



Achieving Sustainable Performance in the Hospitality Industry based on Environmental Management, Pro-Environmental Behavior, and Green Marketing Mix 7P

Bambang Hengky Rainanto^{✉1}, Abdul Talib Bon², Jonathan van Melle³, Yuari Farradia⁴, Ani Mekaniwati⁵

Department of Tourism, Institut Bisnis dan Informatika Kesatuan, Bogor, Indonesia¹

Department of Production and Operations Management, Universiti Tun Hussein Onn Malaysia, Malaysia²

Avans School of Business and Entrepreneurship, Avans University of Applied Sciences, Netherlands³

Department of Management (Marketing), University of Malaysia Terengganu, Malaysia⁴

Department of Bioentrepreneur, Institut Bisnis dan Informatika Kesatuan, Bogor, Indonesia⁵

Info Article

History Article:
Submitted 2 March 2023
Revised 4 May 2023
Accepted 31 May 2023

Keywords:
green marketing mix 7p's;
environmental management
system; pro-environmental
behavior; sustainable
performance

Abstract

The tourism sector is an important sector because it can grow a country's economy through foreign exchange. However, if not managed properly, tourism can also have negative impacts. This research was located in East Java Province, Indonesia with 228 respondents at the Hotel Manager level. This research aims to develop a relationship model between the Environmental Management System (EMS), Pro-Environmental Behavior (PEB), and the Green Marketing Mix (GMM) as a mediator to achieve Sustainable Industrial Performance (SIP) with 17 hypotheses. Using quantitative methods through surveys and processing using SmartPLS 3. The research results stated that 14 hypotheses were accepted, but 3 hypotheses were rejected. The research results show that the implementation of EMS has a significant relationship with economic and social performance but has no relationship with environmental performance. PEB directly has a significant relationship with environmental performance but not with economic and social performance. GMM has a significant relationship with the three elements of SIP. GMM is also a suitable partial mediator for EMS and PEB to achieve SIP.

Mewujudkan Kinerja Berkelanjutan di Industri Perhotelan berdasarkan Manajemen Lingkungan, Perilaku dan Green Marketing Mix 7P

Abstrak

Sektor pariwisata merupakan sektor yang penting karena dapat menumbuhkan perekonomian suatu negara melalui devisa. Namun apabila tidak dikelola secara benar, pariwisata juga memiliki dampak negatif. Penelitian ini berlokasi di Provinsi Jawa Timur, Indonesia dengan 228 responden di level Manager Hotel. Penelitian ini bertujuan untuk mengembangkan model hubungan antara Sistem Manajemen Lingkungan (EMS), Perilaku Pro Lingkungan (PEB), dengan mediator Bauran Pemasaran Hijau (GMM) untuk mencapai Kinerja Industri Berkelanjutan (SIP) dengan 17 hipotesis. Menggunakan metode kuantitatif melalui survei dan pengolahan menggunakan SmartPLS 3. Hasil penelitian menyatakan 14 hipotesis diterima, namun 3 hipotesis ditolak. Hasil penelitian menunjukkan bahwa penerapan EMS memiliki hubungan signifikan dengan kinerja ekonomi dan sosial tetapi tidak memiliki hubungan dengan kinerja lingkungan. PEB secara langsung memiliki hubungan yang signifikan dengan kinerja lingkungan tetapi tidak dengan ekonomi dan sosial. GMM memiliki hubungan yang signifikan dengan ketiga unsur SIP. GMM juga menjadi mediator parsial yang cocok untuk EMS dan PEB untuk mencapai SIP.

JEL Classification: M31; Q50; L83

How to Cite: Rainanto, B. H., Bon, A. T., Melle, J., Farradia, Y., & Mekaniwati, A. (2023). Achieving Sustainable Performance in the Hospitality Industry based on Environmental Management, Pro-Environmental Behavior, and Green Marketing Mix 7P. *Jurnal Dinamika Manajemen*, 14(2), 178-190.

INTRODUCTION

The very fast growth of the hospitality industry supports the tourism sector which has boosted the economy, but on the other hand, it can have an impact on the environment (Masa'deh et al., 2017). In several countries, the massive growth of tourism has had an environmental impact, for example in Spain there has been an increase in pollution, landfills, disruption of biodiversity, decreased environmental quality, and exploitation of water and water resources (Moliner et al., 2019) and requires a general structure to lend coherence to its approach. There is a need for empirical research to fathom the question of environmental sustainability and customer experience in the hospitality industry and to study the interaction between the two concepts. This paper aims to close these gaps by establishing the nature of the relationship between customers' perceptions of the environmental practices in tourism accommodation and their customer experiences and levels of satisfaction. The working hypotheses, based on a review of the literature on environmental sustainability and customer experience in the hospitality industry, are tested in an empirical study of 412 Spanish customers who stayed in various types of tourist accommodation. The main conclusion is that the relationship between environmental sustainability and customer experience in the hospitality industry can be demonstrated. This paper also validates a measurement scale based on the most accepted dimensionality of the construct: cognitive (think). This negative impact has also been studied in several other countries, such as Jordan (Masa'deh et al., 2017), the Netherlands (Postma & Schmuecker, 2017), Malaysia, Singapore, and Thailand (Azam et al., 2018), and Taiwan (Peng & Lee, 2019). In Indonesia, research on the negative effects of the hotel industry has been published (Lampung et al., 2020; Yuniati, 2021) and concluded the impact on disruption of the natural environment, built environment, and local culture.

