institutions, organizations, and stakeholders;
4. Sustainability performance indicator measuring;
5. Top management's intentions towards sustainability.

The criteria of the management dimension were collected from the majority (22) of articles (30% of all). The "the awareness of normative regulations and other legal demands" was covered in four studies; five studies touched upon the "awareness of resource avail-

ability" as an aspect of sustainable entrepreneurship; the "cooperation with institutions, organizations, and stakeholders" criterion was highlighted in six articles; the "sustainability performance indicator measuring" and the associated criteria were researched by three studies; and, lastly, "top management's intentions towards sustainability" was mentioned as an important factor for sustainable entrepreneurship in four articles.

4. Discussion

Despite the vast literature on benefits and numerous legal obligations, the lack of a clear set of criteria and standards continues to delay the integration of sustainable entrepreneurship into current business practices. As a result, engagement rates are still relatively low, which calls for a deeper exploration of standards and criteria of sustainable entrepreneurship. Numerous measures exist that evaluate sustainability performance [30]. However, they are constricted by two limitations. First, due to concept clarity issues, measures do not provide a thorough evaluation of sustainable entrepreneurship. Second, in cases where sustainable entrepreneurship is only involved in the strategic planning process, applying such measures would not be entirely relevant as they do not explain what criteria the company is missing specifically to better facilitate the transition process.

To address the research problem, the authors identified 19 criteria among four sustainability dimensions—environmental, social, economic, and management—that can be used as indicative factors pointing to the understanding and expertise levels in sustainable entrepreneurship. With that, this research aims to fill not only the educational gap but also the lack of criteria to evaluate the expertise level in sustainable entrepreneurship.

The management dimension was added to the theoretical matrix based on the available literature-identified limitations of the TBL approach. The authors suggest that as a result of the locus of control effect, the impact that top management has on the business outcomes is high, and due to the resourcing and cooperative abilities, the management role has been overlooked in previous research with regard to TBL theory. Therefore, it must be considered as a separate aspect or value with regard to sustainable entrepreneurship and should be analyzed in relation to TBL values.

The authors propose that for a certain company to be defined as following the sustainable entrepreneurship model, it must fulfill the 19 criteria across the four aforementioned sustainability dimensions. In the theoretical model, the environmental dimension consists of five criteria that cover aspects of entrepreneurship regarding the understanding, beliefs, and action competence towards the environment—baseline sustainability, awareness of environmental issues, green environmental policy, green organizational culture, and environmentally friendly behavior.

Baseline sustainability refers to the overall awareness of the sustainability concept. It encompasses the understanding of sustainability considerations that are critical to the development of further business strategies [31]. Such awareness also translates to the attraction of employees with a similar vision and promotes overall conscientiousness towards sustainability within an organization [17].

Despite the fact that the sustainability concept above the environmental dimension entails performance in social and economic sustainability, the baseline sustainability values tend to be the predictors of environmentally friendly behaviors within a company [17]. That, however, becomes problematic when addressing social or economic sustainability aspects if entrepreneurs tend to associate sustainability more with environmental issues rather than social or economic. In support of the research problem, this also points to the lack of general knowledge about sustainable entrepreneurship.

Awareness of environmental issues specifically indicates the extent to which entrepreneurs understand the current environmental challenges and market flaws or imperfections that amplify environmental degradation risks [1]. It is general environmental knowledge that plays a major role in intention and decision formation [17]. Additionally, it impacts employees' green behavior [32]. The level of awareness tends to indicate the respective level of proactive behavior in environmental protection [31]. In other words, the

higher the awareness, the more likely that a company will adjust production policies and engage in environmental protection [33]. Awareness of environmental degradation also promotes innovations and the development of activities necessary to generate environmental gains as a byproduct of entrepreneurial processes [22,34,35]. Thus, it can be concluded that better competence in this area will affect business processes.

Green environmental policy entails planned action, oriented to minimize or reverse negative environmental externalities caused directly by carrying out regular production activities. In many cases, such policies will involve the necessity for innovative interventions [8,13]. As a result, this criterion also points out the level of engagement of innovations and green technology, as well as the overall innovative capacity that is a critical aspect of sustainable entrepreneurship. Nonetheless, a solid corporate environmental policy may reduce financial risks associated with the implementation of a sustainability-oriented strategy and boost overall financial performance through the strengthening of the firm's competitive advantage [36].

Green organizational culture refers to the identity of the company and its link to environmental support. Pro-environmental behavior is most often fostered within the inner culture of a company, and in previous research, it has been linked to better environmental performance [37–40]. It includes different ecological initiatives aimed at, for example, reducing waste, increasing energy efficiency, and reducing CO_2 pollution within the company itself [13]. Studies also indicate an association between green culture and a better dynamic balance between economic and environmental goals [41]. In addition to that, financial and non-financial reward systems can be created to reward environmentally friendly behavior, in an effort to boost the organization's culture [17]. It is necessary that both management and workers have an aligned vision regarding the environment, and this can be achieved with the help of a strong organizational culture.

