

## **Green Entrepreneurial Opportunities and Challenges in the Circular Economy: A Pathway to Sustainability**

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### **Abstract**

The increasing challenges of climate change, environmental degradation, and the depletion of natural resources have intensified the global shift from a linear economy to a circular economy. Unlike the conventional "take-make-dispose" approach, the circular economy emphasizes resource efficiency through waste reduction, reuse, recycling, and the regeneration of natural ecosystems. In this transition, green entrepreneurship has emerged as a key driver of sustainable economic development by fostering innovative products, services, and business models that minimize environmental impacts while creating social and economic value. Green entrepreneurs contribute significantly to achieving sustainability by addressing pressing ecological issues and promoting responsible production and consumption practices. Despite these promising opportunities, the growth of green entrepreneurship is constrained by several challenges, including limited access to finance, technological barriers, inadequate regulatory support, low consumer awareness, and market uncertainties. The study examines the opportunities and challenges associated with green entrepreneurship in the circular economy and explores strategies to strengthen sustainable entrepreneurial ecosystems. It concludes that fostering innovation, implementing supportive government policies, enhancing stakeholder collaboration, and encouraging investment in green technologies are essential for promoting green entrepreneurship and achieving long-term environmental, economic, and social sustainability. The paper further connects these sustainability outcomes with the United Nations Sustainable Development Goals (SDGs), particularly through circular opportunities related to responsible

consumption and production, clean energy, sustainable cities, innovation, decent work, water conservation, and climate action.

Keywords: Green Entrepreneurship, Circular Economy, Sustainability, Innovation, Resource Efficiency, Environmental Management, Sustainable Development Goals

## 1. Introduction

Accelerated industrial development and demographic expansion have exerted unparalleled strain on natural resources, leading to environmental contamination, a decline in biodiversity, and alterations in climate. The traditional linear economic framework has played a substantial role in exacerbating these environmental issues by encouraging rampant resource depletion and waste production. As a result, policymakers, scholars, and corporate executives are progressively promoting a circular economy that prioritises resource efficiency, product longevity, recycling, and sustainable manufacturing.

Green entrepreneurship has arisen as a crucial catalyst for the circular economy through the creation of eco-friendly company solutions. Eco-conscious businesses merge inventive strategies with sustainable practices to provide offerings that reduce ecological harm while producing commercial and societal advantages. Their commercial frameworks frequently emphasise renewable energy, waste management, environmentally conscious manufacturing, sustainable farming, green transportation, and recycling innovations.

The circular economy has substantial prospects for businesses to create inventive company frameworks while tackling ecological issues. Nonetheless, the creation and growth of eco-friendly businesses continues to be challenging due to insufficient financial backing, technical unpredictability, market rivalry, and regulatory intricacies. Comprehending these prospects and obstacles is crucial for formulating efficient methods that promote sustainable economic growth.

The sustainability dimension of green entrepreneurship is closely connected with the Sustainable Development Goals. Circular economy activities can directly support responsible consumption and production and can also contribute to clean energy, innovation, employment, sustainable cities, climate action, water conservation and environmental protection. The United Nations identifies sustainable management of resources, waste prevention, reduction, recycling and reuse as important elements of SDG 12. ☐cite☐turn0search0☐turn0search1☐

## 2. Green Entrepreneurship: Concept and Importance

Green entrepreneurship refers to the creation and management of businesses that prioritize environmental sustainability alongside economic profitability and social responsibility. Unlike traditional entrepreneurs who primarily focus on financial returns, green entrepreneurs integrate ecological considerations into every aspect of their business operations.

Green entrepreneurship contributes to sustainability through:

- Efficient utilization of natural resources.
- Reduction of carbon emissions.

- Waste minimization and recycling.
- Promotion of renewable energy.
- Development of environmentally friendly products.
- Creation of green employment opportunities.
- Encouragement of responsible consumption.