The Environmental Management System (EMS) focuses on fulfilling commitments by organizations to several policies for environmental management. This commitment includes reducing negative environmental impacts from the organization's products, services, and activities (Rainanto et al., 2020) academics and practitioners pay attention to sustainable hotel industry performance by adopting an environmental management system (EMS).

Pro-Environmental Behavior (PEB) is human behavior that understands and implements principles aimed at protecting the environment. The application of Pro-Environmental Behavior (PEB) is voluntary for the tourism industry, especially the hospitality industry (Fatoki, 2019; Li & Wu, 2019).

Green Marketing Mix 7Ps (GMM 7Ps) is a strategy for fulfilling 7 basic attributes that will support marketing activities while upholding environmental protection. The hotel industry needs to implement the Green Marketing Mix 7P's strategy to realize sustainable tourism (Rainanto et al., 2022b).

The hotel industry's business performance is considered successful and sustainability is realized from success in terms of the economy (business), preservation of the surrounding environment, and maintaining the socio-cultural conditions of the local community. Business continuity in the hospitality sector is not enough to be seen from the side of economic benefits, it is also necessary to look at it from the perspective of the surrounding environmental and social conditions (Pereira et al., 2021; Rainanto et al., 2022a; Sharpley, 2020).

Cities that have potential as tourist destinations tend to experience high growth in the number of hotels compared to other cities. This is because tourist destination cities are attractive economic potential for hospitality investors and tourist destinations. For some residents who "benefit" from their city becoming a tourist destination, this will be considered attractive, but for some other residents, this can be a problem (Rainanto, 2022). (Ilhami et al., 2020) stated that until 2019 there was

a traffic jam in Batu City, which is located in East Java Province, on certain days due to the large number of tourist vehicles entering the city. This is supported by data from the Central Bureau of Statistics for the City of Batu in 2019 which stated that visitors to tourist attractions and souvenir tours in Batu City in 2019 totaled 6,047,460 tourists with a total of 1,354 hotels (BPS Kota Batu, 2020). The ratio of the population of Batu City to the number of tourists coming to the city in 2019 is that the population of Batu City is 0.02% of the number of tourists (BPS Kota Batu, 2020).

The number of tourists in Batu City, Malang City, and Malang Regency in East Java Province increased rapidly at weekends. The arrival of these tourists caused congestion on several roads there. The results of the research on the noise level conducted on Jalan WR Supratman which is one of the main roads in Malang City, East Java Province on Sunday is 81.2 dBA - 86.1 dBA, while on Monday it is 72.0 dBA - 79, 1dBA (Putra & Setyabudiarso, 2022). By the Decree of the Minister of State for the Environment No. 48 of 1996, Appendix 1 includes a table regarding Noise Level Standards according to area designation. The standard threshold values for Noise Level according to the regulations include Housing and Settlements (55 dbA); Trade and Services (70 dbA); Office Building (dbA); Green Open Space (50 dbA); Industrial (70 dbA); Government and Public Facilities (60 dbA); Recreation (70 dbA) (KepMen LH No.48, 1999). Meanwhile, the Noise Threshold Value (NAV) according to Kepmenaker No. per-51/MEN/1999, ACGIH, 2008 and SNI 16-7063-2004 is 85 dB (Menteri Tenaga Kerja Republik Indonesia, 1999). Another negative effect is that the water discharge becomes weak at certain times. According to the Indonesian Forum for the Environment (WALHI) of East Java Province, the water quality index in East Java from 2016 to 2020 has decreased and is of concern and has a very concerning status. The data is also following the Statistical Report on Water Quality, Air and Land Cover issued

by the Ministry of Environment and Forestry, Directorate General of Pollution Control and Environmental Damage, which stated that the water quality of all major rivers in East Java Province was classified as heavily polluted from 2015 to 2020 (Kementerian Lingkungan Hidup dan Kehutanan, 2021). Based on the East Java Province Environmental Management Quality Index Report. WALHI (2020) notes that more than 800,000 hectares of forest in East Java have been damaged. Walhi (2021) stated that in East Java Province cumulatively based on BNPB records from 2013 to 2019 there have been 2676 hydrometeorological disasters.

