

---

## Environmental Awareness, Green Consumption, and Entrepreneurial Sustainability in Rural Development: A Bibliometric Analysis

---

Submitted 29/01/26, 1st revision 15/02/26, 2nd revision 20/03/26, accepted 20/04/26

Simran Babu<sup>1</sup>, Honorata Howaniec<sup>2</sup>, Mirna Leko-Simić<sup>3</sup>,  
Sandhyarani Sahoo<sup>4</sup>,

### **Abstract:**

**Purpose:** The purpose of this study is to examine the interrelationships between rural consumers' environmental awareness, green consumption, and rural entrepreneurial sustainability, and to assess their collective contribution to responsible rural economic development, with particular emphasis on Asian and South Asian contexts.

**Design/methodology/approach:** This study adopts a bibliometric and systematic literature review approach, integrating the TCCM (Theory, Context, Characteristics, and Methodology) framework. Data were collected from Scopus and Web of Science databases, covering the period 2015–2025. A total of 247 journal articles were initially identified, of which 75 were selected for in-depth content analysis. Bibliometric techniques, including citation analysis and bibliographic coupling, were applied to identify key trends, thematic linkages, and regional research patterns.

**Findings:** The results reveal that green consumption is strongly associated with rural economic development, particularly during the 2018–2020 period, while the relationship between rural entrepreneurial sustainability and rural economic development remains relatively underexplored. Environmental awareness emerges as a critical driver of green consumption behaviours, which, in turn, influence sustainable entrepreneurial activities. The study also identifies significant regional disparities, with South Asia exhibiting limited research output and weak international collaboration compared to other regions. Additionally, the findings highlight a decline in publication trends after 2021, despite increasing global sustainability challenges.

**Practical Implications:** The findings suggest that policymakers should promote environmental education, support green entrepreneurship, and strengthen research collaboration, particularly in underrepresented regions such as South Asia. Managers and

---

<sup>1</sup>PhD. student, Department of Business Administration, Sambalpur University, India, ORCID: 0009-0000-2098-5802, [simranbabu05@gmail.com](mailto:simranbabu05@gmail.com);

<sup>2</sup>Assoc. Prof., Department of Marketing and Entrepreneurship, University of Bielsko-Biala, Poland, ORCID: 0000-0002-8975-3601, [hhowaniec@ubb.edu.pl](mailto:hhowaniec@ubb.edu.pl), [hhowaniec@poczta.onet.pl](mailto:hhowaniec@poczta.onet.pl);

<sup>3</sup>Prof., Department of Marketing, Josip Juraj Strossmayer University of Osijek, Croatia, ORCID: 0000-0002-6637-3278, [mirna.leko@efos.hr](mailto:mirna.leko@efos.hr);

<sup>4</sup>PhD, Department of Business Administration, G. M. University, India, ORCID: 0000-0002-0556-9672, [sahoosandhya15@gmail.com](mailto:sahoosandhya15@gmail.com);

entrepreneurs are encouraged to integrate consumer environmental awareness into business models and marketing strategies to enhance sustainable value creation. Strengthening public–private partnerships and supporting rural innovation ecosystems can further accelerate sustainable rural development.

**Originality/value:** This study contributes to the literature by integrating environmental awareness, green consumption, and entrepreneurial sustainability within a unified analytical framework. By applying the TCCM approach, it provides a comprehensive synthesis of theoretical and empirical insights, identifies critical research gaps, and proposes directions for future research, particularly in the context of developing rural economies.

**Keywords:** Environmental awareness, sustainable consumption behaviour, rural entrepreneurship, sustainability transitions, consumer behaviour, emerging economies.

**JEL codes:** O13, Q56, M31.

**Paper type:** Research article.

## 1. Introduction

The growing global awareness of contemporary rural economic development, especially in economically challenged regions, has increasingly emphasized the adoption of an ecological worldview in both consumption and production – key economic spheres that are progressively integrating concepts such as environmental awareness, green consumption, and sustainable entrepreneurship into broader socio-economic systems (Huang *et al.*, 2021; Tabares *et al.*, 2022; Neto de Moraes *et al.*, 2024; Ramos Farroñán *et al.*, 2024; Ali, Eid, and Khalid 2025).

An ecological worldview is shaped by biospheric values, reflecting a deep concern for the environment and nature among consumers (Wyrzykowska, and Rytko 2024). These beliefs, in turn, influence outcomes such as consumer responsibility and subsequent behaviours, including the adoption of environmentally responsible consumption patterns, beginning with the acceptance of eco-conscious products (Kumar *et al.*, 2025).

Furthermore, both egoistic and altruistic motivations significantly affect consumers' intentions to purchase eco-friendly products, their willingness to pay a premium, and their word-of-mouth intentions. In particular, altruistic motivations – rooted in concern for others and going beyond self-interest – lead to the purchase of eco-friendly products by appealing to consumers' desire to contribute positively to environmental sustainability (Rouf *et al.*, 2025; Tyagi *et al.*, 2023).

Moreover, green pricing strategies and physical evidence significantly influence repurchase intentions, with customer satisfaction acting as a mediating factor in this relationship (Mahardika *et al.*, 2025). Consequently, environmentally conscious

---

consumers demonstrate stronger preferences and a higher willingness to pay for organic and regional products (Hempel and Hamm, 2016).

To further substantiate this aspect, it is important to note that in both rural and urban regions – where the perceived risk of conventional products is high – consumer perception of organic goods, trust in labelling, and household disposable income all contribute to an increased willingness to pay. Interestingly, a study by Ha, Shakur, and Pham Do (2019) found that rural consumers are more willing to pay for organic vegetables than their urban counterparts, possibly because their closer interaction with natural environments strengthens pro-environmental attitudes and environmental awareness.

It is also important to emphasize that the literature documents a decline in consumption in rural areas, as income disparities have driven increased spending on education and professional training aimed at ensuring individual security and enabling social mobility toward higher socio-economic strata (Wang and Liu, 2019).

At the same time, recent studies (e.g., Wang *et al.*, 2025) highlight that rural entrepreneurs play a crucial role in strengthening local economies by creating employment opportunities and generating income, thus stimulating consumer spending. Simultaneously, in rural areas, smart agriculture helps address environmental and social challenges and supports the transition to more sustainable production and consumption patterns (Zheng and Cao, 2024).

Such transformations reflect a broader shift toward sustainability-driven development models, in which technological and organizational innovations play a key role in enhancing long-term economic and environmental performance (Kuzior *et al.*, 2019). Green tourism also encourages both entrepreneurs and consumers to better understand their environmental impact and to adopt more responsible behaviours (Wang *et al.*, 2018). Achieving this goal depends on several factors, including the effectiveness of entrepreneurial education for young people from rural areas (Botezat *et al.*, 2022) and the presence of authentic leadership among rural entrepreneurs who are aware of their values and sustainability-oriented beliefs (Su *et al.*, 2023).

According to Wang *et al.* (2025), high-performing rural entrepreneurs exhibit strong absorptive capacity and effectively adapt their strategies through entrepreneurial bricolage – a concept centred on the creative use of limited rural resources. Acting as a mediator between individual absorptive capacity and entrepreneurial performance, perceived social support fosters environmental awareness, which, in turn, helps to shape both entrepreneurial initiatives and rural consumption in a sustainable manner.

Building on the arguments and evidence, presented this study aims to provide a comprehensive and insightful analysis of the role of rural consumer environmental awareness, green consumption, and rural entrepreneurial sustainability in driving

responsible rural economic development, with a particular focus on Asia and South Asia, using the TCCM (Theory–Context–Characteristics–Methods) framework. Accordingly, the following research questions are proposed:

*RQ1 – What are the key contributions regarding the antecedents of responsible rural economic development identified through a bibliometric review?*

*RQ2 – Can research on responsible rural economic development reach new levels by integrating the TCCM framework, based on ecological awareness, green consumption, and entrepreneurial sustainability?*

*RQ3 – How can the findings of an extensive bibliometric evaluation of ecological awareness, green consumption, and entrepreneurial sustainability be synthesized into a conceptual framework that leverages insights from the TCCM approach, providing a structured foundation for future research and practical applications in responsible rural economic development?*

## **2. Theoretical Background**

### **2.1 Rural Consumers' Environmental Awareness and Its Impact on Green Consumption**

Information, environmental awareness, social context, and eco-friendly actions are key determinants with a significant positive effect on ecological attitudes (Arundati *et al.*, 2020) and socially responsible behaviors (Howaniec 2023, p. 192), which, in turn, contribute to pro-environmental behaviours such as green consumption (Liu *et al.*, 2020; Noja *et al.*, 2021).

In this context, environmental awareness can be understood as a critical cognitive and normative driver shaping individuals' pro-environmental decision-making processes.

Environmental awareness plays a crucial role in shaping pro-environmental behaviour by influencing consumers' attitudes, values, and behavioural intentions, leading to increased engagement in sustainable consumption and reduced ecological footprint (Wierzbiński *et al.*, 2021).

Empirical research suggests that higher levels of environmental knowledge and awareness are consistently associated with stronger environmental concern and greater willingness to engage in environmentally responsible actions, including recycling, energy conservation, and purchase of eco-labelled products (Kollmuss, and Agyeman, 2002; Zsóka *et al.*, 2013).

Moreover, social norms and contextual factors such as community pro-environmental values and social influence can reinforce environmentally positive attitudes and behaviours, amplifying the impact of individual awareness on practical outcomes (Bamberg, and Möser, 2007; Grønhøj, and Thøgersen, 2012).

Research also highlights that environmental awareness interacts with affective components such as personal moral obligation and ecological identity, which further strengthen pro-environmental behavioural intentions (Homburg *et al.*, 2013). Consequently, enhancing environmental awareness through targeted education, media communication, and social marketing can meaningfully promote sustainable consumer decisions and support broader ecological transitions (Kollmuss, and Agyeman, 2002).

Consumers living in rural areas, including those from some of the most environmentally challenged regions, such as parts of Asia, are more likely to recognize the environmental impact of the products they purchase and acknowledge their ecological consequences (Morrison and Beer, 2017). Studies highlight a significant link between rural consumers' environmental awareness and their green purchasing behaviour.

For example, Kautish and Dash (2017) provided empirical evidence from rural India, emphasizing that middle-aged shoppers tend to be the most ecologically conscious. Similarly, Ha, Shakur, and Pham Do (2019) demonstrated that rural consumers in Vietnam are more willing to pay higher prices for organic products compared to urban residents. In line with this trend, products with geographical indications are considered a healthier choice from the perspective of sustainable consumption, with their demand further accelerating during COVID-19 (Muça *et al.*, 2022).

Specifically, the relationship between environmental awareness dimensions, such as mobilization, engaged consumption, domestic environment, and concerns about waste, significantly influences consumers' intention to purchase eco-friendly products (do Prado and Moraes, 2020).

Green marketing practices – such as eco-friendly advertising, sustainable branding, and eco-labelling – positively influence consumer purchasing behaviour and ecological awareness, which, in turn, partially mediate the relationship between purchasing behaviour and eco-marketing aspects (Khalil *et al.*, 2021).

Although challenges such as limited availability and higher prices persist (Ritter *et al.*, 2015), most studies indicate that consumers still prefer to purchase goods that safeguard their health and protect the environment (e.g., Mahesh and Gomathi, 2017).

