Aligning Regional Innovations with Global Sustainability Targets: Marketing Approaches of Women Entrepreneurs in Nilgiris

1*Pavithra D, ²Dr. M. Venkatraman
1*Department of Commerce, PSG College of Arts & Science, Coimbatore – 641014
²Department of Commerce, PSG College of Arts & Science, Coimbatore – 641014

Abstract

Introduction: The implication of these research findings could thus form the basis of best practice in the integration of regional innovations with global targets of sustainability, therefore holding important lessons for women entrepreneurs and other stakeholders who are interested in ensuring sustainable development.

Materials and methods: Primary data collection along with quantitative SPSS analysis have been performed in this research work. Overall research integrity has been maintained by following all ethical considerations and reliable methods in this study.

Results: This study identified a close interrelation between marketing approaches among the women entrepreneurs in the Nilgiris district and regional innovation, regulatory framework, cultural attitudes towards sustainability and global sustainability targets. On the other hand, through linear regression analysis, variances of these variables are also recorded which has justified the context of the study significantly.

Conclusion: The findings of this study conclude the role of regional innovation and regulatory frameworks of the Nilgiris district in the management of sustainability among the women entrepreneurship practices in that area. The findings of this study also conclude the alignment between regional intervention and the global sustainability targets which is also shaping the women's entrepreneurship practices in the Nilgiris district.

Keywords: Sustainability Marketing, Regional Innovations, Women Entrepreneurs, Nilgiris District, Global Sustainability Targets

Introduction

Regional innovations simply cannot afford to drift from global sustainability goals if they are to help an organization stay competitive yet positive for the environment in this fast-moving economic landscape. This study investigates how women entrepreneurs in Nilgiris District, India, are maneuvering this complex terrain through their marketing strategies. Considering the rich biodiversity endowed on Nilgiris and its peculiar socio-cultural context, this area becomes unique in examining these dynamics. Sustainability has rarely been more relevant than it is today. Global targets on sustainability have been placed through a set of international agreements, in particular, the Paris Agreement and the United Nations Sustainable Development Goals, to reduce environmental impacts, increase social equity, and ensure that economic development does not deplete natural resources (Iacobuţă et al. 2022, 102509). The challenge and opportunity lie in these global goals' integration into any business, more so women-led businesses emanating from any emerging region of the Nilgiris District.

Regional innovations—in new technologies, processes, or products coming out of a specific geographic area—are key to achieving the set targets in sustainability. Normally, they are tailored to local conditions and are going to immensely impact efficiency and effectiveness in sustainable practices. In this regard, regional innovations in the Nilgiris District may comprise new agricultural practices, eco-friendly disposable packaging, and resource management with novel techniques. In this regard, women entrepreneurs in this region are aptly positioned to benefit from such innovations because they already operate within close-knit communities, and, in most cases, their business model is built within local knowledge and resources (Ithurbide, 2023, 100). The Nilgiris District is located in the Western Ghats of India, a place known for its extensive tea plantations, interesting flora and fauna, and diverse cultural heritage. This region has particular challenges to sustainability, such as deforestation, shortage of water, and climate change impacts on agriculture.

In this region, women entrepreneurs are increasingly applying innovative approaches to meet these challenges while continuing to align their business activities in support of global sustainability targets. Therefore, their marketing strategies become a crucial means of communicating such commitments to sustainability and hence differentiating their

products and services within the marketplace. Women entrepreneurs who successfully combine local innovations into their marketing strategies raise regional appeal in terms of sustainability products and services (Mukherjee, 2023. 408). This not only helps in regional development but also places the business as a champion for sustainability. For example, a tea producer in Nilgiris can adopt eco-friendly packaging and highlight the sustainable agriculture methods adopted in tea plantations. Therefore, these innovations should be marketed to capture environmentally conscious consumers and establish a strong market presence.

