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Green Marketing Orientation and Sustainable Performance: The Role of Green Innovation and Managerial Environmental Concern

Dewa Nyoman Benni Kusyana[1], **Ni Luh Putu Erma Mertaningrum**[2]
Program Studi Sarjana Manajemen, Universitas Hindu Indonesia, Indonesia[1]
Program Studi Administrasi Bisnis, Sekolah Tinggi Ilmu Sosial dan Ilmu Politik Wira Bhakti, Indonesia[2]
E-mail: bennikusyana@unhi.ac.id

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Abstract

This study aims to analyze the influence of green marketing orientation on sustainable performance through green innovation. It also examines the role of managerial environmental concern as a moderating variable in star-rated hotels in Denpasar City. The growing demand for environmentally friendly business practices encourages the hotel industry to focus on economic profits as well as social and environmental aspects of sustainability. This study uses a quantitative approach with an explanatory design. Data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The study population comprises all 47 star-rated hotels in Denpasar City, selected through a total sampling technique. There were 94 respondents, including General Managers, Hotel Managers, and Operational Managers. Data collection involved questionnaires, interviews, observations, and documentation. The results show that a green marketing orientation has a positive and significant effect on green innovation. However, it has a positive but insignificant effect on sustainable performance. Green innovation has a positive and significant effect on sustainable performance and fully mediates the effect of green marketing orientation. In addition, managerial environmental concern strengthens the effect of green innovation on sustainable performance.

Keywords: Green Marketing Orientation, Green Innovation, Managerial Environmental Concern
JEL Classification: M31, Q56, O31

INTRODUCTION

The hospitality industry plays a significant role in tourism development and regional growth, especially in Bali. As an international tourist destination, Bali faces rising demand to implement sustainable tourism practices, including in hotels. Hotels today are judged not only by service quality, occupancy rates, and profitability. They are also evaluated on how well they address social and environmental concerns. Tourists are becoming more aware of environmental

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issues, and consumer preferences are shifting toward environmentally friendly services. These demands for sustainable business practices are pushing hotels to adapt their strategies (Espino-Rodriguez and Taha, 2022).

Denpasar, as a center of economic and tourism activity in Bali, has a dynamic hospitality industry. One- to five-star hotels in Denpasar offer different service characteristics, market segments, and operational capacities. As a result, they face a range of sustainability challenges. With rising competition, hotels can no longer rely solely on service quality and pricing. They must seek competitive advantages through more environmentally responsible business practices (Abdelhamied et al., 2023). Green marketing orientation (GMO) is relevant here. It integrates environmental considerations into strategies, marketing, and internal processes, and is crucial for sustainable performance (Nuryakin and Maryati, 2022; Abdullah and Febrian, 2025). Implementing GMOs helps hotels build added value and strengthens their image among customers who care about sustainability (Vilkaite-Vaitone and Skackauskiene, 2019).

However, the presence of GMOs does not always lead to sustainable performance in hotels (Sulaiman, 2025). Hotels face major challenges relating to resource scarcity and climate change (Khariq and Edward, 2025). In practice, GMOs must be expressed through concrete actions and various innovations that support resource efficiency and reduce environmental impact. Green innovation (GI) is one such approach (Du and Wang, 2022). In hotels, GI can mean developing more environmentally friendly services, using energy- and water-saving facilities, reducing waste, and renewing operational processes (Elshaer et al., 2022). Thus, a hotel's success in achieving sustainable performance likely depends not only on GMOs but also on the ability to implement GI effectively (Gu, 2022).

The effectiveness of green innovation in improving sustainable performance also depends on the environmental awareness of hotel management, or managerial environmental concern (MEC) (Mo et al., 2022). Management's environmental awareness is crucial. Strategic decisions about investment, innovation, and policy direction are usually shaped by hotel management's perspective (Makhloufi et al., 2023). Hotel management with a strong commitment to sustainability supports green innovation with resources, organizational culture, and long-term decisions (Sobaih et al., 2022). In contrast, low awareness can weaken GI and reduce its impact on sustainable performance (Qu et al., 2021). Many studies have explored GMOs, GI, and sustainable performance, but most focus on direct or partial relationships. Few studies have integrated GI as a mediator and MEC as a contingency factor between GI and sustainable performance, particularly in Indonesian hotels.