Accordingly, policies and initiatives promoting environmental education, sustainable consumption, and support for sustainable entrepreneurship are strongly encouraged (Martínez-Campillo *et al.*, 2019; Michel *et al.*, 2023).

Environmental awareness serves as the foundation for ecological education, enabling consumers to make informed decisions about purchasing eco-friendly products as a clear expression of green consumption (Neto de Moraes *et al.*, 2024).

## **2.2 The Influence of Green Consumption on Rural Entrepreneurial Sustainability**

Consumers have shown increasing interest in sustainable consumption and in purchasing eco-friendly products to minimize waste and negative impacts on the environment resulting from consumption (Valenzuela-Fernández *et al.*, 2022). Nevertheless, despite the growing interest in sustainable products, their adoption is limited by factors such as a lack of clear information and high costs (de Mendonça Uchôa *et al.*, 2024), which can be addressed by improving consumers' understanding of sustainable consumption. This highlights the importance of knowledge diffusion and consumer education in facilitating the transition toward more sustainable consumption patterns.

This understanding is essential for motivating sustainable consumption behaviours influenced by factors such as awareness, attitude, education, social influence, the perceived effectiveness of energy conservation and emission reduction, and differentiation of sustainable products from conventional alternatives (Geng *et al.*, 2017).

Furthermore, green marketing enhances green customer loyalty behaviour, demonstrating a robust correlation with a green corporate image, resulting in green customer satisfaction. Additionally, the quality of eco-friendly products and the expertise of sales personnel contribute to green customer satisfaction (Ali, Eid, and Khalid, 2025).

A rural entrepreneur can capitalize on the growing demand for health-conscious and environmentally friendly products, creating value while advancing sustainability. By leveraging resource endowments, information and communication technology, professional expertise, and logistics infrastructure, they can significantly enhance base-of-the-pyramid entrepreneurship in rural e-commerce, overcoming the limitations of earlier market channels, which previously posed significant limitations (Huang *et al.*, 2021).

In addition, rural establishment managers' attitudes significantly influence their clients' behaviour regarding environmental responsibility. These attitudes positively influence water and energy consumption (Sánchez-Ollero *et al.*, 2021), highlighting the role of micro-level managerial practices in shaping broader sustainability outcomes.

Entrepreneurial success depends on a complex interaction of individual factors, such as resilience, entrepreneurial skills, and psychological capital, social factors, including family support and professional networks, structural factors, such as access to markets and finance, and innovation variables, like the adoption of digital technologies – all while facing persistent obstacles such as a lack of rural

---

infrastructure, traditional gender norms, and discrimination (Ramos Farroñán *et al.*, 2024).

Therefore, rural poverty, natural resource endowment, peripheral location, and rural cultural values are significant aspects of rurality that influence the performance of entrepreneurial ecosystems in numerous ways (Aguilar 2021). These multidimensional conditions are also emphasized in regional development research, where the effectiveness of entrepreneurial ecosystems is closely linked to institutional support, access to resources, and innovation capacity (Mizgajska and Wściubiak, 2022). In this context, consumers' green consumption represents an important factor that can strengthen the sustainability of entrepreneurship in rural areas.

### **2.3 Linking Rural Entrepreneurial Sustainability to Rural Economic Development**

Through interactions with the external environment, rural communities experience growth, decline, or disappearance. However, aspects such as rural livelihood diversification, substantial social capital, and the creation of market-oriented institutions are considered to boost rural resilience and foster the sustainability of rural communities (Li, Westlund, and Liu, 2019). These processes reflect broader structural transformations in rural economies, where resilience and sustainability are increasingly treated as interconnected development objectives.

Therefore, there is a need for rural entrepreneurs to be more aware of eco-conscious concepts and broader economic development issues, and to participate more actively in eco-conscious governance (Sun *et al.*, 2024). Such engagement can enhance enterprise performance through the integration of entrepreneurial orientation, eco-innovation, and sustainability-driven management practices (Manigandan and Raghuram, 2025), including green transformational leadership and green human resource management (Mousa *et al.*, 2025; Kozłowska *et al.*, 2026).

Moreover, the type of entrepreneurship, entrepreneurial motivation, economic value, financial backing, suitable policy frameworks, and a favourable business environment have emerged as key indicators (Shao *et al.*, 2024), while entrepreneurship education, self-efficacy, and social inclusion have a significant effect on entrepreneurial intention (Gianis *et al.*, 2025).

However, rural people recognize that their primary business, agricultural output, contributes to environmental damage. At the same time, they understand that poverty reduction and solving existential problems are more important than environmental preservation. Consequently, they are unwilling to accept additional costs to safeguard the environment, which suggests that economic status often outweighs intentions toward eco-friendly behaviour (Šarković, 2017).

Addressing this tension between economic necessity and environmental responsibility requires targeted behavioural and institutional interventions. Promotion- and prevention-focused messages have been shown to significantly influence eco-conscious beliefs, personal ecological norms, and the perceived value of carbon offsets. These beliefs fully mediate the effect of green value on willingness to pay for carbon offsets, while personal norms are the strongest predictor (Negash *et al.*, 2025).

At the same time, the adoption of green practices—such as green marketing orientation, green innovation, green investment, and green human resource management—can significantly enhance the ecological performance of enterprises (Habtemaryam *et al.*, 2025).

In parallel, the development of green dynamic capabilities supports ecological creativity, sustainability-oriented business strategies, and effective green knowledge management, thereby strengthening long-term competitiveness (Bağış *et al.*, 2025).

It has also been observed that entrepreneurs driven by lifestyle motivations often demonstrate strong sustainability orientations through practices such as diversification of activities, eco-conscious management, investment in organic agriculture, and the promotion of local culture. According to Cunha *et al.* (2020), such strategies not only benefit individual entrepreneurs but also contribute to the development of more dynamic and sustainable rural entrepreneurial ecosystems.

Moreover, environmental policies can stimulate rural entrepreneurs by prioritizing environmental education over eco-conscious promotion, helping them understand the long-term relationship between environmental protection and economic development, fostering individual ecological responsibility, improving positive feedback for those who adopt green practices, actively exploring mechanisms for capturing the value of eco-conscious goods, and improving their learning ability and management skills (Lei *et al.*, 2023).

In this context, green consumption plays a complementary role by reinforcing market demand for sustainable products and services, thereby supporting the development of environmentally responsible business models in rural areas.

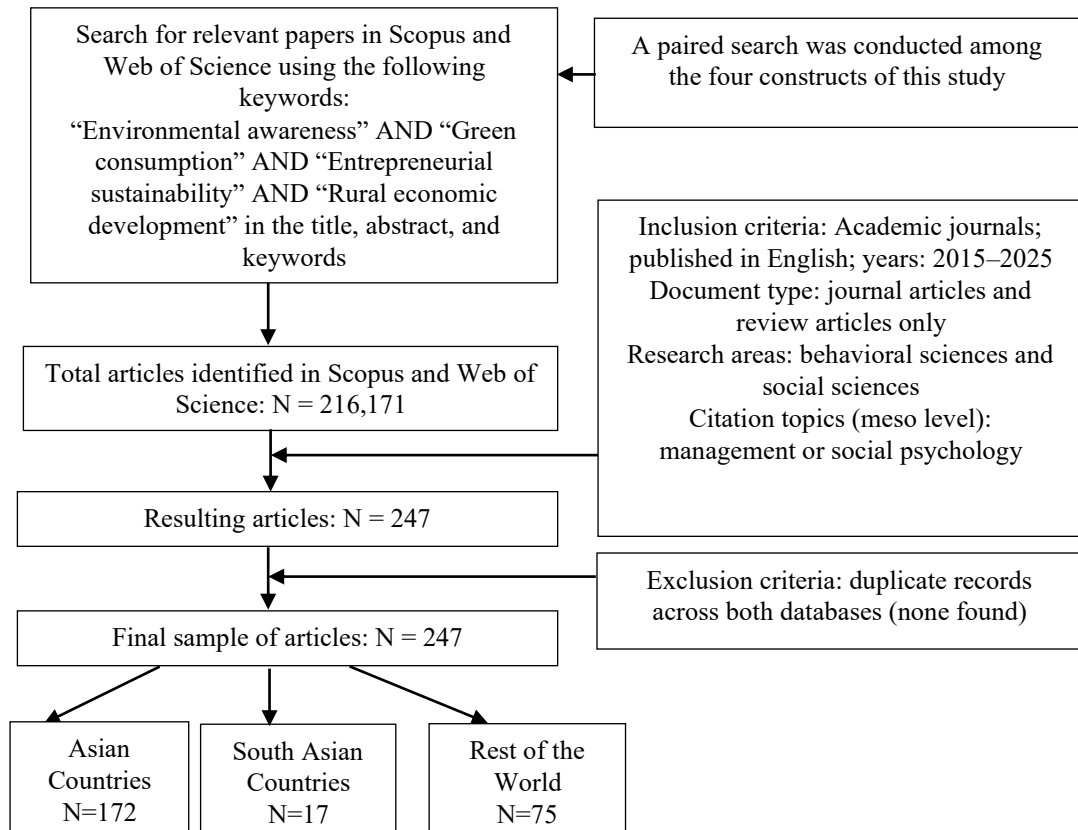
### **3. Research Methodology**

#### **3.1 Research Approach and Data Collection**

This study employs a bibliometric analysis, integrating the TCCM framework with a systematic literature review, to explore the dynamic field of rural economic development in greater depth. Data (extracted articles) were collected from Scopus and Web of Science, which are renowned for their extensive repositories of high-quality journals spanning diverse disciplines, covering the period from 2015 to 2025.

In the first phase of data collection, a pairwise keyword search was conducted in both databases, guided by the linkages outlined in our methodological framework (Figure 1).

**Figure 1.** Literature Search Process.



**Source:** Own research.

The keyword combinations used were:

- (1) RCEA & GC: (rural AND consumers OR customers AND environmental awareness AND green consumption);
- (2) RCEA & RES: (rural AND consumers OR customers AND rural environmental awareness AND rural entrepreneurial sustainability);
- (3) GC & RES: (rural AND consumers OR customers AND green consumption AND rural entrepreneurial sustainability);
- (4) GC & RED: (rural AND consumers OR customers AND green consumption AND rural economic development);
- (5) RES & RED: (rural AND entrepreneurial sustainability AND rural economic development).

The initial search yielded a cumulative total of 216,171 articles of all types across both databases.

### **3.2 Screening and Selection Criteria**

In the second phase of data filtration, a set of inclusion and exclusion criteria was applied to ensure academic rigor and thematic relevance. Specifically, the scope was narrowed to include only journal articles and review articles published between 2015 and 2025, selected to capture trends over the past decade in the context of rural economic development. Additionally, the research areas were limited to behavioural sciences and social sciences, under which sub-criteria such as management or social psychology (the “meso” domain of Web of Science) were specified.

As the sample consisted exclusively of journal articles, book chapters, conference proceedings, editorials, notes, and short surveys were excluded, in accordance with the recommendations of Keupp and Gassmann (2009). This search resulted in 247 journal articles.

Next, duplicate articles across both databases were checked – none were found. Titles and abstracts of the remaining articles were reviewed to ensure relevance to the research context, resulting in the final inclusion of 247 articles.

The final sample was classified into three geographical categories:

- Asian countries: 172 studies
- South Asian countries: 17 studies
- rest of the world: 75 studies

This classification highlights the limited research in South Asia compared to other regions.

