

## Designing A Model To Evaluate Green Marketing Risks (Study: Five-Star Hotels In Karbala)

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### Abstract

*Based on the global value chain perspective, this article identifies the risk of green marketing in the hotel industry using Glazer's theory research method. By reviewing the interview records of 12 experts from hotel managers, human resource managers and university professors, we summarize and identify two main risks and 18 risk factors of green marketing. After ranking the risks using the AHP method, the following results were obtained: (1) Green marketing risks in Karbala hotels include two main internal and external risks. (2) Internal risks included nine risks: learning, marketing problems, experts' challenges, budgets, financial challenges, hotel costs challenges, standardization challenges, strategic management challenges, investment challenges, and service challenges. (3) External risks included nine: lack of customer interest, lack of customer awareness, cognitive challenge, overpriced challenge, legal challenge, environmental challenge, ethical challenges of green recovery, complexity of green technology, and cultural challenge. The analysis of all 18 risks obtained and based on the AHP hierarchical chain method indicates that the legal challenge is the most critical facing Karbala Hotels, which received 0.2241 of the final weights. With the standardization challenge, it received the last rank of 0.0064 from the final weights.*

**Keywords:** green marketing - hotel industry - risk - AHP

### Introduction

In the past decade, environmental protection activities have increasingly been implemented at various organizational levels and functions such as design, production, sales, and marketing. In addition, consumers are gradually focusing on purchasing green products, and therefore, it is essential but challenging to implement green marketing campaigns that increase consumers' green awareness. Various markets and businesses are aligned with various governmental and international green initiatives and constitute the field of green marketing (Azadnia et al., 2021). Companies worldwide have started to pursue green manufacturing, design, and promotion to gain a competitive advantage in the global green market. Companies are beginning to emphasize that their products are recyclable, low-pollution, and resource-saving, promote environmentally friendly consumption behavior, and explore green market opportunities to create a green corporate culture. Green marketing processes quickly became mainstream to ensure the sustainability of marketing operations (Tsai et al., 2020). The tourism industry positively contributes to and strengthens the national economy. However, it can also harm the natural environment and society (UNWTO (2018)). Tourism and hospitality cannot deny the responsibility of climate change. The tourism sector also contributes to global warming through its existence. As stated in

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the Paris Agreement, to maintain the two °C threshold, the hotel industry must reduce its carbon emissions by a certain percentage every so often. Specifically, the industry must reduce greenhouse gas emissions by 66% by 2030 and 90% by 2050 (Patwary et al., 2020). Environmental factors play an essential role in the tourism industry. The demand for green hotels has increased year by year, and customers are concerned about the environmental damage (e.g., carbon emissions) and resource waste produced by restaurants (e.g., excessive consumption of consumables or disposable materials, energy and water) are aware. Therefore, hotel managers have become increasingly active in pursuing green environmental programs (Chung, 2020). Tourism industry managers are concerned about environmental issues. Such concern has contributed to the emergence of green restaurants. Providing environmentally friendly options is essential for the hospitality industry to sustain growth. Past research showed that the hotel industry needs adequate resources and environmental management to maintain sustainability and development (Chung, 2020). Green marketing is an example of an environmental management practice that aims to reduce or prevent negative environmental effects and, ideally, to provide a (green) product (or service) at the right price, place, and time, regardless of whether it is a commercial market. to retailer [B2R]; or business to government [B2G]. Although important questions have been raised regarding the concept of green marketing and the need for a real contribution of this field to the transfer of sustainability, many recent studies have reported empirical evidence for the positive impact of environmental practices on business performance and corporate image (Gelderman et al., 2021). Accelerate the construction of a green production system, promote green products, green factories, green parks, and green supply chains, all-round development, strengthen the green industry, increase new international competitive advantages, to achieve efficient, clean, and low-carbon production cycle and sustainable development. Promoting industrial civilization and ecology of a civilized and harmonious society (Becken et al., 2017). Green Hotel is an environmentally friendly hotel that implements and develops environmentally friendly programs. An increasing number of business operators are pursuing green operations as a good marketing strategy to achieve market segmentation and industry positioning. Therefore, the green hotel business model is a growing market in the highly competitive hotel industry. Tourists prefer centers that prioritize environmental protection. This preference translates into visitors' willingness to support environmental protection and purchase products at local stores and restaurants (Chung, 2020). In this context, companies should establish a risk assessment system to identify and evaluate possible operational risks and develop strategies to mitigate the identified risks. Assessing the risks of green marketing activities enables organizations to control and monitor each risk and ultimately achieve their organizational strategic goals in green marketing practices (Azadnia et al., 2021). Some other risks associated with green marketing throughout There are supply chains that were not considered in previous studies that only considered risks associated with traditional supply chains. In other words, most researchers have considered the risks related to the supply side instead of the demand side, such as customer awareness about green products, customer price sensitivity, and income level, which can affect the implementation of green marketing strategies. In other words, demand-side risks for marketing green products have yet to be discussed in previous studies examining traditional supply chain risks (Karlsson & Hovelsrud, 2021). This study identifies and evaluates green marketing risks using a hybrid FAHP. In addition, the appropriateness of the developed green marketing risk assessment approach is tested by developing an actual case application in Karbala City hotels.

Therefore, this study designed a model to assess the risks of green marketing in the hotel industry, which was guided by the study questions provided by:

1. How can we identify the risks of green marketing in the tourism industry?
2. How do you develop a new approach for a weighted fuzzy inference system to assess risk factors?
3. What are the risks of strategies to reduce risk factors in green marketing?
4. Is the tourism industry affected by green marketing risks?

## Literature review and background

### Green marketing

Green marketing is a business approach towards a greener economy in line with sustainable development. In developed economies, the booming industrialization in response to the growing demand for environmentally friendly products is evidence that emerging economies should take advantage of untapped opportunities to create a unique brand position through green marketing (Ofori, 2021).

Green marketing is a tool used by many companies in different industries to follow this trend; it is a phenomenon that has gained particular importance in the modern market. This concept has enabled the re-marketing and packaging of existing products; green marketing is the marketing of products that are assumed to be environmentally preferable to others (Anitha & Vijai, 2020).

Al-Agha defined green marketing as entering into an integrated system that aims to influence consumer preferences in such a way as to lead them to seek harmless products, modify their consumption habits to environmental needs, and offer products that result in the consumer. Protecting and protecting the environment while achieving profit for the institution is also known as an integrated process of marketing practices whose primary goal is to improve consumers' awareness, culture, attitude, and behavior towards green products and provide environmentally friendly products (Al-Agha, 2017).

