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Communication Strategies in Hospitality: A Study on Michelin Green Star Sustainable Restaurants

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ABSTRACT

This research examines the sustainability communication strategies employed by Michelin Green Star award-winning restaurants. The present study utilised qualitative content analysis of textual data from Michelin Guide descriptions for 182 restaurants, thereby highlighting six core communication themes: sustainable technologies, diversified culinary offerings, community-focused initiatives, sustainable supply chains, entrepreneur values and sustainability certifications. The findings emphasise authenticity, transparency, local community engagement, waste valorisation, circular economy innovations and entrepreneurial passion as key drivers of sustainability communication strategies in the hospitality sector.

1 | Introduction

The United Nations Sustainable Development Goals (SDGs) recognise sustainability as a significant ongoing challenge (Cernev and Fenner 2020; Weiland et al. 2021), which influences our society, including businesses and their stakeholders. This emphasis on sustainability stimulates an increase in responsible practices by organisations (Voola et al. 2022). More and more companies are reviewing their supply chain to include sustainable practices aimed at respecting the planet (Ramirez et al. 2024), circular economy practices (Magnano et al. 2024) and initiatives to promote the well-being of their employees and the local community (Grybauskas et al. 2022). In this scenario, companies face the challenge of effectively and authentically communicating their sustainability efforts (Kong et al. 2021). In this regard, the recent study by Guercini et al. (2025) highlights several critical obstacles to the effective communication of corporate sustainability initiatives, such as the lack of a coherent communication plan, issues related to internal organisational coordination and the persistent fear of being accused of greenwashing.

In particular, the topic of sustainability has emerged as a key issue in the hospitality industry, with practices in hotels and

restaurants strongly influencing consumer perceptions and behaviours (Blanco-Moreno et al. 2025). In this regard, scholars (Han and Hyun 2018) argue that sustainable practices in hospitality increase customer satisfaction and their propensity to return. For these reasons, hospitality businesses show a growing interest in sustainable procurement, waste reduction and green technologies with the aim of improving customer experience and promoting sustainability goals (Blanco-Moreno et al. 2024). Specifically, the sustainability challenge concerns the restaurants, known for their significant environmental footprint, driven by largely unsustainable practices (Kanwal et al. 2024). Indeed, more and more restaurants communicate their commitment to protecting the environment and society by offering sustainable and healthy experiences (Bhat et al. 2024).

Although the issue of sustainability for restaurants has attracted the interest of scholars (e.g., Riva et al. 2022), research on the role of sustainability communications in hospitality is insufficient (Blanco-Moreno et al. 2025). In this research stream, the role of sustainability in restaurant communication strategies has remained understudied (Yong et al. 2024). More specifically, Huang et al. (2025, 221) recently argued that ‘the empirical reality of the sustainability-awarded restaurants is unknown’.

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Seeking to fill this research gap, this study aims to investigate how sustainability-awarded restaurants communicate their sustainable practices. From these considerations, the following research question (RQ) emerges:

- RQ: What are the main characteristics of sustainability-awarded restaurant communication strategies?

For this research's exploratory objective, a qualitative approach was chosen. Specifically, a qualitative content analysis (Kassarjian 1977) was conducted, including restaurants that have obtained the Green Star of the Michelin Guide. The findings of this study contribute to the hospitality academic literature by revealing the main characteristics of the sustainability communication strategies of restaurants. Furthermore, the research provides managerial implications for hospitality professionals.

The paper is structured as follows: Section 2 presents the study's conceptual background, beginning with a review of the literature on sustainability in the hospitality industry. Section 3 describes the research design, explicitly outlining how content analysis data were collected and how the cluster analysis was conducted. Subsequently, the research findings are presented and discussed. Lastly, the study's theoretical and managerial implications and limitations are highlighted, suggesting directions for future research.

2 | Conceptual Background

2.1 | Sustainability Communication Strategies in the Hospitality Industry

An extensive and evolving academic debate regarding the integration of sustainability within organisational communication strategies has emerged in recent years (e.g., Olavarria-Key et al. 2021; Tiago et al. 2021; Golob et al. 2023; Guercini et al. 2025). 'Sustainability communication' is increasingly recognised not merely as message transmission but as an ongoing, dynamic social process that facilitates dialogue and engagement among stakeholders, with the goal of fostering sustainable ecological, economic and social practices (Ziemann 2011; Golob et al. 2023). Recent literature has augmented this foundational view by emphasising the active co-creation of meaning and the role of authenticity and transparency in building trust (Olavarria-Key et al. 2021).

It is essential to distinguish among several related concepts within this field. Sustainability communication broadly encompasses a wide range of activities, such as raising awareness of environmental and social issues and engaging stakeholders in behavioural change. Sustainability reporting, for instance, involves the formal disclosure of a company's performance and initiatives across environmental, social and governance dimensions (Stacchezzini et al. 2016), whereas green advertising represents a more explicitly promotional approach, focusing on persuasive messaging to foster a positive, eco-friendly brand image (Golob et al. 2023). In contrast, the concept of greenwashing refers to the dissemination of misleading or unsubstantiated claims about environmental practices (de Freitas Netto et al. 2020).

