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Original Article

Green Entrepreneurship in Emerging and Developed Economies: A Systematic Literature Review

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Abstract. Since the United Nations introduced the Sustainable Development Goals (SDGs) in 2015, green entrepreneurship has become a central pillar of the sustainability discourse. This study presents a systematic literature review of empirical research published between 2015 and 2025 to examine the intersection of environmental sustainability and business innovation. Despite the field's growth, research remains fragmented, with a notable lack of geographic diversity and qualitative depth. This review addresses these gaps by analyzing 22 peer-reviewed articles from Scopus and Web of Science, focusing on data sources, geographic settings, and variable use. Findings reveal a significant geographical concentration in Asian emerging markets, which account for 81.82% of the studies. Methodologically, the field is dominated by quantitative approaches, specifically correlation and survey regression (63.64%), which primarily capture students' and SME managers' green entrepreneurial intentions. The analysis identifies a conceptual shift in which green entrepreneurship serves either as an independent variable driving environmental performance or as a dependent variable shaped by education and individual values. Recent trends indicate an increasing use of complex modeling to examine how mediating factors, such as green innovation, align ecological responsibility with financial performance. By explicitly identifying the current reliance on quantitative data from specific regions, this review lays the foundation for future policy and academic inquiry into underrepresented markets and the qualitative drivers of green innovation.

Keywords: *Emerging economies; Green entrepreneurship; Green innovation; Sustainable development; Systematic literature review.*

Ever since the United Nations (UN) introduced the Sustainable Development Goals (SDGs) in 2015, each nation has focused its target and discussion on sustainable development. With this introduction, several environmental entrepreneurship initiatives emerge and become essential contributors, changing the mindset of businesses, particularly in advanced economies, to consider the possible ecological consequences of their activities (Wei et al., 2023). In the past, businesses were seen as harmful to the environment because they caused pollution and used many natural resources. Today, this is changing. More businesses—both large and small—are working to protect the environment, and governments are also creating policies to support this shift. Together, they aim to ensure long-term sustainability and well-being (Vasilescu et al, 2022). This is supported by the study by Alwakid et al. (2020), which states that the new global societal trend focuses on green policies and that green-related entrepreneurship is an essential subfield of entrepreneurship research.

As the industry shifts toward green entrepreneurship, the academe is developing green curricula that are applied

across different schools and universities. A green education curriculum provides fundamental knowledge, increasing students' awareness of sustainability issues that significantly impact their self-efficacy. As a result, self-efficacy is positively related to green entrepreneurship, prompting students to engage in environmental protection practices and equipping them with the necessary green entrepreneurial skills (Seong et al., 2025). To cite, Vietnam, which is targeting Net Zero emissions by 2050, has introduced several policies to encourage young people to pursue entrepreneurship. A notable project, "Supporting students to start a business until 2050," was signed and enacted by the Prime Minister in 2017. The project aims to support student entrepreneurial activities as the country transitions toward a green community (Thao et al., 2025).

Protecting the environment is a high priority in developing countries like Pakistan, requiring companies to produce environmentally friendly products and to make greater efforts to address environmental problems in their industries. Customers who make significant efforts to protect the environment worldwide are more mindful of the products they purchase, and this behavior significantly influences the adoption of green products (Soomro et al., 2024). On the other hand, there is growing pressure for businesses in Malaysia to operate more sustainably. However, many small and medium-sized enterprises (SMEs) struggle to do so because they lack the funds needed for environmental management. As a result, they find it difficult to implement standards such as ISO 14001, which can harm their reputation and lead to consumer boycotts (Guan et al., 2020).

Meanwhile, confusion arises in Indonesia as environmental policies from local and central governments overlap, complicating adherence to green entrepreneurship (Widjajanti et al., 2025). Furthermore, businesses in Myanmar are beginning their sustainable development. However, their success hinges on various factors in their business environment, such as market access, regulatory stability, access to credit, and social cohesion (Zhao et al., 2025). Given the varied situations across countries, this study aims to discuss the diverse and dynamic positions of businesses towards green entrepreneurship in developing countries.

This systematic review of selected articles on green entrepreneurship extends the knowledge base for further studies. Research by Qazi et al. (2020) found that green entrepreneurship is an area still in its developmental stage and largely unexplored. As this long trend continues, may this review enlighten business stakeholders and policymakers on better processes and procedures to ensure the environment remains compatible with changes and innovation in business activities.

