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**INNOVATIVE MODELS OF GREEN
 ENTREPRENEURSHIP:
 SOCIAL IMPACT ON SUSTAINABLE
 DEVELOPMENT OF LOCAL ECONOMIES**

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Introduction. Green entrepreneurship has become a powerful new force, driving sustainability and promoting economic development within local economies. This research explains how small-scale green entrepreneurship activity has its desired role in environmentally affected matters and any economic grow-ups from the low ends.

Aims and tasks. The study aims to analyze green entrepreneurship models and highlight successful initiatives in various regions, including those related to solar energy, green agriculture and green product development startups, to understand the impact related to social, economic and environmental factors.

Results. The findings in the research indicate that creativity is an important business strategy, partnerships in the strategic plan, application of technology and capturing communities in driving green entrepreneurship. As such, the study discovered that business models were continuously associated with the creation of jobs, and in average 15,000 new jobs per region were created. North America, Europe, Asia, Africa, and Latin America contributed significantly. Thus, as well as through strategic partnerships and technology adoption, it has contributed to a reduction in CO₂ emissions by an average of 60,000 tons a year across all regions. The success of green entrepreneurship models is analyzed using empirical case studies and real-life examples to bring out core issues requiring action and offer recommendations to policy makers, investors, and entrepreneurs on how to implement green business models further.

Conclusions. The research underlines the dynamic capability of green startups to solve environmental issues along with its shifting economy and community interface. An essential role of green entrepreneurs is the ability to use creative mindsets together with progressive tie-ups. This therefore engenders positive change and leads the way to a more equal and sustainable world. Going further, all critical characters in the area must still be inspired and enlightened to launch more green entrepreneurship initiatives to provide more significant influence on transitioning to a more sustainable society.

Keywords: green entrepreneurship, sustainable development, environmental sustainability, green economy.

1. Introduction.

As a vital component of the current green economy, sustainable entrepreneurship has proven highly effective when dealing with environmental degradation and global warming (Serio et al., 2019). As new business models that merge profit and environmental sustainability into a single goal, green entrepreneurship is a tell-tale sign of the forthcoming paradigm shift toward more conscientious and ecologically conscious economic activities. The advantage of green entrepreneurship is not just the contributions it makes to the world economy through its advantages of innovation and even the improvements in environmental well-being that it brings. It is more of its capacity to improve people's livelihoods, especially on a global scale (Shrivastava, Tamvada, 2019).

Green entrepreneurship ultimately represents the fundamental hint of sustainability, which doesn't only include factors such as resourceful ways of efficiency and waste reduction of the possible amount, but implementing renewable energy sources as well. Thus, by paying special attention to the inherent nature of the business process, green entrepreneurs attempt to stifle the ecological footprint and, at the same time, deliver profits to the shareholders. A more considered approach that goes beyond making profits and puts an emphasis on the interconnectedness of businesses' success and the need to protect nature (Gu & Zheng, 2021).

To add to this, eco-entrepreneurship is conducted within the frame of sustainable development, and it is aligned with the United Nations (UN) Sustainable Development Goals (SDGs) and other international initiatives that have as the underlying goal the ecological balance and social equity. This type of leadership can be exemplified by numerous initiatives, chiefly clean energy startups, sustainable agriculture ventures, and ecological product design firms. In so doing, they facilitate the SDGs achievement on climate change, responsible consumption and production, as well as decent work and economic growth (He et al., 2020).

The powerfulness of green entrepreneurship goes beyond environmental matters. Social and economic effects could also be significant and should be considered. Creative applications of innovative technologies and business models, green entrepreneurs ensure not only new non-standard employment opportunities and effective economic stimulation of both urban and industrial areas but also bring marginalized communities' education and move them towards self-sustainability. To stretch the idea, green businesses keep standing with consumers and boost reputation in the long run by maintaining environmentally sound business practices, which is an important competitive skill in the global business space.

The very essence of sustainable entrepreneurship is embodied in green entrepreneurship, which fundamentally represents the principles of energy efficiency, waste minimization, and the use of renewables. Rather than disregard environmentalistic aspects, green entrepreneurs aim to significantly alleviate the burden on the ecosystem, while still ensuring profitability for the company. This is distinct from the traditional profit-oriented thinking, in which there seems to be a clear demarcation between business goals and environmental concerns. These are two incompatible and conflicting entities. The proactive approach effectively merges both entities, leading to business success and environmental stewardship (Gu & Zheng, 2021).

On top of that, eco-entrepreneurship operates within the institutional framework of sustainability, tying up its target achievement with the UN SDGs and other global environment balance efforts and inclusive policy issues. In this way, the green entrepreneurs create similar enterprises like clean energy startups, sustainable agriculture ventures and eco-friendly product design firms, which meet some of the targets such as climate action and responsible consumption and productivity, as well as the goals related to decent work and economic growth (He et al., 2020).

The relevance of green entrepreneurship provides increased environmental protection and opportunities for the development of the national economy. Green entrepreneurs can develop their businesses based on the conditions and technologies they use and new business models that stimulate new employment opportunities and, thus, the local economy. Therefore, state support for “green” business is needed, which will enhance confidence and improve brand reputation in the context of the growing competitiveness of countries in the transition to a green economy.

In essence, green entrepreneurship reflects a comprehensive view of business operations that works for society, nature and the customer. With an absolute priority universally accepted that deals with the alarming weapon of climate change and sustainable development, the spotlight of “green entrepreneurship” gains more significance. Through advocating for inventive solutions and ushering in transformative changes, green entrepreneurs act as the portrayal of the potential of entrepreneurship that will initiate the way for positive environmental and social impacts, consequently driving the world into a more sustainable and resilient living space.

Small economic systems create the basis of sustainable environmental development because they represent the most important fundamental blocks of a good socio-economic environment conceptualization within quite fragile communities (Hoogendoorn et al., 2020). It can be grasped from the sustainable development context that local economies have been proven to be the bedrock of environmental stewardship, social well-being, and equitable prosperity by intrinsic linkage with the three factors mentioned. Beyond identifying the significance of local economy, the ability of local economies to stimulate sustainable transition, by creating inclusive livelihoods and driving transformative growth must be established. In the core of sustainable development, a crucial point exists that calls for the interlaced interaction of economic advance, environmental conservation and social equity. The relevant local economy functions at a micro level representing a nucleus of further efforts on a global scale.

This particular environment is considered most favorable for the birth of new sustainable initiatives. It is because local economies are usually closer to the sources of supply, market outlets, and ecosystems that the regional population has the power to determine consumption, production, as well as resource use (Horbach, 2018).

In light of that, they act as strategic fields on which various eco-friendly measures can be carried out and remedies can be found to square the circle of environmental difficulties.

In addition, local and micro-economies especially seem to have a great advantage in adaptability and responsiveness to local needs and priorities. As opposed to centralized economic systems, which often make concessions on efficiency and scale for the sake of social and environmental factors, local economies offer a base where economic activities can be perfectly tuned to the unique values and characteristics of the community. Among members of the regional institutions, this may be catalytic in increasing the use of economic and physical resources.

The local economies have always dominated the global arena, and this is not a role that can be taken over by sustainable development in any way. While national and international policies play a huge role in creating the larger structures of sustainability, particularly those embodied within the targets and goals, it is at the local level that one sees these policies in effect and notices practical sustainability manifested. At different stages of the clean energy transition process, local governments, businesses, civil societies, and communities have different views on the role of the transition of local economies toward ecological sustainability. Consequently, locally practiced approaches are the holders of responsibility for reaching thoroughly the general sustainability outlook.

Economic activities, by default, are the ingredients (building blocks) of sustainable development, which depend on sustainable consumption (multiple resources management), distributive justice, and risk management.