Green entrepreneurs play a significant role in achieving the United Nations Sustainable Development Goals (SDGs), particularly those related to climate action, responsible consumption and production, clean energy, and sustainable cities. The SDGs therefore provide a broader sustainability context for understanding the environmental, economic and social outcomes of green entrepreneurial activity.

### 3. Understanding the Circular Economy

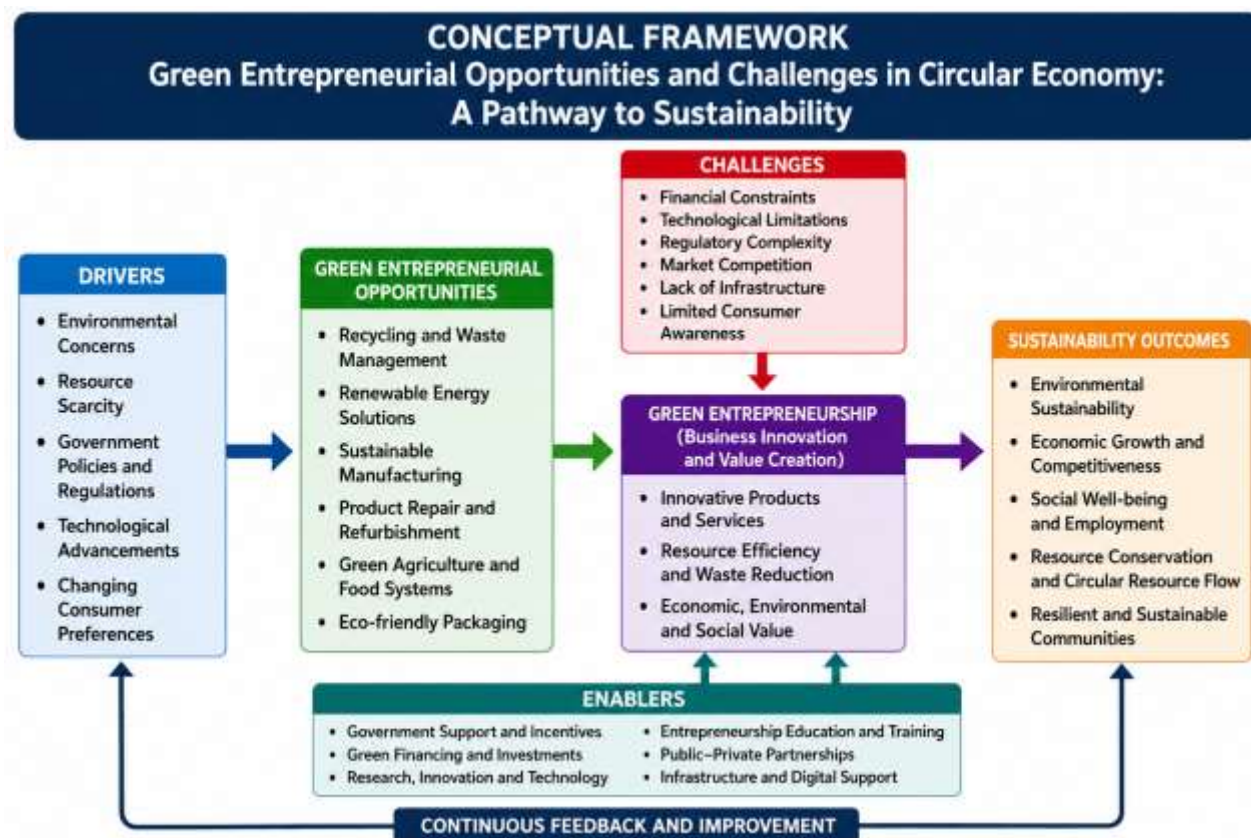
The circular economy is an economic model designed to eliminate waste and maximize resource utilization by keeping products and materials in continuous use. Instead of disposing of products after consumption, the circular economy promotes reuse, repair, and recycling.