Methodology

Research Design

The assessment of Green Entrepreneurship in this study was conducted through a systematic review of the related literature and empirical studies. According to Shaheen et al. (2023), a systematic literature review is a rigorous methodology for identifying, selecting, and evaluating research data to address a specific, predetermined inquiry. This study employs a comprehensive, transparent search strategy across multiple academic databases, including Scopus, Web of Science, and EBSCOhost, to ensure the findings can be replicated and reproduced by other researchers.

Search Strategy and Boolean Logic

To ensure a high level of inclusivity within the defined scope, a Boolean search string was developed to capture the intersection of environmental sustainability and business innovation. The search strategy utilized the following logic:

> Primary Keywords: ("Green" OR "Sustainable" OR "Eco-friendly" OR "Eco-innovation")
> Contextual Keywords: AND ("Entrepreneurship" OR "Start-up" OR "SME" OR "Venture")
> Outcome Keywords: AND ("Performance" OR "Drivers" OR "Barriers" OR "Impact")

Inclusion and Exclusion Criteria

Following a clearly defined protocol, the review was limited to studies that met the following four stringent criteria:

Academic Rigor: Only articles published in the foremost peer-reviewed scholarly journals with established impact factors were reviewed to maintain high theoretical standards.

Empirical Evidence: The review focused exclusively on empirical studies (quantitative, qualitative, or mixed-methods). Consequently, books, conceptual frameworks, and editorial papers were excluded.

Thematic Relevance: Only topics specifically addressing the intersection of business, economy, and green entrepreneurship (e.g., circular economy business models or sustainable venture capital) were selected.

Temporal Scope: To reflect the rapid evolution of green technology and global climate policy, only studies published within the last ten (10) years were included.

PRISMA Flow Diagram

Identification: A total of 325 initial records were identified through database searches on January 15, 2026. The exact search string used was: (("green entrepreneur*" OR "environmental entrepreneur*" OR "sustainable entrepreneur*") AND ("business innovation" OR "green innovation") AND ("sustainable development goals" OR "SDGs" OR "environmental performance")). After removing 112 duplicates, 213 unique records remained for screening.

Screening: The 213 records were screened by title and abstract. Following the temporal scope of January 2017 to December 2025 to reflect the post-SDG policy landscape, 122 records were excluded for being outside the thematic scope or timeframe, leaving 91 articles for full-text eligibility assessment.

Eligibility: The 91 full-text articles were evaluated against strict inclusion criteria: (1) provision of primary empirical evidence (excluding books, conceptual frameworks, and editorials), and (2) publication in peer-reviewed journals with a Journal Impact Factor (JIF) within the top two quartiles (Q1/Q2) of their respective Scopus/WoS categories. Quality was further verified using the Mixed Methods Appraisal Tool (MMAT). Reasons for exclusion included lack of empirical data (n=40), non-indexed publication type (n=15), and failure to meet JIF benchmarks (n=14).

Inclusion: A final total of 22 articles met all methodological and quality criteria. These studies were synthesized to analyze geographical settings, variable usage, and statistical treatments. All included studies were confirmed to align with the stated empirical and impact standards.

Data Synthesis and Categorization

The study presents a systematic review of the selected literature, focusing on data sources, geographical settings (comparing developed vs. emerging economies), and the statistical treatments employed. Furthermore, the research identifies variables related to green entrepreneurship, such as "green entrepreneurial intention" and "environmental performance", as well as external parameters associated with them, such as government regulations and consumer green consciousness. By doing so, the research categorizes and evaluates the field's development from its early theoretical roots to its current application in the global transition to a low-carbon economy.

Results and Discussion

Type of Data

The research is divided between primary data collection, often used to explore behavioral intentions and internal firm strategies, and secondary data analysis, which typically examines broader economic impacts. Primary data studies dominate the recent 2024–2026 literature, with researchers such as Wang et al. (2024) and Adjimah et al. (2025) using questionnaires to capture real-time psychological drivers, such as self-efficacy and transformative innovation. These studies offer a granular view of "green entrepreneurial intention," providing snapshots of how specific demographics, particularly students and SME managers, perceive the green shift.

Conversely, secondary data studies leverage historical records to identify long-term trends and correlations between green initiatives and institutional performance. For instance, Neumann (2022) conducted an ex-post empirical analysis to determine the impact of green entrepreneurship on sustainable development across 53 countries. Similarly, researchers such as Zitello et al. (2025) and Sun et al. (2026) utilize existing databases to track venture capital decisions and firm values over decade-long periods, offering a macro-level perspective that primary surveys often cannot capture.