Going beyond the immensity of local economies and societies not only provide a direction to achieve a future where a prosperous social and environmental development will be just a matter of time but also, a path where prosperity and sustainability will be one. Alongside environmentally sustainable oriented development, growth at the local level is a vital and key factor that will help to achieve a global green over a fairer and stronger society.

2. Literature review.

Inherent innovation resulting in social effect is among the important factors that lead to neolocal and sustainable development that is carried out through green social entrepreneurship. The study by Wagner et al. (2021) reveals that a university-connected program is one of the most appropriate tools that can be used to make sure that the country can develop and also support sustainable entrepreneurship, as shown by its mechanisms and impacts.

Venancio and Pinto (2020) explored the causal connections among various enterprising ventures and ability to foster sustainable development goals and create multiple paths toward sustainability. The authors outlined the literature on institutions, entrepreneurship, and economic development for the last decade. Such factors play a key role in one another's development, thus bringing about a subtle intertwining of these factors.

They also go into detail and discuss the importance of how the institutional environment is related to entrepreneurship and how the economy is created and charged with difficulties because wealth is very unequally distributed.

Kuckertz et al. (2020) expand the discussion to green entrepreneurial harmonization, which enables green entrepreneurship as an ecosystem for environmental sustainability. Moreover, there is an authorial suggestion of a structural approach that aims to establish a connection between green entrepreneurship and small and medium enterprises and brings to light the influence that sustainable behavior has on the organizations' internal dynamic system.

Méndez-Picaso et al. (2021) examined sociocultural and economic factors in the development of social entrepreneurship and sustainable development, which should not be perceived as an exclusive form. MrKajic et al. (2019) continued the dialogue by highlighting how startup acquisition transactions are the key component of this smart financing ecosystem that promotes the sustainability of innovations.

Hence, Johnson and Schaltegger (2020) develop a multilevel causal mechanism frame to understand sustainable development through entrepreneurship. It looks at the connection between individuals, organizations, and society, and it is realized by stressing the complexity between these levels because of complexity.

The responsibility of Kasseeah (2016) is shaped specifically to problematize dimensions of entrepreneurship within an evidence-based study or a local investigation that reveals the overwhelming benefits of entrepreneurial activity on region-based development.

It is assumed that green entrepreneurship is an important element in developing environment-friendly technologies in the bioeconomic transformation degree by the theory of Kuckertz et al. (2020).

However, a question that is being strongly debated by Leoncini et al. (2019) is the effect of green technology on the growth of firms. They also posit that this will change people's perceptions of the company, and as long as it keeps this green innovation, it can remain competitive for a long time.

Moreover, Lin (2022) focuses on various aspects of the role of venture capital that relate to the growth of green investments as part of the financial mechanisms of this process.

Based on the studies of these scholars, the probability principle underlying green entrepreneurship is explained, and the consequences of these developments and the driving forces of it are also highlighted, recognizing the crucial role of these factors in the environmental and social wellness issues of regions.

3. Aim and tasks.

The study explores the topic of “green entrepreneurship” and its growing role as a powerful tool for development and regional communities. The study analyzes hybrid eco-models, starting from green energy acquisitions and including ecological agriculture and eco-design of products. The objective is to learn how many businesses take advantage of the greenways of production.

Given that green entrepreneurship is propelled by green practices that maximize the triple bottom line, that is, social, environmental, and economic responsibility, thus illustrating this (triple bottom line) green potential, the goal of this is to show how green business is growing these days.

Along the way, research focuses on the methods used by already sustainable green business projects that overcome these challenges and build sustainable growth. The latest findings will thus help emerging entrepreneurs and policymakers as users of this research. However, recommendations, as outlined in this paper, will be channelled to policymakers, investors, and business entrepreneurs who are on the verge of a green business model transition with a clear-cut request to actors to stimulate the policies that will push this effort, develop financing structures that will back the green economy and form collaborations that will speed up this process.

4. Theoretical framework.

The common ground of this article refers to the overlapping of the entrepreneurship theory, sustainability theory, and economic development theory. The entrepreneurial theory of led to understanding of the factors that motivate entrepreneurs, influence behaviors, and direct strategies in the execution of opportunities, creation of value and pursuit of innovation.

When grouped with other theories, green entrepreneurship will be understood as a catalyst for sustainable development because it can identify and solve environmental-related challenges, boost the economy, and promote social inclusiveness within local economies.

Green entrepreneurs achieve sustainability goals by including the practices in business models, a source of new ideas that generate value and improve ecological and social conditions. The academic framework integrates ideas and case studies from social entrepreneurship, circular economy, and inclusive growth to guide the assessment of the contribution made by green entrepreneurship projects to sustainable development goals.

Moreover, the theoretical foundation emphasizes the roles of enabler institutions, proactive networks, supportive policies in facilitating and green entrepreneurship.

Policymakers, investors, and supporters can build the foundation by structuring incentives, reducing barriers, and providing resources that can create an ecosystem that is like a fertile soil, of which green businesses can grow and thrive. With this paradigm in mind, the theoretical framework acts as a guide for the discussion of strategies in the area of overcoming hurdles, pushing the adoption of the practice, and giving green entrepreneurship, ultimately, a chance to effectively reach the established sustainable development goals.

5. Methodology.

The methodology that is used during research is comprised of several steps that are interconnected and closely aligned with the intention of comprehensively encompassing the behavior of green entrepreneurs and impact on sustainability. Research is based on a theoretical structure, and is formed by a thorough review of literature, which comprises academic articles, reports from industry, and cases. Then, dedicated to green entrepreneurship case studies, studying successful initiatives from different regions and industries is the main study approach. Such a deep dive covers understanding the methodology, stumbling blocks, and outcomes of such initiatives to derive valuable information. In the analysis of the case study, data collection efforts will be pursued, which include qualitative and quantitative data collected through interviews, surveys, and secondary sources.

Qualitative data is analyzed by thematic coding and content analysis methods, on the other hand, quantitative data is generally statistically analyzed to discover patterns and is associated. In a cross-case synthesis, the lessons learned from the cases and the data analysis lead to more comprehensive insights and recommendations. Peer review, expert consultation and community members engagement are used as the method of validation of the findings which enhances the reverence and credibility of the research. Eventually, the research outcome will consist of recommendations for policymakers, investors, and entrepreneurs who should also pay attention to green business models. This approach, according to them, is the basis for achieving sustainable development. The methodology studied in this research may have only some side effects. On the other hand, conducting further research and cooperation in green entrepreneurship and sustainable development seems very fruitful. This is the way to go in the future.

6. Discussions.

Green entrepreneurship is not another usual business approach as it seeks to unalterably lift environmental awareness and sustainability principles (Gu et al., 2020). This way of doing business is drastically different from old-type entrepreneurship, which applied traditional methods to bring environmental or so-called green innovations to the very heart of businesses. Green entrepreneurship as a business paradigm has certain unique aspects that put fingerprint when combined to form a holistic approach.

The distinctive trait of green entrepreneurship is developing new-slot products and procedures created via the most innovative methods, with loss reduction as the highest objective. Green entrepreneurs are all about producing stuff, rendering services to society and creating sustainable business models. That encompasses using renewable raw materials, implementing pollution-free processes, innovative technologies and advanced devices to execute the recovery of natural resources.

Green business basements propel innovations by giving entities simple and effective ways towards environment-friendly practices.

The green period of entrepreneurial development is affecting the perception from the main goal of having the maximum profit to seeking the goal of holding the triple bottom line consisting of the economic, environmental, and social aspects. Nature and green entrepreneurs creating value spans three delicate ecosystems: it is different from getting in debt, like buying things people don't need, which is bad for both health and wallets. It represents the making of plans for a business, for example, considering the impacts on the environment and society as a whole in addition to being able to make profits to propel the two as the main goals for a company.