Emerging research also highlights the evolving forms and channels by which sustainability is communicated, particularly in digital and online environments. For example, Guercini et al. (2025) emphasise the challenges and opportunities posed by digital platforms for transparent and effective sustainability communication, including the risks of under-communication and the persistent fear of accusations of greenwashing. These new channels require organisations to rethink authenticity, consistency and the interactivity of their messaging strategies.

Lastly, green advertising represents a more promotional approach, aiming to build a company's eco-friendly image and encourage sustainable consumer behaviour through persuasive messaging (Golob et al. 2023). Indeed, communication strategies are crucial in promoting sustainability awareness and favouring the purchase of sustainable products in different industries (Hautea et al. 2021; Kong et al. 2021).

Sustainability communication studies have also focused on the hospitality sector. According to Tölkes's (2018) literature review, this stream of research primarily focuses on the reasons why sustainability messages are not as effective as they could be, with particular attention on green hotel contexts and environmental sustainability, which has prevented a holistic approach to sustainability communication across a broader range of products. For example, scholars demonstrated that consumers prefer emotional appeals to rational ones in destination brochures and hotel websites regarding sustainability (Villarino and Font 2015). In addition, in the hospitality industry, personal benefits are preferred over social benefits by consumers (Hardeman et al. 2017). In this vein, recent hospitality studies highlighted the importance of sustainability communication in generating positive attitudes among consumers, demonstrating that the design and integration of linguistic tools are crucial in sustainability communication campaigns of these organisations (Bernard et al. 2024). As a result, consumers are willing to pay a green premium for a sustainable product (Tao et al. 2024).

As regards companies in this sector that specifically deal with food, such as restaurants, scholars argued that consumers often perceive local food as a more authentic shopping experience than purchasing products from global brands (Riefler 2020). Thus, more and more restaurants are investing in making their businesses sustainable and introducing products that respond to the growing needs of consumers (Bacig and Young 2019). According to Batat and Peter (2020), restaurants that introduce sustainable products in their offerings can differentiate themselves better from their competitors. For example, Hoffenson and Söderberg (2015) demonstrated that communication strategies foster a positive consumer perception towards restaurants focusing on sustainability. Singjai et al. (2018) revealed that green initiatives support restaurants in gaining a competitive advantage, increasing financial performance and acquiring consumer trust. Indeed, when consumers perceive that restaurants are adopting sustainable practices, they develop a positive attitude towards these restaurants (Cheng et al. 2019), which improves their performance and competitiveness (Cantele and Cassia 2020). Thus, by transparently communicating their sustainable practices, restaurants can build trust and loyalty among consumers who prioritise sustainability, driving long-term success and positive environmental impact (Kim and Hall 2020).

In general terms, sustainability initiatives can positively affect the brand image of the restaurants, as well as the growth in company profits and longevity (Maignan et al. 2011). In other words, sustainable communications can create a positive brand image and attitude towards customers, increasing brand equity (Kandampully and Suhartanto 2003; Porter and Kramer 2006). Segovia-Villarreal and Rosa-Díaz (2022) argued that sustainable information influences consumer decision-making at cognitive, affective, attitudinal and behavioural levels. This influence appears to be most significant in the early stages of attitude formation as consumers naturally acquire new information that is free, easy to understand and appealing.

Thus, communication strategies are key for promoting sustainability by creating unique environments to impact sustainable consumption positively (Pop et al. 2020). Organisations must communicate authentically, employing clear messaging and imagery (Luo et al. 2020). Consumers are more likely to respond positively to a brand's socially responsible actions when executed well and aligned with values such as self-enhancement, self-transcendence and openness to change (Nikolinakou and Phua 2020). Communication efforts of restaurants in sustainable terms usually develop along six main lines, according to the literature: (1) sustainable technologies, (2) diversification of culinary offerings, (3) community initiatives, (4) sustainable food supply chain, (5) entrepreneurs' values and (6) sustainable certifications.

2.1.1 | Sustainable Technologies

Adopting sustainable practices within restaurants is closely linked to the diffusion of new technologies that make the business more sustainable. Among the main issues that make the catering and restaurant industry unsustainable is the high level of food waste. Scholars (e.g., Kanwal et al. 2024) argue that food waste upcycling offers significant environmental benefits if supported by new digital technologies (Iris and Wong 2023; Guo et al. 2022). For example, food waste can be converted into green energy, providing an alternative to fossil fuels. This sustainable approach improves resource efficiency and promotes a circular economy that reduces the environmental impact of the restaurant industry (Kanwal et al. 2024). In addition, in adopting sustainable practices, such as energy management, sustainable technologies such as hydroelectric plants and photovoltaic panels play a key role (Arshad et al. 2021; Qaim 2020). For these reasons, restaurants embrace sustainable technologies like energy-efficient appliances, water-saving systems and technological waste reduction tools. These innovations help to reduce the costs and the environmental impact of restaurants and attract consumers sensitive to environmental sustainability.

Another surprising technology applicable to the food world is 3D food printing, which can reduce the transport footprint thanks to local production and the reuse of materials (Jannelli et al. 2018). 3D printing technology has already been applied to develop biodegradable packaging made from rice (Nida et al. 2021) or waste cocoa shells (Jagadiswaran et al. 2021). 3D food printing has recently emerged as an approach that can

revolutionise food production processes (Nachal et al. 2019). These technologies can improve the utilisation of agri-food waste and develop a new range of food products (Keerthana et al. 2020) using 3D printing technology. Therefore, some technologies, such as 3D printing, can facilitate sustainability and improve the circular economy in the food sector (Jagadiswaran et al. 2021).