The American Marketing Association defined green marketing as follows: "Green marketing refers to the development and marketing of products that are considered environmentally safe (that is, they are designed to minimize adverse effects on the physical environment or improve its quality (Canavari & Coderoni, 2019).

### Steps of green marketing

There are three stages in green marketing. The first phase, the green marketing phase, began in the industry in the 1980s. According to Wong et al. (1996), around the 1990s, green marketing entered the second phase, with a specific reaction from marketers. According to Schrum et al. (1995), marketers gradually realize that consumers' attention and positive attitudes toward the environment and green products are not directly reflected in their purchasing behavior. After the 20th century, in 2000, green marketing entered the third stage. Green marketing has gained momentum at this stage by implementing more advanced technology, stricter government regulations, and improved global environmental awareness (Solekah et al., 2020). These three stages of green marketing are, first of all, environmental green marketing. It started in the 70s. The goal of all company marketing activities is to solve environmental problems. The second step, called environmental green marketing, was to use clean technology to design products that reduce pollution and waste. The last stage includes sustainable green marketing, characterized by the most profound and significant development of green marketing, which opens the opportunity for consumption and production based on protecting natural resources. The consumer is aware of the environmental impact it can create, showing the increase in recent studies on marketing strategies and their relationship with marketing and waste (Aguilar-Morales et al., 2022).

### Green marketing tools

Green marketing tools affect purchase behavior, consisting of three dimensions (environmental label, environmental advertising, and environmental brand) (Prihandono et al., 2020). Their factor analysis results in the research model led to the modification of an added dimension in green marketing tools and the naming of environmental labels and eco brands. Examining the coefficients of each of the dimensions of the green marketing tool showed that the eco-brand and trusting the green label to an environmental brand are positive and significant variables related to the actual purchase behavior. Eco-branded products are commercially successful due to having a positive image that leads consumers to purchase and grow brand loyalty (Solekah et al., 2020). Although no single marketing

tool suits a specific organization, many researchers have highlighted three dimensions of green marketing tools influencing consumers' green purchase behaviors: environmental advertising, labeling, and branding. Implementing these green marketing policy tools is essential in changing consumer buying behavior in buying environmentally friendly products and reducing the adverse environmental effects of artificial products (Rizqiyana & Wahyono, 2020).

### **Green marketing in the hotel industry**

Hotels are one of the top five energy-intensive industries, and their high environmental pollution is related to how they operate because hotel facilities operate 24 hours a day, 365 days a year. Hotel companies have used marketing maneuvers such as LEED (Leadership in Energy and Environmental Design) certification, eco-labels, alliances with green partners (such as non-governmental organizations), and providing information to communicate how they fulfill their environmental responsibilities. As for environmental operations, to convince green customers to continue patronizing them, several hotel chains are increasingly using their environmental claims in their marketing activities to attract more customers. For example, "Positive Impact on Tomorrow" by Hilton International and "Luxury Doesn't Cost the Land" by Shangri-La Hotels (Yoon & Chen, 2017). The hotel's green activities lead to a significant improvement in sustainability and environmental performance. In addition, environmental partnership management between supplier and buyer is also critical because it allows both entities to learn about each other's environmental goals. A green supply chain can significantly increase a hotel's overall reputation and financial performance by reducing costs, energy consumption and waste management. Integrating a green supply chain was positively related to the firm's sustainable performance. Irresponsible behavior affects the reputation and brand image of hotels. Hence, hotels are now actively investing in the development of green practices (Mendoza-Fong et al., 2020).

### **The Green Hotel**

The hotel industry is one of the various components of tourism, whose activities endanger the environment due to the high consumption of water, energy, and nondurable goods, along with the discharge of large amounts of raw and solid waste in different quantities. If these resources are managed properly, they will positively affect the organization's environment and operating costs. In the past few years, many forces (e.g., growing environmental awareness of customers, reducing the negative environmental impact of hotels, creating a positive image and economic returns) have encouraged the hotel industry to become more environmentally friendly. As a result, many hotels have started implementing various innovative practices to increase the "greenness" of their operations to reduce their environmental pressure and respond to the growing environmental concerns of customers. The growing attention of customers towards environmental sustainability has encouraged hoteliers to transform their business by implementing green practices in their operations, which helps them gain a competitive advantage and market share through increasing guest sectors related to green sustainability (Merli et al., 2019).

The measures are considered as one the environmentally friendly initiatives that aim to eliminate the adverse effects on the environment through energy saving (for example, by installing energy-efficient appliances and implementing renewable energy programs), reducing water consumption (for example, by installing water-efficient appliances and equipment and implementing a linen and towel reuse program) and managing and reducing waste (for example, by implementing recycling programs and using durable items instead of disposable items (Abdou et al., 2020).

Green hotels are a product of the hospitality industry that comes from considering environmental concerns. Previous studies have shown that consumers concerned about the environment favor environmentally friendly products or services, including visiting green hotels. Environmental values among consumers increased their perception of the brand value of green hotels. Biosphere values, which emphasize environmental well-being,

promoted the intention to visit green hotels. Guest environmental concerns increased their involvement in pro-environmental actions in green hotels. Considering the above, we expected consumers with environmental concerns to be more likely to trust green hotel brands due to their emphasis on actions to protect the environment (Han & Chan, 2013).

### **Risk**

Risk is the probability of an event occurring that will result in a loss when the event occurs within a given period. In addition, a risk is a potential event that can be harmful due to the uncertainty of an event (Haryani et al., 2021). Deviations can start from the input production subsystem to marketing, so risk identification must be identified for each channel in the supply chain (Mailena et al., 2021). Organizations face a wide range of risks that can affect the outcome of their operations. The overall goal may be expressed as a mission or company goal. Events that can affect an organization may prevent it from achieving what it is trying to achieve (risk risks), reinforce that goal (opportunity risks), or create uncertainty about outcomes (control risks). Risk management must provide an integrated approach to evaluating, controlling, and monitoring these three types of risk (Hopkin, 2018).

Risk is an old concept without a universal definition or even a common understanding of the word's root. In his review of risk, Altaus emphasizes that the main distinction between different concepts of disciplinary risk lies in how risk is assessed. It is also in assessment that the quantification of risk is primarily developed, and it is there that epistemological differences become apparent - since these disciplines primarily assess risk as something objectively real (rather than created by an observer). Do we acknowledge that risk is always subjectively defined at some level, even though some risks are more agreed upon than others, such as natural hazards and climate change? Given our focus on risk assessment, from here on, we focus on risk domains that treat risk as an objective reality. However, we acknowledge that a constructivist approach to risk provides essential insights into human behavior around risk (Wassénus & Crona, 2022).