In addition to the negative impacts of environmental conditions, there are also negative impacts from the economic sector, such as

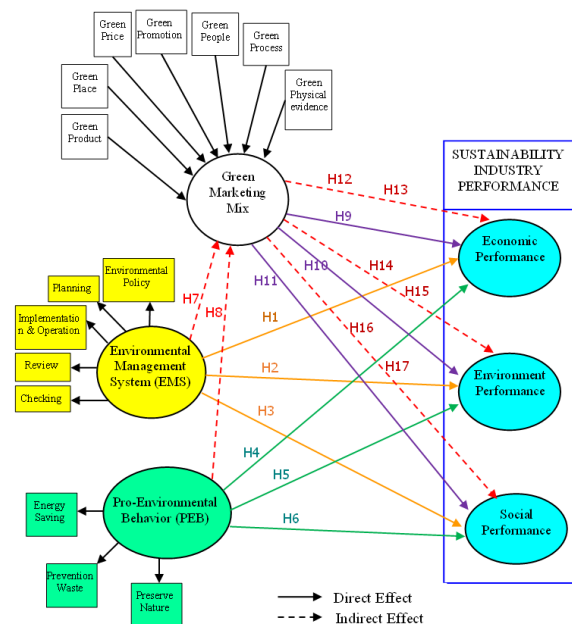


Figure 1. Research Hypothesis

high property prices which combine because many migrants are interested in owning homes in tourist destinations. Massive property development has also reduced the area of paddy fields and open land in these tourist destinations. (Hengky & Kikvidze, 2021) reports that the area of land in Malang is getting narrower every year. This is due to the conversion of land into residential and industrial areas.

Currently, the area of agricultural land in the city of Malang, especially for rice farming, is only 821 hectares out of 1,104 hectares. One of the impacts felt is the frequent occurrence of floods in several areas of Malang Metropolitan in recent years. If this negative impact is left unchecked, it will affect the comfort of the Malang Metropolitan City.

The World Tourism Organization (WTO) defines Sustainable Tourism as: "Tourism that takes into account its current and future economic, environmental, and social impacts, meeting the needs of consumers, the environment, industry, and local communities". The concept of sustainable tourism states that tourism development should not damage nature, the environment, or land, especially agricultural land (Guanabara et al., 2013). UNWTO's conceptual definition of sustainable tourism must: (i) Make optimal use of environmental resources, which are a key element in tourism development, safeguarding important ecological processes and helping to preserve the natural heritage and biodiversity; (ii) Respect the socio-cultural authenticity of the host communities, preserve the cultural heritage and traditional values that they have built and live by, and contribute to intercultural understanding and tolerance; (iii) Ensure proper and long-term economic operations, provide socio-economic benefits that are distributed fairly to all stakeholders, including stable employment and income opportunities and social services for local communities, and contribute to poverty alleviation.

There are three sustainable performances for industrial companies along with details on their constituent parameters (Hourneaux et al., 2018). The three sustainable performances include 1. Sustainable Environmental Performance, consisting of (a) Reduction of wastewater, (b) Reduction of emissions, and waste, (c) Reduction of costs for environmental aspects of products and services, (d) Environmental compliance, (e) Reduction costs for common environmental problems; 2. Sustainable Economic Performance, consisting of (a) Profit

from operations, (b) Sales growth, (c) Return on equity, (d) Return on investment, (e) Cost per unit produced, (f) Net cash flow, (g) Market share, (h) On-time delivery, (i) Customer response time, (j) Number of warranty claims, (k) Number of customer complaints, (l) Customer satisfaction survey, (m) Material efficiency variations; 3. Sustainable Social Performance, consisting of (a) Social commitment, (b) Environmental preservation, (c) Increasing employee job satisfaction, (d) Training and education, and (e) Compliance with products and services.

The novelties of the research are measuring Sustainable Performance in the Hospitality Industry based on an Environmental Management System, Behavior that supports the environment, and the application of the Green Marketing Mix 7P as a mediator. The measurement of sustainable performance for the hotel industry is something new in research because what usually measures sustainable performance is done in the goods or manufacturing industries.

Hypothesis Development

Relationship between Two or More Variables

The hypothesis that forms the basis of this study is 17 relationships. The development of 17 hypotheses is based on a literature review of the dependent to independent variables, as well as the moderator variable which is the link between the dependent and independent variables. 11 hypotheses are directly related, and 6 hypotheses that are indirectly related using the Green Marketing Mix 7P (GMM 7's) mediation. The research hypothesis in this study is in Figure 1 below.

The 17 hypotheses in this study are proposed in detail as follows:

H1: The EMS has a significant and direct relationship to sustainable economic performance

H2: The EMS has a significant and direct relationship to environmental performance

H3: The EMS has a significant and direct relationship to social performance

Table 1. Reliability Value of Reflective Construct

Reflective Construct	Items	Loading Factor (> 0.7)	AVE (> 0.5)	Composite Reliability (>0.7)	Cronbach's Alpha ($\alpha \geq 0.70$)
EMS					
Environmental Policy			.760	.927	.894
	EnvPolicy1	.890			
	EnvPolicy 2	.905			
	EnvPolicy 3	.882			
	EnvPolicy 4	.807			
Planning			.781	.934	.906
	Plan5	.861			
	Plan6	.896			
	Plan7	.905			
	Plan8	.872			
Implementation and Operation			.794	.939	.912
	ImlOpr9	.896			
	ImlOpr10	.938			
	ImlOpr11	.932			
	ImlOpr12	.790			
Checking and Corrective Action			.961	.980	.959
	CheckCor13	.980			
	CheckCor14	.980			
Management Review			.821	.948	.927
	MgtRev15	.871			
	MgtRev16	.908			
	MgtRev17	.916			
	MgtRev18	.929			
PEB					
Save Energy			.844	.942	.907
	EnSav19	.936			
	EnSav20	.955			
	EnSav21	.863			
Waste Prevention			.695	.872	.781
	PrevWaste22	.861			
	PrevWaste23	.860			
	PrevWaste24	.777			
Nature Preservation			.803	.942	.917
	PresNat25	.828			
	PresNat26	.911			
	PresNat27	.922			
	PresNat28	.919			