Given these conditions, this study analyzes the impact of GMOs on the sustainable performance of Denpasar's star-rated hotels. GI acts as the mediating variable, and MEC is included as a moderating variable. This study aims to provide theoretical contributions to research on hotel industry sustainability and offer practical advice for hotel managers. The goal is to help them design business strategies that better address economic, social, and environmental sustainability.

METHOD

This study used a quantitative approach and explanatory research design to examine causal relationships between variables. The research included all one- to five-star hotels in Denpasar City. Denpasar was chosen because its hotel industry is dynamic and features a variety of hotel characteristics. This makes it suitable for studying GMO, GI, MEC, and sustainable performance.

The study population comprised all 47 star-rated hotels in Denpasar City. Sampling used a census method, so the entire population served as the research sample. The study used a key informant approach, involving two respondents per hotel: the General Manager or Hotel Manager and the Operational Manager. The General Manager is familiar with strategic policies, marketing orientation, and performance. The Operational Manager has insight into green innovation in daily operations. Thus, there were 94 respondents in total.

Research data were collected using questionnaires, observations, a few interviews, and documentation. Variables were measured on a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). GMO was measured by three dimensions: strategic, tactical, and internal green marketing orientation, adapted from Papadas et al. (2017) and Borah et al. (2021). GI was measured by green product innovation and green process innovation (Soewarno et al., 2019; Janjua et al., 2024). Sustainable performance was measured by economic, social, and environmental performance (Ishaq et al., 2023; Piwowar-Sulej and Iqbal, 2023). MEC was measured with four indicators from Munawar et al. (2022). Data were analyzed using SEM-PLS with SmartPLS software. This method was chosen for its ability to examine relationships among variables, including mediating and moderating effects. Hypotheses were tested using bootstrapping at a 5% significance level. Relationships were considered significant if the p-value was $\leq$ 0.05 or the t-statistic was > 1.96 (Hair and Amaler, 2022). This approach enabled comprehensive testing of all aspects in the research model.

RESULTS AND DISCUSSION

This section shows the results of hypothesis testing and discusses the relationships in the research model. SmartPLS software was used for the analysis. Results indicate that not all relationships among variables are significant. GMOs have a positive and significant effect on GI. Their direct effect on sustainable performance is positive, but not significant. In contrast, GI has a positive and significant effect on sustainable performance. The mediation of GI between GMOs and sustainable performance is significant. MEC also strengthens the relationship between GI and sustainable performance.

Table 1. Hypothesis Testing Results of Structural Model

Hypothesis	Relationship	Path Coefficient	T-Statistic	P-Value	Result
H1	GMO → GI	0.514	5.832	0.000	Supported
H2	GMO → SP	0.118	1.412	0.159	Not Supported
H3	GI → SP	0.463	4.675	0.000	Supported
H4	GMO → GI → SP	0.238	3.291	0.001	Supported

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H5	MEC × GI → SP	0.217	2.584	0.010	Supported

Source: SmartPLS Output Analysis (2026)

Green Marketing Orientation, Green Innovation, and Sustainable Performance in Hotels

The results showed that GMO had a positive and significant effect on GI (β = 0.514; t = 5.832; p < 0.001). This finding suggests that the better a hotel's GMO, the greater its ability to develop GI, in both green product and green process innovation. Hotels with marketing strategies that consider environmental aspects tend to be more active in developing environmentally friendly services, increasing operational efficiency, and implementing process innovations that support business sustainability. This finding aligns with the Resource-Based View perspective, which posits that an organization's ability to develop a strategic orientation can be a source of competitive advantage by building capabilities that competitors find difficult to imitate (Khanra et al., 2022).