2.1.2 | Diversification of Culinary Offerings

In the academic debate on sustainability practices in the restaurant industry, researchers argue that consumers are increasingly attentive to sustainable culinary offerings (Garner 2022). Consumers are increasingly willing to spend their money to support ethical and moral causes, and food consumption represents an important area for such ethical spending (Park 2018). Notably, the *diversification of culinary offerings* is increasingly appreciated by consumers: Adapting menu offerings to include vegetarian, vegan and organic options to cater to a diverse range of consumer preferences reflects an aspect of sustainability in the food and beverage sector (Batat and Peter 2020). As well as meeting consumer demands, promoting vegetarian food choices could also help in the fight against climate change (Weijers et al. 2024). For example, plant-based foods have fewer environmental consequences, so plant-based diets can significantly reduce greenhouse gas emissions (Weijers et al. 2024). Therefore, some studies, such as that by Tilman and Clark (2014), evaluate the possible halving of greenhouse gas emissions linked to food production if vegetarianism were adopted globally, indicating the potential impact of promoting vegetarian food choices. Therefore, organisations' communications, in line with social norms (Mollen et al. 2013), could be particularly effective in satisfying and directing consumers' choices towards more sustainable food.

2.1.3 | Community Initiatives

The commercial practices of tourists often reveal a sincere concern for the place and the community where they reside (Cunha et al. 2020). According to Maziliauske (2024), this attention to the local community contributes to generating economic benefits for job and income creation and preserving traditional cultures and related activities, such as local food and handicrafts, by enhancing local resources. In addition to using products from local suppliers, organisations can be involved in community initiatives aimed at contributing to the local community, in addition to environmental contributions, for example, by engaging in educational programmes and collaborating with local organisations (Zepeda et al. 2013). For example, these companies can create new or joint offerings by collaborating with other local actors, offering specialised products and incorporating local resources. However, although these companies are willing to innovate by introducing new sustainable practices, the costs associated with sustainability and the lack of resources represent obstacles to the sustainable transition (Bazaanah and Mothapo 2024). Being close to the community and transmitting local values and traditions also favours a greater perception of the authenticity of one's proposal to the public (Kim et al. 2020; Uggioni et al. 2010).

2.1.4 | Sustainable Food Supply Chain

According to the recent literature review by Yong et al. (2024), sustainability in the restaurant industry refers to sustainable, eco-friendly, environmentally responsible or eco-conscious restaurants. The peculiarity of these restaurants focusing on sustainability is their commitment to adopting and communicating sustainable practices (Nicolau et al. 2020), such as conscientious sourcing of raw materials and ingredients or improving energy efficiency. Indeed, sustainable communication in the restaurant industry involves promoting environmental sustainability and eco-friendly practices as key elements of a restaurant's brand (Riva et al. 2022). This can include various supply chain activities, such as sourcing locally grown products, using organic ingredients, minimising food waste, reducing energy consumption and adopting recyclable or biodegradable packaging. As recently demonstrated by Falasco et al. (2024), geographical indications, that is, the names identifying products originating from a specific place, are key tools in the food supply chain. They safeguard the production processes, the characteristics of raw materials and the final product, promoting sustainable cultural and gastronomic heritage. Indeed, companies are increasingly adopting a sustainable supply chain that combines green purchasing, materials management, production, distribution and logistics management (Roh et al. 2022). The practices related to sourcing and managing raw materials, including using local and seasonal products, reducing plastic use and implementing zero-waste strategies, are essential to the sustainability supply chain (Dong et al. 2021). Short supply chains aim to reconfigure the relationship between producers and consumers to promote the relocation of production and trust in a stronger connection between the public and producer (Paciarotti and Torregiani 2018; Torjusen et al. 2008).

2.1.5 | Entrepreneur's Values

The communication of sustainable practices appears to be particularly appreciated by some generations of consumers, such as Millennials, who are willing to pay more for restaurants that focus on sustainability precisely because of the benefits they can derive from it, also in terms of health and product quality (Nicolau et al. 2020). Therefore, aligning values with the entrepreneurs of these green structures is particularly important as they allow the public to identify with the company's ethics and commitment to sustainability, which they strongly believe (Nuringsih and Nuryasman 2021). In other words, the ethical principles and personal values of entrepreneurs, especially in family-run businesses, guide their commitment to sustainability. These values often drive businesses' mission and operational decisions (Nuringsih and Nuryasman 2021). Entrepreneurs who undertake sustainability-oriented actions seek to maximise human happiness and health while improving environmental quality and promoting economic well-being for current and future generations. The primary motivation behind companies' sustainability-oriented actions is that entrepreneurs consider themselves part of a broader social system and avoid actions that negatively affect others and damage the surrounding environment. Alignment with values can lead the consumer audience to become more

involved with the organisation (Nambisan and Baron 2013). Entrepreneurs with a long-term outlook feel more committed to future generations, considering activities such as the conservation of natural resources, the active promotion of diversity and the prevention of pollution of the surrounding environment (Tilley and Young 2006; Wiengarten et al. 2017).