First and foremost, eco-friendly enterprise culture is concerned with protecting the environment. Green entrepreneurs are conscious of the limited availability of natural resources and the critical importance of addressing the acute problem of mankind's harming the environment. Green entrepreneurs also most of the time participate in conservation, biodiversity preservation and restoration of the environment efforts which contribute immensely to the holistic environmental sustainability philosophy as demonstrated by He et al. (2020).

Among others, green entrepreneurship is based on environment-oriented behavior and the social dimension. Environmental entrepreneurs know that businesses not only have the role to bring needed change but also the responsibility to make society and community healthier by making businesses create for the well-being of communities and individuals. To accomplish this, organizations could, for instance, create a culture of diversity in the office and leverage philanthropy to help local populations, or they could also choose to encourage fair labor conditions along the supply chain. Green entrepreneurs can achieve social goal when they incorporate social responsibility practices into business operations, which results in the promotion of social equity and empowerment.

Green entrepreneurship not only tracks the system thinking but also the cause-effect relationship among the natural systems, making people understand that the environment, society and economic systems are all interlinked (Gu et al., 2020). Eco-entrepreneurs understand that sustainability issues are not just single or focused in nature, but they are multidimensional and require comprehensive solutions that consider the interdependent systems of ecosystem.

This means that green entrepreneurship does not strive just at reducing environmental problems, but rather at identifying and removing sources. This is also its main goal: to change the system, which will allow long-term sustainability.

Green entrepreneurship becomes a materially revolutionary business form involving sustainable development of innovative business, a triple bottom line, environmental stewardship, social responsibility, and a holistic approach to the systems. Embracing the natural characteristics of green business - driving environmental change for the better while creating economic value is one of the main roles of environment-conscious entrepreneurs. Green entrepreneurs demonstrate how a seemingly profit-seeking entity like business organizations can be impelled to undertake the burden of ensuring that the environment is protected and the society is doing well (Gu & Zheng, 2021).

Looking at the motivations behind green entrepreneurship, it is revealed that an assortment of reasons, both personal and business, move people and companies in the green direction. The initial forces behind the green business as a type of startup business are a combination of personal, community, and business-oriented factors that make it an attractive undertaking.

First of all, the main motivation of business executives to move to the green movement is self-respect as a part of nature conservation. The realization of this brings throngs of youth eager to become entrepreneurs, and inspiration may come from an involuntary sense of responsibility emanating from the destruction of the environment and the need to terminate activities from causing the damage.

As local communities whose one and only concern is an accelerating environmental problem such as climate change, pollution, deforestation and resource depletion, these people have the utmost desire to make a change towards sustainable business operations that would, perhaps, ensure favorable living conditions for future generations.

Sustainable enterprises can strategically influence ethical and moral symbols that empower objectives and may focus on social justice and environmental protection, taking an example from (Tymoshenko et al., 2023). This is the road for some people to find place in the business through the opportunity to make choices that can be varied and meaningful from views, values, and ideological beliefs that should tie with views, values, and ideological constructs.

Businesses' ethical issues and the fairness of decision-makers are included in the endeavors of green entrepreneurs, which leads to the development of businesses that are ethical and conduct procedures sustainably. In general, this is a result because the great importance of these issues is perfectly associated with the long-run vision for sustainability and ethics that they are committed to (Gu et al., 2020).

The exploration of green entrepreneurship as one of the bases for developing local economies meets cognition on the assortment of benefits that result from including green business principles as an intrinsic part of local economic building. Benefits extend beyond mere financial gains, encompassing social, environmental, and economic dimensions that collectively contribute to the resilience and vibrancy of local communities. Beyond obvious income advantages, they also include social, ecological and economic elements which help communities to diversify and build sustainability thus preserving the overall durability and prosperity.

Eco-friendly entrepreneurship should be an innovative driver for economic growth by bringing together job seekers and surveying existing wealth reserves. While green start-ups become star players in bringing musicality and great value to one specific location, there comes an operating synergy that combines various business entities to generate more value.

From lessening carbon pollution through clean energy and environment-friendly manufacturing to the facilitation of startup businesses, the creative and innovative green entrepreneurs' drive for growth and creation of jobs is not only at various skill levels but as well as this leads to a reduction in unemployment and economic prosperity (He et al., 2020).

The green entrepreneurship culture, which is also a key player that participates in research and policymaking activities, can also help promote economic diversification and resilience. Such investments are not only for maneuvering but also contribute to teaching capabilities, competencies, and knowledge to the area's youngsters, creating a happy atmosphere where these entrepreneurs are increasingly becoming successful.

Figure 1 shows the relationship between green entrepreneurship initiatives and economic growth opportunities. Statistics show which parts of the world were most significant regarding green entrepreneurship initiatives, job creation, CO2 emissions reduction and GDP growth in 2022. It turns out that North America, Europe, Asia, Africa and Latin America made significant contributions. .

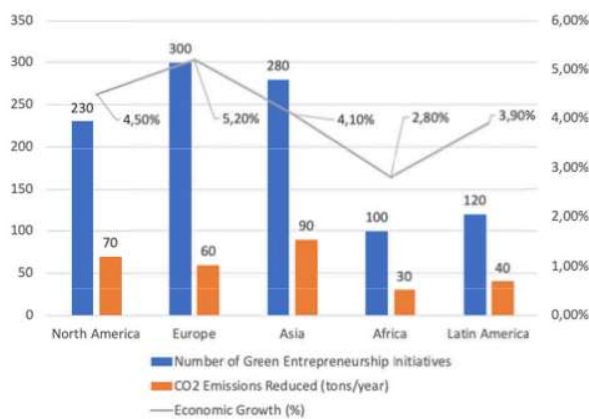


Fig. 1. Green entrepreneurship initiatives and the impact on sustainable development across regions, 2022.

Source: based on Audretsch et al. (2022).

From the sustainable actions these entrepreneurs undertake, which lead to the improvement of living standards of the local population regionally.

Therefore, Fig. 1 indicates how environmentally friendly methods are being advocated for, and in the end, the accomplishment of sustainable development goals is made possible at different places. In particular, the figures indicate a contrast to other places, the many strategies employed, employment creation, CO2 emission and economic growth. North America and Europe hold the lead regarding capabilities (the scope of the existing initiatives) and criteria (the impact metrics framework respectively). The countries in Asia and Latin America follow the global leaders. In Africa, the development process began pretty slowly with a lack of appropriate initiatives, which is a barrier to overcome.

The fact that this phenomenon leads to not only national but also worldwide revolutions, which are environmental and social, proves the catalyzing role of eco entrepreneurship. This eventually builds capacity in which policies are created and implemented, there is ease in accessibility to financial services and working together in complementary sectors can be achieved thus enabling increase and coverage of green business and economic activities. In contrast, while the regions will write a plan, set priorities, and be on path to a sustainable and resilient society, green entrepreneurship becomes a critical tool to develop an equitable and sustainable society of the future.

6.1. Innovative models of green entrepreneurship.

While the authors discuss different conveniences of green entrepreneurship, including the circular economy, the authors provide examples of new ways that focus on increasing the efficiency of resources, reducing the amount of waste, and shifting patterns of consumption to be less environmentally destructive. The models that are an introduction of a circular economic system away from the linear and extractive economy will embrace modern regenerative principles that aim at maximizing resource utilization while reducing the environmental impact (Hoogendoorn et al., 2020).

The circular economy is being supplied by circular economy entrepreneurs who seek to rebuild traditional linear systems of production and consumption currently existing into more effective closed-loop cycles. Through the circular economy approach, business not only cut down environmental damage but also increase revenue sources through new business strategies (Gu & Zheng, 2021).