The Oxford English Dictionary's definition of risk is as follows: "the chance or possibility of danger, loss, damage or other adverse consequences, and the definition of risk is at risk." In this context, risk is used to denote negative consequences. However, risk-taking can also have a positive outcome. A third possibility is that risk is related to the uncertainty of the outcome. Definitions of risk can be found in many sources, an alternative definition to reflect the broad nature of the risks involved. It can affect organizations. The Institute for Risk Management (IRM) defines risk as the combination of the probability of an event and its consequences. Consequences can range from positive to negative. This efficient and practical definition can be easily applied (Hopkin, 2018).

### **Steps to identify risks**

Watan proposed a series of steps that can be useful in limiting risks and preventing their spread, including identifying the uncertainty about possible risks, preparing a preliminary checklist of all project risk sources, and identifying all possible risks and consequences. They are preparing a plan for all possible risks, expanding and improving to prepare a formal project risk plan, and preparing a summary for each group of risks. Tools such as checklists, interviews, questionnaires, brainstorming, the Delphi technique, or insurance documents can be used to identify risks (Watan, 2018).

### **Types of risks**

Some researchers have mentioned another group of possible risks in some institutions, including the researcher Ramadani, who believes that pure risks are considered pure when they cause a particular loss or the situation is at a break-even point and cannot. Always be predictable (Hisrich & Ramadani, 2017). While the other sees speculative risks when they are pure, the entrepreneur faces situations in which he can only lose, while in speculative risks, he can either lose or gain. At the same time, researcher Kuratko confirmed that the main risks cannot be avoided. This type of risk differs from the previous types because

when it occurs, it involves all companies operating in the country or society. The potential sources of this type of risk include natural, political, economic, social forces, etc. For example, floods, earthquakes, wars, inflation, etc. are primary risks (Kuratko, 2016). Another researcher agrees that financial risks arise from a particular venture because the entrepreneur puts a significant part of his capital at risk, which usually comes from savings from any activity in the past. Researcher Hisrich confirms that professional risks are one of the most critical topics frequently discussed, especially by managers who enjoy a secure corporate job, high salary and a package of benefits. The researcher also confirms that psychological risks may be the most significant risk related to the psychological safety of the business person (Hisrich & Ramadani, 2017).

### **Risk analysis in marketing**

Risk analysis is a process of understanding the nature and level of risk (International Organization for Standardization, 2018). Articles that use machine learning methods to understand the nature and determine the level of risk are classified as articles focusing on the risk analysis stage. For example, Mojaddi et al. (2017) propose a set machine learning approach to determine the flood risk level for a given geographic area (Hegde & Rokseth, 2020). There are still defects in the refinement of customer service, so it is impossible to effectively meet customers' needs in the details of electrical infrastructure and electrical products (Yang et al., 2022).

### **Risk Assessment**

Risk assessment is a mature discipline. The structured risk assessment practice guides analysts to identify potential risks/threats, analyze their causes and consequences, and describe the risk, usually quantitatively, with appropriate representation of uncertainties. Analysts make assumptions and simplifications in evaluation, collect and analyze data, and develop and use models to represent the phenomena under study. For example, the failure modes of components due to a given earthquake, the heat fluxes on a structure due to a fire, and operators' response to an incident are all results of conceptual models that attempt to mimic how an actual incident would occur. Based on existing knowledge (Santos, 2022). Assessing the risk of a system requires considering a vast number of scenarios with multiple failures of its components, and by doing so, a deep understanding and knowledge of the system's failure modes and thus increased risk awareness and attention to safety, which usually leads to It improves the overall safety of the system (Zio, 2018). Risk assessment plays a central role in safety-critical industries. However, it faces a series of challenges partly related to technological advances and increasing needs (Paltrinieri et al., 2019). Risk assessment as the process of comparing the results of risk analysis with risk Criterion to determine whether the risk and / or its amount is acceptable or not, it is defined (Kosova, 2021).

### **Risk assessment factors in business organizations**

Researchers Saleh and Allhidan (2021) classified risk assessment factors in business organizations as follows (risk analysis, risk identification, planning activities, monitoring and evaluation, acquiring knowledge, preparing for risks, dealing with Risks, implementing the plan, developing knowledge, ability to reduce risks; determine the magnitude and strength of risks; develop knowledge; ability to reduce risks before they occur; determine the size and strength of risks (Saleh & Allhidan, 2021).

### **Risk assessment methods**

Qualitative risk analysis prioritizes risks for further analysis or evaluation and combines the probability of occurrence and effect. Quantitative risk analysis is the process of numerical analysis of known risks on the project's overall goals (Nia, 2019).

### **Perceived green risk**

Perceived green risk is the hypothesis that when a person buys a product, he has an adverse risk for the environment. The results show that perceived green risk has a negative effect on green trust. This means that the more an individual is aware of consumer-perceived risks, the less consumers will trust green products. Conversely, if the perception of risk is low, consumer trust in a green product increases. Furthermore, studies show that perceived value influences repurchase intention. It shows that perceived value does not significantly affect repurchase intention (Aditi et al., 2020). In the following table, the background of research related to green marketing.

Table (1) research background

Article: 1	Investigating the role of green hotel sustainable strategies to improve the customer's cognitive and emotional image: Evidence from PLS-SEM and fsQCA
Authors:	Salem, Albaz, Al-Alawi, Al-Kathiri and Rashwan, (2022).
Study objectives:	The goal has been to eliminate the negative impact of hotels on the environment and to meet the expectations of green customers who value environmentally friendly products, practices and policies.
Statistics of the study:	A sample of 323 customers from 54 four- and five-star "green" hotels in the Sultanate of Oman were investigated.
Conclusion:	Customers' overall positive image of green hotels results from the complex interactions of environmental values, low-carbon knowledge, and cognitive image rather than the separate influence of each. All four factors played an important role (although in SEM, the cognitive image had a more substantial effect than the affective image). However, PLS-SEM has clarified how these factors affect customers' overall image of green hotels. Influence, and suggests that environmental values and low-carbon knowledge shape the cognitive image, creating a positive overall image.
Article: 2	A study of green marketing in emerging economies
Authors:	Sadaki and Abdul Rahim (2022)
Study objectives:	This research study examines how green marketing can influence consumer purchasing decisions.
Statistics of the study:	It leads researchers to study green marketing in emerging economies
Conclusion:	The research design used is a mixed design known as sequential exploratory design, where first, qualitative data is collected to explore a specific phenomenon. Then, quantitative data is collected to examine the relationships in the qualitative data.
Article: 3	The effect of green marketing on consumer behavior in the market of palm oil products
Authors:	Machova, Renata-Ambrose, Rebecca-Zigmund, Tibor-Paco, Frank (2022).
Study objectives:	This article aims to investigate the impact of green marketing on consumer behavior in the market of products containing palm oil.
Statistics of the study:	Processed information was obtained for 527 data sheets from respondents. Data was collected from Slovakian consumers in the summer of 2021.
Conclusion:	Research shows that most consumers spend less time reading product packaging descriptions. It may be helpful for companies to declare on the packaging that their product does not contain palm oil and to inform and influence the consumer of the negative emotional messages of the ad. The results obtained from the research are helpful for both manufacturers and customers.