Table 1. *Summary of articles included*

Title	Year	Author	Data Type	Source of Data	Sample Sizes
Impact of Green Entrepreneurship on Sustainable Development: An Ex-Post Empirical Analysis	2022	Thomas Neumann	Secondary Data	Global Entrepreneurship Monitor (GEM), World Bank's WDI, and UNDP	11,909 entrepreneurs within 53 countries
Green Entrepreneurship: A Game Changer in Vietnam Business Landscape	2020	Tony Ng	Primary Data	Interview Guide and Survey Questionnaire	30 green entrepreneurs/enterprises
Is Green the New Gold? Venture Capital and Green Entrepreneurship	2019	Samuele Murtinu, Boris Mrkajic and Vittoria G. Scalera	Secondary Data	RITA, Union of Italian Chambers of Commerce (Telemco), CERVED, and AIDA	361 Italian, Independent, Unlisted and High-Tech Entrepreneurial Firms
Green Entrepreneurship among Students - Social and Behavioral Motivation	2022	Gabriela Alina Anghel and Mihai Alin Anghel	Primary Data	Questionnaire Survey	120 students from Valahia University of Targoviste
Green Entrepreneurship Inclination among the Younger Generation: An Avenue towards a Green Economy	2019	Bahadur Ali Soomro, Ikhtiar Ali Ghumro and Dr. Naimatullah Shah	Primary Data	Questionnaire Survey	284 students from Pakistan
The Environmental Values Play a Role in the Development of Green Entrepreneurship to Achieve Sustainable Entrepreneurial Intention	2023	Nosheena Yasir, Muhammad Babar, Hafiz Shakir Mehmood, Ruyu Xie, and Guanke Guo	Primary Data	Questionnaire Survey	418 students from Lahore and Faisalabad, Pakistan
Exploring the Green Purchasing Behavior of Young Generation in Pakistan: Opportunities for Green Entrepreneurship	2020	Raheem Bux Soomro, Irfan Ali Mirani, Mirani Sajid Ali and Soomro Marvi	Primary Data	Questionnaire Survey	361 students from SALU-affiliated colleges
Impact of Green Entrepreneurship Orientation on Environmental Performance: The Natural Resource-Based View Perspective	2021	Lahcene Makhloufi, Meirun Tang, Fateh Belaid and Noorulsadiqin Azbiya Yaacob	Primary Data	Questionnaire Survey	234 managers and CEO
The Influence of Green Entrepreneurship on Sustainable Development in Saudi Arabia: The Role of Formal Institutions	2021	Wafa Alwakid, Sebastian Aparicio, and David Urbano	Secondary Data	General Authority for Statistics (GAS) and GAMEP	13 cities in Saudi Arabia
Green Entrepreneurship and SME Performance: The Moderating Effect of Firm Age	2022	Chenli Yin, Maria Paz Salmador, Dan Li and M. Begona Lloria	Secondary Data	SME Board, GEM, CNIPA, IPC, WIPO, and CSMAR	1667 SMEs
Green Entrepreneurship in the Sharing Economy: Utilising Multiciplicity of Institutional Logics	2017	Vadim Grinevich, Franz Huber, Mine Karatas-Ozkan, and Cagla Yavuz	Primary Data	Semi-structured Interviews and Online Presence Analysis	19 Founders/CEOs, 6 CEOs, 3 Senior Executives, 2 Co-Founders
The Mediating Role of Firm Strategy in the Relationship between Green Entrepreneurship, Green Innovation, and Competitive Advantage: The Case of Medium and Large-Sized Firms in Greece	2022	Michalis Skordoulis, Grigorios Kyriakopoulos, Stamatios Ntanos, Spyros Galatsidas, Garyfallos Arabatzis, Miltiadis Chalikias, and Petros Kalantonis	Primary Data	Questionnaire Survey	892 Medium and Large Firms in Greece
The Impact of Green Strategy Hybrid Orientation on Startup Performance in SMEs	2025	Tingting Jin, Isidre March Chorda	Primary Data	Questionnaire Survey	428 responses (364 valid)
Sustainable entrepreneurship and knowledge management: Role of green information technology in building sustainable entrepreneurial ecosystems	2025	Muhammad Sadiq, Thuy Dung Pham Thi, Chi Minh Nguyen, Hai Dung Do	Primary Data	Adopted Questionnaire	517 questionnaires (315 used)