However, the results of the study indicate that GMOs have a positive but insignificant effect on sustainable performance (β = 0.118; t = 1.412; p = 0.159). This finding indicates that GMOs owned by hotels have not been able to directly improve sustainable performance across economic, social, and environmental dimensions. This condition shows that GMO ownership alone is not enough if it is not followed by effective implementation in hotel operations. In other words, a green marketing strategy is more of an organizational policy direction that requires further implementation to produce benefits that are felt by the hotel

Furthermore, GI was shown to have a positive and significant effect on sustainable performance (β = 0.463; t = 4.675; p < 0.001). These results indicate that hotels that implement GI tend to have better sustainability performance. GI in hotels can be achieved through the development of more environmentally friendly facilities and services, improved energy and water efficiency, reduced operational waste, and the adoption of more efficient work processes. The implementation of these innovations not only reduces environmental impacts but also increases operational cost efficiency and strengthens the hotel's image in the eyes of customers.

Another finding indicates that GI positively and significantly mediates the effect of GMOs on sustainable performance (β = 0.238; t = 3.291; p = 0.001). The type of mediation observed is perfect mediation because the direct effect of GMOs on SP was found to be insignificant, whereas the indirect effect through GI was significant. This indicates that GMOs can only impact sustainable performance if they are first translated into tangible innovations. This finding supports the Dynamic Capability View, which posits that organizations need to shift their strategic orientation toward innovative actions to achieve better performance (Mao and Lu, 2023)

The Moderating Role of Managerial Environmental Concern

The results also show that MEC significantly strengthens the influence of GI on sustainable performance (β = 0.217; t = 2.584; p = 0.010). This indicates that the higher the hotel management's concern for environmental issues, the greater the impact of green innovation on improving the hotel's sustainable performance. Hotel

management with a high level of environmental concern tends to provide greater support for implementing green innovation by providing resources, organizational policies, and a long-term commitment to sustainability. Conversely, in hotels with low managerial environmental concern, green innovation may be less effective, resulting in a more limited impact on hotel performance. This finding reinforces the Stakeholder Theory's view that organizational attention to environmental and stakeholder interests is a crucial factor in creating long-term business sustainability (Valentinov, 2023).

CONCLUSION

This study shows that achieving sustainable performance in star-rated hotels in Denpasar City is not solely determined by the presence of GMOs, but is more influenced by the hotel's ability to translate this orientation into tangible innovation. The implementation of GMOs, in both product and process forms, is a crucial element in improving hotel performance economically, socially, and environmentally. These findings demonstrate that sustainability in the hospitality industry cannot be achieved solely through strategic commitments or green marketing communications, but requires a real transformation in hotel operational activities that can generate long-term benefits for the organization and the environment.

This study also emphasizes the importance of hotel leadership in supporting the success of sustainability strategies. Managerial awareness of environmental issues has been shown to strengthen the effectiveness of green innovation in improving hotel sustainability performance. Therefore, hotel managers need to position GI as an integral part of their business strategy and build a stronger managerial commitment to environmental issues. Future research is recommended to expand the scope of the research area and consider other variables, such as organizational culture, green organizational climate, or environmental commitment, to gain a more comprehensive understanding of the sustainability of the hotel industry.

This research provides theoretical and practical implications for the development of sustainable marketing studies in the hotel industry. Theoretically, the research results strengthen the Resource-Based View and Dynamic Capability Theory perspectives by showing that GMO is not yet able to directly improve sustainable performance, but rather must first be translated through GI. This finding confirms that an organization's strategic orientation does not automatically translate into performance but requires the transformation into concrete, innovative actions. In addition, the research results expand the application of Stakeholder Theory by showing that MEC can strengthen the relationship between GI and sustainable performance. Practically, the research results have implications for hotel managers: improving sustainable performance is not achieved solely through strategic green marketing commitments, but requires implementing green innovations in products and operational processes, supported by managerial awareness of environmental issues.

This study makes a theoretical contribution by developing an integrative model that links GMO, GI, MEC, and sustainable performance in the context of the hotel industry in Denpasar City. The novelty of this study lies in examining the

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roles of GI as a mediating variable and MEC as a moderating variable simultaneously within a single research model, a practice that remains relatively limited in the context of hotels in Indonesia. Practically, this study contributes to hotel management by designing more effective sustainability strategies, namely by positioning green innovation as the primary bridge between a green marketing orientation and improvements in sustainable performance. Furthermore, this study serves as a basis for hotel leaders to strengthen their commitment to environmental issues as part of their long-term business strategy.

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