Article: 4	A weighted fuzzy approach for green marketing risk assessment: empirical
Authors:	Azadnia, Amirhossein Gransayeh, Mohsen Onfari, George Old, Pejman 2021
Study objectives:	This research study fills gaps in the literature by (1) proposing a comprehensive list of green marketing risk factors in the dairy industry, (2) developing a new weighted fuzzy inference system approach to evaluate those risk factors, and (3) providing a Final ranking of dairy industry risk factors along with risk mitigation strategies for highly ranked risk factors.
Statistics of the study:	Dairy companies in Iran
Conclusion:	The results of this study can provide a roadmap for managers to improve their competitive advantages in the market. The results of this study provide a comprehensive insight to manufacturers, policymakers, and industry stakeholders on existing green marketing risks, their ranking, and mitigation strategies. The results of this study will help them successfully implement green marketing strategies, projects, and initiatives.
Article: 5	Modeling green marketing and green supply chain management in the field of supply chain risk management towards sustainability
Authors:	Faradia, Yovari - Boon, Abdul Talib (2021)
Study objectives:	This study focuses on the effectiveness of supply chain risk management efforts and analyzes the structural relationship between the constructs toward firm sustainability.
Statistics of the study:	This study explained how internal GSCM and external GSCM are part of the supply chain risk management effort.
Conclusion:	This model shows the relationship between GMM and GSCM towards sustainability in the supply chain risk management scope. Greening supply chain management will be the best effort to avoid supply chain risks, i.e., environmental protection and economic (profitability). In addition, GMM also plays a vital role in maintaining economic sustainability because GMM can continuously promote green as well as create green products and green distribution innovation, which increases the margin determined by green pricing.
Article: 6	The relationship between constructs of greenwashing, green consumer confusion, green perception risk and green trust among urban consumers in India.
Authors:	Saxina, Britti -Sharma, Jarima (2021)
Study objectives:	The purpose of this paper is to explore the effect of Greenwash (GW) on Green Trust (GT) during the intermediate stages of Green Consumer Confusion (GCC) and Green Perceived Risk (GPR).
Statistics of the study:	The relationship between demographic factors and four constructs, GW, GT, GCC, and GPR, has also been investigated. Through establishing a survey research plan, questionnaires were administered to 325 respondents.
Conclusion:	The analysis results reveal some interesting facts, including the negative association of Greenwash with Green Trust. This finding suits companies that sell or put products on green or environmentally friendly boards.
Article: 7	Green marketing orientation: Achieving sustainable development in green hotel management
Authors:	Chang, Ku Cheng (2020)



Study objectives:	The primary purpose of this study is to confirm whether corporate social responsibility (CSR) and stakeholders affect green purchase beliefs under environmental protection pressure (green marketing orientation, brand image and brand loyalty).
Statistics of the study:	In the next step, we selected hotels that have received the Green Hotel Standard of the Taiwan Environmental Protection Agency. The researcher selected three hotel managers and two researchers with practical experience in the hotel to conduct semi-structured interviews. At this stage, researchers remove inappropriate questions and improve the recognition and clarity of the semantic level. Then, green store consumers were randomly selected to complete a pre-test survey for a random group of samples to evaluate the applicability of the measurement tools.
Conclusion:	This study showed that shareholders and executives of socially responsible hotels could indirectly increase consumer loyalty to the hotel's image through green marketing.
Article: 8	Investigating the moderating effects of green marketing and green psychological benefits on customers' attitudes, value and green purchase intention
Authors:	Liao, Ying Kai-Wu, Wan Yeh-Pham, T. An (2020)
Study objectives:	This study aims to integrate the theoretical basis of green purchasing using the signaling theory approach in green marketing.
Statistics of the study:	The study included a survey of 319 customers with at least one year of experience purchasing green products in Cambodia. The findings experimentally showed the positive and significant effect of green customer value on the attitude towards green products.
Conclusion:	Green customer values and attitudes toward green products positively affect green purchase intention. Green marketing (environmental advertising and word-of-mouth) and psychological benefits (warm glow, self-expressive benefits, and nature experience) moderate the relationships between customer value, green product attitude, and green purchase intention. The results may be helpful for managers and marketers to develop appropriate green marketing strategies. They may also be helpful to academics in conducting further validation of the theoretical framework of green purchasing.
Article: 9	Identifying the risk of green innovation in the manufacturing industry under the global value chain based on grounded theory
Authors:	Sun, Yingying-Yu, Li-Yin, Shi (2020)
Study objectives:	The main goal of this study is to analyze the prerequisites for promoting the green competitiveness of companies and to analyze the effect of using marketing tools on the descriptive variables of a company.
Statistics of the study:	Based on the global value chain perspective, this article identifies the risk of green innovation in the manufacturing industry using the grounded theory research method. By reviewing the interview records of 25 managers of manufacturing companies, we summarize and identify four significant risks and 31 risk factors of green innovation.
Conclusion:	The risks of green production under the global value chain include ten risk factors. Green marketing risks under the global value chain include nine risk factors. The risks of green services under the global value chain include five risk factors.
Article: 10	An overview of green marketing challenges: current scenario
Authors:	Kirado, Jiriraj 2019
Study objectives:	This study aims to know the main concepts and ideas of green marketing and its essential challenges.

Statistics of the study:	Theoretical research
Conclusion:	Green marketing needs to evolve as it is still in its infancy. Adopting green marketing will be challenging in a short period, but it will positively impact the company in the long run.