Moreover, the aligning of marketing strategies with global sustainability goals further helps to reach a wider audience. Women entrepreneurs have to position themselves in both the local and global context; therefore, keeping up with the traditions in their use yet modern practices of sustainability standards (Ojediran and Anderson, 2020. 87). Their marketing strategies have to reflect this balance—how regional innovations sit within and contribute towards global sustainability goals. This thus tries to explore how women entrepreneurs in Nilgiris District are using regional innovation and aligning them with global sustainability targets as a part of their marketing approach. This study tries to draw on strategies, challenges, and successes in showing the greater implications of these practices on sustainable business development in emerging regions. Understanding these dynamics is essential not only for policymakers and business leaders in the Nilgiris but also for other regions grappling with similar challenges toward sustainability.

Aim and Objectives

The main purpose of this study is to identify the role of regional innovation in achieving global sustainability targets among the women entrepreneurs in the Nilgiris district. The objectives of this study are as follows:

- To investigate the correlation between the regional innovation, global sustainability targets and marketing approaches among the Nilgiris's women entrepreneurs.
- To examine the impact of regulatory environment of Nilgiris district on achieving global sustainability target in the women entrepreneurs' marketing approach in the Nilgiris district.
- To explore the interrelation between global sustainability and marketing approaches of the women entrepreneurs in the Nilgiris district.
- To examine the influence of cultural attitude of the citizens of Nilgiris in the marketing approaches of the women entrepreneurs.

Research Question

- What is the correlation between regional innovation global sustainability targets and marketing approaches among the Nilgiris's women entrepreneurs?
- How regulatory environment of the Nilgiris affecting global sustainability target achievement among the women entrepreneurs in Nilgiris?
- What is the interrelation between global sustainability and marketing approaches undertaken by women entrepreneurs in Nilgiris?
- What is the influence of cultural attitudes towards sustainability among Nilgiris's people on the marketing approaches of the women entrepreneurs in Nilgiris?

Hypotheses

 $\mathbf{H_{1}}$: Regional innovation in the Nilgiris district is directly related with global sustainability target achievement of women entrepreneurs in the Nilgiris district.

H₀: Regional innovation in the Nilgiris district is not related with global sustainability achievement in the marketing approach of women entrepreneurs.

H₂: Cultural attitude among the citizens in Nilgiris district plays vital role in achieving global sustainability targets in the marketing approaches of the women entrepreneurs.

H₀: Cultural attitudehas no influence on the achievement of global sustainability targets in the marketing approaches of women entrepreneurs.

Literature Review

Impact of regulatory environment in achieving global sustainability targets

Achievement of sustainability targets are mainly based on the managing principles in the operational aspect which can be considered to directly related with the implementation of proper regulations. According to Sinha et al. (2021, 22), strict environmental laws should be implemented by policymakers to safeguard the supply of natural resources and minimise the use of fossil fuels. This is indicating the role of proper regulatory frameworks in managing global sustainability targets in an appropriate way. On the other hand, Ahmed et al. (2022, 596) stated that countries enacted environmental regulations to promote ecological awarenesses. Therefore, it can be considered that regulatory environment of a country plays a vital role in enhancing ecological awareness among citizens which results in achievement of global sustainability targets more appropriately.

Role of regional innovation in managing sustainability in marketing

The logical implementation of the concept of industry 4.0 can be considered as one of the most essential aspects emerges the regional innovation especially to shaping the marketing perspectives more effectively. As mentioned by Hervas-Oliver et al. (2021), the term "regional innovation system" denotes to the people, relationships, and organisations that create expertise and propel regional growth by functioning as an ecosystem of interrelated chains and engagements cantered on education and creativity. On the other hand, Tartaruga et al.(2024, 10) mentioned that regional innovation plays a vital role in economic development of an area. This information clearly indicating the role of regional innovation in the management of sustainability in marketing perspectives as it provides potential opportunities to the marketers to achieve the global sustainability goals.