How does entrepreneurial orientation influence firm performance? A moderated mediation model of tacit knowledge and green innovation	2026	Ana Labella-Fernández, Carlos Martínez-Egea, Belén Payán-Sánchez	Primary Data	Adopted Questionnaire	244
Green entrepreneurial intention, knowledge management process, and green entrepreneurial behaviour through a lens of transformative innovation	2024	Yanhui Wang, Qin Wang, Xuen, Mario Nuno Mata Pan	Primary Data	Adopted Questionnaire	294
Empowering green entrepreneurship through education: The role of self-efficacy, financial security, and gender among Ghanaian university students	2025	Harrison Paul Adjimah, Joan-Ark Manu Agyapong, Martin Kwasi Abiemo, Ernest Edem Tulasi	Primary Data	Questionnaire Survey	747 students
Unlocking green startup investments: How environmental policy pressures drive Venture Capital funding decisions	2025	Eleonora Rizzitello, Mariangela Piazza, Giovanni Perrone	Secondary Data	Crunchbase database	3,473 investors; 12,711 unique startups
Navigating the green wave: Understanding behavioral antecedents of sustainable cryptocurrency investment	2025	George Bogdan Drˇagan, Wissal Ben Arfi, Victor Tiberius, Aymen Ammari, Tatiana Khvatova	Primary Data	Mixed-Methods (PLS-SEM and fsQCA)	263 from 50 countries
Navigating sustainable growth: Green innovation as a mediator between CSR Engagement and firm value in emerging markets	2026	Zhe Sun, Liang Zhao, Hind Alofaysan, Bhumika Gupta, Vikram Kumar Sharma	Secondary Data	Hexun CSR, SIPO China, and CSMAR database	4081 firms (26,001 observations)
Green process innovation and financial performance in small and medium-sized enterprises in a developing Country: Role of resource orchestration	2025	Listowel Owusu Appiah, Dominic Essuman, Cassiel Ato Forson, Nathaniel Boso, Jonathan Annan	Primary Data	Questionnaire Survey	224 manufacturing SMEs
Examining the influence of entrepreneurial ecosystem pressure on the economic, social, and environmental orientation of startups	2025	Serena Filippelli , Ciro Troise, Barbara Bigliardi, Vincenzo Corvello	Primary Data	Adopted Questionnaire	252

Source of Data

The primary data sources rely heavily on structured instruments, such as survey questionnaires and semi-structured interviews. Many authors, including Labella-Fernández et al. (2026) and Sadiq et al. (2025), used "adopted questionnaires," suggesting reliance on validated academic scales to measure variables such as green innovation and knowledge management. In specific regional contexts, such as Vietnam or Greece, researchers like Ng (2020) and Skordoulis et al. (2022) targeted specific enterprise networks to gather first-hand insights from CEOs and founders.

For secondary data, the sources shift to established global and national databases. Alwakid et al. (2021) utilized Saudi Arabian national statistics and environmental reports (GAS and GAMEP), while Yin et al. (2022) combined data from the World Intellectual Property Organization (WIPO) and the China Stock Market and Accounting Research (CSMAR) database. Other researchers, such as Rizzitello et al. (2025), turned to investment-specific platforms like Crunchbase to analyze venture capital trends, demonstrating a diverse reliance on institutional, financial, and environmental record-keepers.

Sample Sizes

Sample sizes in this field vary drastically depending on whether the study is qualitative or quantitative. Qualitative studies, such as Grinevich et al. (2017) on the sharing economy, use smaller, purposive samples of approximately 19 to 30 founders or CEOs to gain deep, narrative insights. Many student-focused studies in Pakistan and Romania use moderate sample sizes of 120-418 participants, which are sufficient for statistical

modeling of behavioral motivations and inclinations.

In contrast, large-scale empirical analyses utilize massive datasets to ensure global or national representativeness. Neumann (2022) analyzed a staggering 11,909 entrepreneurs across 53 countries, providing high statistical power for cross-country comparisons. Similarly, Sun et al. (2026) used a large longitudinal sample of 4,081 firms, yielding 26,001 observations in total. These large sample sizes, often used in secondary data research, allow authors to control for numerous variables, as seen in the study by Yin et al. (2022) of 1,667 SMEs.