### Research Methodology

The current research method combines qualitative and quantitative approaches, namely exploratory. Given its focus on a specific statistical population and its aim to address practical deficiencies, it can be classified as applied research. The research focuses on two groups: the managers of five-star hotels in Karbala City and university professors specializing in green marketing, who are regarded as experts in their field. Based on the data provided, the whole population of the statistical community amounted to 12 individuals. Furthermore, in light of the limited accessibility to the entire population within the statistical community, a statistical sample was employed, and a suitable sampling technique was utilized to pick the individuals comprising the statistical sample. It is important to mention that the count of managers who consented to collaborate and offered satisfactory responses was ten individuals.

Data collection, both qualitative and quantitative, is necessary to accomplish the objectives of this research throughout three library areas. The library sector reviewed the study literature to determine the hazards of green marketing. This data was gathered by utilizing a phishing tool. The output of this section constitutes the main model of the research. The quantitative section data has been acquired using paired comparison matrices. The matrix utilized in this study has rows and columns that are equivalent to the number of primary variables. A researcher constructed a closed questionnaire, which utilized a 5-point Likert scale, to facilitate the attainment of a consensus. The closed questionnaire's validity is assessed using face content validity, which involves gathering the opinions of 6 university professors.

In the initial phase of the qualitative analysis in the present study, the data gathered from the interviews were subjected to a three-stage procedure of open, axial, and selective coding to deconstruct and examine them. The analysis process commences as the researcher meticulously examines the transcribed interviews, line by line, in collaboration with experts from five-star hotels in the city of Karbala. Similar data with equivalent meanings are grouped together under certain codes, employing a method known as coding and categorization. Next, he allocates suitable concepts to each of the layers. In the open coding stage, various categories of suitable codes related to green marketing hazards were identified and extracted. The concepts were obtained from the writings and, in some instances, were authored by the individuals themselves. A total of 501 primary codes were generated from 12 interviews. Subsequently, owing to the abundance of comparable codes, it was condensed by the utilization of conceptual and semantic similarity. Ultimately, a total of 501 codes were allocated among 18 sub-components, and subsequently, two primary categories were established through the use of secondary open codes.

Table (2) displays the conclusive coding outcomes derived from the study of the interviews.

Table (2) displays the final coding outcomes derived from the study of the interviews.

Interviewee code	open source (initial)	Pivotal codes	The category
code A /code B /code D /code E /code F /code H /code I /code J /code K /code L	Indifference of guests about green marketing - Few tourists are interested in green marketing - Consumers' lack of interest in environmental issues affects sales - Travelers' lack of interest in green marketing standards	Lack of customer interest	External risks

code A /code B /code C /code D /code E /code F /code G /code H /code I /code J /code K /code L	lack of environmental awareness of customers regarding environmental issues - lack of awareness of guests about the benefits of green products - lack of awareness of customers with the application of green marketing of the hotel	Lack of customer awareness	
code A /code B /code C /code D /code E /code F /code G /code H /code I /code J /code K	Tourists' misconception that environmental problems are not dangerous - Different perceptions of tourists about the risks caused by environmental problems - Encountering the problems of tourists' lack of connection with green marketing - Changing the perception of guests about green marketing	Cognitive challenge	
code A /code B /code E /code F /code I /code J /code K /code L	The increase in the price of hotel services - the increase in hotel room rates - the increase in the cost of goods and services - the high cost of green marketing - the high cost of materials used in green marketing - the high cost of producing services with the implementation of green recovery	The price challenge is over	
code A /code B /code /code D /code E /code F /code G /code H /code I /code J /code K /code L	Weak support of the relevant ministries for the implementation of green marketing - Uncertainty of the person in charge of issuing green permits - Green hotel marketing needs government support - Government strictness on the implementation of green hotel services - Alignment of the level of support for green hotel marketing with real environmental practices	Legal challenge	
code I/ code L	Waste of water resources - Spending a lot of natural resources in implementing green marketing	Environmental challenge	

c code / code B / code D / code / code E / code G /F code J / code I code L /	False claims by hotels about being green - Need for credibility when promoting green marketing - Facing the problems of false green advertising - Claiming by hotels to take real environmental actions - Deterioration of hotel green marketing progress due to false advertising - False claim of being environmentally friendly Viability of hotels - false advertising of hotels as green hotels - failure to adopt honest advertising when implementing green hotel marketing - use of false advertising data about green hotels - loss of customer trust due to false advertising about green hotels - Incorrect claim of hotels about their environmental sustainability - Threat of the tourism industry by deceiving consumers in the field of green recovery - False green advertising - Decreasing the value of green marketing due to the presentation of false green advertising - Creating unhealthy competition between hotels in green recovery - The dishonesty and purposefulness of green hotel brands	Ethical challenges of green marketing	Internal risks
code / code E /code G /code I /code J /cod L	The need for advanced equipment and machinery in the implementation of green marketing - The need for high technology for recycling - Waste management and classification to facilitate the recycling process - The problem of hotel waste management - Green technologies are not important for customers - The customer's green experience requires special technologies which may cause him discomfort	The complexity of green technology	
code F /code I /code J /code L	Continuous guidance of customers to accept green hotel marketing - Importance of customer attitude to accept green marketing - Customer awareness and norming to accept the idea of green marketing - Encouraging employees and customers to use green marketing	Cultural challenge	
code A / code C	Implementation of human resource development courses in green recycling - lack of hotel management experience with environmental information - green recycling training for employees	learning	
Code D / code F /code L	The problem of attracting customers to green hotels - the need for extensive advertising to spread the idea of green marketing and sustainability - the problem of presenting environmental practices to the target market - the problem of persuading tourists to choose green hotels	Marketing problems	