Diffusion of Innovation Theory

Diffusion of Innovation Theory, developed by E.M. Rogers in 1962, is one of the first concepts in social science. The term originated in casual discussions to explain how an idea or product progressively gains popularity and permeates a specific neighbourhood or social structure (Nordhoff et al. 2021, 59). This diffusion leads to people finally accepting a new idea, behaviour pattern, or object as a part of their social systems. Considering this theoretical aspect, the cultural attitude of the Nilgiris's women entrepreneurs is an influential factor associated with the regional innovation in the area which can also be considered to have efficacies in the achievement of global sustainability targets especially from the marketing approaches.

Key variables

Variables	Definition	Reference
Marketing approaches	Marketing approaches is the way an individual encompassing	Paul (2020, 452)
(DV)	with promotion of a certain brand or products in a particular	
	market.	
Regulatory Environment	Regulatory environment of a region indicates the effectiveness	Sheth and Atul
(IV1)	of the laws and regulations enacted in that area.	(2021, 152)
Cultural attitude towards	Cultural attitudes towards sustainability of a region denotes the	Chwialkowska et
sustainability (IV2)	sustainability concerns among the people of that particular	al. (2020, 5)
	region.	
Regional innovations	This is the system incorporated with intervention in a particular	Leckel et al.
(IV3)	(2020, 3)	
Global sustainability	Global sustainability is the aspect which confronted with the	Polejack (2021,
(IV4)	targets of reducing environmental degradation from	3)
	operational aspect.	

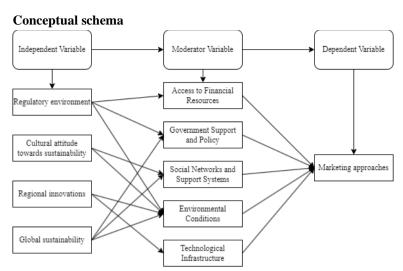


Figure 1: Conceptual model of the study

(Source: Self-developed)

Materials and Methods

A structured questionnaire is designed to extract information from the women entrepreneurs in Nilgiris District. This includes sections associated with demographic characteristics, marketing strategies, and regional innovation factors related to global sustainability targets. Likert scale questions have been framed to quantify the responses in a uniform format. Therefore, to check the relevance the questionnaire has been pre-tested in a small group. The finalized questionnaire was administered electronically via online survey platforms such as Google Forms for fair share accessibility.

Sampling

The sampling process has been used here to filter out the sample size from the entire population. A purposive sampling method has been adopted, targeting women entrepreneurs who operate within the Nilgiris District. Purposive sampling is usually used when the selection of a particular group needs to be done (Mweshi and Sakyi, 2020. 187). The sample consisted of businesses of different sectors such as agriculture, handicrafts, and tourism to take a holistic view of the entrepreneurial scenario prevailing in the region. Among the total population of 100 people, 61 sample sizes have been selected for this study. Due to having specific criteria of selecting a particular type of sample which is women entrepreneur 61 participants has been selected as minimises the risks of unavailability of proper sample especially in the selected study area.

Data Collection:

The primary data collection process has been followed in this research. The primary data has been collected and then analysed through the online survey and using survey questionnaire [refer to Appendix 1]. Primary data is used to gather firsthand data (Taherdoost, 2021. 28). The reason for using this data collection method is to make this research more authentic in a sense. Quantitative data has been collected from the respondents through the survey process.

Data Analysis:

Quantitative data was analysed using SPSS. Additionally, descriptive statistics has been used to summarize demographic information and some of the key questions. Bivariate inferential statistics, through correlation and regression analyses, has been used to see the relationships between dependent variables, namely marketing approaches. These are against regional innovations and global sustainability targets as independent variables. The findings are going to shed light on factors affecting marketing approaches by women entrepreneurs in the Nilgiris District.

Ethical considerations and reliability

The ethical considerations have been kept in view like voluntary participation, anonymity, and confidentiality. The respondents of the research were kept safe from any type of harm during the research. The reliability has been maintained to protect the integrity of the research.