Entrepreneurs who stand out in the research and development of environmentally friendly product design involving creating sustainable options instead of conventional ones would be one of those. The application of this principle could be through the design of renewable materials during manufacture, energy and water conservation during production, and also through the integration of compostable or recyclable parts. They target this market segment by designing products from environmentally friendly materials suitable to the customers' demands for environmentally friendly products and contribute to creating the processes and procedures of design and production.

Renewable startups are undoubtedly key players in the clean energy transition. They multi-fold harness non-conventional energy sources like sun, wind, and hydro. Such companies design green and efficient technologies and business approaches to increase the rate at which households have access to renewable energy, decrease emissions in the atmosphere, and make communities more independent. By harnessing alternative energy, startups promote environmental conservation, care for human capital, and generate economic growth.

The mission of sustainability agriculture centers on fostering regenerative farming methods, which build the ground, biodiversity, and ecosystems (Prokopenko et al., 2023). Such enterprises can involve various organic farming, agroforestry, permaculture, and urban farming (for instance, urban farming), which maximize ecological equilibrium and food security. Sustaining the environment is a crucial condition of survival for humans.

The entrepreneurs who organize sustainable agricultural practices accelerate environmental conservation, minimize the effects of climate change, as well as contribute to the local food system, which creates a thriving and prolonged community.

Green building and construction organizations primarily focus on planning and building structures that aim at minimizing energy use, conserving water and achieving superior indoor environmental quality. These enterprises utilize recycled and sustainable building materials, energy-efficient building techniques and passive design approaches to lower environmental impact and provide maximum occupant comfort. Green building standards implementation can be seen as a method by entrepreneurs to counter environmental problems such as carbon emission reduction, resource conservation and the mere improvement of health standards (Gu et al., 2020).

Residual organizations and businesses aim to decrease landfill waste by using creative recycling, composting, and waste-to-energy technological approaches. These businesses are the basics of a sustainable supply chain that not only efficiently utilizes resources but also eliminates the impact on the environment. By converting discarded material into fresh goods or renewable energy, the entrepreneurs shape the economy in a circular development and make possible the environmentally friendly management of resources.

Table 1 provides an overview of inventive models applied within green entrepreneurship, detailing the various implementations, descriptions, and analyses of each model's substantial influence on sustainable business tactics. People are facing an ecological age with increased stress and the demand for bold actions to create opportunities that will lead to sustainable economic systems. To an extent, these business activities embody the principles of environmental sustainability and illustrate the immensity of business power as a good agent of social and environmental change.

Table 1. Innovative models of green entrepreneurship, including examples, descriptions, and analysis.

№	Model	Example	Description	Analysis
1.	Circular economy businesses	Patagonia	Patagonia is a leading outdoor apparel company that embraces circular economy principles.	Circular economy businesses prioritize resource efficiency, waste reduction, and closed-loop systems, minimizing environmental impact.
		Interface	Interface, a carpet manufacturer, implements closed-loop recycling to reuse materials.	By extending product lifecycles and reducing waste, these businesses create economic value from existing resources.
2.	Eco-friendly product design	Tesla	Tesla designs and manufactures electric vehicles with a focus on sustainability and energy efficiency.	Eco-friendly product design involves using renewable materials, reducing energy consumption, and minimizing waste.
		Method	Method produces eco-friendly cleaning products using biodegradable and non-toxic ingredients.	Through innovative design, these products offer sustainable alternatives to conventional goods.
3.	Renewable energy startups	SolarCity (now Tesla Energy)	SolarCity (now Tesla Energy) installs solar panels and develops solar energy projects for residential and commercial use.	Renewable energy startups drive the adoption of clean energy technologies, reducing reliance on fossil fuels.
		Vestas	Vestas manufactures wind turbines and provides renewable energy solutions globally.	By harnessing wind and solar power, these startups contribute to decarbonizing the energy sector and mitigating climate change.
4.	Sustainable agriculture	Stonyfield Farm	Stonyfield Farm produces organic dairy products using sustainable farming practices.	Sustainable agriculture ventures prioritize soil health, biodiversity, and regenerative farming methods.
5.	Ventures	Plenty	Plenty utilizes vertical farming technology to produce fresh, locally grown produce sustainably.	By minimizing water usage and eliminating pesticides, these ventures promote environmentally friendly food production.
6.	Green building	Green Hammer	Green Hammer designs and constructs energy-efficient, sustainable buildings using eco-friendly materials and techniques.	Green building firms prioritize energy efficiency, water conservation, and indoor environmental quality.
7.	Construction firms	The Bullitt Center	The Bullitt Center in Seattle is a net-zero energy, water, and carbon building that serves as a model of sustainable design.	By showcasing sustainable building practices, these firms drive innovation and promote green building standards.
8.	Waste management	Terracycle	Terracycle specializes in recycling hard-to-recycle materials and upcycling waste into new products.	Waste management enterprises divert waste from landfills, promote recycling, and support the circular economy.
9.	Recycling enterprises	Recology	Recology provides comprehensive waste management services, including recycling and composting, in various cities.	Through innovative waste management solutions, these enterprises reduce environmental pollution and conserve resources.

Source: based on Hoogendoorn et al. (2019).

Green entrepreneurs bring a wide range of models, from circular economy businesses designed to minimize waste to renewable energy startups and sustainable agricultural businesses that find unique solutions to environmental problems that are also profitable. Moreover, it creates increased community resilience. Green entrepreneurship is a complex undertaking highlighting the many ways to contribute to a greener planet, not only what can be done to reduce carbon emissions but also how sustainable business can be an instrument of social change.

The discussion of creative “green” entrepreneurship models in Table 1 highlights the transitional opportunity of sustainable business practice in local economies, which range from circular economy business to eco-product design, waste management and other green entrepreneurship-based ones, suggesting that green entrepreneurship has all solutions to environmental challenges, economic growth and social well-being. These models illustrate by-products of optimizing resources, minimizing waste, and making stewardship provision the goal of the economy to a point where entrepreneurial creativity brings about a shift to a sustainable and stable society.

In accelerating trends pushing sustainability imperatives, green entrepreneurship will heighten and be more likely to assert a dominant position in business development, reforming systems and implementing sustainable development goals. By applying green entrepreneurship principles, entrepreneurs and policymakers can give impetus to the economic force that is good for the environment and society, facilitating sustainability.

In this regard, innovative green startups, circular economy models, eco-friendly design, renewable energy ventures, sustainability in agricultural fields, and green building realms as candidates are only some approaches to garner attention in environmental sustainability and economic prosperity (Horbach, 2018). By leveraging these models, entrepreneurs can instil positive environmental and socially impactful ventures while fostering economic innovativeness and resilience.

On a time and scale where environmental problems are becoming more acute and the requirement for green sustainability is becoming more popular, green entrepreneurship looks ready to take a lead in local economies. In focusing on environmental sustainability, these innovative business models (frictional entrepreneurship) do environmental work to the economy and social responsiveness, enhancing the society with a positive environment, business, and social solvencies.

As sustainable development grows, the case study presented in Table 1 shows how firms should embrace environmentally friendly practices, which have the potential to bring positive change in the continuum. With a better understanding of successful initiatives and by employing the lessons learned, entrepreneurs, policymakers, and all the community’s stakeholders can build stronger, more equal, and peaceful surroundings for future generations to come.

Feedback from the green entrepreneurial models’ evaluation on role in advancing environmental sustainability and economic development at the local level reveals the multidimensional benefits of the models for a community (Fernández-Laviada et al., 2020). Normally, these models are made up of methods like resource-saving, adoption of renewable energy, application of sustainable agriculture practices, and waste management techniques, and some of them are recycling, which all work to prevent environmental degradation and provide for ecological stability.