Finally, environmentally friendly behavior cannot be limited to general support. The exploitation of resources has highly compromised environmental sustainability. As a result, there have to be clear and visible patterns of actions directed at the preservation of the environment, biological diversity, ecosystems, and mitigation of the climate crisis [17]. Pro-environmental behavior also tends to moderate customer attitudes towards sustainable products and is reported to have an impact on green innovation practices [35]. As a result, such behavior is also associated with eco-friendly production [42].

The central aspect of this criterion is the understanding of the relation between short-term costs and long-term goals. This can be expressed through responsible resource management, the use of renewable energy sources, recycling, and the use of recyclable materials in an effort to provide continuous growth capabilities for the next generations [2]. The transition may involve increased costs but would benefit the planet in the long term. This criterion is distinctive from the green environmental policy criterion as it aims to avoid potential environmental risks, whereas green environmental policy deals with already-caused damage and externalities.

The criteria of the sustainable entrepreneurship matrix in the social dimension covers the understanding of the impact that any business activity can have on society and the placement of appropriate policies to improve or at least mediate social issues. According to the literature review, the authors identified five aspects of sustainable entrepreneurship that relate to the social dimension the closest—awareness of social issues, altruism, sustainable human resource management, quality workplace policy, and acceptance of a social stewardship role.

Just like awareness of environmental issues, the awareness of social issues determines the understanding of the relationship between business and society and relates to meeting both social and economic needs [43]. It also moderates the sense of responsibility and overall response to social issues [44]. Social resources catalyze industrial growth since society not only defines the consumer base but is also the source of the workforce. Previous research indicates that higher levels of interest in social sustainability point to a more pronounced interest in sustainable entrepreneurship [2,28]. Therefore, such knowledge

within a company can help in identifying the practices that are commonly associated with social problems and make changes to improve not only the general welfare but also the performance of the company.

Altruism is a personal characteristic that epitomizes a person's concern for others' well-being. In business, the characteristic serves as a motivator of social responsibility within a company [45]. In fact, other studies recognize altruism as a precondition to social entrepreneurship oriented at social value creation [46]. In the case of high altruism, personal benefit is not nearly as important as helping others, which aligns with sustainable entrepreneurship's intentions to put forward other non-financial goals above profit maximization. With high levels of empathy-based altruism within a company, there is a greater chance that entrepreneurial activities will be carried out with high regard for social matters and social sustainability [2]. With greater altruism, entrepreneurs will tend to discover more developmental opportunities regarding sustainability [47]. As a result, altruism potentially predicts the intention to engage in sustainable entrepreneurship.

Sustainable human resource management is based on an adapted version of green human resource management theory. The main difference is that the orientation to sustainability entails all TBL framework aspects. Particularly in the social dimension, such practice indicates consideration of employees and their well-being. In other words, resource management not only oversees the establishment of a just and equal workplace but also takes care of employee work–life balance, well-being, and social security [17,48,49]. Studies show that sustainable human resource management practices are highly associated with sustainable innovation [50]. The benefits that arise from a company supporting its employees permeate to the society level and can contribute to better social welfare overall. Nonetheless, sustainable human resource management has been shown to attract talents that further promote sustainability within an organization and increase the overall sustainability performance [51].

Quality workplace policy relates to the company's efforts to establish employment opportunities to support especially the underprivileged part of society and boost employment rates. In the long run, such entrepreneurial initiative contributes to overall social sustainability. Quality refers to stable, long-term positions with competitive salaries that do not discriminate against age, gender, disabilities, ethnicity, religion, or other social factors [7,21]. In consequence, establishing quality workplaces annually indicates concern about employment and social security levels that can be further interpreted as a criterion for sustainable entrepreneurship.

Studies highlight social stewardship goals as an inherent part of sustainability strategy within a business and overall corporate social responsibility [52,53]. A company that accepts a social stewardship role and actively engages in social and human rights protection much more strongly expresses values that align with sustainable entrepreneurship. Often, this role is displayed through marketing activities that in turn help raise awareness of social issues among different groups of society [5]. For best results, companies with a sustainable entrepreneurship model would be expected to work together with stakeholders, as well as governmental and non-governmental organizations, to potentially generate a greater impact through various social value-promoting campaigns and charity events.

Among numerous factors associated with the interaction between economic dimension and sustainable entrepreneurship, the authors propose four criteria that relate to the level of integration of economic sustainability values into ongoing business processes. Those are awareness of sustainability's role in economics, resource optimization plans, product and service functionality, and familiarity with the circular economy model.