2.1.6 | Sustainability Certifications

Sustainability certifications play a key role among the various communication tools companies adopt for this purpose. According to Prell et al. (2020), certifications typically boost the preference for certain products over comparable uncertified ones. Among the most widely obtained sustainability certifications are those related to biodynamic, green, organic and plastic-free facilities. These certifications strengthen work credibility and consumer trust, as they guarantee compliance with specific standards of sustainable practices (Prell et al. 2020). However, as recently demonstrated by Baloglu et al. (2022), even though more and more restaurants are applying sustainable practices, they cannot always obtain certifications that require very high standards and high costs in terms of time. For example, restaurants that meet certification requirements, such as Green Seal, reduce their environmental footprint (Baldwin et al. 2011). Digital menus, which are environmentally friendly, do not have a negative impact on customer satisfaction (Visschers and Siegrist 2015). In addition to significant changes to reduce waste and emissions, consumers also need to participate in achieving specific objectives and implementing certain practices (Gössling 2015).

In conclusion, this literature review revealed six key themes that characterise the communications strategies of restaurants focusing on sustainability (Figure 1).

3 | Research Design

Considering the explorative research objective of the study, which aimed to investigate how sustainability-awarded restaurants communicate their sustainable practices, a qualitative approach was opted for. Following previous studies (e.g., Tosun

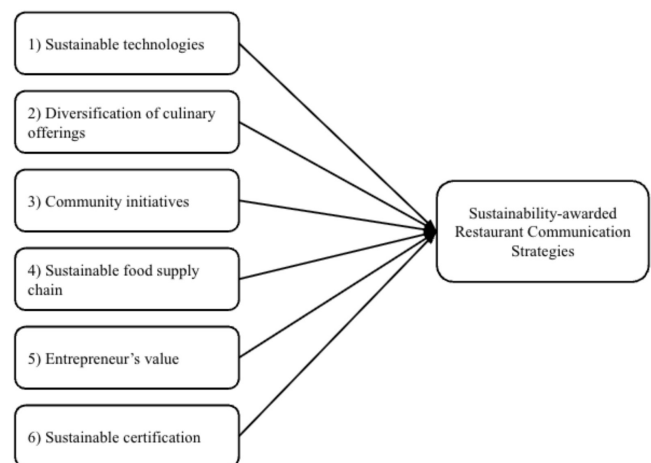


FIGURE 1 | Conceptual framework. *Source:* Authors' elaboration.

and Sezgin 2021), the study conducted a qualitative content analysis (Mayring 2021), as this allows a general description of communication contents (Kassarjian 1977). As argued by Finfgeld-Connett (2014), this flexible research method effectively integrates, interprets and synthesises qualitative data by identifying the most discussed themes.

Particularly, this research focuses on restaurants in the Michelin Guide that were awarded the 'Green Star' award. The Michelin Guide is an authoritative indicator for the global gastronomic industry (e.g., Chiang and Guo 2021; Meneguel et al. 2019), and since 2020, it has introduced a specific classification known as the 'Green Star', focusing precisely on restaurants that are particularly attentive to adopting sustainable initiatives (Michelin Guide 2024).

To assess the commitment to sustainability of high-level restaurants, all the restaurants awarded the Green Star by the Michelin Guide were considered to understand the aspects that led to the achievement of this milestone, distinguishing themselves for their commitment compared to other establishments (Michelin Guide 2024). Restaurants awarded the Green Star have received considerable attention from food critics, the media and the entire restaurant industry (Huang et al. 2023; Noguer-Juncà and Fusté-Forné 2022). Therefore, obtaining the Michelin Green Star is a valuable tool for consumers to understand and guide their choices of restaurants that are attentive and committed to guaranteeing fully sustainable products and services. Thus, the Michelin Green Star rewards establishments that are moving in this direction (Huang et al. 2025), offering consumers a guarantee that they are choosing establishments that are highly committed to sustainability.

Therefore, people who want to select a restaurant recognised as sustainable can start with the Michelin Guide as their first source of information. As these are very expensive and high-involvement services, the public starts by gathering information from a reliable source recognised in the restaurant industry (Espejel et al. 2009). The Michelin Guide for each Green Star restaurant provides an overview of the restaurant's main characteristics, why it has been awarded this prize and a direct link to the company website to deepen the realities above. The company websites similarly report the sustainability aspects mentioned by the Michelin Guide that led to the award (Michelin Guide 2024).

3.1 | Data Collection

The sample of restaurants examined included the 182 restaurants awarded a Green Star by the Michelin Guide. The data collection involved manually collecting what is expressed in the section of each restaurant present in the Michelin Guide, in the section 'Gastronomy and Sustainability—Michelin Green Star' (Michelin Guide 2024), to understand the aspects that led to the achievement of the award. In addition, further information provided by the Michelin Guide relating to location, price and type of cuisine was collected to provide a broader overview of the restaurants included in the sample. The researchers manually collected this information between May and June 2024, creating a database for subsequent processing.

Most of the restaurants in the sample are located in Italy (31.9%) and Germany (24.7%). The Michelin Guide also classifies restaurants according to price range (1–4), considering different currencies. In the sample, 41.21% of the restaurants belonged to the highest price range (4), 32.97% to the Level 3 price range, 24.18% to the Level 2 price range and only 1.65% to the lowest Level 1 price range. Each restaurant was also assigned 1 or 2 labels related to the type of cuisine. In our sample, 18.25% of the restaurants offered creative and modern cuisine, 8.33% offered local cuisine, and 7.94% offered contemporary cuisine.