I code / C code	Lack of trainers for green marketing - Lack of trainers to do green hotel marketing	expert challenge
code A /code C / code K	Inability of hotels to bear the costs of implementing green marketing - Inability of hotels to pay for staff training - Difficulty in applying green marketing due to the poor financial budget of hotels - The cost of training in green marketing - Implementation of green marketing requires additional financial costs - The implementation of green marketing of the hotel requires more money - The project of implementing green marketing requires a large budget - A lot of money is needed to promote green marketing	Budgetary financial challenge
code C / code D / code E / code K	Increasing the cost of implementing green marketing in the hotel - increasing the cost of recyclable materials - increasing the total cost of the hotel - increasing the costs of sustainable environmental activities - increasing the operating costs of the hotel - increasing the costs of hotel management - increasing the costs of hotel feasibility studies - creating Costs related to meeting the standards - the green marketing program requires additional financial resources	The challenge of hotel costs
code A/code E /code I	There are no consistent standards for measuring green marketing - use of terminology away from green marketing - lack of guarantee for environmental standards	The challenge of standardization
code / C code G	Problems in implementing green marketing strategies - the need to use green marketing strategies	The challenge of strategic management
code D / code G /code H	Making sustainable new investments to implement environmental practices - Making significant investments in infrastructure to implement green marketing practices - Requiring additional investment in implementing green marketing in the hotel	The investment challenge
code /B code F	Guests are affected by the level of green services provided to them - customer dissatisfaction with the weak green hotel capabilities - lack of necessary capabilities to implement green marketing - tourist dissatisfaction with green technologies used in the hotel	Service challenge

The classification process has resulted in the identification of two primary categories within the conceptual framework of the current research: external risks and internal risks. Each category encompasses distinct aspects that are unique to it. External hazards encompass

nine characteristics: customer interest, lack of customer awareness, cognitive problems, cost pricing challenges, legal challenges, environmental challenges, ethical challenges of green recovery, the complexity of green technology, and cultural challenges. However, the internal risks encompass nine facets of learning: marketing issues, difficulties faced by experts, financial challenges related to budgeting, challenges associated with hotel prices, challenges in standardization, challenges in strategic management, investment challenges, service challenges, and cultural challenges. The conceptual model of green marketing risks in five-star hotels in Karbala is depicted in Figure (1).



Figure 1 Green marketing risk model

In the second step of the quantitative analysis phase, we administered a pairwise comparison questionnaire to experts. The purpose was to ascertain the weight and significance of each risk identified during the interview phase to fulfill the research objectives. The quantitative analysis process utilizing the Analytic Hierarchy Process (AHP) consists of multiple stages. This section focuses on the examination of the research data. This study seeks to prioritize the influential elements of green marketing. The AHP hierarchical analysis process method is employed to accomplish this objective. The initial step involves identifying the influential components, which are subsequently assigned weights and decided using the Analytic Hierarchy Process (AHP) approach. Expert Choice software is used for all calculations.

During the initial phase, many factors are systematically evaluated in pairs to assess the efficacy of empowerment courses. Decision matrices are employed for this specific objective. The matrices depict the hazards derived from the qualitative stage, with the rows and columns representing these risks. Additionally, the experts are requested to indicate the relative importance of each variable compared to the other variable using a 5-degree spectrum in pairs. If the priority of one risk is four times higher than that of the second risk, then the priority of the second risk is one-fourth of the priority of the first risk.

**Introduction of research factors**

Based on the literature review and research background, we identified factors that influence green marketing. These factors consist of 18 indicators, categorized into two dimensions. To localize these factors, we conducted a questionnaire with ten experts. The questionnaire asked the experts to rate each indicator on a 5-point Likert scale, ranging from 1 (very little importance) to 5 (very high importance). Subsequently, the mean score for each index was computed, and any index with an average score below three was eliminated. The findings demonstrated that experts have endorsed all indications since the average score for each indicator surpasses 3. As shown in the table (3).

Table 3: Introduction of research factors

Criterion	Sub-criterion	Average Rating	Criterion	Sub-criterion	Average Rating
<b>External</b>	Lack of customer interest	3.3	<b>Internal</b>	learning	3.2
	Lack of customer awareness	3.3		Marketing problems	3.5
	Cognitive challenge	3.1		Expert challenge	3.7
	The price challenge is over	3.1		Budgetary financial challenge	3.4
	Legal challenge	4.7		The challenge of hotel costs	3.4
	Environmental challenge	4.3		The challenge of standardization	3.6
	Ethical challenges of green recovery	3.8		The challenge of strategic management	3.9
	The complexity of green technology	3.8		The investment challenge	3.6
	Cultural challenge	3.7		Service challenge	3.7

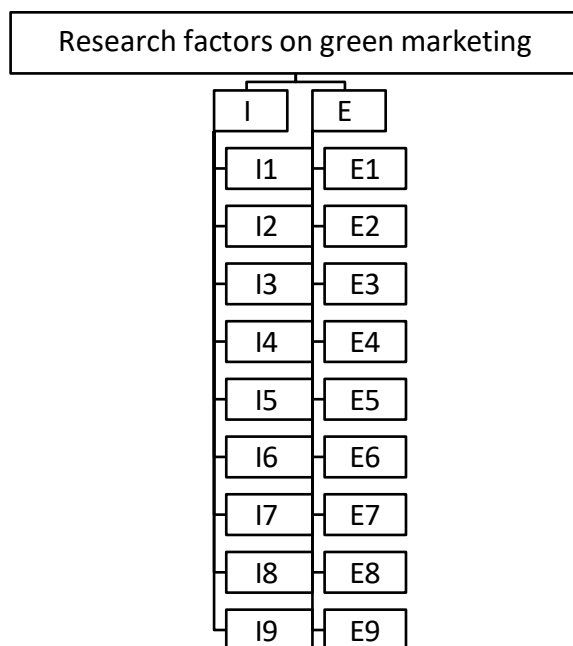
Based on the data in Table 3, all research indicators have an average score exceeding 3, indicating that they have met the required Criterion and are considered acceptable. The authorized indicators are presented in Table 4 in the form of coding. Figure 2 also presents the hierarchical model.

Table 4- Research Criterion and Sub-Criterion

Criterion	Criterion code	Sub-criterion	Sub-criterion code	Criterion	Criterion code	Sub-criterion	Sub-criterion
<b>Internal</b>		learning	I1	<b>External</b>		Lack of customer interest	E1
		Marketing problems	I2			Lack of customer awareness	E2
		Expert challenge	I3			Cognitive challenge	E3
		Budgetary financial challenge	I4			The price challenge is over	E4
		The challenge of hotel costs	I5			Legal challenge	E5

<b>I</b>	The challenge of standardization	I6	<b>E</b>	Environmental challenge	E6
	The challenge of strategic management	I7		Ethical challenges of green recovery	E7
	The investment challenge	I8		The complexity of green technology	E8
	Service challenge	I9		Cultural challenge	E9

Figure 2: Hierarchical model of research



The preceding steps involved the introduction of the research factors. The AHP hierarchical analysis method is employed in this step to ascertain the significance and magnitude of each factor. Using Table 2, experts were provided with pairwise comparisons of Criterion and sub-Criterion. There are a total of 10 individuals who are experts in this area. Upon finishing the pairwise comparison matrices, the inconsistency rate of each matrix was computed. They all yielded values below 0.1, indicating the matrices' stability and compatibility. The experts' pairwise comparisons were consolidated using the geometric mean approach and inputted into the Expert Choice software to ascertain the weight. The following are the outcomes of the pairwise comparisons and the corresponding weights.