Results and Discussion

Results

As previously mentioned in this paper, the "primary quantitative data" has been collected from 61 appropriate samples through constructing an online survey. This section of the study mainly deals with the representation and analysis of the accumulated data in which a statistical process has been followed. In this analytical approach descriptive statistics, Pearson correlation, linear regression and reliability statistical analysis have been performed and the purpose of the study has been met accordingly. Considering these analytical approaches the linearity of the relationships among the dependent variable, Marketing approaches (DV) and independent variables, "Regulatory environment" (IV1), "Cultural attitude towards sustainability" (IV2), "Regional innovations" (IV3) and "Global sustainability" (IV4) has also been discussed.

Descriptive statistics

Sections Statistics	D1	D2	D3	DV	IV1	IV2	IV3	IV4
Mean	1.64	1.38	1.92	3.02	3.38	3.30	3.36	3.33
Median	2.00	1.00	2.00	3.00	4.00	4.00	4.00	4.00
Mode	2	1	3	3	4	4	4	4
SD	0.932	0.756	1.187	0.826	1.003	0.955	0.932	0.944

Table 1: Descriptive statistics

One of the fundamental areas of statistics research is descriptive statistics. It demonstrates the way the factors in a sample relate to one another and is frequently used to tidy up and compile dispersed data, which is essential for doing research and drawing inferential statistical comparisons. According to Dong (2023, 17), this statistical analysis helps in summarising the accumulated information which can be used in further statistical analysis. In this regard, the mean and the Std. Deviation (SD) values can be considered as the most crucial factors associated with the understanding of data distribution in the dataset.

In the represented dataset, for D1, the mean value has been reported for 1.64 whereas the SD value has been reported for 0.932. These values can be considered to be close to each other and from these findings, it can be summarised that the data accumulated in these sections are in clustered distribution in the dataset. In terms of data gathered in the DV section, the mean value is identified as 3.02 while the SD value is reported as 0.826. This indicates evenly distributed data in the dataset. On the other hand, data gathered in the IV1 section indicate a mean value of 3.38 while the SD value has been reported for 1.003 which are also close to each other and also indicate a clustered data distribution in the dataset.

Correlation analysis

Correlation analysis		DV	IV1	IV2	IV3	IV4
DV	P-Value	1	0.605	0.644	0.520	0.556
IV1	P-Value	0.605	1	0.760	0.719	0.760

IV2	P-Value	0.644	0.760	1	0.772	0.779
IV3	P-Value	0.520	0.719	0.772	1	0.660
IV4	P-Value	0.556	0.760	0.779	0.660	1

Table 2: Pearson Correlation analysis between the variables

Pearson correlation analysis can be considered one of the most common statistical factors used in terms of assessing the correlation between the identified variables in research. Janse et al. (2021, 2334) stated in an article that a correlation value higher than or close to 0.5 can be considered to provide evidence of a positive correlation between two or more variables. In the above-represented observational data, the correlation between DV and IV1 has been reported for 0.605 which can be considered to represent a positive interrelation between these variables. On the other hand, the *P*-value between DV and IV2, IV3 and IV4 has been reported for 0.644, 0.520 and 0.5556 respectively which are also indicating a positive and strong interrelation between these variables.

Regression analysis

Model summary

Model Summary				
Model	R	R-square	Adjusted R-square	
1	0.640	0.410	0.368	

Predictors: Constant: "Regulatory environment", "Cultural attitude towards sustainability", "Regional innovations" and "Global sustainability"

Dependent Variable: Marketing approaches

Table 3: Model summary

The purpose of the regression analysis used in this work was to determine the linear association between DV and IV1, IV2, IV3, and IV4. There is a linear relationship between the dependent and independent variables when the R-value is approaching 0.5 (Shrestha, 2020, 41). The R-value for this investigation is 0.640, suggesting a linear relationship between DV and IV1, IV2, IV3, and IV4. A score near or higher than 0.5 suggests an efficient fit of the model, and the R-square value reflects how effective the model employed in the investigation was. The R-squared score for this study is 0.410, which indicates that the model employed in the investigation fits the data adequately.