Environmental Performance			.592	.853	.894
	EnvSust57	.771			
	EnvSust58	.787			
	EnvSust59	.792			
	EnvSust60	.727			
Economics Performance			.774	.954	.942
	EconSust61	.867			
	EconSust62	.843			
	EconSust63	.910			
	EconSust64	.908			
	EconSust65	.897			
	EconSust66	.853			
Social Performance			.789	.949	.933
	SosSust67	.847			
	SosSust68	.891			
	SosSust69	.935			
	SosSust70	.923			
	SosSust71	.842			

H4: The PEB has a significant and direct relationship to economic sustainability

H6: The PEB has a significant and direct relationship to social sustainability

H5: The PEB has a significant and direct relationship to environmental sustainability

H7: The EMS directly has a significant relationship on GMM

Table 2. Measurement of Two-Stage Process for Second-Order (Reflective – Formative)

Construct	Item	Loading Factor	Ave	Composite Reliability	Weight	VIF	T-Values Weights	P Value Weight
Reflective Model Second Order								
EMS			.739	.934				
	Environ. Policy	.880						
	Planning	.908						
	Implement & Operation	.911						
	Check & Corrective Act.	.735						
	Management Review	.873						
PEB			.807	.926				
	Save Energy	.877						
	Waste Prevention	.915						
	Nature Preservation	.902						

Environ. Sustainable Perform		.592	.853
Environ. Sustain57	.773		
Environ. Sustain58	.783		
Environ. Sustain59	.792		
Environ. Sustain60	.727		
Economics Sustainable Perform		.774	.954
Economics Sustain61	.869		
Economics Sustain62	.845		
Economics Sustain63	.910		
Economics Sustain64	.906		
Economics Sustain65	.895		
Economics Sustain66	.854		
Social Sustainable Perform		.789	.949
Social Sustainable67	.845		
Social Sustainable68	.891		
Social Sustainable69	.936		
Social Sustainable70	.924		
Social Sustainable71	.842		

Formative Model Second Order

GMM

Green Product	.151	2.347	3.331	.001
Green Place	.065	4.227	1.117	.264
Green Price	.169	3.046	3.337	.001
Green Promotion	.030	2.984	.674	.500
Green Process	.213	2.200	4.817	.000
Green People	.393	1.865	9.632	.000
Green Physical Evidence	.191	4.161	3.027	.002

- H8: The PEB directly has a significant relationship on GMM
- H9: The GMM has a significant and direct relationship to economic sustainability
- H10: The GMM has a significant and direct relationship to environmental sustainability
- H11: The GMM has a significant and direct relationship to social sustainability
- H12: The GMM mediates between EMS and economic sustainable performance
- H13: The GMM mediates between PEB and economic sustainable performance

- H14: The GMM mediates between EMS and environmentally sustainable performance
- H15: The GMM mediates between PEB and environmentally sustainable performance
- H16: The GMM mediates between EMS and social sustainable performance
- H17: The GMM mediates between PEB and social sustainability