### **3.3 Data Analysis and Tools**

A full record – including abstract, keywords, citation information, bibliographical information, funding details, and other metadata – was retrieved and exported in CSV format.

The bibliometric analysis was conducted using VOSviewer (version 1.6.20) (van Eck and Waltman, 2010). Among the 247 publications, a thorough manual evaluation was carried out to select the 60 most relevant articles in accordance with the objectives of this study. Furthermore, 45 grey literature sources were extracted, from which the 15 most relevant sources were selected.

In total, 75 articles were then subjected to content analysis using the TCCM framework (Paul *et al.*, 2023). Descriptive analyses were also performed using Microsoft Excel (Table 1, Figure 2, and Figure 3).



interest												
RCEA & GC	131	190	29	85	275	462	67	19	95	53	3	128.09
RCEA & RES	131	190	29	149	158	462	67	39	97	55	4	125.55
GC & RES	131	190	29	126	158	462	67	19	95	52	3	121.09
GC & RED	173	210	35	180	245	601	161	121	104	84	3	174.27
RES & RED	37	34	126	35	28	55	81	17	55	3	0	42.82

**Source:** *Own study.*

The most cited authors – Kamal, Shafiq, and Kakria (2020), Liu *et al.* (2020), Sun, Liu, and Zhao (2019), and Lu *et al.* (2015) – represent the most influential researchers, as determined by citation frequency.

High-impact journals such as the Journal of Cleaner Production, Tourism Management, and Sustainability serve as the primary publication venues.

In terms of geographical distribution, China, England, and the United States dominate the publication landscape with significant contributions.

The most frequent keywords – such as green consumption, rural development, sustainability, entrepreneurship, and environmental awareness – reflect the main themes and highlight the thematic richness of the field (Figure 2).

Despite existing author collaborations and visible research networks, collaboration between Asian countries and the rest of the world remains limited.

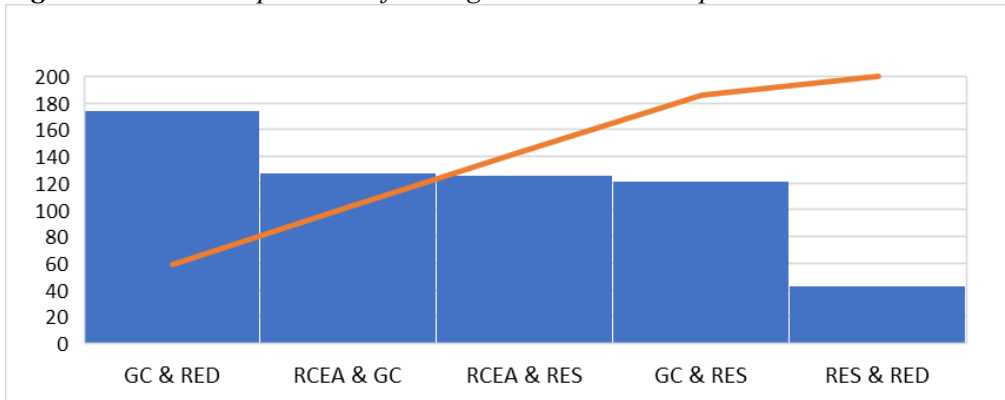
Overall, this field is shaped by a combination of highly cited authors, influential journals, and global research networks that advance the discourse on rural economic development with a focus on sustainability.

The strongest relationship is observed between green consumption (GC) and rural economic development (RED) (85%), followed by RCEA–GC (65%), RCEA–RES (62%), and GC–RES (60%).

In contrast, the RES–RED relationship accounts for only 20%, revealing a significant research gap in understanding the contribution of entrepreneurship to rural economic development (Figure 2).

Statistical analysis confirms that while GC–RED is on a promising trajectory, RES–RED requires further empirical investigation.

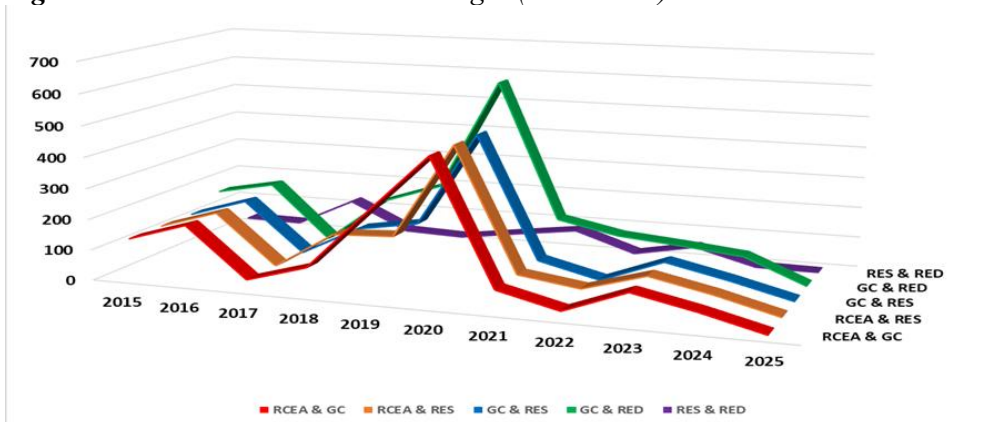
**Figure 2.** Relative Importance of Linkages in Rural Development Research.



*Source:* Own research.

Yearly trends from 2015 to 2025 show that most research peaked between 2018 and 2020, followed by a decline after 2021 – a pattern observable across all five linkages. Notably, RCEA–GC and GC–RES show prominent peaks, indicating that these areas received the most citations during their peak periods. GC–RED also increased but declined sharply after 2021. Although RES–RED remained relatively steady, it still followed the general downward trend (Figure 3).

**Figure 3.** Citation Trends Across Linkages (2015–2025).



*Source:* Own research.

The number of studies conducted by region across the five linkages provides insights into research on environmental awareness, green consumption, and rural entrepreneurial sustainability at global, Asian, South Asian, American, European, African and Middle Eastern levels. Globally, most studies address GC–RED (77), with 59 conducted in Asian countries, only 5 in South Asia, and the remaining 18 from Europe, Africa, and Middle East. The RES–RED linkage is covered in just 37 global studies, 18 from Asia, only 3 in South Asia, and the remaining 19 from Europe, America, Africa, and Middle East. This disparity, particularly in South Asia,

is concerning given the acute environmental and sustainability challenges faced by the region (Table 2).

**Table 2.** *Regional Distribution of Studies by Linkages.*

No.	Linkages between key factors	World	Asia	South Asia	America	Europe	Africa	Middle East
1	Rural-consumer environmental awareness & Green consumption (RCEA-GC)	43	31	2	2	10	0	0
2	Rural-consumer environmental awareness & Rural entrepreneurial sustainability (RCEA-RES)	48	34	5	1	11	1	1
3	Green consumption & Rural entrepreneurial sustainability (GC-RES)	42	30	2	0	10	1	1
4	Green consumption & Rural economic development (GC-RED)	77	59	5	0	15	2	1
5	Rural entrepreneurial sustainability & Rural economic development (RES-RED)	37	18	3	2	12	3	2

Note: No studies were identified for any of the linkages in Australia.

**Source:** *Own study.*

To support these inferences, a bibliographic coupling analysis at the country level was conducted (Figure 4), based on data from Web of Science and Scopus.

Bibliographic coupling analysis of countries reveals that most studies originate from China and are frequently cited by researchers in Europe and North America. In contrast, studies from South Asia are sparse and demonstrate limited international collaboration. Despite growing global interest in sustainability-related research, the integration of environmental awareness, green consumption, and entrepreneurial sustainability into rural development strategies remains insufficient in South Asia. This shortfall is particularly critical, as the region faces pressing sustainability challenges that demand context-specific solutions and stronger international research partnerships.



## **5. Discussion**

Referring to Appendix 1, a structured analysis of the existing literature using the TCCM framework offers critical insights into the interplay between rural entrepreneurial sustainability and rural economic development, with a particular focus on rural consumers' environmental awareness and green consumption behaviours.

The theoretical underpinnings of the selected studies draw on widely recognized models such as the Stimulus–Organism–Response (S-O-R) model, the Theory of Planned Behaviour (TPB), the Technology Acceptance Model (TAM), the Innovation Diffusion Theory, the Social Cognitive Theory, the Risk Perception Theory, the Norm Activation Model (NAM), the Elaboration Likelihood Model (ELM), the Value-Belief-Norm (VBN) Theory, and Consumer Behaviour Theory.

Additional frameworks, such as Green Marketing Theory and the Environmental Kuznets Curve (EKC) Theory, are also used to explore the behavioural and economic dimensions of environmental awareness and green consumption. Other studies incorporate Institutional Theory, Koopmans and Montias' (1971) Framework, and Sustainable Entrepreneurship Theory to examine sustainable business practices and their implications for rural development (Dinda, 2004; Peattie and Crane, 2005; Nirmal *et al.*, 2025).

From a contextual perspective, the majority of studies focus on tourism, agriculture, and the hospitality sector, while also addressing the roles and challenges of rural women entrepreneurs, particularly in underdeveloped regions.

The key characteristics examined include environmental awareness, consumer motivation, willingness to pay, green trust, satisfaction, purchase intention, and the influence of green brand image. Additionally, the literature explores broader development themes such as rural revitalization, poverty alleviation, rural entrepreneurship, and rural economic advancement.

Methodologically, the reviewed research incorporates both qualitative approaches – including case studies, systematic reviews, and ethnographic methods – and quantitative techniques such as structural equation modelling (SEM), correlation, regression, ANOVA, data envelopment analysis (DEA), and bibliometric analysis.

While Asian countries show a relatively higher volume of research on environmental and sustainability issues, the impact of these studies is not yet evident at the grassroots level. This underscores the need to focus more closely on rural areas, which represent the foundational layer of socio-economic development.

The highest concentration of research occurred between 2019 and 2021, likely driven by the global pandemic, which intensified attention on sustainability and

green transitions. However, the number of publications in 2023–2024 declined sharply compared to earlier periods, particularly in 2015–2016, suggesting a potential stagnation in scholarly interest despite growing environmental urgency.

A key finding is the scarcity of research in South Asian countries, especially when compared to global trends and research outputs from other parts of Asia. This gap is further confirmed by bibliographic coupling analyses. Limited exploration of critical linkages – such as RCEA–GC and GC–RES – highlights a pressing need to better understand how environmental awareness and green consumption contribute to rural sustainability.

The lack of collaboration between South Asian scholars and researchers from developed nations limits the integration of sustainability principles into rural economic development strategies, posing a missed opportunity for regional transformation and inclusive growth.

## **6. Conclusion**

This study explores the existing literature to identify major antecedents and emerging relationships among rural entrepreneurial sustainability (RES), green consumption (GC), and rural consumers' environmental awareness (RCEA), with a view to understanding their collective impact on rural economic development (RED).

Addressing Research Question 1 (RQ1), the analysis reveals that theoretical models such as the Stimulus–Organism–Response (S-O-R) model, the Theory of Planned Behaviour (TPB), the Technology Acceptance Model (TAM), and Green Marketing Theory are frequently employed to explain individual-level variables including environmental awareness, green trust, purchase intention, and consumer motivation.

These theories, alongside frameworks like Institutional Theory and Sustainable Entrepreneurship Theory, provide foundational insights into the psychological and contextual factors that drive rural green behaviour and entrepreneurial sustainability.