The circular economy creates entrepreneurial opportunities because products, materials and resources that may otherwise become waste can be retained, recovered, repaired, reused or transformed into inputs for new economic activities. The approach is therefore closely connected with SDG 12, whose targets include sustainable management and efficient use of natural resources and substantial reduction of waste through prevention, reduction, recycling and reuse. □ cite □ turn0search0 □

### 4. Conceptual Framework

The conceptual framework of the study integrates the major factors associated with green entrepreneurship in the circular economy. The framework retains the original structure of Drivers, Green Entrepreneurial Opportunities, Challenges, Green Entrepreneurship, Enablers and Sustainability Outcomes. Green entrepreneurship is positioned as the central mediating mechanism through which entrepreneurial opportunities can be transformed into environmental, economic and social outcomes. The SDGs are incorporated as the broader global sustainability context of these outcomes rather than being treated as a separate independent variable.

Figure 1. Conceptual Framework



Source: Original conceptual framework from the submitted manuscript.

SDG integration: The original framework is retained unchanged as Figure 1. The SDGs are incorporated in the paper as an additional sustainability-mapping dimension, linking the sustainability outcomes generated through green entrepreneurship with relevant Sustainable Development Goals, particularly SDG 12.

1. Drivers: Drivers are the key factors that encourage the adoption of green entrepreneurship within the circular economy. These include environmental concerns, resource scarcity, supportive government policies, technological advancements, and changing consumer preferences. Growing awareness of climate change and environmental degradation motivates businesses to adopt sustainable practices. Resource scarcity encourages efficient utilization and recycling of materials. Government regulations and incentives promote environmentally responsible business activities, while technological innovations enable cleaner production methods. Additionally, consumers increasingly demand eco-friendly products, encouraging entrepreneurs to develop sustainable business models. Together, these drivers create favorable conditions for green entrepreneurial activities and accelerate the transition toward a circular economy.

2. Green Entrepreneurial Opportunities: Green entrepreneurial opportunities refer to business prospects that emerge from adopting environmentally sustainable and resource-efficient practices. These opportunities include renewable energy, recycling and waste management, sustainable manufacturing, eco-friendly packaging, green agriculture, product refurbishment, water conservation technologies, sustainable transportation, and digital



circular economy platforms. Entrepreneurs identify these opportunities by addressing environmental challenges while generating economic value. The circular economy encourages innovative business models that reduce waste, extend product life cycles, and maximize resource utilization. These opportunities not only improve business competitiveness but also contribute to environmental protection, job creation, technological innovation, and sustainable economic growth across various industrial sectors.

3. Challenges: Challenges represent the barriers that influence the successful implementation of green entrepreneurship within the circular economy. Common challenges include financial constraints, technological limitations, regulatory complexity, inadequate infrastructure, supply chain difficulties, limited consumer awareness, skilled workforce shortages, and intense market competition. High investment requirements and uncertain financial returns discourage many entrepreneurs from adopting sustainable business models. Technological innovation often requires specialized knowledge and substantial research investment. Inconsistent government policies and regulatory compliance further complicate business operations. These challenges moderate the relationship between entrepreneurial opportunities and sustainability outcomes by affecting the pace, scale, and effectiveness of green business development.

4. Green Entrepreneurship: Green entrepreneurship serves as the central mediating variable that transforms environmental opportunities into sustainable economic and social outcomes. It involves developing innovative products, services, and business models that integrate environmental responsibility with economic profitability. Green entrepreneurs adopt resource-efficient production techniques, renewable energy, waste reduction practices, and environmentally friendly technologies to minimize ecological impact. Their businesses generate value by addressing environmental problems while meeting consumer needs. Green entrepreneurship connects available opportunities with sustainability goals by promoting innovation, creating green employment, reducing pollution, conserving natural resources, and encouraging responsible production and consumption practices within the circular economy framework.