3.2 | Data Analysis

A qualitative content analysis was conducted using NVivo 14 software to systematically examine the Michelin Guide 'Sustainable Gastronomy' sections for 182 Green Star restaurants (Michelin Guide 2024). The dataset was imported, and each restaurant text was treated as a separate case (Mayring 2021). Coding was carried out deductively according to the six overarching themes established in the conceptual framework (Figure 1) and informed by prior literature (Krippendorff 2018).

Nodes were created in NVivo for these central themes, with additional sub-nodes added to capture recurring sub-themes within the data. To ensure consistency and limit subjectivity, all researchers participated in the coding process; any disagreements were resolved collaboratively. NVivo's coding comparison tools were used to monitor coder agreement periodically. Subsequent analytical queries and visualisations within NVivo, including word frequency and cluster analyses based on word similarity, were then employed to examine relationships between codes and identify key thematic clusters. This process enabled the interpretation of both the prevalence and interplay of sustainability-related communication strategies among Michelin Green Star restaurants. Table 1 represents the breakdown of the main themes and their second-order codes.

Concerning 'sustainable technologies', this considers technological investments made for more efficient energy management and generation, for example, solar and water energy with the introduction of photovoltaic panels or reusing some available territorial water resources.

The 'diversification of culinary offering' topic focuses on how these firms are particularly attentive to offering vegetarian, vegan, ecological and organic proposals, rewarding biodiversity and biodynamicity to meet diverse nutritional and dietary needs.

The theme 'community initiatives' highlights how communication is not only focused on the sustainable imperative but also combined with the social imperative. Restaurant initiatives seek to improve sustainability education, benefit the local community and collaborate with various local organisations and authorities to raise food standards.

The item on 'sustainable food supply chain' considers the raw materials provided by companies' vegetable gardens, vineyards and farms and the commitment to reducing plastic in product packaging, reducing waste and reusing these materials as fertilisers.

TABLE 1 | Codebook.

Examples	Second-order codes	Main themes
Reuse of available water resources, use of local watersheds	Hydroelectric plant	Sustainable technologies (Arshad et al. 2021; Qaim 2020)
Using solar energy to charge electric cars	Photovoltaic panels	Diversification of culinary offering (Batat and Peter 2020)
	Agricultural	
	Biodynamic	
	Biological	
	Ecological	
	Vegan	
	Vegetarian	
Helping local people in need	Benefiting the community	Community initiatives (Zepeda et al. 2013)
Collaboration with the university, local institutions, etc.	Collaboration with organisations	
Creation of books aimed at food education	Education	
Ensuring biodiversity	Biodiversity	Sustainable food supply chain (Dong et al. 2021; Roh et al. 2022)
Using waste to make fertiliser	Circular economy	
	Fertilisation	
Enhancement of local products or those of local suppliers	Farm	
Enhancing local traditions	Local raw materials	
	Local tradition	
Elimination of all plastic packaging	Plastic-free	
Respect in breeding	Respect for animals	
Seasonality for fruit and vegetables from own vegetable gardens	Seasonality	
	Territorial enhancement	
	Vegetable garden	
	Vineyards	
	Zero-kilometre products	
Minimising waste and refuse, as well as initiatives to make these waste products useful in agricultural life	Zero-waste and waste utilisation	
	Entrepreneurial sensitivity	Entrepreneur's values (Nuringsih and Nuryasman 2021)
	Family business	
	Passion	
	Philosophy	
Commitment to achieving these certifications, and various initiatives implemented	Biodynamic certifications	Sustainability certifications (Prell et al. 2020)
	Green certifications	
	Organic certifications	

Source: Authors' elaboration.

this but also the environment, many long-standing employees and, of course, the economy!', and Company G, 'it is within a certified biodynamic farm that provides 90 percent of the ingredients for a strictly daily and seasonal cuisine'. The last two topics focus on 'community initiatives', which reflect the efforts of restaurants to engage and benefit the community, 'a fervent believer in the importance of outreach, X is also an educational farm' (Company H). Finally, the topic of 'diversification of culinary offering', which caters to a broad spectrum of consumer preferences through varied and eco-friendly menu options, as supported by 'a large organic vegetable garden on the hotel's estate is the ideal basket of goodies from which this vegetarian and vegan restaurant's menu draws heavily' (Company I) or 'the kitchen offers a range of vegetarian and vegan options that are never mundane and of a high standard, organic when not biodynamic, and X has become the best vegetarian restaurant in the capital' (Company L).

Finally, Figure 3 identifies five clusters based on the connection between the different sub-codes that the authors have labelled and interpreted.

The first cluster, 'local community: supporting food traditions', focuses on the social commitment of restaurateurs to contributing to society's well-being, for instance, by including

disadvantaged parts of the population in their community or also trying to educate the community about this healthier and more natural way of eating. These aspects can also preserve typical local food traditions over time and spread essential values to young generations to convey the authenticity of restaurants.

The second cluster, 'valuing waste: Educating for a sustainable food future', focuses on restaurateurs' commitment to promoting good food education by holding consumer meetings or writing books. These aspects highlight the philosophy and belief of entrepreneurs in identifying new solutions to effectively and efficiently use waste.

The third cluster, 'circular investments: Rethinking packaging and infrastructure for a sustainable food future', focuses on more technological investments to better manage natural and local energy sources, such as solar and water, and a commitment to reducing plastic in packaging to pursue a circular economy.