In response to RQ2, bibliometric trends indicate that green consumption is strongly linked to rural economic development, particularly during the 2018–2020 period. However, despite this correlation, the relationship between RES and RED remains relatively underexplored, especially in South Asian countries.

The citation patterns and research gaps suggest that rural economic development can indeed be enhanced through the integration of environmental awareness, sustainable consumption practices, and entrepreneurship – but further empirical validation is needed, particularly in underrepresented regions. While countries like China dominate the literature in terms of volume, studies in the South Asian Association for Regional Cooperation (SAARC) countries remain marginal. Thus, unlocking the

full potential of rural development requires a stronger focus on RES and its synergistic relationships with GC and RCEA.

Regarding RQ3, the review highlights several implications. From an entrepreneurial perspective, building environmental awareness and trust among rural consumers can foster new green business models, especially in sectors like agriculture, tourism, and hospitality. From a managerial standpoint, integrating consumer behaviour insights into sustainable product offerings and marketing strategies is essential.

On the policy front, the lack of sufficient research highlights the urgent need for policy interventions that support green innovation and promote collaboration between local researchers and international institutions, particularly in economically challenged regions. Enhanced public-private partnerships and research funding can stimulate sustainability-driven rural development, especially for vulnerable groups such as rural women entrepreneurs.

Overall, while progress has been made in linking green behaviour and entrepreneurship to rural development, significant research gaps remain – particularly in developing regions where sustainability efforts are most needed.

## **7. Limitations and Future Research**

A key limitation of this study is the selective geographic focus on Asian and South Asian countries, while European countries and other developed regions were not analysed in as much depth. This decision was deliberate, reflecting the research objective of examining rural economic development, green consumption, and entrepreneurial sustainability in contexts where these phenomena are underexplored and where environmental and socio-economic challenges are particularly acute.

European countries generally have more established frameworks for sustainable rural development, higher baseline environmental awareness among consumers, and mature green markets, which could introduce a bias in the comparative bibliometric analysis.

By concentrating on developing and emerging economies, this study prioritizes regions where interventions, policies, and research initiatives can have the most transformative impact, providing insights that are contextually relevant for policymakers, rural entrepreneurs, and scholars seeking to address sustainability challenges in resource-constrained environments.

Future research could expand the scope to include European and other developed countries, enabling cross-regional comparisons and testing whether observed patterns in emerging economies hold in more mature markets. Furthermore, this study is limited to a bibliometric analysis of articles and review papers published between 2015 and 2025 in the Scopus and Web of Science databases, and does not

include empirical validation. Future research could empirically test the proposed conceptual framework and broaden the scope by incorporating additional sources such as book chapters, conference proceedings, and studies from longer timeframes and alternative databases.

## References:

- Abadi, A., Khakzand, M. 2022. Extracting the qualitative dimensions of agritourism for the sustainable development of Charqoli village in Iran: the promotion of vernacular entrepreneurship and environment-oriented preservation perspectives. *Environment, Development, and Sustainability*, 24, 12609-12671. <https://doi.org/10.1007/s10668-021-01958-0>.
- Abdelwahed, N.A.A., Bastian, B.L., Wood, B.P. 2022. Women, Entrepreneurship, and Sustainability: The Case of Saudi Arabia. *Sustainability*, 14(18), 11314. <https://doi.org/10.3390/su141811314>.
- Aguilar, E.C. 2021. Rural entrepreneurial ecosystems: A systematic literature review for advancing conceptualisation. *Entrepreneurial Business and Economics Review*, 9(4), 101-114.
- Akram, U., Lavuri, R., Bilal, M., Hameed, I., Byun, J. 2024. Exploring the roles of green marketing tools and green motives on green purchase intention in sustainable tourism destinations: a cross-cultural study. *Journal of Travel & Tourism Marketing*, 41(4), 453-471. <https://doi.org/10.1080/10548408.2023.2293022>.
- Ali, R., Eid, R., Khalid, A. 2025. A green step forward: the role of green marketing in nurturing green customer loyalty. *Marketing Intelligence & Planning*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MIP-05-2024-0307>.
- Al-Kubati, N.A.A., Selvaratnam, D.P. 2023. Empowering women through the Self-Help Group Bank Linkage Programme as a tool for sustainable development: lessons from India. *Community Development Journal*, 58(2), 283-308. <https://doi.org/10.1093/cdj/bsab036>.
- Arundati, R., Sutiono, H.T., Suryono, I.A. 2020. Effect of ecological awareness, personal norms and ecological attitude to conservation behavior. *Proceedings on Engineering Sciences*, 2(2), 187-196. <https://doi.org/10.24874/PES02.02.009>.
- Bamberg, S., Möser, G. 2007. Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27(1), 14-25. [doi.org/10.1016/j.jenvp.2006.12.002](https://doi.org/10.1016/j.jenvp.2006.12.002).
- Bağış, M., Adiguzel, Z., Dhar, B.K., Yolcu, T., Kurutkan, M.N. 2025. Green creativity and business sustainability: the influence of dynamic capabilities, technology adoption, business strategies and knowledge management. *Business Process Management Journal*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/BPMJ-10-2024-0903>.
- Botezat, E.A., Constăngioară, A., Dodescu, A.O., Pop-Cohuț, I.C., 2022. How Stable Are Students' Entrepreneurial Intentions in the COVID-19 Pandemic Context? *Sustainability*, 14(9), 5690. <https://doi.org/10.3390/su14095690>.
- Cunha, C., Kastenholz, E., Carneiro, M.J. 2020. Entrepreneurs in rural tourism: Do lifestyle motivations contribute to management practices that enhance sustainable entrepreneurial ecosystems? *Journal of Hospitality and Tourism Management*, 44, 215-226. <https://doi.org/10.1016/j.jhtm.2020.06.007>.

- de Mendonça Uchôa, J.C., Guimarães Freitas, L., Vieira Pereira, I., Bertuolo, C., Silva de Oliveira, A., Gomes Jacomini, R., Caetano Amaral, J., de Giorge Cerqueira, H., Alves Maciel, W., Lopes Pinheiro, L.A., Caproni Neto, H.L., de Sousa Júnior, F.S. 2024. The Importance of Green Marketing as a Market Tool for Consumption and Sustainable Awareness. *Revista de Gestão Social e Ambiental*, 18(10), 1. <https://doi.org/10.24857/RGSA.V18N10-154>.
- Dinda, S. 2004. Environmental Kuznets Curve hypothesis: A survey. *Ecological Economics*, 49(4), 431-455. <https://doi.org/10.1016/j.ecolecon.2004.02.011>.
- do Prado, N.B., Moraes, G.H.S.M.D. 2020. Environmental awareness, consumption of organic products and gender. *Revista de Gestão*, 27(4), 353-368. <https://doi.org/10.1108/REG-11-2019-0120>.
- Drăgoi, M.C., Iamandi, I.E., Munteanu, S.M., Ciobanu, R., Țarțavulea, R.I., Lădaru, R.G. 2017. Incentives for Developing Resilient Agritourism Entrepreneurship in Rural Communities in Romania in a European Context. *Sustainability*, 9(12), 2205. <https://doi.org/10.3390/su9122205>.
- Dwivedi, H., Kushwaha, R., Joshi, P., Siddiqui, M.H., Mishra, M. 2024. From leaves to fabric: the beauty of Econic Available to Purchase. *Emerald Emerging Markets Case Studies*, 1-32. <https://doi.org/10.1108/EEMCS-11-2023-0448>.
- Dziewkański, P., Prus, P., Sołyk, P., Wrońska, M., Imbrea, F., Smuleac, L., Pascalau, R., Błaszczuk, K. 2022. Spatial Disproportions of the Green Economy and the Financial Situation of Polish Voivodeships in 2010–2020. *Sustainability*, 14(21), 13824. <https://doi.org/10.3390/su142113824>.
- Ellis, V., Bosworth, G. 2015. Supporting rural entrepreneurship in the UK microbrewery sector. *British Food Journal*, 117(11), 2724-2738. <https://doi.org/10.1108/BFJ-12-2014-0412>.
- Fan, J., Peng, L., Chen, T., Cong, G. 2024. Mining the impact of social media information on public green consumption attitudes: a framework based on ELM and text data mining. *Humanities and Social Sciences Communications*, 11(1). <https://doi.org/10.1057/s41599-024-02649-7>.
- Filieri, R., Milone, F.L., Paolucci, E., Raguseo, E. 2023. A big data analysis of COVID-19 impacts on Airbnbs' bookings behavior applying construal level and signaling theories. *International Journal of Hospitality Management*, 111. <https://doi.org/10.1016/j.ijhm.2023.103461>.
- Gargano, G., Licciardo, F., Verrascina, M., Zanetti, B. 2021. The Agroecological Approach as a Model for Multifunctional Agriculture and Farming towards the European Green Deal 2030-Some Evidence from the Italian Experience. *Sustainability*, 13(4), 2215. <https://doi.org/10.3390/su13042215>.
- Geng, D., Liu, J., Zhu, Q. 2017. Motivating sustainable consumption among Chinese adolescents: An empirical examination. *Journal of Cleaner Production*, 141, 315-322. <https://doi.org/10.1016/j.jclepro.2016.09.113>.
- Gianis, A., Ramli, A.H., Mariam, S. 2025. Social Inclusion, Entrepreneurial Intention, Self-Efficacy, Gender, And Entrepreneurship Education In Generation Z. *Jurnal Ilmiah Manajemen Kesatuan*, 13(2), 725-746. <https://doi.org/10.37641/JIMKES.V13I2.3136>.
- Grønhoj, A., Thøgersen, J. 2012. Action speaks louder than words: The effect of personal attitudes and family norms on adolescents' pro-environmental behaviour. *Journal of Economic Psychology*, 33(1), 292-302. <https://doi.org/10.1016/j.joep.2011.10.001>.