**Comparing the significant measures in pairs**

Table (5) presents the pairwise comparisons of the two primary Criterion in this section. The incompatibility rate of this pairwise comparison is 0.02, which falls below the threshold of 0.1, indicating a satisfactory level of compatibility.

Table 5: Pairwise comparisons of the main criterion

	<b>Internal</b>	<b>External</b>
<b>Internal</b>		<b>0.174</b>

The pairwise comparisons in Table 5 are inputted into the Expert choice software, which computes the Criterion weights and is displayed in Figure 3.



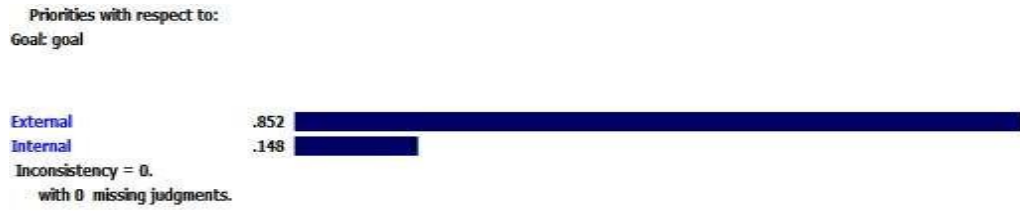


Figure 3: Weights of the main criterion

Table 6: Weight and rank of the main criterion

Criterion name	code	Weight	
External	E	0.852	1
Internal	I	0.148	2

Based on Figure 3, the exterior Criterion, which weigh 0.852, have achieved first position, while the internal Criterion, with a weight of 0.148, have secured second place.

**Pairwise comparison of internal subscales**

Table 7 provides the pairwise comparison of the nine sub-Criterion of the internal criterion. The inconsistency rate for this pairwise comparison is 0.05.

Table 7: Pairwise comparisons of internal sub-Criterion

	I1	I2	I3	I4	I5	I6	I7	I8	I9
I1		3.471	3.471	0.435	0.489	2.837	0.249	0.444	1.039
I2			0.943	0.281	0.632	1.073	0.383	0.322	0.718
I3				0.132	0.380	1.585	0.327	0.330	0.799
I4					3.560	3.184	1.592	1.582	3.244
I5						2.263	0.353	0.438	2.422
I6							0.323	0.279	0.484
I7								0.424	1.385
I8									2.936
I9									

The pairwise comparisons in Table 7 are inputted into the Expert Choice software, which computes the Criterion weights as depicted in Figure 4.

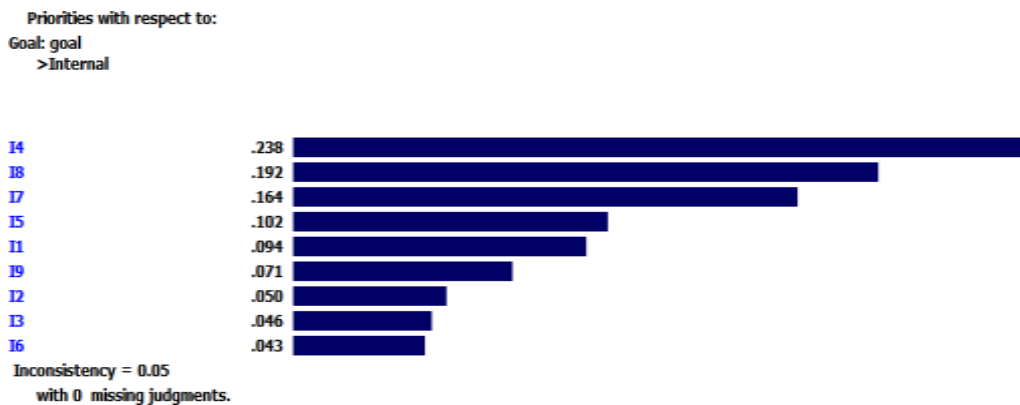


Figure 4: Weights of internal sub-Criterion

Table 8: Weight and rank of internal sub-Criterion

Criterion name	code	Weight	rank
Budgetary financial challenge	I4	0.238	1
The investment challenge	I8	0.192	2
The challenge of strategic management	I7	0.164	3
The challenge of hotel costs	I5	0.102	4
learning	I1	0.094	5
Service challenge	I9	0.071	6
Marketing problems	I2	0.050	7
Expert challenge	I3	0.046	8
The challenge of standardization	I6	0.043	9

Figure 4 indicates that the budget financial issue, with a weight of 0.238, has achieved the highest ranking among the internal sub-Criterion. The investment challenge secured second place with a weight of 0.192, while the strategic management challenge secured third place with a weight of 0.164.

**Pairwise comparison of external sub Criterion**

The external criterion consists of 9 sub-Criterion, and their pairwise comparison is provided in Table 9. The discrepancy rate of this pairwise comparison is 0.06.

Table 9: Pairwise comparisons of external sub Criterion

	E1	E2	E3	E4	E5	E6	E7	E8	E9
E1		0.348	0.315	2.555	0.129	0.143	0.453	0.328	0.405
E2			1.436	2.133	0.157	0.295	0.316	0.423	0.553
E3				3.252	0.198	0.142	0.355	0.395	0.426
E4					0.146	0.152	0.221	0.156	0.256
E5						1.016	2.957	3.117	2.493
E6							2.541	2.453	1.055
E7								0.382	2.841
E8									2.590
E9									

We enter the pairwise comparisons of Table 9 in the Expert Choice software, which calculates the criterion weights and is illustrated in Figure 5.