5. Enablers (Supporting Variable): Enablers are supportive factors that strengthen the growth and success of green entrepreneurship in the circular economy. These include government incentives, green financing, research and development, entrepreneurship education, public-private partnerships, infrastructure development, digital transformation, and stakeholder collaboration. Financial assistance and favorable policies reduce investment risks for sustainable businesses. Research institutions contribute technological innovations that improve production efficiency and environmental performance. Digital technologies enhance resource monitoring, supply chain transparency, and waste management. Collaboration among governments, industries, financial institutions, and educational organizations creates a supportive entrepreneurial ecosystem that encourages innovation and accelerates the adoption of sustainable business practices.

6. Sustainability Outcomes: Sustainability outcomes represent the ultimate results achieved through successful green entrepreneurship within the circular economy. These outcomes include environmental sustainability, economic growth, social well-being, resource conservation, and resilient communities. Green entrepreneurial activities reduce pollution, minimize waste generation, lower carbon emissions, and improve resource efficiency. Sustainable business practices also create employment opportunities, stimulate economic competitiveness, and enhance community development. By promoting circular production and consumption patterns, businesses contribute to long-term environmental protection and responsible resource management. These outcomes align

with global sustainable development objectives and demonstrate how green entrepreneurship supports balanced economic, environmental, and social progress.

## 5. Significance of the Research

The current research is significant as it investigates the role of green entrepreneurship prospects and obstacles in facilitating the effective execution of the circular economy and sustainable development. As ecological challenges like climate change, resource exhaustion, and waste production escalate, enterprises are compelled to use new and sustainable methodologies. This research offers significant understanding of the elements that promote green entrepreneurship, the obstacles that impede its advancement, and the supportive frameworks that facilitate sustainable business growth. The study assists entrepreneurs, policymakers, academics, educators, and investors by providing insights for fostering environmentally sustainable businesses. Moreover, the research enhances the current body of knowledge by amalgamating green entrepreneurship and circular economy principles into a cohesive framework aimed at attaining enduring environmental, economic, and social sustainability. The SDG mapping further clarifies how these activities relate to the wider global sustainability agenda.

## 6. Statement of the Problem

The shift from a conventional linear economy to a circular economy is crucial for attaining sustainable development. Despite the novel solutions that green entrepreneurship provides for resource conservation, waste minimisation, and environmental safeguarding, their implementation is nevertheless constrained by many obstacles. Entrepreneurs frequently face monetary limitations, technological obstacles, limited infrastructure, legal intricacies, and a lack of customer awareness, which hinder the expansion of sustainable enterprises. Simultaneously, prospects generated by renewable energy, recycling, sustainable production, and digital technologies are still not fully exploited in several areas. There exists a restricted comprehension of how these prospects, obstacles, and facilitating elements jointly affect sustainability results. Consequently, this research aims to investigate these connections and offer a conceptual model that facilitates the establishment of efficient green entrepreneurial ecosystems. The SDG perspective strengthens this problem statement by linking these sustainability outcomes to global goals such as responsible consumption and production, clean energy, sustainable cities, innovation and climate action.

## 7. Green Entrepreneurial Opportunities in the Circular Economy

The transition toward a circular economy has opened numerous business opportunities across multiple sectors. The following opportunities are retained from the original paper and expanded with their relevant SDG connections.

### 1. Recycling and Waste Management

Growing volumes of municipal and industrial waste create opportunities for entrepreneurs to establish recycling facilities, waste collection systems, composting units, and material recovery centers. Innovative technologies can convert plastic waste into construction materials, textiles, fuel, and reusable packaging products. These activities

strongly relate to SDG 12 through waste prevention, reduction, recycling and reuse and can also support sustainable cities and climate action.

## 2. Renewable Energy Businesses

Solar, wind, biomass, and small-scale hydropower offer significant entrepreneurial opportunities. Green entrepreneurs can develop renewable energy installations, energy storage systems, and smart grid technologies that reduce dependence on fossil fuels. The increasing demand for clean energy provides a stable market for sustainable businesses. These activities directly support SDG 7 and contribute to SDG 13.