- Ha, T.M., Hansson, H., Abu Hatab, A., Darr, D., Shakur, S. 2022. A risk-benefit approach to the purchase and consumption of conventional vegetables in wet markets. *Appetite*, 176. <https://doi.org/10.1016/j.appet.2022.106142>.
- Ha, T.M., Shakur, S., Pham Do, K.H. 2019. Rural-urban differences in willingness to pay for organic vegetables: Evidence from Vietnam. *Appetite*, 141, 104273. <https://doi.org/10.1016/j.appet.2019.05.004>.
- Habtemaryam, T.N., Degoma, A., Tsegaye, A. 2025. Driving environmental sustainability through synergistic green business practices and green innovation in developing economies' leather, textile and garment industries. *Management & Sustainability: An Arab Review*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MSAR-07-2024-0070>.
- Hempel, C., Hamm, U. 2016. How important is local food to organic-minded consumers? *Appetite*, 96, 309-318. <https://doi.org/10.1016/j.appet.2015.09.036>.
- Homburg, A., Stolberg, A. 2006. Explaining pro-environmental behavior with a cognitive theory of stress. *Journal of Environmental Psychology*, 26(1), 1-14. <https://doi.org/10.1016/j.jenvp.2006.03.003>.
- Hong, X., Chen, Q., Man, D., Shi, C., Wang, N. 2024. The impact of digitalization on the rich and the poor: Digital divide or digital inclusion? *Technology in Society*, 78. <https://doi.org/10.1016/j.techsoc.2024.102634>.
- Howaniec, H. 2023. *Corporate Social Responsibility and Marketing Ethics: The Effects of Value-Based Marketing on Consumer Behaviour* (1st ed.). Routledge. <https://doi.org/10.4324/9781003317364>.
- Hua, K., Pang, X. 2024. Investigation into the Factors Affecting the Green Consumption Behavior of China Rural Residents in the Context of Dual Carbon. *Sustainability*, 16(13), 5797. <https://doi.org/10.3390/su16135797>.
- Huang, L., Xie, G., Huang, R., Li, G., Cai, W., Apostolidis, C. 2021. Electronic Commerce for Sustainable Rural Development: Exploring the Factors Influencing BoPs' Entrepreneurial Intention. *Sustainability*, 13(19), 10604. <https://doi.org/10.3390/su131910604>.
- Jiang, Y., Zhu, L., Goulão, L.F., Li, X., Su, L., Chen, L., Li, A. 2024. The bamboo weaving training as a strategy for women's empowerment toward sustainability in rural revitalization: Practices, challenges and perspectives. *Women's Studies International Forum*, 106. <https://doi.org/10.1016/j.wsif.2024.102975>
- Kamal, S.A., Shafiq, M., Kakria, P. 2020. Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society*, 60. <https://doi.org/10.1016/j.techsoc.2019.101212>
- Kautish, P., Dash, G. 2017. Environmentally concerned consumer behavior: evidence from consumers in Rajasthan. *Journal of Modelling in Management*, 12(4), 712-738. <https://doi.org/10.1108/JM2-05-2015-0021>.
- Keupp, M.M., Gassmann, O. 2009. The past and the future of international entrepreneurship: a review and suggestions for developing the field. *Journal of Management*, 35(3), 600-633. <https://doi.org/10.1177/0149206308330558>.
- Khabbaz, L., Kuran, O. 2024. Empowering Rural Lebanese Female Entrepreneurs: A Resource-Based Perspective. *Journal of Developmental Entrepreneurship*, 29(01). <https://doi.org/10.1142/S108494672450002X>.
- Khalil, F.H., Adnan, A., Amna, A. 2021. Influence of Green Marketing Practice on Consumer Buying Behavior: Moderating Persuasion of Environmental Awareness. *Journal of Managerial Sciences*, 15(2), 119-138. <https://journals.qurtuba.edu.pk/ojs/index.php/jms/article/view/277>.

- Kim, C., Kim, K. 2024. Income, environmental quality and willingness to pay for organic food: a regional analysis in South Korea. *Humanities and Social Sciences Communications* 11(1). Springer Nature. Doi:10.1057/s41599-024-03463-x.
- Kollmuss, A., Agyeman, J. 2002. Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239-260. <https://doi.org/10.1080/13504620220145401>.
- Kozłowska, M.A., Malecka, J., Kolinski, A., Thalassinou, E. 2026. Quantification of Sustainable Urban Development: An Analysis of SDG 11 in the European Union Countries. *European Research Studies*, 29(1), 35-52.
- Kumar, V., Kaur, A., Cao, D., Sindhwani, R., Mathiyazhagan, K., Lin, B. 2025. Exploring sustainable energy consumption practices: An extended environmental value-belief-norm framework using SEM analysis. *Energy Economics*, 108408. <https://doi.org/https://doi.org/10.1016/j.eneco.2025.108408>.
- Kuzior, A., Kwilinski, A., Tkachenko, V. 2019. Sustainable development of organizations based on the combinatorial model of artificial intelligence. *Entrepreneurship and Sustainability Issues* 7(2), 1353-1376. [https://doi.org/10.9770/jesi.2019.7.2\(39\)](https://doi.org/10.9770/jesi.2019.7.2(39)).
- Lei, S., Qiao, Q., Gao, X., Feng, J., Wen, Y., Han, Y. 2023. Ecological Awareness, Policy Perception, and Green Production Behaviors of Farmers Living in or near Protected Areas. *Forests*, 14(7), 1339. <https://doi.org/10.3390/f14071339>.
- Li, Q.C., Wu, M.Y. 2019. Rationality or morality? A comparative study of local and nonlocal visitors' pro-environmental intentions in nature-based destinations. *Journal of Destination Marketing & Management*, Volume 11, March, pages 130-139.
- Li, Y., Westlund, H., Liu, Y. 2019. Why some rural areas decline while some others not: An overview of rural evolution in the world. *Journal of Rural Studies*, 68, 135-143. <https://doi.org/10.1016/J.JRURSTUD.2019.03.003>.
- Li, Y., Xu, Y., Joseph, J., Li, P., Knight, D.W. 2025. Capital mobilization: strategies for integrating migrant tourism entrepreneurs in rural regions. *Tourism Geographies*, 27(2), 275-292. <https://doi.org/10.1080/14616688.2025.2459730>.
- Lin, L., Li, M., Wang, Y., Jiang, Y., Zhu, F. 2024. Rural B&B entrepreneurs' lifestyle pursuits and rural resilience. *International Journal of Hospitality Management*, 123. <https://doi.org/10.1016/j.ijhm.2024.103920>.
- Liu, P., Teng, M., Han, C. 2020. How does environmental knowledge translate into pro-environmental behaviors? The mediating role of environmental attitudes and behavioral intentions. *Science of the Total Environment*, 728, 138126. <https://doi.org/10.1016/J.SCITOTENV.2020.138126>.
- Lu, J., Mao, Z., Wang, M., Hu, L. 2015. Goodbye maps, hello apps? Exploring the influential determinants of travel app adoption. *Current Issues in Tourism*, 18(11), 1059-1079. <https://doi.org/10.1080/13683500.2015.1043248>.
- Mahardika, R.P., Ismoyowati, D., Ushada, M. 2025. Green marketing in the coffee shop: Gen Z repurchase intention through customer satisfaction. *BIO Web of Conferences* 167, 07004, ICoSIA 2024. <https://doi.org/10.1051/bioconf/202516707004>.
- Mahesh, R., Gomathi, P. 2017. A Study on Rural Consumers Buying Behaviour of Green Products with Special Reference to Selected Villages in Tiruppur District. *International Journal of Engineering and Management Research*, 6(1), 15-20.
- Malik, M.Y., Tiwari, A., Hemat, W. 2024. Heterogeneous effects of agricultural insurance on agricultural green development: evidence from Sub national economies of India. *Discover Sustainability*, 5, 472. <https://doi.org/10.1007/s43621-024-00687-4>.

- Mamun, A.A. 2022. Predicting the Intention and Adoption of Environmentally Friendly Entrepreneurial Activities Among the Rural Households. *Vision: The Journal of Business Perspective*, 0(0).
- Manigandan, R., Raghuram, J.N.V. 2025. Linking entrepreneurial orientation to sustainable performance: the mediating role of green innovation. *International Journal of Productivity and Quality Management*, 44(3), 331-355. <https://doi.org/10.1504/IJPQM.2025.144900>.
- Martínez-Campillo, A., Sierra-Fernández, M. del P., Fernández-Santos, Y. 2019. Service-Learning for Sustainability Entrepreneurship in Rural Areas: What Is Its Global Impact on Business University Students? *Sustainability*, 11(19), 5296. <https://doi.org/10.3390/SU11195296>.
- Maťová, H., Triznová, M.O., Kaputa, V., Loučanová, E., Vlosky, R.P. 2024. Strategic Environmental Consumer Segmentation: An Exploratory Case Study in Slovakia. *SAGE Open*, 14(1). <https://doi.org/10.1177/21582440241240638>.
- Michel, J.F., Mombeuil, C., Diunugala, H.P. 2023. Antecedents of green consumption intention: a focus on generation Z consumers of a developing country. *Environ Dev Sustain*, 25, 14545-14566. <https://doi.org/10.1007/s10668-022-02678-9>.
- Mizgajska, H., Wsciubiak, Ł. 2022. Institutional Support for Innovation: National versus Local Level: Insights from Poland, *European Research Studies Journal*, Volume XXV, (Special B), 199-209. <https://doi.org/10.35808/ersj/3030>.
- Morrison, P.S., Beer, B. 2017. Consumption and Environmental Awareness: Demographics of the European Experience. In: Shibusawa, H., Sakurai, K., Mizunoya, T., Uchida, S. (eds) *Socioeconomic Environmental Policies and Evaluations in Regional Science. New Frontiers in Regional Science: Asian Perspectives*, 24. Springer, Singapore. <https://doi.org/10.1007/978-981-10-0099-75>.
- Morrison, C., Ramsey, E., Bond, D. 2017. The role of social entrepreneurs in developing community resilience in remote areas. *Journal of Enterprising Communities: People and Places in the Global Economy*, 11(1), 95-112. <https://doi.org/10.1108/JEC-02-2015-0020>.
- Mousa, S.K., Fernandez-Crehuet, J.M., Thaher, Y.A.U. 2025. Advancing Sustainable Performance in Healthcare: Mediating Roles of Green HRM and Green Innovation Under Green Transformational Leadership. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.4238>.
- Mthembu, B., Mutambara, E. 2018. Rural Tourism as a Mechanism for Poverty Alleviation in Kwa-Zulu-Natal Province of South Africa: Case of Bergville. *African Journal of Hospitality, Tourism and Leisure*, 7(4).
- Muça, E., Pomianek, I., Peneva, M. 2022. The Role of GI Products or Local Products in the Environment-Consumer Awareness and Preferences in Albania, Bulgaria and Poland. *Sustainability*, 14(1), 4. <https://doi.org/10.3390/su14010004>.
- Murta, J.C.D., Willetts, J.R.M., Triwahyudi, W. 2018. Sanitation entrepreneurship in rural Indonesia: a closer look. *Environment, Development, and Sustainability*, 20, 343-359. <https://doi.org/10.1007/s10668-016-9883-7>.
- Negash, Y.T., Rizaldy, H., Rehman, S.U. 2025. Gen Z's willingness to pay for carbon offset in the fast fashion industry: regulatory focus and sustainability adapted value belief norms perspectives. *Management of Environmental Quality*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MEQ-06-2024-0216>.
- Neto de Moraes, L.C., Santos de Oliveira, M.D., Juliane de Oliveira, K., Bonomo, B., Ferreira Campos, D., do Nascimento João, B., Tinoco de Souza Araújo, N.M. da F., Silva Passos, C.R., Silva do Nascimento, A.V., Machado dos Santos, A., Vieira