METHOD

This research method was chosen quan-

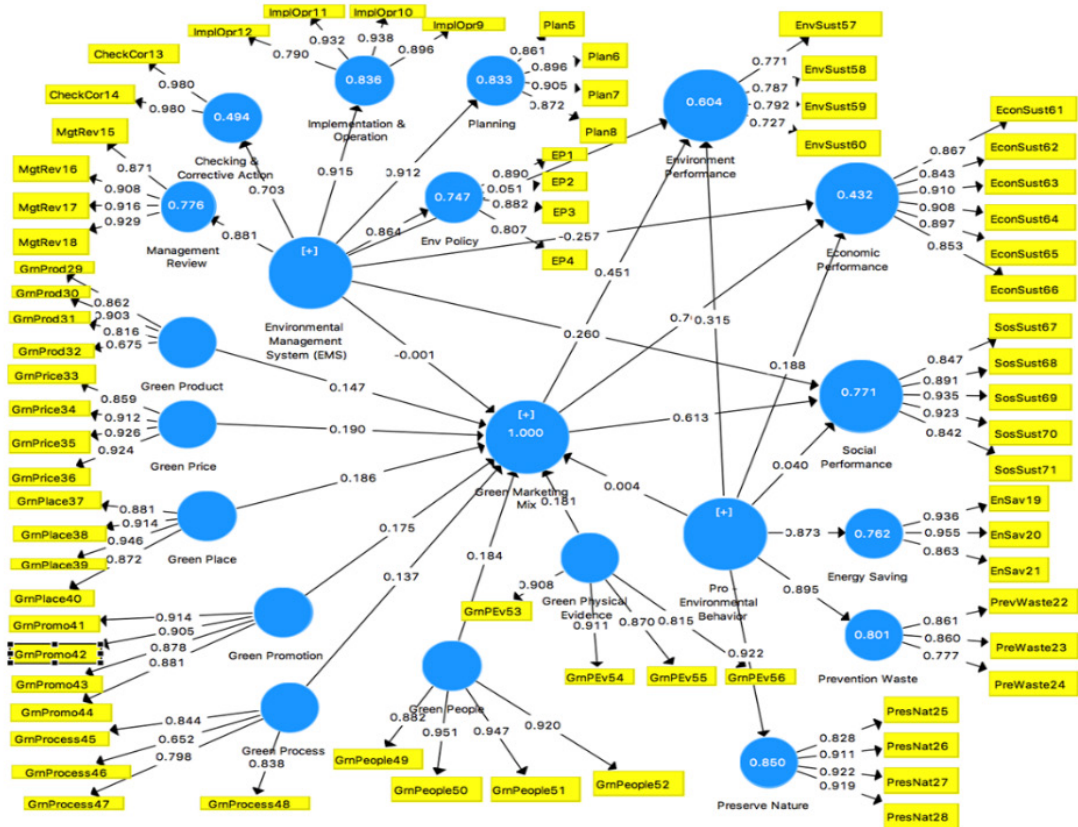


Figure 2. First Order Construct

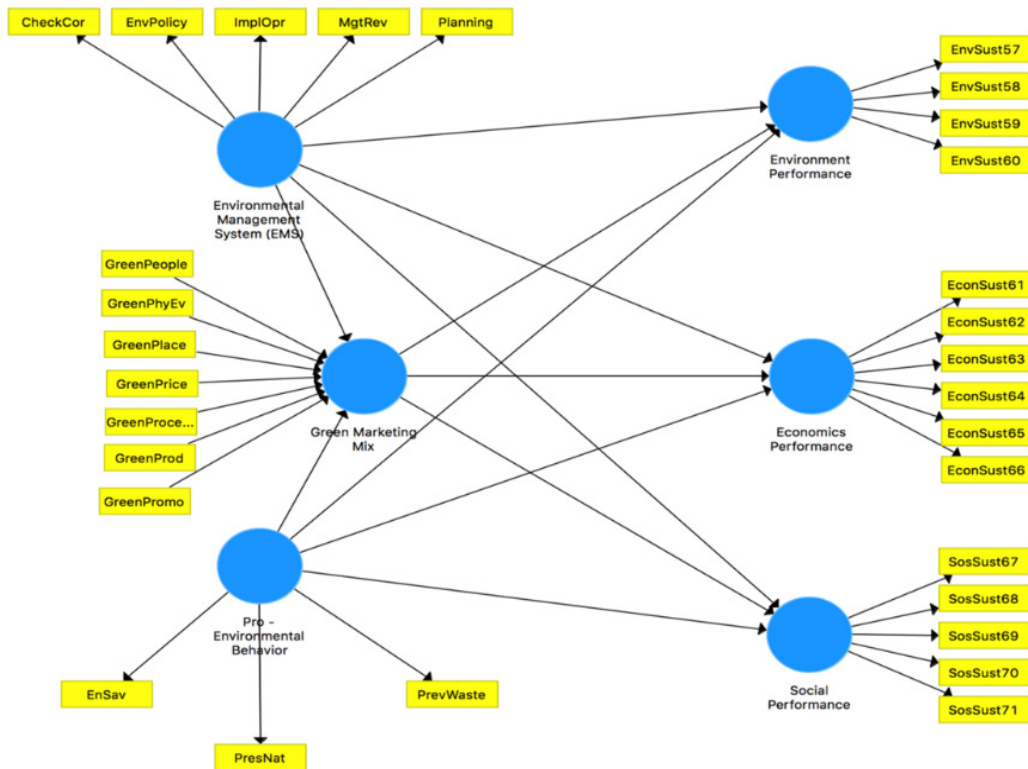


Figure 3. Second Order Construct

titatively by collecting primary data as the main source of the data being analyzed. A total of 228 respondents with the position of a hotel manager or general manager are the basis for calculating the analysis.

This study uses a simple sampling method because the selection of the sample is completely random and member of the hotel industry population has an equal chance of being selected to be part of the sample. Furt-

Table 3. Hypothesis Testing (Direct Effect Result Test)

Hypothesis	Original Sample (O) / β	Std Dev/ Stand Error	T stat t-value (>1.645)	p-value (<0.10)	R ²	f ² (≥ 0.02)	Q ² (> 0)	Decision
H1 EMS → Economy SP	-0.262	0.103	2.545	0.005	.421	0.028	0.295	Supported
H2 EMS → Environ. SP	-0.018	0.098	0.187	0.426	.625	0.000	0.334	Un-Support
H3 EMS → Social SP	0.250	0.075	3.330	0.000	0.763	0.062	0.561	Supported
H4 PEB → Economy SP	0.125	0.109	1.149	0.125	0.421	0.006	0.295	Un-Support
H5 PEB → Environ. SP	0.202	0.102	1.976	0.024	0.625	0.025	0.334	Supported
H6 PEB → Social SP	-0.029	0.070	0.417	0.338	0.763	0.001	0.561	Un-Support
H7 EMS → GMM 7P's	0.465	0.062	7.503	0.000	0.814	0.373	0.486	Supported
H8 PEB → GMM 7P's	0.480	0.060	8.050	0.000	0.814	0.398	0.486	Supported
H9 GMM → Economy SP	0.753	0.113	6.641	0.000	0.421	0.182	0.486	Supported
H10 GMM → Environ. SP	0.626	0.100	6.284	0.000	0.625	0.194	0.486	Supported
H11 GMM → Social SP	0.675	0.072	9.340	0.000	0.763	0.357	0.486	Supported