Eco-businesses like a circular approach and a variety of eco-friendly product design firms, for instance, employ closed-loop systems and use renewable materials without adding more to the existing eco-debt of the surroundings. Renewable energy firms just can’t be underestimated because they are precisely the teams who displace the fossil fuel-based energy production that contributes excessively to the increase of greenhouse gas emissions and consequently, climate change (Fernández-Laviada et al., 2020).

Also, these farmers employ regenerative farming techniques that enrich the soil and promote biodiversity and ecosystem stability, which also account for the two aspects of sustainability, i.e., preservation of the environment and food security.

Certainly, circular commerce and clean and entrepreneurial approaches favour the discarding concept, enabling economic growth and providing employment prospects for local economies. Green business formation benefits the development of innovation and entrepreneurship milieus, which catalyze the development of technologies, new business models, and the diversification of markets.

Through the cooperation of entrepreneurs, researchers and policymakers, green entrepreneurship models create local and even more effective and prosperous ones. Also, sustainable enterprises tend to have considerable income savings and efficiency when they use green business practices like energy efficiency improvements, waste reduction measures, and resource optimization strategies (Dhahri et al., 2021). These efficiency enhancements strengthen profitability, competitiveness, and resilience and make communities financially firm.

In addition, it will be a chance for the organization to be brought out as a distinct brand from its competitors, which welcomes environmentally-conscious consumers, investors, and partners to partner with them. Companies that make sustainability an important element of business are perfectly then seen as socially responsible, and efforts get rewarded with a caring image that, in turn, attracts more customers.

These unique brand identity ideas drive demand for green products and services and improve the local economy's intelligence by attracting investment and stimulating partnerships. In total, the role of green entrepreneurship in achieving eco-friendliness and higher economic performance through local development is very significant, as well as outreach. When the local economy embraces sustainable business practices, it can find the ecological and economic balance between them for creating change and ensuring resilience and inclusion.

6.2. Social impact of green entrepreneurship.

Exploring the social subtext of Green Entrepreneurship, four items of changes on the horizon and improvements that go beyond just the economic and ecological can be seen like: job creation, community upliftment, and reduction of poverty. In city communities, green entrepreneurship not only serves as an engine of job creation but also leads to a big impact on the living standard, including the eradication of poverty when fresh development strategies are adopted (Horbach, 2018).

Eco-business models that promote job creation are fostered across diverse sectors, from installing renewable energy sources and sustainable agriculture to waste management and green tourism (Melay, et al., 2017). Green entrepreneurs as environmental investors not only create for community, but also strive to reduce unemployment by providing job opportunities within local area and improving the economy's efficiency. Furthermore, green careers quite often display high levels of inclusion and equity, where jobs tend to be open for those who are skilled as well as unskilled and alike including the disadvantaged groups and populations at risk.

Eco-green entrepreneurship contributes to community-building by involving citizens in the decision-making process, fostering social bonds, and enhancing collective capacity (Dhahri et al., 2021). Community-led renewable energy projects, therefore, enable the locals to grab the energy production authority, dissemination, and management, and ultimately democratize the access to energy sources and reduce Sustainable agriculture initiatives, in the same way, help the community to get involved in food production, distribution and consumption, as well as that strengthens local food systems and achieves the goals of the so-called food sovereignty.

Green Entrepreneurship Models mitigate poverty by providing income-generating opportunities, improving livelihoods, access to amenities, and environmental protection plans. In the countryside, sustainable agriculture initiatives create platforms that make markets more accessible through technical support and finance.

These initiatives gradually raise the productivity of smallholders, generate income, and improve food security.

Apart from this, renewable energy projects are a way through which access to clean energy is availed to the people living in underserved areas, which is a contributing factor towards eliminating energy poverty and improving standard of living.

The social dimensions of green entrepreneurship operating online fraction go beyond economic prosperity to encompass community success and poverty relief. Through contribution to inclusive and sustainable green development initiatives, green entrepreneurs provide essential services for building resilient communities and communities that individuals and families can be proud to live in, have socially and economically equal opportunities, and are well taken care of environmentally. Consequently, sustainable startups are revealed as dominant levers of social change, promoting fairly and equitably sustainable economic growth in the locality.

Exploring how the social effects of green entrepreneurship contribute to the possibility of achieving an equilibrium between environmental sustainability, economic growth, and social inclusion, considering local communities (Omri, 2018), is an important step towards understanding the entire scope. As its ecological pillar, green entrepreneurship puts more weight on sustainability and social responsibility than others; therefore, it can produce positive social impacts through job generation, community support, and poverty reduction. In addition, green entrepreneurship is a crucial instrument for creating a nationwide framework of equitable access to different opportunities and resources. Therefore, a mass advancement towards the redistribution of privileges and abilities, as well as the addressing of systemic inequalities within local communities can be achieved (via green entrepreneurship).

Eco-friendly entrepreneurial strategies motivate the creation of jobs that facilitate a low-carbon economy across multiple sectors, for example, in relation to renewable energies, sustainable farming, green building projects, and recycling. The jobs may be at a good pay level and can give the team a chance to develop

themselves and get the financial independence needed by families and individuals to break the cycle of poverty. By offering the citizens a chance to have an opposite job and enhancing the overall community prosperity, green entrepreneurship successfully eliminates unemployment and raises the community's well-being.

Green entrepreneurship can energize the local community to a great extent, through increasing people's interests in the community's sustainable development (Meirun, et. al., 2021). Community projects owned by the communities and non-corporate initiatives like urban farming and green business incubators aim to create spaces for community decision-making on projects that directly impact social and environmental health. The feeling that they are taking control gives them self-pride, brings people together and produces solidarity, reinforces the community network.

Green entrepreneurship shows the possibility of preventing poverty for the economically weak, marginalized people by offering them the chance to work and to make a living, women, youth, and indigenous people in particular. Green jobs that emphasize inclusive hiring, job training, and entrepreneurship assistance are the ideal platforms that give the impoverished populations with a chance to experience meaningful livelihoods that leave the vicious cycle of poverty. Moreover, programs like green enterprise microlending and social impact investment provide much-needed financial capital that empowers poverty-adverse social enterprises to expand and scale reach and impact (Dhahri et al., 2021).

Green entrepreneurship does not discriminate while generating jobs and resources because it endorses fair allocation of occupational and societal membership opportunities among the wealthy, poor, whites, blacks, men, and women (Shkola, et. al., 2021). Direct involvement with grassroots organizations and communities that are the most vulnerable and unrepresented green entrepreneurs makes it possible for the effectiveness of sustainable development to stretch beyond a few people. Furthermore, these initiatives towards climate justice and workers' rights creation help to decrease social disparity and foster more equity in society at a local level.

Green entrepreneurship has immense scope to generate inclusivity across all sections of society, to empower the poor strata of society, and to provide solutions to the social issues prevalent in the community. In the green economy entrepreneurship models' green jobs creation, community empowerment, impoverishment minimizing, and social integration are the important factors that provide the basis for forming stronger, fairer, and more advanced societies. By involving stakeholders and applying creative approaches, green entrepreneurs become catalysts of the desired social change, and they are capable of creating a sustainable impact in the community because they are committed to doing the job.

Discussing the impacts of social inclusion and social disparities that social entrepreneurship brings and that social entrepreneurship encapsulates the driving role it plays when convergence occurs between economic and social sustainability is worth discussing. Sustainable business shafts and the involvement of employ genes are capable of producing an equitable economic system that benefits everybody, most especially the underprivileged groups. Starting with the concentration of equal access to opportunities, resources, and decision-making processes, green entrepreneurs serve as a powerful tool in social inclusion and targeted systemic inequalities in local communities.