ANOVA

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	16.812	4	4.203	9.737	0.000
	Residual	24.172	56	0.432		
	Total	40.984	60			

Predictors: Constant: "Regulatory environment", "Cultural attitude towards sustainability", "Regional innovations" and "Global sustainability"

Dependent Variable: Marketing approaches

Table 4: ANOVA

The validity of the prediction of marketing approaches based on the significance value has been determined using the above-represented table. Once the dependent variables have an effective predictability of more than 0.0005, the significance value is greater. In this regard, the reported sig. value is 0.000, above the standard value, suggesting that the regression model accurately predicted the dependent variable.

Reliability statistics

Factors	Cronbach's alpha
DV	0.794
IV1	0.851
IV2	0.784
IV3	0.695
IV4	0.683

Table 5: Reliability statistics

Crobach's alpha has been used to assess the validity of the study findings in terms of reliability. Kennedy (2022, 18) noted that evaluating Cronbach's alpha gives a useful approximation of the findings' dependability. Based on the findings of this study the Cronbach's alpha value for DV indicates the estimation is about 79.4% reliable whereas for IV1, IV2, IV3 and IV4 it is reported for 85.1%, 78.4%, 69.5% and 68.3% reliability respectively. Considering these statistics the measurement followed in this study along with the findings of the study can be considered reliable in the context of the selected topic of the research.

Discussion

The findings of this study critically evaluate the linkage between regional innovation along sustainability targets from the viewpoint of women entrepreneurs, especially from the Nilgiris district. The regulatory environment especially in the selected study area has been identified to be closely interrelated with the marketing approaches of the women of that area. Concerning this aspect, it can be considered that the regulatory environment is providing support to the women in the selected study area who are effectively influencing entrepreneurship by helping them focus on sustainability targets. In this regard, Ye et al. (2020, 1355) also mentioned that several rules and regulations are enacted in multiple countries to promote green entrepreneurship. Therefore, the findings of this study can also be considered as evidence supporting the role of regulatory frameworks of the Nilgiris district in terms of allowing women entrepreneurs to achieve sustainability targets from entrepreneurship.

The quantitative analysis performed in this study also indicates a strong and positive interrelationship between cultural attitudes towards sustainability in the Nilgiris district and the marketing approach of the women in that area. Therefore, it can also be stated from the findings of this study that the cultural attitudes of the people in the Nilgiris district are also effectively resulting in the achievement of sustainability targets for the women entrepreneurs in the district. Keerthika et al. (2021, 1610) also mentioned that sustainability is one of the main concerns in the Nilgiris business context. This is also indicating the cultural belief of the people of this area towards sustainability management. Concerning this aspect along with the findings of the study, it can also be considered that cultural attitude towards sustainability in the Nilgiris districts is also positively aligning regional innovation and sustainability targets among the women entrepreneurs in the selected study area.

On the other hand, this study also identified a strong and positive interrelation between the marketing approaches of women entrepreneurs and regional innovation. Considering the correlational value, it is identified that regional innovation is playing a vital role in the management of sustainability targets in entrepreneurship among the women entrepreneurs in the Nilgiris district. Surana et al. (2020, 13) stated regional innovation is one of the most crucial

aspects associated with the management of sustainability targets in entrepreneurship practices. Therefore, following the findings of this study, it can be considered that the regional development in the Nilgiris district is also a productive factor aligning the sustainability target achievement with the women entrepreneurship in the particular region.

According to the findings of the study, the global sustainability and marketing approach is also closely interrelated from which it can be stated that global sustainability targets are effectively influencing the sustainability approaches among the women entrepreneurs in the Nilgiris district which is aligning the regional entrepreneurship intervention and the sustainability targets in a more systematic course of action. Moallemi et al. (2020, 303) mentioned that intervention at the local level is an essential aspect associated with the achievement of SDGs. Considering this aspect and following the findings of this study, it can be stated that the regional innovation and sustainability targets are effectively interrelated and the global sustainability targets are effectively shaping the entrepreneurship in terms of achieving sustainability targets in a positive course of action.