Economic issues are some of the primary concerns that have driven efforts towards sustainable development [54,55]. Thus, awareness of sustainability's role in economics refers to the baseline understanding of the interaction between sustainability and economic growth. Primarily, that means diverting the focus from short-term financial gains to long-term economic growth without compromising the company's financial viability [2]. Sustainable entrepreneurship, thus, is concerned with carrying out feasible and profitable

business solutions that, in the meantime, support sustainable development. Studies show a direct link between entrepreneurship and economic growth. Thus, the ability to relate both objectives and implement them into practice in a sustainability context demonstrates the potential for the successful application of sustainable entrepreneurship [56].

Resource optimization plans play a critical role in ensuring continuous economic growth in a sustainability context. Research indicates that resource optimization is significantly associated with sustainable development [57]. However, that entails strategic calculations and planning as it may not only have the potential to cut production costs and boost productivity but may also require investing in costly innovations [4]. In the manufacturing sector, resource optimization leads to increased competitiveness and highly contributes to positive environmental performance [58].

Production and resource optimization procedures that fit the sustainability goals will require unique approaches and might not be financially sound, although they are essential in maintaining a competitive edge over other producers [6]. Such considerations are fundamental to sustainable entrepreneurship as they not only concern the possibility of facilitating overall economic growth with respect to sustainable development but also ensure the ability to safeguard the company's position within the market in the long run. Additionally, resource optimization plans may affect the transition towards sustainable entrepreneurship, though the argument calls for more in-depth research to confirm the relationship [59].

Product and service functionality is a key aspect of sustainable entrepreneurship. Goods that serve more than one purpose decrease the need for multiple different items and, thus, reduce unsustainable consumption patterns [5]. The initiative aligns with a frugal business model where value is prioritized over costs. Products with improved functionality not only diversify the supply of a company and optimize costs but also highly contribute to sustainable development [60]. Adding to that, companies can expand the range of market opportunities by offering guarantee and repair services that can help build a solid and loyal customer base. Additionally, customers are already requesting sustainable products that provide endless opportunities for entrepreneurs [4,15]. As a result, the producers can maintain a supply of goods that not only follows sustainability principles but also continuously produces income.

Familiarity with the circular economy model within sustainable entrepreneurship is expressed through thoroughly planned product and project life cycles. Circularity refers to a closed-loop system where the life cycle of materials and products is lengthened through repeated use, repairs, recycling, sharing, and other maintenance activities [5]. A circular economy is associated with positive environmental outcomes and continuous economic growth despite resource constraints, and stimulates sustainability-oriented innovation and technologies [61]. Such a model contributes greatly to economic sustainability and tends to serve as an indicator of sustainable entrepreneurship.

The literature review allowed us to conclude that the final dimension of the sustainable entrepreneurship matrix, management, is most closely associated with the following five criteria—awareness of normative regulations and other legal demands; awareness of resource availability; cooperation with institutions, organizations, and stakeholders; sustainability performance indicator measuring; and, lastly, top management's intentions towards sustainability.

Awareness of normative regulations and other legal demands refers to the understanding of the legal context and binding requirements that entrepreneurs must comply with and put in place within business processes. High levels of sustainability will require high governmental engagement; thus, laws are inevitable, and compliance is mandatory [1]. Institutional context contributes to sustainable development by aiding the strengthening of the competitive advantage of a company [62]. The legal framework may work in favor of sustainable entrepreneurship if the company sees the government as a resource rather than an entity that limits the freedom of entrepreneurship. On the contrary, institutional uncertainty may cause further entrepreneurial uncertainty, which is detrimental to the advancement of

sustainability performance within a company [63]. Thus, to that understanding, knowledge of the incentives and legal context behind the pure law is highly important.

Awareness of resource availability illustrates entrepreneurs' knowledge of where to access educational or financial support to carry out sustainability objectives within a business. For example, investment in innovative technologies aids sustainable entrepreneurship; however, lack of knowledge on resource availability can hinder further success [22,64]. As a result, the ability to detect resources and opportunities is an attribute of sustainable entrepreneurship.

Cooperation with institutions, organizations, and stakeholders is essential to success in sustainable entrepreneurship [8]. Previous research presents collaboration with stakeholders and other involved groups as a mechanism for the pursuit of sustainability-oriented business practices [65]. Considering the needs of the interested parties is associated with positive social and environmental outcomes [66]. Thus, such practice undeniably points to sustainable entrepreneurship intentions. The larger the variety of actors, the greater the potential to address different entrepreneurial aspects; for example, cooperation with business schools can share knowledge and skills that are necessary to run sustainable business processes [12]. In addition to that, the strengthening of cooperative ties can ensure the ability to carry out sustainable entrepreneurship in the long run [6]. Therefore, it can be concluded that sustainable management practice entails an outlook on a wide range of cooperative opportunities.

It is not only important to implement different sustainability values but also to measure performance. Currently, a company's performance is measured based on financial indicators; however, sustainable entrepreneurship requires close monitoring of non-financial performance [31]. The assessments can be made internally as well as by inviting an external examiner. Regardless, the top management should be aware of the criteria of sustainable entrepreneurship, know how to interpret the results, and hold a department or at least a position that consecutively supervises the processes. For example, key performance indicator analysis may serve as a tool to estimate success in sustainable entrepreneurship [13,22].