Table 4. Hypothesis Testing on Mediating

Hypothesis	Original Sample (O) / β	Std Dev/ Stand Error	T statistic t-value (> 1.96)	p-value 2.5%	Confidence Interval (BC) 97.5%		Decision
H12 EMS → GMM → Economy SP	0.350	0.075	4.650	0.000	0.215	0.503	Supported
H13 EMS → GMM → Environ. SP	0.291	0.061	4.798	0.000	0.181	0.417	Supported
H14 EMS → GMM → Social SP	0.314	0.052	6.057	0.000	0.220	0.422	Supported
H15 PEB → GMM → Economy SP	0.362	0.070	5.183	0.000	0.230	0.501	Supported

Table 4. Hypothesis Testing on Mediating

Hypothesis	Original Sample (O)/β	Std Dev/ Stand Error	T statistic t-value (> 1.96)	p-value 2.5%	Confidence Interval (BC)		Decision
					97.5%	97.5%	
H16 PEB → GMM → Environ. SP	0.300	0.064	4.730	0.000	0.177	0.428	Supported
H17 PEB → GMM → Social SP	0.324	0.057	5.662	0.000	0.226	0.448	Supported

hermore, the use of a purposive sampling method was because the respondents selected as questionnaire fillers are hotel employees with the position of General Manager or Manager. The reason for selecting respondents at the Manager or General Manager level is because

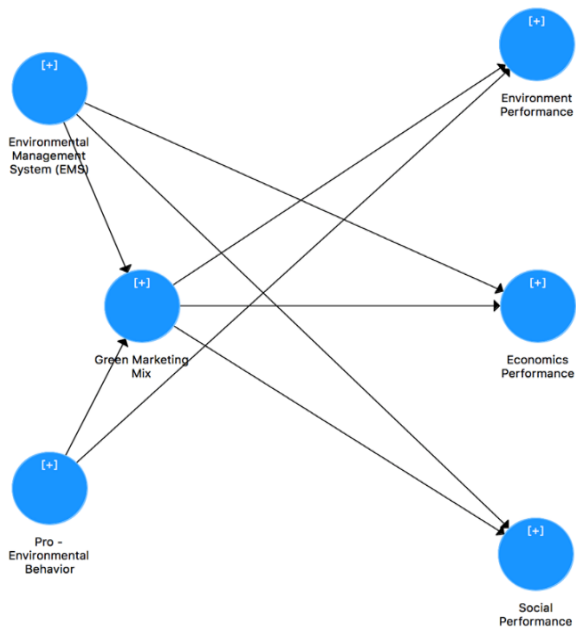


Figure 3. The Results of Full Model Analysis

those two positions understand and are competent with matters relating to policies carried out by hotel management. These policies, among others, relate to EMS, PEB, and GMM toward SIP.

Research analysis based on research objectives: (1) Research analysis to find out the direct relationship between the X and Mediator variables with the Sustainable Industry Performance variable using Smart-PLS 3; (2) Research analysis to determine the recommended relationship model between variable X and Me-

diator with the Sustainable Industry Performance variable using Smart-PLS 3.

RESULT AND DISCUSSION

The results of the analysis using Smart PLS 3 through several stages of the process. The stages of the process include Measurement of Construct Variable, Model validation, Assessment of measurement model, Measurement validity of first-order construct – reflective model, Loading Factor, Convergent Validity – Average Variance Extracted (AVE), Convergent Validity – Composite Reliability (CR), Cronbach’s Alpha (α), Cross Loading, Fornell-Larcker Criterion, Heterotrait-monotrait (HTMT), Measurement Model Result – Outer model, Validity and Reliability of Second-Order Construct – Two-Stage Approach, Two stage approach (reflective-formative measurement model), Structural model/inner model measurement, Collinearity statistics (VIF) – Outer & Inner VIF, Hypotheses Testing (Path Coefficient), Coefficient of Determinant (R²), Effect Size (f²), Predictive Relevance (Q²), Hypothesis Evaluation, Testing the mediating roles, and finally the Recommended Model.

Fornell & Larcker (1981) states that the Convergent Validity of Cronbach’s Alpha and Composite Reliability (CR) must be more than 0.70, while the Average Variance Extracted (AVE) value must pass 0.50. Based on the critical threshold value above, a summary of the measurement validity is shown in Table 1.

Measurement of the second-order construct with reflective and formative measurement indicators needs to be taken into account. A

two-stage approach was carried out before analyzing the structural model and the interaction between the mediator and moderator. A summary of all the results of the second-order PLS algorithm (Reflective - Formative) is presented in Table 2.