- Leite, D.F., de Oliveira Silva Lima, H.L.B. 2024. Environmental Education and Green Marketing as Mechanisms for Sustainable Awareness. *Revista de Gestão Social e Ambiental*, 18(12), 1. <https://doi.org/10.24857/RGSA.V18N12-031>.
- Nirmal, D.D., Nageswara Reddy, K., Singh, S.K. 2024. Application of fuzzy methods in green and sustainable supply chains: Critical insights from a systematic review and bibliometric analysis. *Benchmarking*, 31(5), 1700-1748. <https://doi.org/10.1108/BIJ-09-2022-0563>.
- Niu, S., Lyu, X., Gu, G., Peng, W., Wang, Y., Xue, P., Solodovnikov, S.Y. 2024. A framework for quantification and integration of green development of cultivated land in China: From the perspective of adaptability-vitality-resistance. *Land Degradation and Development*, 35(5), 1938-1959. <https://doi.org/10.1002/ldr.5034>.
- Noja, G.G., Cristea, M., Thalassinou, E., Kadłubek, M. 2021. Interlinkages between government resources management, environmental support, and good public governance. *Advanced Insights from the European Union*. *Resources*, 10(5), 41.
- Padma, P., Ramasamy, E.V., Muralivallabhan, T.V., Thomas, A.P. 2018. Changing Scenario of Household Consumption Pattern in Kerala: An Emerging Consumer State of India. *Social Indicators Research*, 135, 797-812. DOI:10.1007/s11205-016-1518-8.
- Paul, J., Khatri, P., Duggal, H.K., Paul, J. 2023. Frameworks for developing impactful systematic literature reviews and theory building: What, Why and How? *Journal of Decision Systems*, 33(4), 1-14. <https://doi.org/10.1080/12460125.2023.2197700>.
- Peattie, K., Crane, A. 2005. Green marketing: Legend, myth, farce or prophesy? *Qualitative Market Research: An International Journal*, 8(4), 357-370. <https://doi.org/10.1108/13522750510619733>.
- Polak, J., Snowball, J. 2017. Towards a framework for assessing the sustainability of local economic development based on natural resources: honeybush tea in the Eastern Cape Province of South Africa. *Local Environment*, 22(3), 335-349. <https://doi.org/10.1080/13549839.2016.1196348>.
- Ramos Farroñán, E.V., Arbulú Ballesteros, M.A., Mogollón García, F.S., Heredia Llatas, F. D., Farfán Chilicaus, G.C., Guzmán Valle, M.D., García Juárez, H.D., Silva León, P. M., Arbulú Castillo, J.C. 2024. Sustainability and Rural Empowerment: Developing Women's Entrepreneurial Skills Through Innovation. *Sustainability*, 16(23), 10226. <https://doi.org/10.3390/su162310226>.
- Rao, Y., Shaosheng, J., Wenchao, W. 2024. Interactive effects of information and trust on consumer choices of organic food: Evidence from China. *Appetite*, 192. <https://doi.org/10.1016/j.appet.2023.107115>.
- Rickett, A.L., Jolley, G.J., Knutsen, F.B., Davis, S.C. 2023. Rural Sustainable Prosperity: Social Enterprise Ecosystems as a Framework for Sustainable Rural Development. *Sustainability*, 15(14), 11339. <https://doi.org/10.3390/su151411339>.
- Ritter, Á.M., Borchardt, M., Vaccaro, G.L.R., Pereira, G.M., Almeida, F. 2015. Motivations for promoting the consumption of green products in an emerging country: exploring attitudes of Brazilian consumers. *Journal of Cleaner Production*, 106, 507-520. <https://doi.org/10.1016/J.JCLEPRO.2014.11.066>.
- Rodgers, P. 2016. Is green economy achievable through championing green growth? A local government experience from Zambia. *Jamba: Journal of Disaster Risk Studies*, 8(3). <https://doi.org/10.4102/jamba.v8i3.253>.
- Rouf, M.A., Babu, M.A., Siddiquee, M.J.A., Islam, M.R., Afrin, M.S., Hasan, M.M., Jaman, S.M.S. 2025. The careful consumer: effects of altruistic and egoistic motivation on the purchase intention of green products. *Quality & Quantity*. <https://doi.org/10.1007/s11135-025-02123-9>.

- Samantarai, M., Dutta, S. 2024. Katherine Lucey and Solar Sister: empowering women in sub-Saharan Africa to create clean energy businesses Available to Purchase. *Teaching Notes*, 20(6), 1368-1397.
- Sánchez-Ollero, L., García-Pozo, A., Mondéjar-Jiménez, J. 2022. Impacts of Environmental Sustainability Measures on Rural Accommodation. *Journal of Hospitality & Tourism Research*. <https://doi.org/10.1177/1096348020986914>.
- Šarković, A. 2017. The environmental awareness of rural area inhabitants as factor of tourism development. *Tourism International Scientific Conference Vrnjačka Banja - TISC*, 2(1), 255-272. <http://www.tisc.rs/proceedings/index.php/hitmc/article/view/144>.
- Schwegler, Y.O., Petty, J.S. 2025. How environmental awareness and concern affect environmental entrepreneurial intent. *Journal of Business Venturing*, 40(2). <https://doi.org/10.1016/j.jbusvent.2024.106470>.
- Shao, Q., Jiang, C., Li, G., Xie, G. 2024. Influencing Factors of Sustainable Rural Entrepreneurship: A Four-Dimensional Evaluation System Encompassing Entrepreneurs, Economy, Society, and Environment. *Systems*, 12(10), 387. <https://doi.org/10.3390/SYSTEMS12100387>.
- Su, H.Y., Liang, Y., Wen, T. 2023. Structural embeddedness, entrepreneurial behavior, and firm performance in the industry network of small tourism enterprises: The moderating role of relational embeddedness and leadership self-efficacy. *Journal of Hospitality and Tourism Management*, 56, 431-442. <https://doi.org/10.1016/j.jhtm.2023.06.007>.
- Sun, B., Wang, X., Luo, P., Zhao, Y., Rijal, M. 2024. Importance of Farmers' Awareness on Ecological Revitalization to Promote Sustainable Development. *Sustainability*, 16(22), 10134. <https://doi.org/10.3390/su162210134>.
- Sun, Y., Liu, N., Zhao, M. 2019. Factors and mechanisms affecting green consumption in China: A multilevel analysis. *Journal of Cleaner Production*, 209, 481-493. <https://doi.org/10.1016/j.jclepro.2018.10.241>.
- Szumelda, A.U. 2019. Agriculture and everyday realities on small farms – An entrepreneurial challenge to farmers between the desire for autonomy and a secure existence. Two examples from east and south-east Poland. *Journal of Rural Studies*, 67, 57-68. <https://doi.org/10.1016/j.jrurstud.2019.02.008>.
- Tabares, A., Londoño-Pineda, A., Cano, J.A., Gómez-Montoya, R. 2022. Rural entrepreneurship: An analysis of current and emerging issues from the sustainable livelihood framework. *Economies*, 10(6), 142.
- Tyagi, P., Grima, S., Sood, K., Balamurugan, B., Özen, E., Thalassinou, E. (Eds.). 2023. *Smart analytics, artificial intelligence and sustainable performance management in a global digitalised economy*. Emerald Publishing Limited.
- Valenzuela-Fernández, L., Guerra-Velásquez, M., Escobar-Farfán, M., García-Salirrosas, E. E. 2022. Influence of COVID-19 on Environmental Awareness, Sustainable Consumption, and Social Responsibility in Latin American Countries. *Sustainability*, 14(19), 12754. <https://doi.org/10.3390/su141912754>.
- Van Eck, N.J., Waltman, L. 2010. Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523-538.
- Van Tuyen, T., Uy, T.C., Le Phi Khanh, H., Thi Hong Phuong, L., Dung Ha, H., Thanh Nga, L.T., Dung, T.Q. 2023. Community-based tourism as social entrepreneurship promoting sustainable development in coastal communities: a study in Thua Thien Hue province, Central Vietnam. *Maritime Studies*, 22, 8. <https://doi.org/10.1007/s40152-023-00293-6>.

- Varela-Candamio, L., Calvo, N., Novo-Corti, I. 2018. The role of public subsidies for efficiency and environmental adaptation of farming: A multi-layered business model based on functional foods and rural women. *Journal of Cleaner Production*, 183, 555-565. <https://doi.org/10.1016/j.jclepro.2018.02.109>.
- Verma, P., Raghubanshi, A.S. 2019. Rural development and land use land cover change in a rapidly developing agrarian South Asian landscape. *Remote Sensing Applications: Society and Environment*, 14, 138-147. <https://doi.org/10.1016/j.rsase.2019.03.002>.
- Vlachou, C., Iakovidou, O., Sergaki, P., Menexes, G. 2023. Entrepreneurial motives in Greek rural areas: 'opportunity' or 'necessity'? *International Journal of Entrepreneurship and Small Business*, 50(1), 94-112. <https://doi.org/10.1504/IJESB.2023.133483>.
- Wahga, A.I., Blundel, R., Schaefer, A. 2018. Understanding the drivers of sustainable entrepreneurial practices in Pakistan's leather industry: A multi-level approach. *International Journal of Entrepreneurial Behaviour and Research*, 24(2), 382-407. <https://doi.org/10.1108/IJEBr-11-2015-0263>.
- Wang, L.L., Chu, D.P., Huang, Y.R., Pan, J.X. 2025. From absorption to action: unraveling the entrepreneurial path in external rural tourism through bricolage and social support perception. *Current Issues in Tourism*, 28(1), 55-69. <https://doi.org/10.1080/13683500.2023.2296577>.
- Wang, S., Wang, J., Wang, Y., Yan, J., Li, J. 2018. Environmental knowledge and consumers' intentions to visit green hotels: the mediating role of consumption values. *Journal of Travel & Tourism Marketing*, 35(9), 1261-1271. <https://doi.org/10.1080/10548408.2018.1490234>.
- Wang, Z., Liu, X. 2019. Demands for Education and Health and the Desire for Social Mobility in Rural China: Perspectives on Weak Consumer Motivation. *SAGE Open*. <https://doi.org/10.1177/2158244019857841>.
- Wierzbiński, B., Surmacz, T., Kuźniar, W., Witek, L. 2021. The Role of the Ecological Awareness and the Influence on Food Preferences in Shaping Pro-Ecological Behavior of Young Consumers. *Agriculture*, 11(4), 345. <https://doi.org/10.3390/agriculture11040345>.
- Wyrzykowska, B., Rytko, A. 2024. Green Choices: A Comprehensive Review of Pro-Environmental Consumer Behaviors. *European Research Studies Journal*, XXVII (2), 255-270. <https://doi.org/10.35808/ersj/3401>.
- Xu, J., Liu, C., Dou, G., Cai, Y. 2024. Mineral resource management in Chinese rural areas: Policy assessment for green economic growth. *Resources Policy*, 90. <https://doi.org/10.1016/j.resourpol.2024.104815>
- Yeh, C.H., Hartmann, M., Gorton, M., Tocco, B., Amilien, V., Steinnes, K.K. 2021. Looking behind the choice of organic: A cross-country analysis applying Integrated Choice and Latent Variable Models. *Appetite*, 167. <https://doi.org/10.1016/j.appet.2021.105591>.
- Yin, J., Ji, Y., Ni, Y. 2023. Love me, love my dog: does destination attractiveness not only mitigate tourists' anger and regret emotions but also prevent negative word of mouth? *Current Issues in Tourism*, 26(13), 2184-2202. <https://doi.org/10.1080/13683500.2022.2080647>.
- Zhang, M., Zhang, H. 2024. The Use of Smart Lockers in China's Smart Villages Construction: Expanding UTAUT With Price Value and Technical Anxiety. *SAGE Open*, 14(4). <https://doi.org/10.1177/21582440241287593>.
- Zhang, J., Zheng, Z., Zhang, Z., Qin, Y., Wang, J., Cui, P. 2021. Digital consumption innovation, socio-economic factors and low-carbon consumption: Empirical analysis

based on China. *Technology in Society*, 67.  
<https://doi.org/10.1016/j.techsoc.2021.101730>.

Zheng, Y., Cao, D. 2024. How do cue utilization and value co-creation and future orientation affect the consumers' choices of smart agricultural products? *Humanities and Social Sciences Communications*, 11(1), 1-12. [doi.org/10.1057/s41599-024-03911-8](https://doi.org/10.1057/s41599-024-03911-8).