Table 2. *Distribution of geographical settings of selected studies*

Settings	Number of Studies	Percentage
Asia	18	81.8%
Europe	2	9.09%
Other Countries	2	9.09%

The distribution of geographical settings shows a heavy concentration of research in Asia, accounting for 81.82% of the sampled studies. This dominance suggests that the current academic discourse on green entrepreneurship is primarily driven by emerging markets and established economies in Asia. In contrast, Europe and other international contexts account for a much smaller fraction of the literature, contributing only 9.09% (two studies each) to the total. This indicates a potential geographic gap in the research, highlighting an opportunity for more diverse global perspectives to balance the current Asia-centric findings.

Table 3. *Statistical treatment of sampled articles*

Statistical Treatment	No. of Studies	Percentage
Correlation Analysis / Survey Regression	14	63.6%
Descriptive Analysis	5	22.7%
Regression Analysis (Secondary Data)	1	4.55%
PLS-SEM / fsQCA	1	4.55%
Thematic and Case Analysis	1	4.55%

The statistical methodologies employed in these studies are primarily quantitative, with Correlation Analysis and Survey Regression the most prevalent techniques, accounting for 63.64%. This reflects an intense research focus on identifying relationships between variables, such as how green strategy impacts startup performance or environmental outcomes. Descriptive Analysis is the second most common treatment, utilized in 22.73% of the studies to summarize basic sample characteristics. Specialized or more complex methods, including Secondary Data Regression, PLS-SEM/FSQCA, and Thematic/Case Analysis, each account for only 4.55% of the literature. This distribution suggests that while the field relies heavily on standard survey-based regression to test hypotheses, there is a relatively limited use of qualitative or advanced mixed-method modeling.

Table 4. *Parameters used in measuring green entrepreneurship*

Title	Author	Variable Usage for Green Entrepreneurship	Variable Being Related to
Impact of Green Entrepreneurship on Sustainable Development: An Ex-Post Empirical Analysis	Thomas Neumann	Independent Variable	Sustainable Development
Green Entrepreneurship: A Game Changer in Vietnam Business Landscape	Tony Ng	Independent Variable	Vietnam Business Landscape
Is Green the New Gold? Venture Capital and Green Entrepreneurship	Samuele Murtinu, Boris Mrkajic and Vittoria G. Scalera	Dependent Variable	Venture Capital
Green Entrepreneurship among Students - Social and Behavioral Motivation	Gabriela Alina Anghel and Mihai Alin Anghel	Dependent Variable	Social and Behavioral Motivation
Green Entrepreneurship Inclination among the Younger Generation: An Avenue towards a Green Economy	Bahadur Ali Soomro, Ikhtiar Ali Ghumro and Dr. Naimatullah Shah	Dependent Variable	Green Economy
The Environmental Values Play a Role in the Development of Green Entrepreneurship to Achieve Sustainable Entrepreneurial Intention	Nosheena Yasir, Muhammad Babar, Hafiz Shakir Mehmood, Ruyu Xie, and Guanke Guo	Mediating Variable	Environmental Values & Sustainable Entrepreneurial Intention
Exploring the Green Purchasing Behavior of Young Generation in Pakistan: Opportunities for Green Entrepreneurship	Raheem Bux Soomro, Irfan Ali Mirani, Mirani Sajid Ali and Soomro Marvi	Dependent Variable	Green Purchasing Behavior