Conclusion

The constructed study critically highlights the interrelation between the marketing approaches of the women entrepreneurs and the "regulatory environment", "cultural attitude towards sustainability", "regional innovations" and "global sustainability". Concerning this aspect, it can be concluded that the regional innovation and global sustainability targets are critically aligned in the context of women entrepreneurship, especially in the Nilgiris district. Based on the findings of this study, it can also be concluded that the cultural attitudes in the selected study area are one of the most crucial factors encouraging sustainability target achievement among the women entrepreneurs in the area in a more concerted way.

This study has been constructed with an ideology of aligning the regional innovation in the Nilgiris district with the global sustainability targets which signified the effectiveness of the regional innovation, cultural influences, global sustainability targets and regulatory frameworks in the development of sustainability target achievement targets among the women entrepreneurs in the selected study area. Therefore, from this study, it can be concluded that the regional innovation, cultural influences, global sustainability targets and regulatory frameworks of the Nilgiris districts are the most crucial factors associated with the management of sustainability in the entrepreneurship practices among the women entrepreneurs in the Nilgiris district.

Using a "primary quantitative approach" makes the study more relevant from the viewpoint of the current state of the context. However, a lack of qualitative information based on the selected context can be stated as a critical gap of this study and can be stated as a limitation of the study. However, this limitation can also be considered as an aspect raising future scope associated with constructing research using qualitative information in the same context which would justify the thesis statement in a more justified way and would signify the context of the study more appropriately. Overall, the findings from this study can be concluded to have efficiency in meeting the set purpose in an abrupt course of action.

References

- 1. Ahmed, Zahoor, Mahmood Ahmad, Husam Rjoub, Olga A. Kalugina, and Nazim Hussain. "Economic growth, renewable energy consumption, and ecological footprint: Exploring the role of environmental regulations and democracy in sustainable development." *Sustainable Development* 30, no. 4 (2022): 595-605.
- 2. Chwialkowska, Agnieszka, Waheed Akbar Bhatti, and Mario Glowik. "The influence of cultural values on proenvironmental behavior." *Journal of Cleaner Production* 268 (2020): 122305.
- 3. Dong, Yihang. "Descriptive Statistics and its applications." *Highlights in Science, Engineering and Technology* 47 (2023): 16-23.
- 4. Hervas-Oliver, Jose-Luis, Gregorio Gonzalez-Alcaide, Ronald Rojas-Alvarado, and Silvia Monto-Mompo. "Emerging regional innovation policies for industry 4.0: analyzing the digital innovation hub program in European regions." *Competitiveness Review: An International Business Journal* 31, no. 1 (2021): 106-129.
- Iacobuţă, Gabriela Ileana, Clara Brandi, Adis Dzebo, and Sofia Donaji Elizalde Duron. "Aligning climate and sustainable development finance through an SDG lens. The role of development assistance in implementing the Paris Agreement." Global Environmental Change 74 (2022): 102509.