Zhu, H., Chen, Y., Chen, K. 2019. Vitalizing Rural Communities: China's Rural Entrepreneurial Activities from Perspective of Mixed Embeddedness. *Sustainability*, 11(6), 1609. <https://doi.org/10.3390/su11061609>.

Zhu, C., Liu, X., Nayga Jr., R.M., Li, X. 2023. Does crowdedness affect consumers' food consumption and nutrients intake in restaurant environments? A cross-city analyses from China. *International Journal of Hospitality Management*, 115. <https://doi.org/10.1016/j.ijhm.2023.103598>.

Zhu, C., Luo, W. 2024. An Empirical Study on the Coupling Coordination and Driving Factors of Rural Revitalization and Rural E-Commerce in the Context of the Digital Economy: The Case of Hunan Province, China. *Sustainability*, 16(9), 3510. <https://doi.org/10.3390/su16093510>.

Zsóka, Á., Szerényi, Z.M., Széchy, A., Kocsis, T. 2013. Greening due to environmental education? Environmental knowledge, attitudes, consumer behavior and everyday pro-environmental activities of Hungarian high school and university students. *Journal of Cleaner Production*, 48, 126-138. <https://doi.org/10.1016/j.jclepro.2012.11.030>.

**Appendix:**

**Table 3.** *The analysis of the existing literature using the TCCM framework.*

WOS (SOUTH ASIAN COUNTRIES)					
No	Theory	Context	Characteristics	Methodology	Citation
1	Consumer Behaviour Theory	Household consumption patterns in Kerala, India, over 50 years.	Urban vs rural disparities, Sustainability concerns	Percentage analysis	Padma <i>et al.</i> (2018)
2	Technology Acceptance Model (TAM)	Factors influencing the acceptance of telemedicine services among the rural population.	Technological anxiety and Perceived risk, Social influence	PLS-SEM	Kamal, Shafiq, & Kakria (2020)
WOS (OTHER ASIAN COUNTRIES)					
1	Hierarchy of Needs Theory, Neo-Marxist-Oriented Theory, Rational Action Theory	Paradox of why increased household incomes in rural areas are accompanied by decreased motivation for consumption.	Consumer motivation, Rural medical care, Rural education, Social mobility, Individual security	Ordinary least squares (OLS) regression models	Wang & Liu (2019)
2	Risk Perception Theory	Regional differences in the determinants of willingness to pay for organic vegetables in Hanoi, Vietnam.	Willingness to pay, Organic vegetables, Rural-urban difference	Interval regression model	Ha, Shakur, & Pham Do (2019)
3	Theory of Planned Behaviour (TPB)	Joint effects of information and consumers' trust in shaping consumer preferences for organic food.	Interactive effects, Trust, Information, Consumer choices, Organic food	Hypothetical choice experiment	Yuan, Jin, & Wu (2024)
4	Social Capital Theory	External rural tourism entrepreneurs in Yuanjia	Entrepreneurial bricolage &	SEM	Wang <i>et al.</i> (2025)

		village, Shaanxi province.	performance, Tourism entrepreneurship		
5	Cue Utilization Theory	Consumers' intention to purchase smart agricultural products, & examining the effects of value co-creation, cue utilization, and attitude.	Cue Utilization, Value co-creation, Consumer choices, Smart agricultural products	SEM	Zheng & Cao (2024)
6	Theory of Planned Behaviour (TPB)	Effect of environmental knowledge on consumers' intentions to visit green hotels through consumption values.	Environmental knowledge, Functional, social, & emotional values	SEM	Wang <i>et al.</i> (2018)
7	High-Dimensional Fixed Effect Model	How crowdedness may influence consumers' food spending & choices in natural restaurant settings.	Consumers' food consumption, Restaurant environments	High-dimensional fixed-effect model	Zhu <i>et al.</i> (2023)
8	Neoclassical Growth Theory	Impact of digital development on the wealth gap, focusing on industrial structure & consumer spending.	Digital divide, Digital inclusion, Rich-poor gap	SEM	Hong <i>et al.</i> (2024)
9	Technology Adoption Model, Innovation Diffusion Theory, & Social Cognitive Theory	Factors that could affect travel app adoption by tourists visiting rural tourism sites in China.	Mobile applications, Behavioural intention, Travel experience, Rural tourism	SEM	Lu <i>et al.</i> (2015)
10	Risk-benefit Approach	Purchasing and consumption of conventional vegetables from wet markets focusing on perceived food safety risks and perceived benefits.	Perceived risks, Perceived benefits, Conventional vegetables, Wet markets	CFA, generalized ordered, & Poisson regressions	Ha <i>et al.</i> (2022)
11	Unified Theory of Acceptance and Use of Technology	Determining key factors affecting the willingness of rural Chinese consumers to use smart lockers.	Smart villages, Smart lockers, UTAUT, Price value, Technical anxiety	PLS-SEM	Zhang & Zhang (2024)
12	Emotion-Appraisal Theory	Tourists' emotional and behavioural responses to residents' irregular business behaviours and destination attractiveness.	Residents' irregular business behaviours, tourists' anger & regret emotions, rural tourism	SEM	Yin, Ji, & Ni (2023)
13	Elaboration Likelihood Model (ELM)	Information strategies from government, businesses, & media influence consumer attitudes toward green consumption.	Social media information, Public green consumption	ELM and text data mining	Fan <i>et al.</i> (2024)
14	Environmental Kuznets Curve (EKC) Theory	Dynamic relationship between income & willingness to pay a premium for organic food across regions with varying levels of environmental development.	Income, Environmental quality, Willingness-to-pay, Organic food	Two-step regression analysis	Kim & Kim (2024)
15	Stimulus-Organism-Response (SOR) Theory, Antecedent-Behavior-Consequence (ABC) Theory	Impact of green marketing tools (green advertising & eco-labelling) and green motives on green purchase intention, subsequently enhancing green satisfaction and WOM, with brand experience as a moderator.	Green advertising, Eco-labelling, Brand experience, Green brand image, Green trust, Green purchase intention, Green motives, Green satisfaction	PLS-SEM	Akram <i>et al.</i> (2024)

16	Theory of Planned Behavior (TPB), Norm-Activation Model (NAM)	Relative strengths of the rational & moral models in explaining visitors' pro-environmental intentions in nature-based destinations.	Sustainable tourism, Pro-Environmental intention, Nature-based destinations.	SEM	Li & Wu (2019)
17	Network Embedding Theory	Structural embeddedness of STEs' <u>industry</u> networks to entrepreneurial behavior & firm performance.	Structural embeddedness, Entrepreneurial behavior, Firm performance, Small tourism enterprises, Relational embeddedness	SEM	Su, Liang, & Wen (2023)
WOS (OTHER COUNTRIES EXCEPT ASIAN COUNTRIES)					
1	Random Utility Theory (RUT)	Differences in attitudes & willingness-to-pay values between consumers who consider the organic production of food important and less important.	Organic-minded consumers, Willingness-to-pay	Random parameter logit modeling	Hempel & Hamm (2016)
2	Signaling Theory, Construal Level Theory of Psychological Distance	Peer-to-peer accommodation sector, analyzing Airbnb bookings before and after COVID-19 in Italy.	Consumer behavior, Psychological distance, Spatial and social distance, Price premium	Big data analysis, empirical Bayesian shrinkage	Filieri <i>et al.</i> (2023)
3	Theory of Planned Behaviour (TPB)	Relative role of organic labelling in consumers' purchase decisions for apples and the extent to which behavioral constructs.	Organic labelling, Consumers' purchase decisions, Subjective norms, Perceived behavioral control	SEM	Yeh <i>et al.</i> (2021)
4	Green Marketing Theory	Focuses on consumers' beliefs and perceptions regarding what is environmentally "green."	Green consumers, Environmental awareness, Green products	Cluster analysis, PCA	Matova <i>et al.</i> (2024)
SCOPUS (SOUTH ASIAN COUNTRIES)					
1	Consumer Behaviour Theory, Innovation of Diffusion Theory	Evolving ideas in context to the challenges, catering to a green fashion clothing line selling their products in the emerging economy of India.	Green fashion clothing line, Sustainable value, Sustainable fashion brand	Case Study	Dwivedi <i>et al.</i> (2024)
2	Institutional Theory	Drivers of sustainable entrepreneurial practices in SMEs operating in a developing economy.	Environmental practices, Institutional isomorphism, Sustainable entrepreneurship	Grounded analysis	Wahga <i>et al.</i> (2018)
3	Koopmans and Montias (1971) Framework	Relative competitiveness of agricultural green development & exploring the factors influencing this development.	Agricultural insurance, green development, Sub-national economies	Hausman test, Panel quantile regression	Malik, Tiwari, & Hemat (2024)
4	Theory of Change	India's experience in using the Self-Help Group Bank Linkage Programme as a core development strategy.	Empowering women, Self-help group, Sustainable development	Systematic review	Al-Kubati, & Selvaratnam (2023)
SCOPUS (OTHER ASIAN COUNTRIES)					
1	Theory of Planned Behaviour (TPB), SET Theory, Cognitive Learning Theory,	Factors & mechanisms that motivate green consumption and examining the entire consumption process—choosing, using, and disposing.	Green consumption, Individual level effect, Provincial level effect, Consumption process	MSEM	Sun, Liu, & Zhao (2019)

	Social Class Theory				
2	Social Theory	Perspectives respondents have regarding their experiences and the practices of sustainability activities.	Sustainability, women entrepreneurship, Entrepreneurship, women	Focus groups, Thematic analysis	Abdelwaheed, Bastian, & Wood (2023)
3	Integrated Natural Resource Management (INRM), Policy Analysis Framework	Focuses on assessing the influence of metallic and non-metallic resource efficiency on the sustainable development of rural areas in China.	Mineral resource management, Rural areas, Green economic growth	Systematic literature review, Econometric Model	Xu <i>et al.</i> (2024)
4	Social Inequality Theory	Social inequality by analyzing the impact of digital consumption innovation & socio-economic factors on low-carbon consumption.	Digital consumption, innovation, Low carbon consumption, Socio-economic factors	PCA, Substitution variable method	Zhang <i>et al.</i> (2021)
5	Theory of Planned Behaviour (TPB), Social Learning Theory, Value-Belief-Norm Theory	Impact of market incentives, social pressure, information boost, environmental awareness, and psychological factors on diverse forms of green consumption behavior.	Dual carbon, Green consumption behavior, Rural residents, Influencing factors	SEM	Hua & Pang (2024)
6	Coupling Coordination Theory, Sustainable Development Theory	Analyzing the spatio-temporal evolution characteristics and driving factors of the coupling coordination development of rural revitalization and rural e-commerce in Hunan Province.	Rural revitalization, Rural e-commerce, Coupling coordination degree, Driving factors	Coupling coordination model, Spatial econometric model	Zhu & Luo (2024)
7	Sustainability Theory, EU Bioeconomy Model	Examining the role of public subsidies on farming efficiency in Spain.	Bioeconomy, Environmental behavior, New rurality, Rural women, Sustainability	DEA, Nonparametric regression	Varela-Candamio <i>et al.</i> (2018)
8	Sustainable Development Theory, Adaptability–Vitality–Resistance (AVR) Framework	Developing a new multidimensional framework for assessing green development of cultivated land (GDCL) according to the essential requirements of green development.	Green development, Cultivated land, Agricultural growth	Spatiotemporal analysis	Niu <i>et al.</i> (2024)
9	Sustainable Development Theory	Impact of rural development on land use and land cover change & examining socio-economic growth & proximity to urban areas transforming agrarian landscapes.	Rural development, Land use, Land cover, South Asian landscape	Geospatial analysis	Verma & Raghubanshi (2019)
10	Empowerment Theory, Triple Bottom Line Theory	Outcomes of bamboo weaving training programs in rural China & assessing the impact of these programs on the well-being of rural women & their communities.	Women’s empowerment, Rural women, Sustainability, Rural revitalization, Poverty alleviation	Ethnographic research	Jiang <i>et al.</i> (2024)
11	Social Entrepreneurship Theory	A social entrepreneurship perspective to explore Community-based tourism practices & their relationship	Community-based, tourism, Coastal, Social entrepreneurship, Sustainable development	Descriptive statistics, Randomization tests,	Van Tuyen <i>et al.</i> (2023)