Numerous metric systems, indicators, and measurement methods have been developed to estimate specifically sustainability performance [30]. However, the authors argue that most of them fail to provide a thorough evaluation of all sustainability aspects concerning entrepreneurial activities. Some overly focus on environmental aspects, while others disregard social matters; however, the majority tend to cover the basis of the TBL or ESG concepts [67,68]. Thus, the authors suggest that based on the new concept of four sustainable entrepreneurship dimensions and 19 criteria, a new metric system should be developed and used as a resource for self-evaluation purposes in production companies. This way, companies could reduce reliance on audit firms, boost competence in sustainable entrepreneurship, and compare their annual performance.

Finally, the top management's intentions point to the likelihood that the sustainable entrepreneurship model will be integrated into ongoing business processes [2,69]. Equally important is whether the top management has any goals set to promote sustainability and what the management is ready to do to improve performance in the sustainability area [14,70]. As a result, properly oriented attitudes, incentives, and intentions will determine how successfully the sustainability principles will be adopted into the company. Another key aspect that points to intentions to transform towards sustainable entrepreneurship is sustainability orientation [2].

The present research may be subject to several limitations. First, the research topic requires a methodology that can cover the existing literature comprehensively. For example, a formal systematic literature review would have provided insights into the sustainable entrepreneurship criteria in greater depth compared to the monographic method. Second, despite the exhaustive efforts, not all research could have been covered due to limitations in databases. Third, the findings are subject to the personal bias of the researchers; as a result, the interpretation of findings may be subjective and vary depending on the context.

The limitations may be resolved by conducting a comprehensive systematic literature review to enlarge the scope of articles processed in this review and thoroughly examine the available data. Additionally, further reviews would help refine the criteria in greater depth. Besides that, the present article provides an interesting gap for future research. In other words, more studies should be conducted on sustainable entrepreneurship in relation to small and medium enterprises (SMEs) as they make up a significant portion of all enterprises in total. The authors suggest that raising awareness of sustainable entrepreneurial practices among SMEs in the manufacturing industry could make more impactful changes in the transition towards sustainability. Additionally, future research should focus on the generalizability of the findings in an effort to develop a measure that would estimate not only expertise levels in sustainable entrepreneurship but also sustainability performance regardless of the company size and geopolitical context.

Despite the limitations, the present study contributes to the research by identifying gaps in theory and providing directions for future research. The theoretical implications are currently being used in the second research phase as a basis for a semi-quantitative study that explores the expertise levels in sustainable entrepreneurship in the Latvian manufacturing industry. The main goal is to estimate the key areas that highlight educational gaps or lack of expertise. The results will be further used to develop a theoretical matrix that could be applied as a self-evaluation tool for expertise in sustainable entrepreneurship for enterprises that are considering adopting sustainable practices into present business processes. In such a way, entrepreneurs would be able to identify the lacking areas, compare their performance on a quarterly or annual basis, and transition to sustainable entrepreneurship more successfully.

Nonetheless, the transition to sustainable production calls for an overarching organization that could not only assist companies with theoretical and practical resources specifically related to entrepreneurial activities but also provide statistics on the performance comparison among different manufacturing companies, production sectors, and locations. Most importantly, the implications of the present study could be used by entrepreneurs to evaluate their expertise in sustainable entrepreneurship based on the identified criteria. However, a metric system should be developed and tested in order to serve as a resource to entrepreneurs. Distinctively from other metric systems, the criteria could sufficiently cover and balance different aspects of sustainable entrepreneurship while providing more thorough insights without overly focusing on particular dimensions.

5. Conclusions

This literature review provided valuable insights into current findings regarding sustainable entrepreneurship. The authors primarily identified that definitions of sustainable entrepreneurship among different researchers are inconsistent, though few have attempted to clarify the concept which could be used as a common base for future research [3]. In general, the sustainable entrepreneurship concept illustrates a systemically coordinated set of strategic actions that facilitate the integration of environmental, social, economic, and managerial sustainability practices into ongoing business processes without compromising the developmental capabilities of future generations.

Since research has shown great potential for enterprises to mitigate the environmental and social crisis, without a doubt, the transition to a sustainable entrepreneurship model is highly supported. However, this could be a long and complex process, especially within the current capitalism-oriented traditions and commercial mindset among entrepreneurs. Nevertheless, understanding the expertise position in sustainable entrepreneurship would help to address the key areas that need the most attention in order to successfully facilitate the transition to sustainable business practices in the manufacturing industry.

In conclusion, this study provides a comprehensive summary and analysis of sustainable entrepreneurship criteria. It was concluded that the sustainable entrepreneurship concept should include a sustainable management dimension as an indispensable accessory to the TBL framework. The inclusion rests upon three reasons. First, the locus of control of

the top management; second, the relationship between the top management action and the outcomes at an operational level; and third, the resourcing and cooperative capabilities of the top management.