Green business models can place workforce inclusion and workforce development on the priority lists to ensure a high percentage of employees is from marginalized communities such as women, youth, disabled people, and minorities. Green companies that indeed pay fair wages, train individuals with necessary skills, and always provide realistic career advancement opportunities empower individuals from disadvantaged communities to obtain legitimate livelihoods and participate actively in local economies.

Being a green entrepreneur means that you would be working really closely with your local community. One of the impacts of restoring agency on the community is that it empowers them to take the lead in renewable energy projects, urban farming cooperatives, and green business incubators.

Businesses in the green sector use a resource-efficient approach by offering to the communities' items and services that are needed and are not environmentally detrimental. Achieving this will entail measures such as efficient clean energy systems, green residential areas, as well as a wide range of organic, locally produced foods within reach. Ensuring equal access to fundamental services and the resources such eco-entrepreneurs are using is one of the ways to address social inequalities and enhance the overall standard of living (Omri, 2018).

Green Entrepreneurs are the ones to call for justice in the environment by looking at the systemic injustices as well as inequities of the environment that highly affect the marginalized community. People endeavor to achieve equal distribution of environmental products and services by addressing pollution and environmental problems in poor areas and by implementing policies that consider the needs of the underprivileged and the challenged groups. Green entrepreneurs promote growth, social justice, and equity within communities by minimising human impacts (Demirel et al., 2019).

Social entrepreneurs utilize imaginative business plans and solutions to solve social and environmental problems, creating an inclusive society. The heartbreak of losing a community member at a young age is all too familiar to high school students. Social enterprises that merge entrepreneurial approaches with a strong dedication to upliftment exist. This can bring structural changes, promote social cohesion, and remove social disadvantages across local communities. Social entrepreneurship through ecological ventures leads to sharing power and bridging social gaps in the territorial communities through equal employment policies, community engagement, the supply of environmentally friendly goods, the advocacy for environmental justice and social entrepreneurship.

Green entrepreneurs can establish economies with inclusion that also prosper for people of low social class and, at the same time, offer the chance for social change for the better, coming together with economic prosperity and protection of the environment.

6.3. Sustainable development of local economies.

The effectiveness of green entrepreneurship is expressed in the development of local economies and businesses, which can lead to social well-being and a pollution-free environment in communities (Yasir et al., 2023). From ecological conservation to the operation phase, green entrepreneurs make diverse contributions to the sustainability of local economies using green economy techniques or environmental sustainability principles.

Therefore, green entrepreneurship promotes economic diversification through the creation of innovative industries and sectors under particular conditions or environmental alternatives such as renewable energy, green technologies, sustainable agriculture and waste management activities. Green entrepreneurship improves economic sustainability and reduces dependence on fossil fuel or extractive sectors (Monte et al., 2022).

By channeling the funds into renewable energy plants, sustainable agriculture business, greenhouse construction, and waste management schemes, the green entrepreneurs develop the job openings at all the skill levels starting from the lower to highly special positional levels. This therefore reduces the release of new recruitment calls so as to take away the lower skilled workers, train them, while the consequent improvement of economic resilience.

Green capital formation has implication of creating sustainable value chains encompassing environmental and social considerations across all the nodes on the supply chain (Dhahri, et al, 2018). These eco-friendly business practices, such as sourcing locally, cutting on waste, and ethical labor, create the value chain that is based on sustainability, transparency, and accountability. Not only does it strengthen the core of the local economy financially but it also boosts the position of the local businesses in the marketplace which is extremely beneficial to the company profitability worldwide through better marketability.

Green entrepreneurs bring about new-green solutions to environmental issues by innovatively investing in research and

development; these comprise of renewable energy technologies, sustainable agriculture approaches, and eco-friendly products. These initiatives shall stimulate the development of new niches, the synthesis of new markets, and draw investors to local communities.

The green entrepreneurship has a direct implication on the community health through environmental challenges upgrade, public health outcomes, and quality of living. One of the key outcomes of sustainable development is the progress of green companies in expanding the market of clean energy sources, implementing eco-friendly types of transportation, making healthier food available and creating regionally important green areas. Thus, the healthier and more livable communities, equipped for environmental disasters, become the result.

By promoting green business partnerships and cooperation between the public, private and non-profit sectors toward agreed sustainability objectives, eco-entrepreneurship is enhanced. Through collaboration, stakeholders can synergistically exploit respective strengths in terms of resourcefulness, skill-set, and networking to collectively implement programs that ensure sustainable development of local economies. In this case, partners work together to make green entrepreneurship projects work rather than doing so separately. Community members are as a result more conscious about the environment.

Green business as a catalyst of local areas for sustainable development shows a dynamic relationship pattern that leads to economic prosperity, social inclusion, and environmental responsibility. Through the integration of social responsibility ideas into business practices, green entrepreneurs are becoming part of initiatives to ensure that communities in the future are resilient, equitable as well as full of life and the environment is enhanced. With time, renewal of the earth's resources remains at the heart of sustainability. As the growth of it gets crucial, green entrepreneurship will have much larger influence on catalysing the future local economies and achieving all the aim of sustainable development.

Table 2 reflects the linkages between green entrepreneurship and sustainable development of the localised economy and includes details and explanations.

Table 2. The interplay between green entrepreneurship and the sustainable development of local economies.

№	Aspect	Details	Explanation
1.	Economic diversification	Emergence of new industries and sectors	Green entrepreneurship catalyzes the development of renewable energy, sustainable agriculture, green technology, and eco-friendly products/services.
		Reduced dependence on traditional industries	Diversification reduces reliance on sectors like fossil fuels, enhancing economic resilience and fostering innovation.
2.	Job creation	Range of employment opportunities	Green entrepreneurship generates jobs in renewable energy, sustainable agriculture, green construction, and waste management.
		Skills development and workforce enhancement	Jobs created span various skill levels, contributing to workforce development and economic empowerment within communities.
3.	Value chain development	Emphasis on sustainability throughout supply chain	Green entrepreneurs prioritize sustainable sourcing, waste reduction, and ethical labor practices, enhancing transparency and accountability.
		Local sourcing and community engagement	By sourcing materials locally and engaging with communities, green entrepreneurs strengthen local economies and foster resilience.
4.	Innovation and technology transfer	Investment in research and development	Green entrepreneurship drives innovation in renewable energy technologies, sustainable farming practices, and eco-friendly products.
		Collaboration between stakeholders	Collaboration between entrepreneurs, researchers, and policymakers facilitates knowledge exchange and technology transfer within local economies.
5.	Community resilience and well-being	Addressing local environmental challenges	Green entrepreneurship improves public health, access to healthy food, and quality of life, contributing to community resilience and well-being.
		Enhancing public spaces and green infrastructure	Investments in green spaces and sustainable transportation promote healthier, more livable communities that are better equipped to withstand environmental challenges.
6.	Partnerships and collaboration	Multi-stakeholder partnerships	Green entrepreneurship fosters collaboration between businesses, government agencies, NGOs, and community groups to achieve shared sustainability goals.
		Leveraging resources and expertise	By pooling resources and expertise, stakeholders can implement collective solutions that maximize impact and promote sustainable development.

Source: based on Hoogendoorn et al. (2019).

Eco-entrepreneurship has a key role to play in creating a sustainable local economy which can be done via economic diversification, job creation, value chain formation, and innovation, creation of community's resilience and through partnerships. Green industries and sectors that are different from the conventional ones and are focused on renewable energy sources, sustainable agriculture, green technology, and eco-friendly products and services often lead to the emergence of new sources of income and a balanced economy that does not over-depend on the usual traditional industries. In addition, this green entrepreneurship makes the economy more resilient to economic changes.