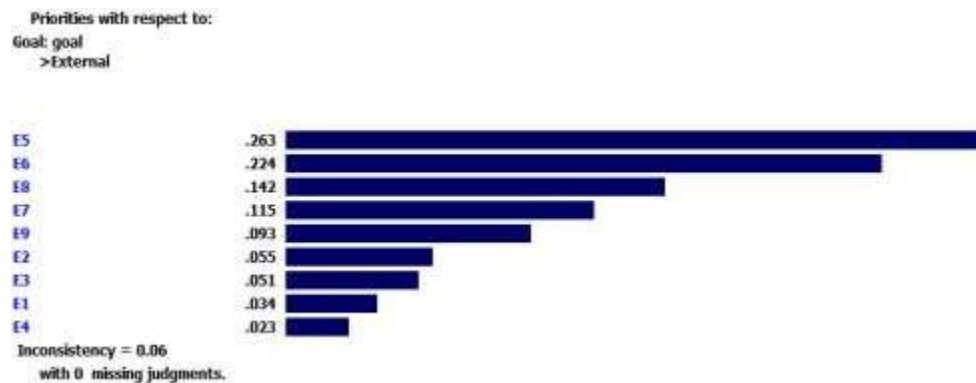


Figure 5: Weights of external sub Criterion

Table 10: Weight and ranking of external sub-Criterion

Criterion name	code	Weight	rank
Legal challenge	E5	0.263	1
Environmental challenge	E6	0.224	2
The complexity of green technology	E8	0.142	3
Ethical challenges of green recovery	E7	0.115	4
Cultural challenge	E9	0.093	5
Lack of customer awareness	E2	0.055	6
Cognitive challenge	E3	0.051	7
Lack of customer interest	E1	0.034	8
The price challenge is over	E4	0.023	9

Based on Figure 5, the external sub-Criterion indicate that the legal challenge has achieved the highest ranking with a weight of 0.263. The environmental challenge secured second place with a weight of 0.224, while the intricacy of green technology earned third place with a weight of 0.142.

**Weight and final ranking of sub-Criterion**

The ultimate weight of the sub-Criterion is determined by multiplying the weight of each criterion by the weight of its corresponding sub-Criterion, as computed in the preceding phases and presented in Table 11. According to this, the legal challenge has achieved the highest position among all sub-Criterion. The environmental challenge is considered the second most significant issue, while the complexity of green technology is ranked as the third most challenging aspect.

Table 11: weight and final ranking of sub-Criterion

Criterion	Standard weight	under the Criterion	The relative weight of the sub criterion	Substandard final weight	The final rank of the sub-criterion
Internal	0.148	learning	0.094	0.0139	14
		Marketing problems	0.05	0.0074	16
		Expert challenge	0.046	0.0068	17
		Budgetary financial challenge	0.238	0.0352	8
		The challenge of hotel costs	0.102	0.0151	13
		The challenge of standardization	0.043	0.0064	18
		The challenge of strategic management	0.164	0.0243	11
		The investment challenge	0.192	0.0284	10
		Service challenge	0.071	0.0105	15
External		Lack of customer interest	0.034	0.0290	9

0.852	Lack of customer awareness	0.055	0.0469	6
	Cognitive challenge	0.051	0.0435	7
	The price challenge is over	0.023	0.0196	12
	Legal challenge	0.263	0.2241	1
	Environmental challenge	0.224	0.1908	2
	Ethical challenges of green recovery	0.115	0.0980	4
	The complexity of green technology	0.142	0.1210	3
	Cultural challenge	0.093	0.0792	5

### Discussion and conclusion

The current research has been done to identify and prioritize factors influencing the evaluation of green marketing risks in Karbala hotels. The results showed that the risks affecting the evaluation of green marketing are the complexity of green technology, the challenge of hotel costs, the legal challenge, the challenge of standardization, the challenge of strategic management, learning, the challenge of experts, the challenge of investment, the financial challenge of the budget, the ethical challenges of recovery. Green, marketing problems, service challenges, cultural challenges, customers' lack of interest, cognitive challenges, customers' lack of awareness, environmental challenges, and cost price challenges.

Within green marketing sources, verifying the credibility of the information used, particularly about the source's legitimacy, is essential. In addition, the efficacy of individuals or hotel staff who adopt green marketing is very significant in terms of trustworthiness. Furthermore, the assessment is influenced by the significance of green marketing resources, their enduring trustworthiness, and the endorsement of specialists in the field about identified dangers.

The outcomes derived from the AHP approach are contingent upon the weights and Criterion utilized to categorize these green marketing risks into two primary classifications: internal and external.

The weight for external hazards was 0.852, whereas the weight for internal risks was 0.148. According to these findings, external risks significantly impact green marketing in Karbala hotels more than internal risks.

The legal challenge was given the highest ranking with a weight of 0.2241 due to its massive impact on hotel green marketing. There is a growing global concern for environmental matters and sustainable development, which is seen in the implementation of laws and regulations pertaining to environmental measures. Green hotel marketing is significantly impacted by environmental preservation and sustainable development laws, making it a crucial legal challenge. Stringent legal obligations may exist to diminish the utilization of natural resources, including water and electricity, and to handle waste ecologically sustainably. Hotels must comply with these requirements and fulfill the environmental standards established by domestic and international legislation. This entails making financial investments and implementing operational and marketing adjustments. The environmental challenge was ranked second, with a criterion weight of 0.1908. Environmental challenges greatly influence green hotel marketing, necessitating the implementation of sustainable measures and strategies. This entails raising environmental awareness and meeting the growing demand for eco-friendly practices. Such measures may involve using renewable and environmentally conscious materials, reducing water and energy consumption, managing waste in sustainable ways, and enhancing resource utilization efficiency. Overall, environmental challenges significantly impact hotels' green marketing efforts. Hotels must implement sustainable practices, employ new marketing

tactics to address these difficulties and leverage them to distinguish themselves and appeal to environmentally conscious visitors.

Regarding standardization, it received the lowest ranking with a standardized weight of 0.0064. This challenge pertains to the efforts of hotels to establish and enforce consistent environmentally sustainable policies within the tourism industry. This difficulty is regarded as a primary obstacle to marketing the green hotel. However, among the challenges Karbala hotels face, it is classified as the least significant. This is due to the need for increased attention and a thorough evaluation of strategies to enhance its efficacy within this particular setting. It is establishing environmental objectives and implementing corresponding tactics Secure. Investing in eco-technology and consistently improving resource efficiency in all business aspects enables hotels to implement green marketing, collaborate with suppliers and partners who embrace environmentally sustainable practices, and effectively communicate with guests and consumers about the hotel's environmental sustainability practices.

Looking for chances to partner with environmental and social organizations to assist sustainable projects and initiatives will contribute to the advancement of this challenge. Although standardization has hurdles, green hotel marketing strategies can effectively cultivate a favorable hotel reputation and appeal to environmentally conscious guests. Hotels may enhance their competitive edge in the hospitality sector by implementing sustainable environmental practices and effectively communicating them, promoting sustainable governance.

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