The fourth cluster, 'on the path to food certification', highlights the commitment of these organisations, often family-run firms, to pursuing and attaining certifications, such as biodynamic and organic, usually achieved through the availability of products directly from their vegetable gardens and farms. The effort in achieving these initiatives is often also achieved through

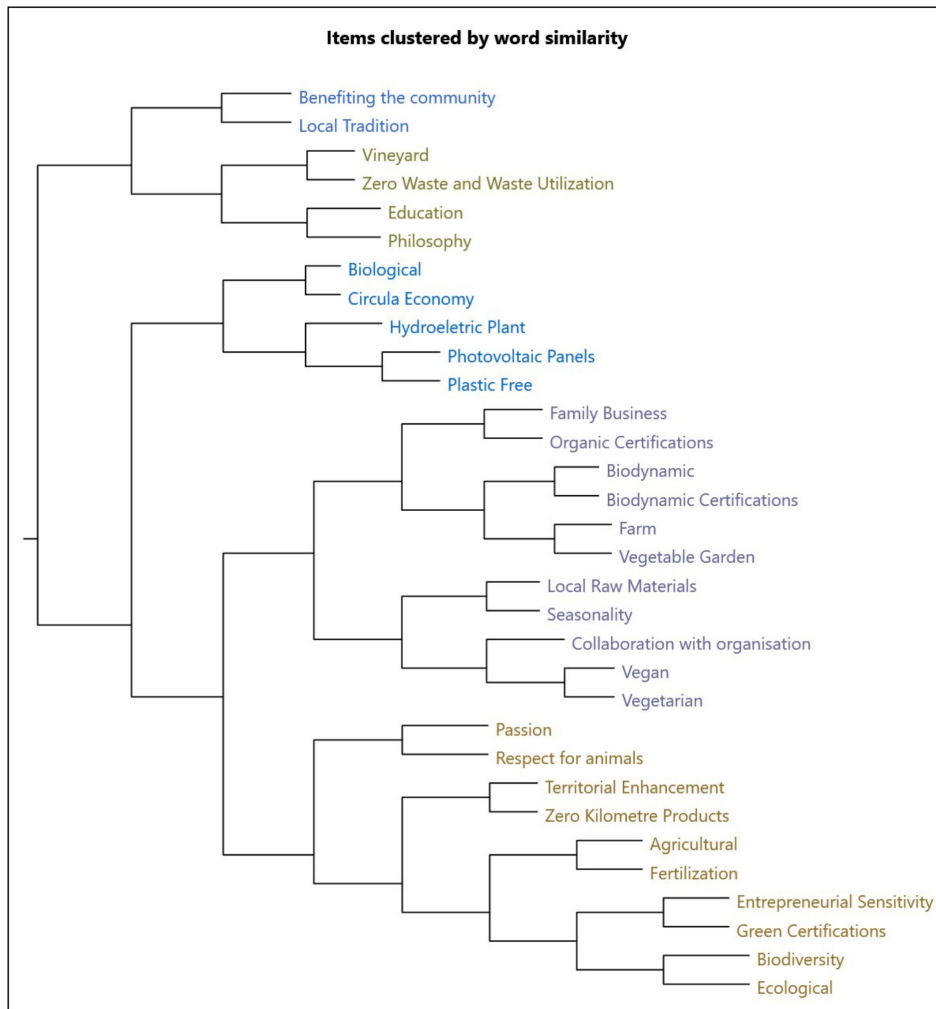


FIGURE 3 | Cluster analysis. *Source:* Authors' elaboration.

collaboration with some local organisations. Still, it allows the public to enjoy local products and benefit from the seasonality of food and its nutritional properties.

Finally, the fifth cluster, 'entrepreneurial passion for the respect and quality of food products', demonstrates how important it is to achieve this mission is also the passion for nature and animals to valorise one's territory and communicate these aspects to the consumers to make them appreciate the possibility of tasting zero-kilometre products. These aspects show the sensitivity of the entrepreneur and the family, allowing the achievement of recognised green certifications and the enhancement of the local territory.

5 | Discussion

This study investigates how sustainability-awarded restaurants communicate their sustainable practices. The empirical evidence from our research clearly shows that the Michelin Guide Green Star Restaurants persuade the public to try a sustainability-oriented restaurant mainly in (1) sustainable food supply chain, (2) entrepreneur's values and (3) sustainable technologies implemented by restaurateurs to make their businesses more sustainable.

Regarding the sustainable food supply chain theme, the restaurants focusing on sustainability highlight an accurate selection process and adopt sustainable raw materials. Thus, 'green purchasing decisions' are a key communication element for consumers (Moser 2015). For example, the role of local suppliers and self-produced raw materials in farms and gardens emerges in the sustainable communication strategies of the analysed restaurants. Our results show that restaurants communicate their efforts to avoid plastic in their supply chain by adopting more environmentally sustainable packaging. These aspects are emphasised by auxiliary sustainable communication strategies (Kemper and Ballantine 2019) aimed at promoting material reuse and encouraging recyclable products in packaging. In addition to highlighting the characteristics of the products, such as zero-kilometre products, mentioned in the fourth cluster, as coming from their gardens and farms.