Altogether, the listed factors help better illustrate the role of management in the integration of sustainability pillars into production processes and the overall transition to sustainable entrepreneurship. Thus, sustainable entrepreneurship should be reviewed only with regard to all four dimensions—environmental, social, economic, and managerial—to avoid excessive focus on only certain aspects of sustainability and their role in entrepreneurship.

Based on the present data, a theoretical matrix could function as a resource to help promote the expertise levels and competence in sustainable entrepreneurship among entrepreneurs. On top of that, it presents great potential as a performance metric system for entrepreneurs in quarterly and annual sustainability performance evaluations. Nonetheless, the criteria can be adapted for use in future studies.

Author Contributions: Conceptualization, L.T.; methodology, L.T. and S.B.; formal analysis, L.T.; writing—original draft preparation, L.T.; writing—review and editing, L.T. and S.B.; visualization, L.T.; supervision, S.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

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

References

1. Hummels, H.; Argyrou, A. Planteraty Demands: Redefining Sustainable Development and Sustainable Entrepreneurship. *J. Clean. Prod.* **2021**, *278*, 123804. [CrossRef]
2. Thelken, H.N.; de Jong, G. The impact of Values and Future Orientation on Intention Formation within Sustainable Entrepreneurship. *J. Clean. Prod.* **2020**, *266*, 122052. [CrossRef]
3. Farny, S.; Binder, J.K. Sustainable Entrepreneurship. In *World Encyclopedia of Entrepreneurship*, 2nd ed.; Dana, L.P., Ed.; Edward Elgar Publishing: Cheltenham, UK, 2021; pp. 605–611.
4. Mondal, S.; Singh, S.; Gupta, H. Green Entrepreneurship and Digitalization Enabling the Circular Economy through Sustainable Waste Management—An Exploratory Study of Emerging Economy. *J. Clean. Prod.* **2023**, *422*, 138433. [CrossRef]
5. Bocken, N.; Boons, F.; Baldassarre, B. Sustainable Business Model Experimentation by Understanding Ecologies of Business Models. *J. Clean. Prod.* **2019**, *208*, 1498–1512. [CrossRef]
6. Moya-Clemente, I.; Ribes-Giner, G.; Pantoja-Diaz, O. Configurations of Sustainable Development Goals that Promote Sustainable Entrepreneurship over Time. *Sustainability* **2019**, *28*, 762–788. [CrossRef]
7. Tarnanidis, T. Measuring Sustainable Entrepreneurship in the Food Sector. *Int. J. Sustain. Entrep. Corp. Soc. Responsib.* **2020**, *7*, 1–8. [CrossRef]
8. Calderon, A.Y.C.; Carillo, L.F.L.; Contreras, J.L.G. Sustainable Entrepreneurship in Colombia: Strengths and Opportunities. *J. Manag.* **2020**, *36*, 190–203.
9. Nguyen, H.T.T.; Costanzo, L.A.; Karatas-Özkan, M. Stakeholders' Perceptions of Sustainable Entrepreneurship within the Context of a Developing Economy. *J. Small Bus. Manag.* **2023**, *61*, 441–480. [CrossRef]
10. Gu, W.; Mo, W.; Wang, M. Enterprise-level Sustainable Entrepreneurship Index Construction and its Applications. *Int. Entrep. Manag. J.* **2023**, 1–34. [CrossRef]
11. Mansouri, S.; Momtaz, P.P. Financing Sustainable Entrepreneurship: ESG Measurement, Valuation, and Performance. *J. Bus. Ventur.* **2022**, *37*, 106258. [CrossRef]
12. Lee, S.H.; Zhou, Y. The Outlook for Sustainable Development Goals in Business Management: A Systematic Literature Review and Keyword Cluster Analysis. *Sustainability* **2022**, *14*, 11976. [CrossRef]
13. Ali, M.; Malik, M.; Yaqub, M.Z.; Jabbour, C.J.C.; de Sousa Jabbour, A.B.L.; Latan, H. Green Means Long Life—Green Competencies for Corporate Sustainability Performance: A Moderated Mediation Model of Green Organizational Culture and Top Management Support. *J. Clean. Prod.* **2022**, *427*, 139174. [CrossRef]
14. Dhir, A.; Khan, S.J.; Islam, N.; Ractham, P.; Meenakskhi, N. Drivers of Sustainable Business Model Innovations. An Upper Echelon Theory Perspective. *Technol. Forecast. Soc. Change* **2023**, *191*, 122409. [CrossRef]
15. Coffay, M.; Bocken, N. Sustainable by Design: An Organizational Design Tool for Sustainable Business Model Innovation. *J. Clean. Prod.* **2023**, *427*, 139294. [CrossRef]
16. Satyadini, A.; Song, L. Modern Entrepreneurship and the 'Doughnut': Productive or Destructive? *Asian-Pac. Econ. Lit.* **2023**, *37*, 119–141. [CrossRef]
17. Saeed, B.B.; Shakir, H.; Afsar, B.; Khan, I. Promoting Employee's Proenvironmental Behavior through Green Human Resource Management Practices. *Corp. Soc. Responsib. Environ. Manag.* **2018**, *26*, 424–438. [CrossRef]