Two variables are considered Moderate, namely Environmental Policy and Checking and Correction Actions. The combined effect of the first order explaining the variance in Environmental Policy, Planning, Implementation & Operation, Inspection & Corrective Action, Management Review, Saving Energy, Waste Prevention, and Nature Preservation is accepted. The PLS algorithm for the results of R2 is presented in Figure 2 about First Order Construct below.

The second-order construct model in this research is reflective-formative. The higher-order constructs are for the mediator variable. Due to the formative nature of the mediator constructs, the recommended measurement approach for this type of HCM model is the two-stage PLS. The two-stage PLS approach takes advantage of the advantages of PLS path modeling to explicitly measure the values of latent variables, also be implemented in models with interaction effects between all constructs as measured by reflective indicators. Figure 2 below shows the results from the Second Order Construct.

The results of the hypothesis for a direct relationship are obtained from several criteria such as t-value, p-value, and f^2 . The relationship between variables in a positive (supported) result is based on a t-value above 1.645 (Hair et al., 2017) then the P-value must be less than 0.10 (Hair et al., 2017); and f^2 must be greater than 0.02. The details of the hypotheses are presented in Table 3 and Table 4.

After the results of the analysis with several previous stages, it was concluded that of the 17 initial hypotheses, it was proven that 14 hypotheses were accepted, while 3 hypotheses were rejected. Easily, the final results of the study table be seen in Figure 3 below.

The results of the research based on the analysis result model are that the Environmen-

tal Management System (EMS) variable supports Sustainable Economy, Social Sustainable, and Green Marketing Mix 7P. The Pro-Environmental Behavior (PEB) variable supports the Sustainable Environment and Green Marketing Mix 7P. The 7P Green Marketing Mix Variables are also three sustainable variables namely Economic, Environmental, and Social. The 7P Green Marketing Mix function as a mediator between EMS and PEB in Sustainable Industrial Performance is also supported. The novelty of this research for the hospitality industry is the 7P Green Marketing Mix, both directly and as a moderator for EMS and PEB will provide positive benefits for the sustainability of the hospitality businesses

The hypotheses that support the novelty of the results of this study include H12 (EMS - GMM - Economic Sustainable Performance); H13 (PEB - GMM - Economic Sustainable Performance); H14 (EMS - GMM - Environmental Sustainable Performance); H15 (PEB - GMM - Environmental Sustainable Performance); H16 (EMS - GMM - Social Sustainable Performance); and H17 (PEB - GMM - Social Sustainable Performance).

The benefits of this research can be used by several parties such as Hotel owners, Managers, Regional Governments, Central Government, and Hospitality Associations, all of that in the framework of creating sustainable tourism.

CONCLUSION AND RECOMMENDATION

There are seventeen hypotheses linking the Environmental Management System (EMS), Pro-Environmental Behavior (PEB) for Sustainable Industry Performance (SIP) with the Green Marketing Mix 7P's Mediation (GMM 7P's). Fourteen hypotheses are accepted and three hypotheses are rejected. Fourteen hypotheses were accepted, consisting of: H1, H3, H5, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, and H17. While the three hypotheses are rejected, namely: H2, H4, and H6. There are 11 hypotheses related to the direct interaction hypothesis, eight hypotheses are accepted, while

three are not accepted. The conclusion from the research results is that the Environmental Management System (EMS) supports Sustainable Economy, Social Sustainable, and Green Marketing Mix 7P. For Pro-Environmental Behavior (PEB) supports Sustainable Environment and Green Marketing Mix 7P. Then the Green Marketing Mix 7P supports the three sustainable variables, namely Economic, Environmental, and Social. The Green Marketing Mix 7P function as a mediator between EMS and PEB on Sustainable Industry Performance is also supported. The benefit of this research for the hotel industry is that implementing EMS and PEB through the 7P Green Marketing Mix will provide positive benefits for the sustainability of the hotel business. The limitation of this research is the scope of the research location which is only in East Java. On the other hand, there is the Covid-19 pandemic which has forced several hotels to not operate. The recommendation for further research is to expand the scope of research locations to other provinces so that it can become a policy decision in managing the hospitality industry in the Republic of Indonesia.