This economic diversification is located in the variety of industries that offer jobs and hence give way to skill development, workforce improvement, and economic empowerment, which make the communities gain a lot. Furthermore, green enterprises advocate for a fair sustainability system, which ensures responsible labor practices and a transparent value system, leading to a stronger economic base. Through inducing technological innovation and transfer of technologies, green entrepreneurship leads to economic development fostering new markets and attracting investment to local regions. Thus, economic development can be expedited, and local employment opportunities can be created.

Green entrepreneurship can also uplift the community's resilience and well-being by tackling local environmental issues, ensuring good health for the public and maximizing the quality of life. Green infrastructure and its beneficial public space investments ensure that the communities are resilient to environmental shifts and healthier and more vibrant. In addition, green entrepreneurship development is a collaboration and a partnership between individual stakeholders for a shared sustainability mission to achieve the goal by leveraging resources and expertise and networking to implement the decisions (Omri, 2020).

Green entrepreneurship serves as the foundation for the compact local economy because of its role in transforming less inclusive, resilient, and thriving communities into ones where people and environment prosper. As the demand for sustainability evolves, green entrepreneurship will significantly impact the local economy and propel the aspiration to make sustainable development possible.

Examining the influence of government laws, appealing arrangements, and infrastructure in accelerating the development of green enterprises uncovers the primary position of a practicable system and appropriate ecosystem for nurturing green businesses. Government agencies tend to drive multiple mechanisms that support greenfield investments, promote the integration of renewables, and develop habits to conserve resources such as regulations, tax credits, and grants. For example, feed-in tariffs and renewable energy mandates substitute green energy development and make environmentally charged costs internal, like the price of carbon emission. Support connecting from business incubators, accelerators, and mentorship programs proves an ineluctable stepping stone for green entrepreneurs, giving them untraceable access to investment opportunities, markets, and technical expertise. Besides that, the capital is being invested in green infrastructure comprised of renewable energy infrastructure, green transportation systems, and waste management facilities, which create a solid platform for the success and growth of green businesses (Horisch et al., 2017).

The importance of governmental policies, supporting networks, and infrastructure for achieving the immediate growth of green ventures cannot be overestimated. However, perspectives and barriers still exist in scaling operations and achieving a long-term sustainable strategy. Resolving these challenges results from collaborative work for an effective facilitation of a business environment for green businesses developed through the support of policies, funding, market development, and technological advancement. Through overcoming obstacles and not shying away from taking opportunities, green entrepreneurs create a wave of transition toward an environmentally friendly and healthy future.

6.4. Case studies.

Lyndon and Peter Rives founded SolarCity (Now Telsa Energy) in 2006, bringing in groundbreaking solar leasing and financing solutions for homeowners and businesses, which made them a prominent market player. SolarCity was revolutionizing how people used solar power by abolishing up-front costs and lessening the installation processes. Using this easier access, they brought about the widespread adoption of solar energy not only in North America but also in other places. This company has been making progress in scaling the business, and through strategic partnerships with local governments and utilities, it solarizes thousands of roofs. Thus it results in a reduction of greenhouse gas emissions and the transition to cleaner energy.

M-KOPA Solar (Africa), which was founded in the year 2011 by Jesse Moore, Nick Hughes, and Chad Larson, and transformed the approach to how clean energy is accessed in East Africa, through the solar home systems to the the grid household (Pay as you go). Through employing mobile payment technology and creative financing techniques, M-KOPA Solar overcame the issue of energy poverty in Africa and offered a reliable solar alternative to millions of households where electricity was not available, hence improving energy access, decreasing reliance on fossil fuels, and boosting livelihoods.

By means of its convergent and affordable business model, M-KOPA Solar almost monopolized the off-grid solutions market and exported solar systems to multiple African countries. Scaling up decentralized biomass gasification technology for rural, remote, and poor areas in Asia, Husk Power Systems (Asia) in 2008 was founded by Manoj Sinha, Ratnesh Yadav, and Gyanesh Pandey. Through installing electricity-generating power stations from agricultural waste called biomass gasification plants, Husk Power System resolved energy deficiency, and cut down on greenhouse gas release while creating jobs in rural communities. By implementing community service and renewable energy projects, the innovative business model of Husk Power Systems has benefited about 5000 households and businesses, placing the bottom of the pyramid economies in the most sustainable way feasible.

Ecovative Design (Europe) is an enterprise created in 2007, among other founders, by Eben Bayer and Gavin McIntyre, implemented eco-friendly replacements of plastic packaging materials using advanced mycelium-based technology. Using the glue-like natural tendencies of mycelium, the root structure of the mushrooms, Ecovative Design has come up with environmentally friendly packaging solutions capable of being fully biodegraded, turned into compost, and renewed through natural processes. The company has collaborated with different multinational companies and manufacturers in the process of scaling up its production line. Thus, mycelium-based products were introduced across multiple industries, including but not limited to packaging, construction, and fashion. Through providing sustainable alternatives to traditional materials, Ecovative Design aims to establish a peloton where circular economy principles are on roll, thus a reduction in environmental impact.

Sustainable Energy (India) set foot in 2011 and was one of the largest renewable energy developers in India that focused on wind, solar, and hydroelectric power projects. Through its sustainability, innovations, and social responsibility in energy scenario, ReNew Power has given a new direction to the

India power sector by developing clean energy projects and minimizing the dependability on fossil fuels. Its credibility and experience of project development and its financial and operational know-how resulted in the installation of Gigawatts of renewable energy capacity across India, and more and more households, industries, and businesses were supplied with clean and safe electricity. The company was able to grow its business internationally by scaling up and an intelligent investment strategy which enable it to participate actively in achieving the sustainable development of the country and transitioning to a low-carbon economy.

The effectiveness of its shipments demonstrates how green entrepreneurship startups make different parts of geography more accessible through environmental sustainability, economic growth, and inclusive social practices. Using innovation, teamwork, and sustainable management, these green entrepreneurs suggest a possible way to use business as a source of ripples that lead to the resolution of global problems and the creation of a cleaner future.

Entrepreneurship and sustainable business are hot topics of discussion every time since businesses are exploring different ways to twirl the environment responsibly and make income. These projects set a precedent for creating an enabling environment through the innovativeness of business models, strategic partnerships, and technology adoption in sustainability goal-oriented. The strategies from this knowledge are the source of knowledge and best practices. The entrepreneurs of this category who develop green technologies will benefit considerably, while the green policymakers who were instrumental as well will come out of it better informed and more able to promote sustainable development.

Many of these eco-entrepreneurship projects have started innovative business approaches that manage gaps in the market. They bring lots of value to customers and provide environmental benefits as well. Similarly, SolarCity experimented with a solar leasing model that combined affordability with accessibility.

M-KOPA Solar's pay-as-you-go financing scheme brought renewable energy to underserved groups, and the demand went up.

These efforts illustrate the significance of designing business models in such a way that they let them receive financial rewards for not only economic but also social and ecological purposes. It also helps them to grow faster and sustainably.

Through the cooperation of stakeholders, including governments, utilities, NGOs, and local communities, there is no doubt that many barriers can be overcome and effectiveness will also be enhanced. Husk Power System's ties with local communities and governments helped arrange access to biomass feedstock and regulatory approvals at both the national and community levels, which gave a chance for rapid deployment. Through taking advantage of synergy in fields such as expertise, resources, and networking, green community enterprises can overcome the obstacles and negative effects and grow faster.

Applications of the new technologies, as well as creating various cost-cutting and performance-improving solutions, are necessary to ensure you achieve your green entrepreneurship goals. The practice of Ecovative Design, using biotechnology technology based on mycelium to construct packaging materials, illustrates the necessity for applying nature-based solutions, including designing eco-friendly alternatives to commonly used materials.