18. European Commission. *Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and Amending Directive (EU) 2019/1937*; European Commission: Brussels, Belgium, 2022.
19. Smit, L.; Bright, C.; McCorquodale, R.; Bauer, M.; Deringer, H.; Baeza-Breinbauer, D.; Torres-Cortés, F.; Alleweldt, F.; Kara, S.; Salinier, C.; et al. *Study on Due Diligence through the Supply Chain*; Publications Office of the European Union: Luxembourg, 2020; pp. 1–572.
20. Korporatīvās Ilgtspējas un Atbildības Institūts. Available online: https://www.incsr.eu/novertejumi/ilgtspejas-indekss/ilgtspejas-indekss-2023/ (accessed on 7 May 2024).
21. Huang, Y.; Li, P.; Bu, Y.; Zhao, G. What Entrepreneurial Ecosystem Elements Promote Sustainable Entrepreneurship? *J. Clean. Prod.* **2023**, *422*, 138459. [CrossRef]
22. Roomi, M.A.; Saiz-Alvarez, J.M.; Coduras, A. Measuring Sustainable Entrepreneurship and Eco-Innovation: A Methodological Proposal for the Global Entrepreneurship Monitor (GEM). *Sustainability* **2013**, *13*, 4056. [CrossRef]
23. Jamil, A.; Ghazali, A.M.; Nelson, S.P. The influence of Corporate Governance Structure on Sustainability Reporting in Malaysia. *Soc. Responsib. J.* **2021**, *17*, 1251–1278. [CrossRef]
24. Wasdani, K.P.; Vijaygopal, A.; Manimala, M.J.; Verghese, A.K. Impact of Corporate Governance on Organizational Performance of Indian Firms. *Indian J. Corp. Gov.* **2021**, *14*, 180–208. [CrossRef]
25. Pekovic, S.; Vogt, S. The Fit Between Corporate Social Responsibility and Corporate Governance: The Impact on Firm's Financial Performance. *Rev. Manag. Sci.* **2021**, *12*, 1095–1125. [CrossRef]
26. Suraya, E.; Azis, N.; Majid, M.S.A. Does Performance Matter for Business Survival Based on the Enhancement of Locus of Control and Business Competence. *Sumerianz J. Bus. Manag. Mark.* **2020**, *3*, 98–106.
27. de Freitas Netto, S.V.; Sobral, M.F.F.; Ribeiro, A.R.B.; da Luz Soares, G.R. Concepts and Forms of Greenwashing: A Systematic Review. *Environ. Sci. Eur.* **2020**, *32*, 19. [CrossRef]
28. Aliabadi, V.; Ataei, P.; Gholemrezai, S. Identification of the Relationships among the Indicators of Sustainable Entrepreneurial Ecosystems in Agricultural Startups. *J. Innov. Knowl.* **2022**, *7*, 100245. [CrossRef]
29. Shakeel, J.; Mardani, A.; Chofreh, A.G.; Goni, F.A.; Klemes, J.J. Anatomy of Sustainable Business Model Innovation. *J. Clean. Prod.* **2020**, *261*, 121201. [CrossRef]
30. Saidani, M.; Yannou, B.; Leroy, Y.; Cluzel, F.; Kendall, A. A taxonomy of circular economy indicators. *J. Clean. Prod.* **2019**, *207*, 542–559. [CrossRef]
31. Mendes, A.C.S.; Ferreira, F.A.F.; Kannan, D.; Ferreira, N.C.M.Q.F.; Correia, R.J.C. A BWM Approach to Determinants of Sustainable Entrepreneurship in Small and Medium-Sized Enterprises. *J. Clean. Prod.* **2022**, *371*, 133300. [CrossRef]
32. Safari, A.; Salehzadeh, R.; Panahi, R.; Abolghasemian, S. Multiple Pathways Linking Environmental Knowledge and Awareness to Employees' Green Behavior. *Corp. Gov.* **2018**, *18*, 81–103. [CrossRef]