REFERENCES

- Azam, M., Alam, M. M., & Haroon Hafeez, M. (2018). Effect of Tourism on Environmental Pollution: Further Evidence from Malaysia, Singapore and Thailand. *Journal of Cleaner Production*, 190, 330–338.
- BPS Kota Batu. (2020). Kota Batu dalam Angka 2020. *Badan Pusat Statistik Kota Batu*, 250–255.
- Fatoki, O. (2019). Hotel Employees' Pro-Environmental Behavior: Effect of Leadership Behavior, Institutional Support, and Workplace Spirituality. *Sustainability (Switzerland)*, 11(15), 1-15.
- World Tourism Organization. (2013). *Sustainable Tourism for Development Guidebook - Enhancing capacities for Sustainable Tourism for development in developing countries*. Available at: <https://www.e-unwto.org/doi/book/10.18111/9789284415496>.
- Hengky, S. H., & Kikvidze, Z. (2021). Sustainable Coastal Tourism in Tanjung Kelayang, Indonesia. *Tourism Planning and Development*, 18(3), 365–370.
- Hourneaux, F., Gabriel, M. L. da S., & Gallardo-Vázquez, D. A. (2018). Triple Bottom Line and Sustainable Performance Measurement in Industrial Companies. *Revista de Gestao*, 25(4), 413–429.
- Ilhami, M. R., Anugrah Santaufanny, F. F., & Sinambella, R. (2020). Efektivitas Aver Viewer dalam Memantau Kemacetan Lalu Lintas di Kota Batu. *Jurnal Publisitas*, 7(1), 11–22.
- Kementerian Lingkungan Hidup dan Kehutanan. (2020). *Statistik Kualitas Air, Udara, dan Tutupan Lahan 2020*. Available at <https://ppkl.menlhk.go.id/website/filebox/1033/210930123917BUKU%20STATISTIK%20PPKL%202020%20>.
- KepMen LH No.48. (1999). Keputusan Menteri Negara Lingkungan Hidup No. 48 Tahun 1996 Tentang: Baku Tingkat Kebisingan. 48.
- Lampung, U. B., Rama, A., Barusman, P., Virgawenda, T. M. B., & Arwis, Y. A. (2020). Factors that Effect the Level of Consumers Loyalty for Budget Hotel in Indonesia. 2932 *Talent Development & Excellence*, 12(1), 2932–2942.
- Li, Q. C., & Wu, M. Y. (2019). Rationality or Morality? a Momparative Study of Pro-Environmental Intentions of Local and Nonlocal Visitors in Nature-Based Destinations. *Journal of Destination Marketing and Management*, 11, 130–139.
- Masa'deh, R., Nasseef, M. A., Suliman, M., & Albawab, M. (2017). The Effect of Hotel Development on Sustainable Tourism Development. *International Journal of Business Administration*, 8(4), 16.
- Menteri Tenaga Kerja Republik Indonesia. (1999). Nilai Ambang Batas Faktor Fisika di Tempat Kerja Menteri Tenaga Kerja Republik Indonesia. *Kep.51/Men/1999*, 15–20.
- Moliner, M. Á., Monferrer, D., Estrada, M., & Rodríguez, R. M. (2019). Environmental Sustainability and the Hospitality

- Customer Experience: a Study in Tourist Accommodation. *Sustainability (Switzerland)*, 11(19), 1-15.
- Putra, N. F., Setyabudiarso, H., Hendriarianti, E. (2022). Kota Malang Analysis of Noise Levels of W .R. *Jurnal Enviro Prodi Teknik Lingkungan – ITN Malang*, 10(2),1-8.
- Peng, X., & Lee, S. (2019). Self-Discipline or Self-Interest? the Antecedents of Hotel Employees' Pro-Environmental Behaviours. *Journal of Sustainable Tourism*, 27(9), 1457–1476.
- Pereira, V., Silva, G. M., & Dias, Á. (2021). Sustainability Practices in Hospitality: Case Study of a Luxury Hotel in Arrábida Natural Park. *Sustainability (Switzerland)*, 13(6), 1–21.
- Postma, A., & Schmuecker, D. (2017). Understanding and Overcoming Negative Impacts of Tourism in city Destinations: Conceptual Model and Strategic Framework. *Journal of Tourism Futures*, 3(2), 144–156.
- Rainanto, B. H. (2022). *Environmental Management System and Pro-Environmental Behavior with Green Marketing Mix as a Mediator for Sustainable Industry Performance in Hotel Industry in East Jawa Province, Indonesia*. (Disertation: Universiti Tun Hussein on Malaysia). <http://eprints.uthm.edu.my/8407/>
- Rainanto, B. H., Bon, A. T., & Purba, J. H. V. (2020). Environmental Management System (EMS) and Green Marketing Mix (7Ps) for Hotel Sustainable Industrial Performance: a Conceptual Model. *International Journal of Advanced Science and Technology*, 29(7), 3724–3732.
- Rainanto, B. H., Bon, A. T., & Purba, J. H. V. (2022). Developing the Conceptual Model of Sustainable Industrial Performance in the Hospitality Industry. *International Journal of Global Optimization and Its Application*, 1(2), 80–89.
- Rainanto, B. H., Bon, A. T., & Purba, J. H. V. (2022). Environmental Management System and Pro-Environmental Behavior in Realizing Sustainable Industry Performance: Mediating Role of Green Marketing Management. *International Journal of Global Optimization and Its Application*, 1(1), 12–21.
- Sharpley, R. (2020). Tourism, Sustainable Development and the Theoretical Divide: 20 Years on. *Journal of Sustainable Tourism*, 28(11), 1932–1946.
- Yuniati, N. (2021). Green Hotel Concept and Practices in Indonesia. *E-Journal of Tourism*, 8(2), 184.
- Undang-Undang Republik Indonesia No.4 tahun 1982 tentang Ketentuan-Ketentuan Pokok Pengelolaan Lingkungan Hidup (UPPLH)
- Undang-Undang Republik Indonesia No.23 tahun 1997 tentang Pengelolaan Lingkungan Hidup
- Undang-Undang Republik Indonesia No.32 tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup
- Undang-Undang Republik Indonesia No.90/1990 tentang Kepariwisata