		with sustainable development.		Chi-sq test	
12	Grounded Theory	Focuses on agritourism, localism, entrepreneurship, and dimensions of social & cultural sustainability in order to achieve sustainable rural development.	Agritourism, Rural development, Vernacular entrepreneurship	Conceptual study	Abadi & Khakzand (2022)
13	Theory of Planned Behaviour	Focuses on predicting the intention and adoption of environmentally friendly entrepreneurial activities.	Green entrepreneurship, Economic decision-making processes	PLS-SEM	Mamun (2022)
14	Mixed Embeddedness Framework	Impact of social, institutional, and economic environments of rural communities on entrepreneurship.	Rural communities, Farmer entrepreneurship, Entrepreneurial activities	Binary logistic regression (BLR) model	Zhu, Chen & Chen (2019)
15	Political Economy Analysis Framework	Factors affecting the sustainability of sanitation enterprises in rural Indonesia.	Sanitation entrepreneurship, Social enterprise, Enterprise development	Extensive literature reviews, Semi-structured interviews	Murta, Willetts, & Triwahyudi (2018)
16	Capital Theory	Proposes a framework for assessing the integration of migrant tourism entrepreneurs (MTEs) in rural areas.	Migrant tourism entrepreneur, Ethnic tourism, Rural regions	Ethnographic study	Li <i>et al.</i> (2025)
17	Constructivist Grounded Theory	How rural entrepreneurial activities can bring sustainable solutions to rural villages based on entrepreneurs' lifestyle pursuits in their business activities.	Rural resilience, Rural B&Bs, Entrepreneurs, Business success, Rural community	Constructivist grounded theory, Interviews	Lin <i>et al.</i> (2024)
SCOPUS (OTHER COUNTRIES EXCEPT ASIAN COUNTRIES)					
1	Tobit Model	Examining the role of public subsidies on farming efficiency in Spain.	Rural women, Environmental adaptation	Data envelopment analysis (DEA)	Varela-Candamio <i>et al.</i> (2018)
2	Theory of Entrepreneurship, Theory of Planned Behaviour (TPB)	Focused on explicitly analyzing environmental concern and awareness in the entire environmental-entrepreneurship literature.	Environmental entrepreneurship, Entrepreneurial intent, Environmental awareness & concern	Correlation, Regression & ANOVA	Schwegler & Petty (2025)
3	Social Entrepreneurship Theory	Focuses on addressing energy poverty in sub-Saharan Africa and how women in rural areas were disproportionately affected by energy poverty.	Social entrepreneurs, Sustainable development, Women entrepreneurs	Case study	Samantarai & Dutta (2023)
4	Agroecological Framework	Role of organic, biodynamic, & integrated farming with relevance to the European Green Deal & farm to fork strategy.	Multifunctionality, Agroecology, European green deal, Rural development	Case study	Gargano <i>et al.</i> (2021)
5	Sustainable Development Theory	Extent to which local government has embraced green growth and green economy.	Green economy, Green growth, Government, Underdeveloped areas	Mixed-research methods	Rodgers (2016)
6	Sustainable	Assessing & identifying the	Green economy,	TOPSIS	Dzikański

	Development Theory, Fiscal Federalism Theory, Green Economic Theory	spatial differentiation in the relationship between the green economy and the financial situation of voivodeships.	Sustainable development, Financial situation, Rural area, Synthetic measure	method, Correlation analysis, Regression analysis	<i>et al.</i> (2022)
7	Rural Entrepreneurial Ecosystems Component Mapping Framework	Focuses on exploring the success factors and barriers faced by rural women entrepreneurs in the artisanal sector during 2020–2024.	Women’s rural entrepreneurship, Economic empowerment, Gender barriers, Sustainable development	Bibliometric analysis	Ramos Farroñán <i>et al.</i> (2024)
8	Progression of LED Theory	Focuses on examining the relationship between sustainability and local economic development (LED) within the context of the emerging honeybush tea industry in the Eastern Cape.	Environment, Sustainability, Local economic development	Connelly’s (2007) framework for sustainable development	Polak & Snowball (2017)
9	Social Entrepreneurial Ecosystems (SEEs) Framework	Three social enterprises that have emerged at different times in a rural area recovering from the environmental & health consequences.	Social enterprise ecosystems, Rural development, SDGs	Extended case study approach	Rickett <i>et al.</i> (2023)
10	Community Resilience Theory, Structuration Theory	Focuses on understanding the processes whereby social entrepreneurs can contribute to community resilience and sustainability.	Resilience, Social capital, Social enterprise, Social entrepreneurs, Remote rural communities	Case study approach	Morrison, Ramsey & Bond (2017)
11	Sustainable Development Theory, Resilience Theory	Specific conditions & constraints that influence the progress of agritourism business initiatives as viable entrepreneurial solutions for self-sustainable rural communities.	Resilient agritourism entrepreneurship, Green entrepreneurship, Rural communities, Sustainable development	Ordinary least square regression models	Drăgoi <i>et al.</i> (2017)
12	Grounded Theory	Three economic models adopted by interviewed farmers, highlighting their core motivations.	Entrepreneurial challenge, Agriculture, autonomy	Conceptual study	Szumelda (2019)
13	Resource Based View (RBV) Framework	Rural female entrepreneurs in Lebanon are navigating challenges and opportunities amidst economic crises.	Female entrepreneurs, Rural, Motivating factors	Integrative qualitative methods	Khabbaz & Kuran (2024)
14	Schumpeter’s Theory of Innovation	Extent to which rural tourism can be used as a mechanism to alleviate poverty in the Bergville area.	Tourism, Rural tourism, Rural areas, Poverty, Poverty Alleviation	Mixed-method approach	Mthembu & Mutambara (2018)
15	Entrepreneurial Theory	Impact of funding upon competition in the sector and the entrepreneurial characteristics of microbrewers.	Entrepreneurship, Brewing industry, Rural development, Brewing	Semi-structured interviews	Ellis & Bosworth (2015)
16	Push-pull Theory	Motives for entrepreneurship in rural areas & delves further into the form of entrepreneurship based on the motives.	Entrepreneurial motive, Necessity-opportunity entrepreneurship, Rural areas	Descriptive statistics, PCA, Wilcoxon test	Vlachou <i>et al.</i> (2023)
GREY AREA LITERATURE					
SOUTH ASIAN COUNTRIES					
1	Theory of	Emphasizes the growing	Green products,	PLS-SEM	Rouf <i>et al.</i>

	Planned Behaviour (TPB)	demand for green products in developing economies.	Altruistic motivation, Egoistic motivation, Purchase intention		(2025)
2	Value-Belief-Norm (VBN) Theory	Explores willingness-to-pay-more and word-of-mouth for eco-friendly home products.	Sustainable energy, Consumption practices, environmental VBN framework	SEM	Kumar <i>et al.</i> (2025)
OTHER ASIAN COUNTRIES					
1	Social Marketing Theory, Theory of Green Marketing, Value Norm Theory	Examines the variables of ecological awareness, personal norms, and environmental attitudes that affect conservation behavior.	Ecological awareness, Personal norms and Ecological attitude, Conservation behavior	PLS-SEM	Arundati, Sutiono, & Suryono (2020)
2	Theory of Planned Behaviour(TPB)	Environmental knowledge influences pro-environmental behaviors via environmental attitudes and behavioral intentions.	Environmental knowledge, Environmental attitudes, Behavioral intentions, Pro-environmental behaviors	SEM	Liu, Teng, & Han (2020)
3	Entrepreneurial Event Model	Focusing on the base of pyramid communities engaging in rural e-commerce entrepreneurship.	Rural e-commerce, Entrepreneurial intention	PLS-SEM	Huang <i>et al.</i> (2021)
4	Sustainability Assessment Framework	Underscoring the prominence of economic dimensions in fostering sustainable rural entrepreneurship.	Sustainable rural entrepreneurship, Economy, Society, Environment	Fuzzy DANP method	Shao <i>et al.</i> (2024)
5	Marxist Ecological Thought	Examined the cultivation of ecological awareness among farmers in ecological revitalization.	Ecological awareness, Farmer knowledge, Rural revitalization, Sustainable development	Case analysis method, Bibliometric analysis	Sun <i>et al.</i> (2024)
6	Modern Growth Theory	Interpreting why some rural areas decline while some others do not.	Rural decline, Rural revitalization, Rural resilience, Rural evolution, Sustainability	Extensive literature review	Li, Westlund & Liu (2019)
OTHER COUNTRIES EXCEPT ASIA					
1	Theory of Planned Behaviour (TPB)	Dimensions of environmental awareness influencing the intention of consuming organic products.	Environmental awareness, Organic product consumption	PLS-SEM	do Prado <i>et al.</i> (2020)
2	Theory of Consumer Behaviour	Brazilian consumers in Southern Brazil, specifically individuals who have consumed green products.	Green products, Green consumption, Sustainability	SEM	Ritter <i>et al.</i> (2015)
3	Theory of Planned Behaviour (TPB)	Generation Z consumers in Haiti, particularly educated individuals, exploring differences across gender, family economic status, and parents' education.	Perceived environmental knowledge, Drive for environmental responsibility, Green Consumption	SEM	Michel <i>et al.</i> (2023)
4	Entrepreneurial ecosystem theory, Stam & Van de Ven's (2019) conceptual framework for entrepreneurial ecosystems.	Rural locations, specifically focusing on entrepreneurial ecosystems in underdeveloped and resource-constrained rural areas.	Rural poverty, Natural resources endowment, Peripheral location, and Rural cultural values.	SLR	Aguilar (2021)
5	Theory of Planned Behavior	Effect that COVID-19 has on environmental awareness,	Environmental awareness, Sustainable	SEM	Valenzuela-Fernández

	(TPB) and Norm Activation Theory	sustainable consumption, and consumer social responsibility.	consumption, Social responsibility		<i>et al.</i> (2022)
6	Sustainable Tourism Development Theory	Attitude of rural establishment managers influence on the behaviour of their clients regarding ecological respect.	Environment, Rural tourism, Rural accommodation, Sustainability measures	PLS-SEM	Sánchez-Ollero <i>et al.</i> (2022)
7	Service-Learning Theory	Describes and evaluates an SL experience for Sustainability Entrepreneurship in the context of Spanish Higher Education.	Service-Learning, Sustainability entrepreneurship, Rural areas, Sustainable development	Comparative analysis	Martínez-Campillo <i>et al.</i> (2019)

**Source:** *Own study.*