As regards the entrepreneurs' values, our analysis highlights that restaurants are increasingly communicating their ethical principles and the history that guides their business activities in a more detailed and precise manner. In many cases, these businesses are family-run and, therefore, the traditions handed down from previous generations and the key values on which the business was based in the past are elements to communicate to consumers, such as respect for animals and the territory (Ferreira et al. 2021). Indeed, Zapata-Cantu et al. (2023) argue that personal family values can profoundly influence the innovation processes of companies. In this regard, in addition to respect for the local community, nature and animals, a passion for cooking interpreted as art is often communicated, a key element that restaurants focusing on sustainability emphasise in their communication strategies. The types of cuisine most frequently encountered are creative and modern while trying to preserve the heritage and traditions of local food by revisiting these aspects in a contemporary key, conveying the authenticity of local traditions (Kim et al. 2020; Uggioni et al. 2010).

The third main theme promotes significant and costly investments in sustainable technologies regarding renewable energy, such as water management and solar energy. It also allows the reach of premises with more sustainable mobility methods, such as electric cars. These technologies highlight the public's growing responsibility and awareness of the environment (Arshad et al. 2021; Qaim 2020).

In addition to these central themes, aspects that can lead to selecting restaurants focusing on sustainability are the role of community initiatives, sustainability certifications and a wide range of food products to meet different consumer preferences and diversify culinary offerings. Regarding the latter, restaurants communicate the possibility of eating vegan and vegetarian products while respecting the environment and animals to accommodate new consumption habits and diets but also fight proactively against climate change (Weijers et al. 2024).

Therefore, the commitment of these restaurants goes beyond just environmental commitment by moving synergistically and in a social direction precisely to advance and improve this industry's commitment (Kwok et al. 2016). The effort to enhance food education, supported by various initiatives, such as public meetings and books, to spread the philosophy of sustainable food is interesting. In addition, the collaboration of these restaurants with various institutions, such as local universities or research centres, promotes improving specific standards to ensure increased quality and reduced processed food for the public (Forde and Decker 2022).

Transversely, across the various sustainability communication topics identified by our study, restaurants also focus on improving consumer attitudes. According to a study by Zhou et al. (2013), marketers who communicate sustainable food products should consider improving individuals' consumption behaviours precisely to direct the public towards meaningful change. These are all consistent with meeting the SDGs, notably SDG 2, 'Zero Hunger', aimed at achieving greater food security, improved nutrition and promoting sustainable agriculture by 2030. This goal reflects the importance of food security and nutrition for the world's people's well-being and our planet's sustainability for future generations (Sehnm et al. 2022).

6 | Theoretical and Managerial Implications

This research investigates the communication strategies of restaurants focusing on sustainability. Specifically, the results of this study identify the main sustainability themes and thematic clusters characterising the communication strategies of 182 restaurants focusing on sustainability that have obtained the Green Star by the Michelin Guide for their constant commitment to sustainability. These findings contribute significantly to the theoretical understanding of the primary constructs conveyed to consumers regarding the sustainable communications of hospitality businesses. In addition, our research presents several managerial implications for entrepreneurs and professionals operating in the hospitality industry by highlighting the role of sustainability in their communication strategies.

As for the theoretical contribution, this empirical study enriches the hospitality academic debate, providing theoretical insights into the sustainability communication of companies operating in the hospitality industry, such as restaurants. In particular, the recent bibliometric analysis by Blanco-Moreno et al. (2025) highlighted insufficient research on the role of sustainability communication strategies in the hospitality sector. Therefore, our study falls within this research stream, highlighting the importance of restaurants to communicate their efforts within their sustainable food supply chain, their entrepreneurial values, and the sustainable technologies implemented to optimise processes and make them more sustainable.

In this perspective, our study is consistent with prevailing theories of green consumer behaviour by elucidating how restaurants use their supply chain choices and corporate values to appeal to eco-conscious consumers (Moser 2015). It is also consistent with the theoretical perspective that sustainable purchasing decisions are key to attracting and retaining consumers who prioritise environmental responsibility (Panda et al. 2020). Indeed, this study extends existing knowledge on sustainable companies by highlighting how restaurants strategically communicate local sourcing, circular economy principles and waste reduction as key elements of their communication strategies.

In addition, by highlighting the ethical principles and historical context of family-run businesses, this study contributes to the existing literature on family business values and their impact on strategic innovation (Jamil et al. 2024). This reflects a nuanced understanding of how intrinsic family values and traditions are translated into practical, sustainable practices, adding a new dimension to the theoretical discourse on sustainability in family-owned enterprises. Specifically, whereas prior literature has examined the role of personal values in entrepreneurship (Nuringsih and Nuryasman 2021), this research highlights how family-run restaurants integrate ethical and environmental principles into their identity and communication. Our findings suggest that these values are operational and central to communication strategies to strengthen consumer trust and loyalty.

Moreover, our findings reveal the importance of communicating the sustainable technologies investments of hospitality companies, suggesting that technologies are operationally beneficial and serve as a tool to enhance brand perception among consumers. The intersection of technological advances and consumer expectations for sustainability validates the theoretical model that sustainable investments are integral to competitive positioning and the long-term success of companies (Tarnovskaya 2023). In this sense, new technologies such as 3D printing applied to food bring new potential discussions regarding the achievable benefits to the surface.