## 3. Sustainable Manufacturing

Manufacturers are increasingly adopting eco-friendly production methods that minimize waste and reduce resource consumption. Entrepreneurs can establish businesses producing biodegradable packaging, recycled textiles, environmentally friendly furniture, and sustainable construction materials. This opportunity connects circular production with SDG 9 and SDG 12.

## 4. Product Repair and Refurbishment

Instead of replacing products, consumers increasingly prefer repairing electronic devices, household appliances, furniture, and machinery. Repair services extend product life while reducing landfill waste and conserving valuable resources. This directly supports circularity and responsible consumption under SDG 12.

## 5. Green Agriculture

Organic farming, precision agriculture, vertical farming, hydroponics, compost production, and biofertilizer manufacturing offer substantial entrepreneurial opportunities. Such activities can support food security, efficient resource use and responsible production, contributing particularly to SDG 2, SDG 6 and SDG 12.

## 6. Sustainable Fashion

Fast fashion contributes significantly to environmental pollution. Green entrepreneurs are developing circular fashion models through recycled fabrics, second-hand clothing platforms, rental services, and clothing repair businesses. Consumers increasingly value ethically produced and environmentally friendly apparel. Sustainable fashion can support SDG 8 through employment and SDG 12 through responsible production and consumption.

## 7. Eco-friendly Packaging

Plastic pollution has increased demand for biodegradable and recyclable packaging materials. Entrepreneurs can develop packaging using bamboo, paper, agricultural residues, seaweed, mushroom fibers, and biodegradable polymers. These activities support SDG 12 and can contribute to SDG 14 by reducing pressures associated with plastic pollution.

## 8. Electric Mobility

Electric vehicles, battery recycling, charging infrastructure, and shared mobility services represent rapidly expanding green business opportunities. Governments worldwide are supporting electric mobility through subsidies and policy incentives. These activities can support SDG 11 and SDG 13.

## 9. Water Conservation Technologies

Businesses focusing on rainwater harvesting, wastewater recycling, smart irrigation systems, and water purification technologies contribute significantly to sustainable resource management. These opportunities directly support SDG 6 and complement SDG 12 through efficient resource use.

## 10. Digital Circular Economy Platforms

Digital technologies facilitate product sharing, rental services, repair marketplaces, and second-hand trading. Online platforms supporting the sharing economy reduce unnecessary consumption while maximizing product utilization. These activities support SDG 9, SDG 11 and SDG 12.

## 8. SDG Mapping of Green Entrepreneurial Opportunities

The SDG dimension is integrated here because the entrepreneurial opportunities discussed above are practical pathways through which circular economy activities can generate sustainability outcomes. SDG 12 is particularly central because the circular economy directly addresses sustainable consumption and production, resource efficiency, and waste prevention, reduction, recycling and reuse. The United Nations also recognises the relevance of circular approaches to broader sustainable development. ☐ cite ☐ turn0search0 ☐ turn0search2 ☐

Table 1. SDG Mapping of Green Entrepreneurial Opportunities

| Green Entrepreneurial Opportunity  | Circular Economy Contribution                                        | Relevant SDGs          |
|------------------------------------|----------------------------------------------------------------------|------------------------|
| Recycling and Waste Management     | Waste reduction, reuse, recycling and material recovery              | SDG 11, SDG 12, SDG 13 |
| Renewable Energy Businesses        | Clean energy, resource efficiency and reduced fossil-fuel dependence | SDG 7, SDG 13          |
| Sustainable Manufacturing          | Resource efficiency, cleaner production and innovation               | SDG 9, SDG 12          |
| Product Repair and Refurbishment   | Product-life extension, reuse and waste reduction                    | SDG 12                 |
| Green Agriculture                  | Sustainable food production and responsible resource use             | SDG 2, SDG 6, SDG 12   |
| Sustainable Fashion                | Reuse, recycling, repair and responsible production                  | SDG 8, SDG 12          |
| Eco-friendly Packaging             | Reduced packaging waste and alternatives to conventional plastics    | SDG 12, SDG 14         |
| Electric Mobility                  | Cleaner transport, shared mobility and emissions reduction           | SDG 11, SDG 13         |
| Water Conservation Technologies    | Water efficiency, conservation and wastewater reuse                  | SDG 6, SDG 12          |
| Digital Circular Economy Platforms | Sharing, rental, repair, reuse and resource optimisation             | SDG 9, SDG 11, SDG 12  |