33. Fryxell, G.E.; Lo, C.W.H. The Influence of Environmental Knowledge and Values on Managerial Behaviors on Behalf of the Environment: An Empirical Examination of Managers in China. *J. Bus. Ethics* **2003**, *46*, 45–69. [CrossRef]
34. Cojoianu, T.F.; Clark, G.L.; Hoepner, A.G.F.; Veneri, P.; Wójcik, D. Entrepreneurs for a Low Carbon World: How Environmental Knowledge and Policy Shape the Creation and Financing of Green Start-ups. *Res. Policy* **2020**, *49*, 103988. [CrossRef]
35. Khan, M.A.S.; Du, J.; Malik, H.A.; Anuar, M.M.; Pradana, M.; Yaacob, M.R.B. Green Innovation Practices and Consumer Resistance to Green Innovation Products: Moderating Role of Environmental Knowledge and Pro-environmental Behavior. *J. Innov. Knowl.* **2022**, *7*, 100280. [CrossRef]
36. Gangi, F.; Daniele, L.M.; Varrone, N. How Do Corporate Environmental Policy and Corporate Reputation Affect Risk-Adjusted Financial Performance? *Bus. Strategy Environ.* **2020**, *29*, 1975–1991. [CrossRef]
37. Alvesson, M. Organizational Culture: Meaning, Discourse, and Identity. In *The Handbook of Organizational Culture and Climate*, 2nd ed.; Ashkanasy, N.M., Wilderom, C.P.M., Peterson, M.F., Eds.; SAGE Publications, Inc.: Los Angeles, CA, USA, 2011; pp. 11–28.
38. Chatman, J.A.; O'Ḳeilly, C.A. Paradigm Lost: Reinvigorating the Study of Organizational Culture. *Res. Organ. Behav.* **2016**, *36*, 199–224. [CrossRef]
39. Rizvi, Y.A.; Garg, R. The Simultaneous Effect of Green Ability-Motivation-Opportunity and Transformational Leadership in Environment Management: The Mediating Role of Green Culture. *Benchmarking Int. J.* **2021**, *3*, 830–856. [CrossRef]
40. Ogiemwonyi, O.; Harun, A.; Hossain, M.I.; Karim, A.M. The Influence of Green Behavior Using Theory of Planned Behavior Approach: Evidence from Malaysia. *Millenn. Asia* **2022**, *14*, 582–604. [CrossRef]
41. Fallah, M.R.; Soori, M. Presenting a Framework for the Successful Entry of Women Entrepreneurs into Green Entrepreneurship. *J. Sci. Technol. Policy Manag.* **2023**, *14*, 467–486. [CrossRef]
42. Xie, Y.; Chen, Z.; Tang, H.; Boadu, F.; Yang, Y. Effects of Executives' Pro-environmental Education and Knowledge Sharing Activities on Eco-friendly Agricultural Production: Evidence from China. *J. Clean. Prod.* **2023**, *395*, 136469. [CrossRef]
43. Hägg, G.; Jones, C. Educating towards the Prudent Entrepreneurial Self—An Educational Journey Including Agency and Social Awareness to Handle the Unknown. *Int. J. Entrep. Behav. Res.* **2021**, *27*, 82–103. [CrossRef]
44. Dooly, M.; Masats, D.; Mont, M. Launching a Solidarity Campaign: Technology-Enhanced Project-Based Language Learning to Promote Entrepreneurial Education and Social Awareness. *J. Technol. Sci. Educ.* **2021**, *11*, 260–269. [CrossRef]
45. Faust, L.; Kolbe, M.; Mansouri, S.; Momtaz, P.P. The Crowdfunding of Altruism. *J. Risk Financ. Manag.* **2022**, *15*, 138. [CrossRef]
46. Lorenzo-Afable, D.; Lips-Wiersma, M.; Singh, S. 'Social' Value Creation as Care: The Perspective of Beneficiaries in Social Entrepreneurship. *Soc. Enterp. J.* **2020**, *16*, 339–360. [CrossRef]