Finally, this research highlights the theoretical relevance of community initiatives, sustainable certifications and offering diversification as integral parts of the communication strategies of hospitality companies. For example, the focus on achieving certifications, engaging the local community and developing educational initiatives supports the role of corporate social responsibility in fostering consumer loyalty and trust (Gonzalez et al. 2022). The study, therefore, strengthens the theoretical

debate concerning the commitment of organisations to educate the public and society to be more conscious of consumption (Zepeda et al. 2013).

As for the managerial implications of this research, our findings provide strategic insights for practitioners operating in the hospitality industry, aiming to improve their sustainability communication strategies. The study offers valuable guidance for hospitality managers by highlighting the key themes to include in their sustainability communication strategies, that is, their sustainable supply chain, the entrepreneurial values and the adoption of sustainable technologies within their businesses. These aspects allow hospitality organisations to significantly differentiate their business offerings from their competitors, increasing the satisfaction and loyalty of consumers who are more aware of sustainable initiatives and willing to pay higher prices to enjoy modern, sustainable, creative dining experiences. Communicating these aspects can also reflect entrepreneurial passion and awareness of new social and environmental imperatives, ensuring that these venues are perceived as more authentic by the public and effectively committed to environmental sustainability and social responsibility for the community in which they are located.

According to our results, hospitality managers should underline sustainability in their communication strategies by highlighting their commitment to local sourcing, waste reduction and circular economy principles. Consumers are increasingly influenced by transparency and ethical business practices, so explicitly showcasing sustainability initiatives, such as using zero-kilometre ingredients, minimising plastic packaging or re-using food waste, can strengthen brand authenticity and attract environmentally conscious customers (Yong et al. 2024).

Furthermore, the importance of the supply chain in sustainable communication strategies underlines the need for managers to be transparent about their sourcing practices (Trienekens et al. 2012). This includes a management directive to invest in local sourcing and in-house production of raw materials, as these aspects resonate strongly with consumers and enhance the authenticity of the sustainability narrative. Entrepreneurial leaders, especially those in family-owned businesses, should focus their communication efforts on core values and traditions. By integrating personal and family stories into their branding, managers can differentiate their business in a crowded marketplace and create a deeper emotional connection with consumers (Nikolinakou and Phua 2020).

Investing in sustainable technologies should be communicated as a core element of the company's value proposition. Managers should strategically highlight their efforts to adopt renewable energy solutions and waste reduction practices, positioning these initiatives as operational efficiencies and brand differentiators that meet rising consumer expectations for environmental responsibility.

In addition, the study highlights the importance of achieving and communicating sustainability certifications (e.g., organic or biodynamic). Managers should pursue these certifications and prominently feature them in their communication strategies, as they effectively signal credibility and commitment to

sustainability to discerning consumers through the various digital tools available. Sustainability certifications serve as credibility markers, which enhance consumer trust (Prell et al. 2020). Restaurants should actively pursue and promote these certifications to differentiate themselves in the market by collaborating with certification bodies, local suppliers and sustainability-focused organisations.

This research also reveals how restaurants should engage in robust community initiatives, partnering with local organisations and educational institutions. Professionals should ensure that these collaborations are strategic and visible to the consumer. This will enhance the company's social licence to operate, drive long-term consumer loyalty and increase consumer satisfaction.

In conclusion, integrating sustainable practices and initiatives into communication strategies, complemented by transparent and authentic communication about these initiatives, is critical for managers seeking to improve their restaurant's brand equity and consumer engagement in an increasingly sustainability-conscious marketplace from a cognitive and emotional point of view.

7 | Conclusions, Limitations and Future Research Directions

This study contributes to the hospitality academic literature by revealing the main characteristics of the sustainability communication strategies of restaurants. Specifically, our results identify the main themes used to convey to consumers the commitment to sustainability in response to new food safety and high-quality demands.

However, this research has limitations that can be overcome by future research. First, our database includes 182 international restaurants identified as sustainable by the Michelin Guide for winning the 'Green Star' award. Our analysis does not consider any differences in sustainability communication related, for example, to the country of origin or the type of cuisine of the different restaurants. Future studies could compare whether the different geographical locations of the premises lead to an emphasis on specific issues about sustainability and the awareness of the target audience about healthy eating.

Future studies could investigate the communication strategies of Green Star restaurants, considering the various tools that can be used to convey sustainable communications and efforts, such as social media platforms used by restaurants. Additionally, future research could consider the temporal evolution of restaurant sustainability communication strategies, depending on the emerging consumer needs and the growing public awareness on these issues.

Our study adopts the company's perspective but omits the consumer's point of view, which could provide important insights regarding the appreciation of restaurant offers. Future studies could adopt a dual perspective to examine the role of sustainability communication strategies in the choice of restaurants, using also different research methodologies, such as sentiment analysis or emotion detection, to explore the consumer's point of

view, for example, by analysing reviews posted on online platforms about consumers' experiences in restaurants. This type of analysis would allow researchers to understand if consumers take into consideration and value issues related to sustainability and if sustainable communication strategies are effective and credible in the choice, appreciation and satisfaction concerning a restaurant focused on sustainability.

In addition, future studies could focus on the generational differences of consumers when they enjoy restaurants focusing on sustainability and investigate which sustainability practices are most appreciated depending on the age group they belong to (e.g., Baby Boomers vs. Generation Z) and examine how sustainable communication strategies must adapt to be more effective.

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Conflicts of Interest

The authors declare no conflicts of interest.

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