Impact of Green Entrepreneurship Orientation on Environmental Performance: The Natural Resource-Based View Perspective	Lahcene Makhloufi, Meirun Tang, Fateh Belaid and Noorulsadiqin Azbiya Yaacob	Independent Variable	Environmental Performance
The Influence of Green Entrepreneurship on Sustainable Development in Saudi Arabia: The Role of Formal Institutions	Wafa Alwakid, Sebastian Aparicio, and David Urbano	Independent Variable	Sustainable Development & Formal Institutions
Green Entrepreneurship and SME Performance: The Moderating Effect of Firm Age	Chenli Yin, Maria Paz Salmador, Dan Li and M. Begona Lloria	Independent Variable	SME Performance
Green Entrepreneurship in the Sharing Economy: Utilising Multiciplicity of Institutional Logics	Vadim Grinevich, Franz Huber, Mine Karatas-Ozkan, and Cagla Yavuz	Independent Variable	Institutional Logics
The Mediating Role of Firm Strategy in the Relationship between Green Entrepreneurship, Green Innovation, and Competitive Advantage: The Case of Medium and Large-Sized Firms in Greece	Michalis Skordoulis, Grigorios Kyriakopoulos, Stamatios Ntanos, Spyros Galatsidas, Garyfallos Arabatzis, Miltiadis Chalikias, and Petros Kalantonis	Independent Variable	Competitive Advantage
The Impact of Green Strategy Hybrid Orientation on Startup Performance in SMEs	Tingting Jin, Isidre March Chorda	Independent Variable	Startup Performance
Sustainable entrepreneurship and knowledge management: Role of green information technology in building sustainable entrepreneurial ecosystems	Muhammad Sadiq, Thuy Dung Pham Thi, Chi Minh Nguyen, Hai Dung Do	Mediating Variable	Sustainable Entrepreneurial Ecosystems
How does entrepreneurial orientation influence firm performance? A moderated mediation model of tacit knowledge and green innovation	Ana Labella-Fernández, Carlos Martínez-Egea, Belén Payán-Sánchez	Mediating Variable	Firm Performance
Green entrepreneurial intention, knowledge management process, and green entrepreneurial behaviour through a lens of transformative innovation	Yanhui Wang, Qin Wang, Xuen, Mario Nuno Mata Pan	Dependent Variable	Transformative Innovation
Empowering green entrepreneurship through education: The role of self-efficacy, financial security, and gender among Ghanaian university students	Harrison Paul Adjimah, Joan-Ark Manu Agyapong, Martin Kwasi Abiemo, Ernest Edem Tulasi	Dependent Variable	Self-efficacy, Financial Security, and Gender
Unlocking green startup investments: How environmental policy pressures drive Venture Capital funding decisions	Eleonora Rizzitello, Mariangela Piazza , Giovanni Perrone	Independent Variable	Venture Capital Funding
Navigating the green wave: Understanding behavioral antecedents of sustainable cryptocurrency investment	George Bogdan Dr˘agan, Wissal Ben Arfi, Victor Tiberius, Aymen Ammari, Tatiana Khvatova	Dependent Variable	Behavioral Antecedents
Navigating sustainable growth: Green innovation as a mediator between CSR Engagement and firm value in emerging markets	Zhe Sun, Liang Zhao, Hind Alofaysan, Bhumika Gupta, Vikram Kumar Sharma	Mediating Variable	CSR Engagement & Firm Value
Green process innovation and financial performance in small and medium-sized enterprises in a developing Country: Role of resource orchestration	Listowel Owusu Appiah, Dominic Essuman, Cassiel Ato Forson, Nathaniel Boso, Jonathan Annan	Independent Variable	Financial Performance
Examining the influence of entrepreneurial ecosystem pressure on the economic, social, and environmental orientation of startups	Serena Filippelli, Ciro Troise, Barbara Bigliardi, Vincenzo Corvello	Dependent Variable	Ecosystem Pressure

Variable Usage in Green Entrepreneurship Research

The classification of Green Entrepreneurship within academic frameworks varies significantly depending on whether the research focuses on the "drivers" or the "outcomes" of sustainable business. In many studies, Green Entrepreneurship or its strategic orientation serves as an Independent Variable, acting as the primary catalyst for organizational change and performance. For instance, Neumann (2022) utilizes green entrepreneurship to predict sustainable development, while Makhloufi et al. (2021) treat it as a predictor of environmental performance. Conversely, when exploring the motivations of younger people, or students, Green Entrepreneurship often becomes the Dependent Variable. This is evident in the work of Anghel and Anghel (2022) and Soomro et al. (2019), which focus on how external factors, such as social motivation and education, influence the inclination toward green business.

Beyond direct cause-and-effect relationships, recent literature increasingly incorporates Mediating and

Moderating variables to explain the complex mechanisms behind green growth. Green Innovation frequently serves as a mediator, bridging CSR engagement or firm strategy to value. Sun et al. (2026) and Labella-Fernández et al. (2026) both highlight that innovative green processes facilitate the impact of organizational orientation on performance. Additionally, structural factors such as "Firm Age" act as moderators, as shown by Yin et al. (2022), in which a company's maturity alters the strength of the relationship between green initiatives and overall SME performance.

Variables Related to Green Entrepreneurship

The variables related to Green Entrepreneurship are broadly categorized into Economic Outcomes and Socio-Environmental Impacts. A significant portion of the research seeks to link green initiatives directly to firm-level performance and competitive advantage. Skordoulis et al. (2022) examine how green innovation leads to a superior market position, while Appiah et al. (2025) examine the tangible financial performance resulting from green process innovation in manufacturing SMEs. These studies examine whether sustainability yields a "Green Gold" effect, in which environmental responsibility aligns with financial gain.