## 9. Challenges of Green Entrepreneurship

### 1. Financial Constraints

Green businesses may require substantial initial investment in technology, infrastructure and equipment. Limited access to suitable financing can discourage entrepreneurs.



## 2. Technological Limitations

Advanced green technologies may be expensive or difficult to access, particularly for small enterprises. Lack of technical expertise can further restrict adoption.

## 3. Regulatory Complexity

Complex environmental regulations, licensing requirements and policy uncertainty can increase operational difficulties.

## 4. Inadequate Infrastructure

Weak recycling systems, insufficient waste-management facilities and limited charging infrastructure can restrict circular business development.

## 5. Supply-Chain Difficulties

Green enterprises may experience difficulty obtaining recycled materials, sustainable inputs and reliable suppliers.

## 6. Limited Consumer Awareness

Low awareness and unwillingness to pay for sustainable products can restrict market demand.

## 7. Skill Shortages

Green businesses require knowledge of sustainability, technology, innovation, environmental management and circular business models.

## 8. Market Competition

Green enterprises may compete with conventional businesses that have established markets and lower apparent operating costs.

## 10. Enablers of Green Entrepreneurship

Enablers are supportive factors that strengthen the growth and success of green entrepreneurship in the circular economy. These include government incentives, green financing, research and development, entrepreneurship education, public-private partnerships, infrastructure development, digital transformation, and stakeholder collaboration. Financial assistance and favorable policies reduce investment risks for sustainable businesses. Research institutions contribute technological innovations that improve production efficiency and environmental performance. Digital technologies enhance resource monitoring, supply chain transparency, and waste management. Collaboration among governments, industries, financial institutions, and educational organizations creates a supportive entrepreneurial ecosystem that encourages innovation and accelerates the adoption of sustainable business practices.

## 11. Future Prospects

1. The prospects for green entrepreneurship seem exceptionally bright as governments, investors, and consumers progressively emphasise sustainability. Innovations in renewable energy, compostable substances, artificial intelligence, and intelligent manufacturing will persist in generating novel commercial prospects.
2. Global climate accords, carbon neutrality objectives, and ecological restrictions are prompting sectors to shift towards circular business frameworks. Financial entities are increasingly augmenting their involvement in environmental, social, and governance (ESG) projects, hence enhancing financial accessibility for sustainable enterprises.
3. Educational establishments are implementing entrepreneurship programmes centred on sustainability that provide aspiring entrepreneurs with expertise and hands-on abilities. As the demand for eco-friendly items escalates, green entrepreneurship is anticipated to significantly enhance economic resilience, innovation, and global sustainable development.

The SDG framework strengthens these prospects by providing a common direction for linking business innovation with measurable sustainability priorities. In particular, SDG 12 calls for sustainable resource use and substantial waste reduction through prevention, recycling and reuse, while the wider SDG framework includes goals on clean energy, decent work, innovation, sustainable cities and climate action. ☐cite☐turn0search0☐turn0search4☐

## 12. Implications of the Research

The results of this research carry substantial consequences for theoretical frameworks, policy-making, and practical applications. The study improves comprehension of the role of green entrepreneurship as a driving force for attaining sustainability in the circular economy. It furnishes decision-makers with data to devise favourable policies, financial motivations, and investment approaches that promote eco-conscious businesses. The research further assists entrepreneurs in recognising lucrative eco-friendly company prospects while tackling possible operational difficulties. Academic establishments and scholars may utilise the results to build entrepreneurship initiatives focused on sustainability and pursue more study. Moreover, financial entities and investors should acknowledge the significance of endorsing eco-friendly ideas. The research aids in the development of robust, resource-efficient, and ecologically sustainable economies by cooperative stakeholder involvement and informed choices. The SDG mapping provides an additional basis for aligning policy and business interventions with wider sustainable development priorities.