- 6. Ithurbide, Christine. "Global Platforms Weaving into the Craft Industry: Lessons from Localisation Strategies in India." *In Digital Platforms and the Global South*, pp. 91-108, 2023.
- 7. Janse, Roemer J., Tiny Hoekstra, Kitty J. Jager, Carmine Zoccali, Giovanni Tripepi, Friedo W. Dekker, and Merel van Diepen. "Conducting correlation analysis: important limitations and pitfalls." *Clinical Kidney Journal* 14, no. 11 (2021): 2332-2337.
- 8. Keerthika, A., K. T. Parthiban, and D. Suresh Kumar. "Understanding cultural ecosystem services of multifunctional agroforestry: a study from the foothills of the Nilgiris, Western Ghats, India." *Current Science* (00113891) 121, no. 12 (2021).
- 9. Kennedy, Imasuen. "Sample size determination in test-retest and Cronbach alpha reliability estimates." *British Journal of Contemporary Education* 2, no. 1 (2022): 17-29.
- 10. Leckel, Anja, Sophie Veilleux, and Leo Paul Dana. "Local Open Innovation: A means for public policy to increase collaboration for innovation in SMEs." *Technological Forecasting and Social Change* 153 (2020): 119891.
- 11. Moallemi, E.A., Malekpour, S., Hadjikakou, M., Raven, R., Szetey, K., Ningrum, D., Dhiaulhaq, A. and Bryan, B.A., 2020. Achieving the sustainable development goals requires transdisciplinary innovation at the local scale. *One Earth*, *3*(3), pp.300-313.
- 12. Mukherjee, Sujata. "The business model canvas of women owned micro enterprises in the urban informal sector." Journal of Enterprising Communities: *People and Places in the Global Economy* 17, no. 2 (2023): 398-418.
- 13. Mweshi, Geoffrey Kapasa, and Kwesi Sakyi. "Application of sampling methods for the research design." *Archives of Business Review–Vol* 8, no. 11 (2020): 180-193.
- 14. Nordhoff, Sina, Victor Malmsten, Bart van Arem, Peng Liu, and Riender Happee. "A structural equation modeling approach for the acceptance of driverless automated shuttles based on constructs from the Unified Theory of Acceptance and Use of Technology and the Diffusion of Innovation Theory." *Transportation research part F:* traffic psychology and behaviour 78 (2021): 58-73.
- 15. Ojediran, Funmi, and Alistair Anderson. "Women's entrepreneurship in the global south: empowering and emancipating?." *Administrative Sciences* 10, no. 4 (2020): 87.
- 16. Paul, Justin. "Marketing in emerging markets: A review, theoretical synthesis and extension." *International Journal of Emerging Markets* 15, no. 3 (2020): 446-468.
- 17. Polejack, Andrei. "The importance of ocean science diplomacy for ocean affairs, global sustainability, and the UN decade of ocean science." *Frontiers in Marine Science* 8 (2021): 664066.
- 18. Sheth, Jagdish N., and Atul Parvatiyar. "Sustainable marketing: Market-driving, not market-driven." *Journal of macromarketing* 41, no. 1 (2021): 150-165.
- 19. Shrestha, Noora. "Detecting multicollinearity in regression analysis." *American Journal of Applied Mathematics and Statistics* 8, no. 2 (2020): 39-42.
- 20. Sinha, Avik, Shekhar Mishra, Arshian Sharif, and Larisa Yarovaya. "Does green financing help to improve environmental & social responsibility? Designing SDG framework through advanced quantile modelling." *Journal of Environmental Management* 292 (2021): 112751.
- Surana, Kavita, Anuraag Singh, and Ambuj D. Sagar. "Strengthening science, technology, and innovation-based incubators to help achieve Sustainable Development Goals: Lessons from India." Technological Forecasting and Social Change 157 (2020): 120057.
- 22. Taherdoost, Hamed. "Data collection methods and tools for research; a step-by-step guide to choose data collection technique for academic and business research projects." *International Journal of Academic Research in Management (IJARM)* 10, no. 1 (2021): 10-38.
- 23. Tartaruga, Iván, Fernanda Sperotto, and Luís Carvalho. "Addressing inclusion, innovation, and sustainability challenges through the lens of economic geography: Introducing the hierarchical regional innovation system." *Geography and Sustainability* 5, no. 1 (2024): 1-12.
- 24. Ye, Qing, Rongting Zhou, Muhammad Azfar Anwar, Ahmad Nabeel Siddiquei, and Fahad Asmi. "Entrepreneurs and environmental sustainability in the digital era: Regional and institutional perspectives." *International journal of environmental research and public health* 17, no. 4 (2020): 1355.