47. Vallaster, C.; Kraus, S.; Kailer, N.; Bladwin, B. Responsible Entrepreneurship: Outlining the Contingencies. *Int. J. Entrep. Behav. Res.* **2019**, *25*, 538–553. [CrossRef]
48. Faisal, S. Twenty-Years Journey of Sustainable Human Resource Management Research: A Bibliometric Analysis. *Adm. Sci.* **2023**, *13*, 139. [CrossRef]
49. Mishra, P. Green Human Resource Management: A Framework for Sustainable Organizational Development in an Emerging Economy. *Int. J. Organ. Anal.* **2017**, *25*, 762–788. [CrossRef]
50. Grabara, J.; Hussain, H.I.; Szajt, M. Sustainable University Development through Sustainable Human Resources and Corporate Entrepreneurship: The Role of Sustainable Innovation and Work Environment. *Amfiteatru Econ.* **2020**, *54*, 480–495. [CrossRef]
51. Kandukuri, V. Aligning Talent and Business: A Key for Sustainable HRM in SMEs. *J. Entrep. Innov. Emerg. Econ.* **2023**, *9*, 80–91. [CrossRef]
52. Rahim, E. Applying the Triple Bottom Line for Corporate Sustainability toward Zero Environmental, Social, and Economic Footprints in Corporate Practice. In *Applied Research Approaches to Technology, Healthcare, and Business*; IGI Global: Hershey, PA, USA, 2023; pp. 121–139.
53. O'Sullivan, N. Sustainable finance. In *Concise Encyclopedia of Corporate Social Responsibility*; Edward Elgar Publishing; Cheltenham, UK, 2024; pp. 196–201.
54. Kraus, S.; Burtscher, J.; Niemand, T.; Roig-Tierno, N.; Syrjä, P. Configurational Paths to Social Performance in SMEs: The Interplay of Innovation, Sustainability, Resources and Achievement Motivation. *Sustainability* **2017**, *10*, 1828. [CrossRef]
55. Akhtar, S.; Arshad, M.A.; Mahmood, A.; Ahmed, A. Spiritual Quotient towards Organizational Sustainability: The Islamic Perspective. *World J. Entrep. Manag. Sustain. Dev.* **2017**, *13*, 163–170. [CrossRef]
56. Tahir, M.; Burki, U. Entrepreneurship and Economic Growth: Evidence from the Emerging BRICS Economies. *J. Open Innov. Technol. Mark. Complex.* **2023**, *9*, 100088. [CrossRef]
57. Wang, Z.; Deng, Y.; Zhou, S.; Wu, Z. Achieving Sustainable Development Goal 9: A Study of Enterprise Resource Optimization Based on Artificial Intelligence Algorithms. *Resour. Policy* **2023**, *80*, 103212. [CrossRef]
58. Tazhibekova, A.; Shametova, A. Ecological Initiative and Their Influence on the Competitiveness and Sustainability of Companies: 'Green' Strategies of SMEs. *J. Knowl. Econ.* **2024**. [CrossRef]
59. Tandon, A.; Chaudhary, S.; Nijjer, S.; Vilamová, Š.; Tekelas, F.; Kaur, P. Challenges in Sustainability Transitions in B2B Firms and the Role of Corporate Entrepreneurship in Responding to Crises Created by the Pandemic. *Ind. Mark. Manag.* **2024**, *118*, 93–109. [CrossRef]
60. Topleva, S.A.; Prokopov, T.V. Integrated Business Model for Sustainability of Small and Medium-Sized Enterprises in the Food Industry, Creating Value Added Through Ecodesign. *Br. Food J.* **2020**, *122*, 1463–1483. [CrossRef]
61. Foroozanfar, M.H.; Imanipour, N.; Sajadi, S.M. Integrating Circular Economy Strategies and Business Models: A Systematic Literature Review. *J. Entrep. Emerg. Econ.* **2022**, *14*, 678–700. [CrossRef]
62. Woolthuis, R.K.; Hooimeijer, F.; Bossink, B.; Mulder, G.; Brouwer, J. Institutional Entrepreneurship in Sustainable Urban Development: Dutch Successes as Inspiration for Transformation. *J. Clean. Prod.* **2013**, *50*, 91–100. [CrossRef]
63. D'Andrea, F.A.M.C. Entrepreneurship and Institutional Uncertainty. *J. Entrep. Public Policy* **2023**, *12*, 10–31. [CrossRef]
64. Urbaniec, M. Sustainable Entrepreneurship: Innovation-Related Activities in European Enterprises. *Pol. J. Environ. Stud.* **2018**, *27*, 1773–1779. [CrossRef]
65. Karatas-Ozkan, M.; Tunalioglu, R.; Ibrahim, S.; Ozeren, E.; Grinevich, V.; Kimaro, J. Actioning Sustainability through Tourism Entrepreneurship: Women Entrepreneurs as Change Agents Navigating through the Field of Stakeholders. *Cent. Eur. Manag. J.* **2024**, *32*, 31–56. [CrossRef]
66. Cucino, V.; Marullo, C.; Annunziata, E.; Piccaluga, A. The Human Side of Entrepreneurship: An Empirical Investigation of Relationally Embedded Ties with Stakeholders. *Manag. Res. Rev.* **2023**, *47*, 1–21. [CrossRef]
67. Pislaru, M.; Herghiligiu, I.V.; Robu, I.B. Corporate sustainable performance assessment based on fuzzy logic. *J. Clean. Prod.* **2019**, *223*, 998–1013. [CrossRef]
68. Martínez, M.P.; Cremasco, C.P.; Gabriel Filho, L.R.A.; Junior, S.S.B.; Bednaski, A.V.; Quevedo-Silva, F.; Padgett, R.C.M.L. Fuzzy Inference System to Study the Behavior of the Green Consumer Facing the Perception of Greenwashing. *J. Clean. Prod.* **2020**, *242*, 116064. [CrossRef]
69. Kimuli, S.N.L.; Orobia, L.; Sabi, H.M.; Tsuma, C.K. Sustainability Intention: Mediator of Sustainability Behavioral Control and Sustainable Entrepreneurship. *World J. Entrep. Manag. Sustain. Dev.* **2020**, *16*, 81–95. [CrossRef]
70. Meshram, S.A.; Rawani, A.M. Entrepreneurial Success Measures and Factors for Sustainable Entrepreneurship. *Int. J. E-Entrep. Innov.* **2019**, *9*, 15–34. [CrossRef]