## 13. Recommendations and Suggestions

To encourage green entrepreneurship in the circular economy, governments must provide supportive laws, tax benefits, and financial aid for sustainable businesses. Enhanced funding for research, innovation, and sustainable technology is crucial for advancing resource efficiency and ecological outcomes. Academic institutions have to include sustainability and eco-friendly entrepreneurship into their courses to cultivate future entrepreneurial competencies. Public awareness initiatives ought to promote consumer adoption of ecologically sustainable purchasing practices and endorse eco-conscious products. Robust cooperation among governmental bodies,



industry, financial entities, and research institutes has to be encouraged to establish a proficient green entrepreneurship environment. Moreover, enterprises ought to embrace circular business frameworks, digital innovations, and eco-friendly supply chain methodologies to enhance their competitiveness while aiding in environmental conservation, economic advancement, and enduring sustainable progress.

Additional SDG-oriented recommendations include:

- Align circular entrepreneurship programmes with relevant SDG targets, especially SDG 12.
- Encourage entrepreneurs to measure resource efficiency, waste reduction and environmental outcomes.
- Promote green finance and investment mechanisms for circular start-ups and small enterprises.
- Strengthen education and awareness so consumers and entrepreneurs understand the connection between circular practices and sustainable development.
- Encourage partnerships among government, industry, finance, educational institutions and research organisations to accelerate SDG-oriented innovation.

## 14. Limitations and Scope for Future Research

The present study is based on secondary data and conceptual analysis and therefore does not present primary survey data or statistical testing. The conceptual framework provides a basis for future empirical investigation. Future researchers may examine the proposed relationships through survey-based studies, case studies, regression analysis, structural equation modelling, comparative studies, sector-specific investigations, and longitudinal research. Future studies may also examine the role of digitalisation, green finance, policy support, consumer awareness and organisational capability in strengthening the relationship between green entrepreneurship and sustainability outcomes. Greater attention can also be given to the social dimensions of sustainable development and to the contribution of circular entrepreneurship to employment, inclusion and community resilience.

## 15. Conclusion

Green entrepreneurship is a very effective avenue for attaining sustainability in the circular economy. Through the amalgamation of ecological accountability and entrepreneurial ingenuity, environmentally conscious corporate leaders foster economic advancement, resource preservation, waste minimisation, and societal welfare. The circular economy fosters a variety of entrepreneurial prospects in renewable energy, recycling, sustainable production, environmentally conscious packaging, agriculture, repair and refurbishment, electric mobility, water conservation, and digital services. Nonetheless, financial obstacles, technological difficulties, legal intricacies, infrastructural constraints, and insufficient customer awareness persist in impeding the advancement of green businesses. Tackling these obstacles necessitates collaborative endeavours among governments, financial entities, educational institutions, industries, and consumers.

Supportive governmental regulations, investment in eco-friendly technology, enhanced financial accessibility, skill development, and comprehensive sustainability education may bolster entrepreneurial ecosystems and expedite the shift to a circular economy. The SDG perspective demonstrates that these entrepreneurial activities

can contribute simultaneously to environmental, economic and social sustainability. SDG 12 provides a particularly strong link because circular practices directly address sustainable consumption and production, efficient resource use, and waste prevention, reduction, recycling and reuse. Other relevant goals include SDG 2, SDG 6, SDG 7, SDG 8, SDG 9, SDG 11, SDG 13 and SDG 14. □cite□turn0search0□turn0search4□

In essence, green entrepreneurship is both a commercial venture and a strategic methodology for fostering a robust, inclusive, and ecologically sustainable future for future generations. The conceptual framework presented in this study retains the original relationships among drivers, opportunities, challenges, green entrepreneurship, enablers and sustainability outcomes while extending the model to show how these outcomes connect with the SDG agenda.