Green entrepreneurs achieve goals through R&D, uncovering new paths, developing a distinct vision, and outperforming competitors in an ever-evolving market.

It is utterly important to have community engagement to develop trust and acceptance and to achieve social impact in green entrepreneurship. Renew Power's community service programs, participation in dialogs with local authorities, and job creation activities among citizens are evidence of awareness of community interests, provision of support for community needs, and sharing of benefits equally. Through the process of taking communities and decision-making, green entrepreneurs can develop resilient partnerships that build up social cohesion and maximize the positive results of green projects.

The elaboration of supportive policies, regulations, and incentive schemes is another key to creating an atmosphere suitable for green entrepreneurship to scale impact at a larger scale. Successful green entrepreneurs usually work closely with policymakers in government, industrial and lobby groups that push for changes in policies that will help to break the barriers and improve the market incentives for green practices. Promotion of clear and consistent policies by creating a comfortable environment for investments, green entrepreneurs will cut back on ambiguity which will result in an accelerated transition to a low-carbon economy.

Successful green entrepreneurship initiatives management to overcome the challenges while sustainable growth is achieved are well demonstrated by innovative business models, strategic partnerships, technology adoption, community engagement, and policy advocacy, which help understand the value.

They can learn lessons derived from these institutes and disseminate them amongst themselves to set a path toward environmental sustainability, social equality and economic equitability. In using these strategies and ideas green entrepreneurs and policymakers may henceforth be key top drivers towards change being resilient, fair and at the same time very sustainable as this will build a future that will not favor a few but all.

6.5. Future directions and recommendations.

Identifying the trends for green entrepreneurs ahead of time shows a light spot where even new development directions can be found, which will lead to even more progress and the achievement of the goals. Of course, several trends are contributing now to the development of green entrepreneurship.

Since the circular thinking approach began to be widely accepted, there has been a growing curiosity about companies that strive to be resource-efficient, waste-free, and create closed-loop systems. Eco-entrepreneurs are a big cause of non-regular approaches to recycling, upcycling, and repurposing materials by creating value and diminishing environmental pollution.

The move to renewable energy endowments, like solar, wind, and hydroelectric power, shows quite promise for green businessmen. Energy storage, grid integration, and distributed power solutions are the technological openings in the traditional energy market, and business models provide the platform for decarbonization.

As with these food safety issues around food security, climate change and environmental degradation, there is a growing demand for sustainable farming and food trends. Green inventors try different methods to engineer solutions like urban farming, skyscraper crops, regenerative agriculture, and plant alternatives for meat and dairy products.

This growing technological and sustainability confluence is made visible in the usage of renewable energy sources and clean technologies for transportation and manufacturing sectors. Renewable companies are tapping into these technologies, including artificial intelligence, IoT, and blockchain, to design smart, efficient, and environmentally friendly solutions for companies and consumers.

The development of impact socially responsible investment and sustainable finance creates opportunities for green entrepreneurs to secure the needed funding and facilitate the growth of operations. Investors constantly seek investment opportunities that generate a positive social and environmental impact alongside healthy financial return prospects. This punctures an enabling environment for green entrepreneurship.

To further promote the adoption of green business models, policymakers, investors, and entrepreneurs can consider the following recommendations:

Through the development of measures to achieve such purpose, implementation of laws, and provision of required support, the environment for green entrepreneurship will be made conducive. This may be done by establishing clear regulations on pollution and emissions, developing innovative renewable energy sources, and undertaking improvements in green technologies.

Investors can contribute funds and support to green startup businesses via impact investing, venture capital, and environmentally friendly financial mechanisms. Investors who deem this

goal a serious objective reserve mainstream capital for businesses that prioritize environmental and societal issues over those that do not and, therefore, are essential for the growth of social entrepreneurship.

Developing an entrepreneurial reliance will help green entrepreneurs develop and discover innovative ways to run operations, grow enormously, and cope with challenges successfully.

Policymakers, investors, and producers can join forces to produce sustainable agricultural systems for the supermarket through technical training, marketing campaigns, and certification schemes, among other things. Stakeholders can induce market adoption and potential boom through communication and campaigns for sustainability and green business-oriented consumption.

Future studies and collaboration can greatly expand the comprehension and operations of entrepreneurship through an eco-friendly approach by examining the trends, evaluating the practices and identifying areas needing innovations. Through facilitating interdisciplinary alliances between academic, industrial and governmental players, the involvement of the different stakeholders will be that one can as well create new knowledge, tools and information in support of running a green business.

Identifying the way-out trend of the green business model, proposing corresponding suggestions, and stating the way to future research and collaborative solutions are necessary for promoting the green business models and attaining sustainable development. By seizing the chances, overcoming the challenges, and standing together, the policymaker, the investor, and the entrepreneur can transfigure the green entrepreneurs as a major driver of social, environmental, and economic improvement.

7. Conclusions.

This study has exposed the multifaceted nature of green entrepreneurship, which has a social impact on the input of sustainable development in the local economies. By going over models, issues and opportunities through in-depth study, it is concluded that some major findings exhibit themselves.

Green entrepreneurship forms a key solution to the most challenging environmental problems while at the same time providing economic stimulation and developing inclusive social status for communities. Through the review of successful instances, the trend of how advanced business models, strategic partnerships, technology applications and community involvement are the keys to bridging barriers on the road to sustainability increase has been revealed.

The inclusion of government support policies, powerful financing mechanisms, and well-developed market incentives to speed up the adoption of green business models is not to be underestimated. These drivers serve as a link in accelerating the dynamics of the shift from an unsustainable to a sustainable economic unit. Ecological start-ups not only contribute to the fight against environmental destruction but also guide the industry by opening fresh prospects for employment creation, community resilience revitalization, and social inclusion boost. Thus, policymakers, investors, and entrepreneurs must connect themselves and innovate to promote the implementation of green business models.

Therefore, stakeholders should devote more effort to crafting effective measures that incentivize and eliminate the bureaucratic challenges conducive to environmentally friendly businesses. The laws should include, among other duties, taxation incentives, subsidies offered to those who develop green energy projects, and regulations that promote sustainable production and consumption. Also, necessary authorities should strive to develop investor-friendly legislation conducive to innovation and business creation towards the green industries. Simultaneously, with this development, the investors' role is also extremely important since the investors will provide financial support, which is essential for a green venture to succeed.

Through investment decisions whereby funds are directed towards sustainable enterprises, investors can take part in the growing trend of green economy and still make a profit. Moreover, investors should focus on impact investing since the objective is to produce good changes to society and ecosystems while earning a profit.

Cooperation among various government, business, academic, and grassroots segments can combine the diverse skills, resources, and networks of those segments to tackle the complex environmental challenges effectively. Stakeholders, by cooperating, can develop careful solutions, disseminate the best practices of relatively efficient solutions, and expand successful practices.

Continuous through-collaboration endeavours with innovations are among paramount considerations to grow green business frameworks and hasten the transition towards sustainability. Moreover, by putting regressive policies first, effective financing mechanisms, and cross-sector partnerships on the frontline, policymakers, investors, and entrepreneurs can jointly bring about positive change in the economy, moving towards a progressive and inclusive economy.

Across the research and outreach efforts, there is a need to carefully evaluate the effectiveness of promulgated policies through trend identification and policy intervention assessment to promote the scaling up of successful initiatives to new sections and regions. Besides this, treatment of the programs to amplify the abilities of the new green entrepreneurs is necessary via capacity-building or mentorship programs and knowledge sharing through the platforms. Through prudently utilizing the attributes of entrepreneurship, innovation, and teamwork, researchers will manage to speed up the electronic transition to create a better and more equal future for all communities within society.

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