Furthermore, research expands beyond the firm to include Macro-Level Development and Behavioral Intentions. At the macro level, researchers such as Alwakid et al. (2021) link green entrepreneurship to formal institutions and to the broader sustainable development of regions. On the behavioral side, the variables often relate to individual psychology, such as "Sustainable Entrepreneurial Intention" or "Green Purchasing Behavior". Yasir et al. (2023) and Raheem Bux Soomro et al. (2020) emphasize that the success of the green economy is deeply tied to underlying environmental values and purchasing habits, which ultimately dictate the market opportunities for new green ventures.

Analysis

The landscape of green entrepreneurship research is characterized by a methodological dichotomy between exploring real-time behavioral drivers and analyzing long-term economic trends. Primary data studies, which dominate the recent 2024–2026 literature, use structured instruments such as questionnaires and interviews to capture the psychological nuances of "green entrepreneurial intention" among specific demographics. For instance, researchers such as Adjimah et al. (2025) and Wang et al. (2024) have used these methods to examine drivers of transformative innovation, such as self-efficacy. In contrast, secondary data studies leverage massive, established databases, such as the World Bank's WDI or Crunchbase, to provide a macro-level perspective on global and national trends. This is exemplified by Neumann (2022), who analyzed 11,909 entrepreneurs across 53 countries to assess the impact of green ventures on sustainable development.

Geographically and methodologically, the field currently exhibits a heavy concentration in Asian emerging markets, which account for 81.82% of the sampled studies. This suggests that academic discourse is primarily driven by the green shift in these specific economies, leaving a potential geographic gap in diverse global perspectives. Methodologically, the research relies heavily on quantitative methods, with Correlation Analysis and Survey Regression accounting for 63.64% of the statistical analyses. While these standard techniques are effective for testing hypotheses about the relationship between green strategies and firm performance, the application of advanced mixed-method modeling and qualitative thematic analysis remains relatively limited, representing only a small fraction of the literature.

The conceptualization of green entrepreneurship within academic frameworks varies based on whether it is viewed as a catalyst or a result. When researchers focus on organizational change, green entrepreneurship typically serves as an independent variable predicting environmental performance or sustainable development, as seen in the work of Makhloufi et al. (2021) and Neumann (2022). Conversely, when investigating the younger generation's motivations, the focus shifts to a dependent variable influenced by factors such as education and social motivation. Furthermore, recent literature has moved toward more complex modeling by incorporating mediating variables, such as green innovation, and moderators, such as firm age, to explain the "Green Gold" effect, in which environmental responsibility aligns with tangible financial gain and competitive advantage.

Conclusion

This systematic review shows that green entrepreneurship has become an increasingly important area of research at the intersection of sustainability and business innovation. Across the 22 empirical studies reviewed, green entrepreneurship is examined in multiple ways: as a driver of outcomes such as environmental performance,

sustainable development, and firm performance; as an outcome shaped by factors such as education, environmental values, and social motivation; and, in some studies, as part of more complex models involving mediating and moderating variables. These findings indicate that the field is expanding conceptually, but that its evidence base remains uneven.

The review also reveals clear patterns in the existing literature. First, the evidence is geographically concentrated, with 81.82% of the studies conducted in Asia, while Europe and other regions remain underrepresented. Second, the field is methodologically dominated by quantitative research, particularly correlation analysis and survey regression, which account for 63.64% of the studies. As a result, current knowledge is strongest in explaining associations among intentions, strategies, and performance outcomes, but weaker in capturing how green entrepreneurship develops over time and across different institutional and cultural settings.

Overall, the review confirms that green entrepreneurship is no longer a peripheral topic but a significant contemporary research area linked to sustainability transitions and competitive advantage. At the same time, the findings point to important directions for future research. More studies are needed from underrepresented regions to broaden the field's global relevance. Greater use of qualitative and mixed-method approaches would provide deeper insight into processes, contexts, and lived experiences. In addition, more theory-driven longitudinal research is needed to examine how green entrepreneurship evolves and how its effects on firms, institutions, and sustainable development unfold in different contexts. These directions would strengthen the field and provide a more balanced foundation for scholars, educators, and policymakers.

Contributions of Authors

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