## 16. References

1. Demirel, P.; Li, Q.C.; Rentocchini, F.; Tamvada, J.P. Born to be green: New insights into the economics and management of green entrepreneurship. *Small Business Economics*. 2019, 52, 759–771.
2. Ebadi, A.G.; Toughani, M.; Najafi, A.; Babae, M. A brief overview on current environmental issues in Iran. *Central Asian Journal of Environmental Science and Technology Innovation*. 2020, 1, 1–11.
3. Ebrahimi, P.; Mirbargkar, S.M. Green entrepreneurship and green innovation for SME development in market turbulence. *Eurasian Business Review*. 2017, 7, 203–228.
4. Flagstad, I.; Johnsen, S.Å.K. The psychology of green entrepreneurship: Founder-driven development of green climate in small-scale companies. *Cogent Business & Management*. 2022, 9, 2079245.
5. Gupta, M.; Dharwal, M. Green entrepreneurship and sustainable development: A conceptual framework. *Materials Today: Proceedings*. 2022, 49, 3603–3606.
6. Hina, M.; Chauhan, C.; Kaur, P.; Kraus, S.; Dhir, A. Drivers and barriers of circular economy business models: Where we are now, and where we are heading. *Journal of Cleaner Production*. 2022, 333, 130049.
7. Kazancoglu, I.; Sagnak, M.; Kumar Mangla, S.; Kazancoglu, Y. Circular economy and the policy: A framework for improving the corporate environmental management in supply chains. *Business Strategy and the Environment*. 2021, 30, 590–608.
8. Lotfi, M.; Yousefi, A.; Jafari, S. The effect of emerging green market on green entrepreneurship and sustainable development in knowledge-based companies. *Sustainability*. 2018, 10, 2308.
9. Martins, A.; Branco, M.C.; Melo, P.N.; Machado, C. Sustainability in small and medium-sized enterprises: A systematic literature review and future research agenda. *Sustainability*. 2022, 14, 6493.
10. Momenitabar, M.; Dehdari Ebrahimi, Z.; Arani, M.; Mattson, J.; Ghasemi, P. Designing a sustainable closed-loop supply chain network considering lateral resupply and backup suppliers using fuzzy inference system. *Environment, Development and Sustainability*. 2022, 1–34.
11. Mondal, S.; Singh, S.; Gupta, H. Assessing enablers of green entrepreneurship in circular economy: An integrated approach. *Journal of Cleaner Production*. 2023, 388, 135999.

12. Muo, I.; Azeez, A.A. Green Entrepreneurship: Literature Review and Agenda for Future Research. *International Journal of Entrepreneurship Knowledge*. 2019, 7, 17–29.
13. Polas, M.R.H.; Kabir, A.I.; Soheli-Uz-Zaman, A.S.M.; Karim, R.; Tabash, M.I. Blockchain Technology as a Game Changer for Green Innovation: Green Entrepreneurship as a Roadmap to Green Economic Sustainability in Peru. *Journal of Open Innovation: Technology, Market, and Complexity*. 2022, 8, 62.
14. Yin, C.; Salmador, M.P.; Li, D.; Lloria, M.B. Green entrepreneurship and SME performance: The moderating effect of firm age. *International Entrepreneurship and Management Journal*. 2022, 18, 255–275.
15. United Nations. *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations, 2015.
16. United Nations Department of Economic and Social Affairs. *Goal 12: Responsible Consumption and Production*.

Editorial note: This revised manuscript preserves the original paper's substantive sections and conceptual framework, while incorporating the SDG dimension and the SDG Mapping Table. It remains a secondary-data/conceptual paper and does not introduce fabricated primary data or statistical findings.