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Original Research Article

Evaluating the Adoption of Sustainable Marketing Strategies towards Electronics Industries Business Performance

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ABSTRACT

The modern business environment requires the integration of green strategies into processes. Manufacturers of electronics products are among the many industries where the growing significance of sustainability issues significantly impacts businesses. As an essential part of these green strategies, green marketing techniques have the power to dramatically impact business success as well as environmental results. Therefore, using a stakeholder-driven empirical framework, this paper aims to investigate the impact of several aspects, including ethical pricing, sustainable marketing, eco-friendly products, and eco-friendly location, upon the business performance of electronic industries in India. This study uses a smart partial least square model, a potent analytical application, in order to clarify the complex connection involving green marketing techniques and electronics business success. An online survey was performed among the executives and managers of companies in the Indian electronics manufacturing industry. A total number of 175 questionnaires from managers and executives of the electronic business sector were gathered for the study. The study's findings suggested that green marketing factors have a major influence on the success of the Indian electronics manufacturing business's performance. In addition to the expanding body of information on green marketing, the research's results will be helpful to electronics companies looking to preserve or enhance their success in a cutthroat market while stepping up their efforts to be more sustainable.

KEYWORDS

Electronic manufacturing, Sustainable marketing, Ethical pricing, Eco-friendly product, Eco-friendly location, Business performance.

INTRODUCTION

Electronics manufacturing is one of the global economy's most dynamic and competitive sectors. It involves the production of various electronic devices and components used in multiple industries and applications. Electronic manufacturing significantly impacts environmental sustainability because it consumes energy and resources, produces waste and emissions, and thus impacts human health and well-being [1]. Improving durability in the electronics sector necessitates changing the creation, production, and disposal of electronic

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gadgets. The negative effects of electronic manufacturing on the environment and society are growing worse in a world that depends more and more on technology. In addition, reducing resource consumption, electronic waste, and environmental impact across the full product duration includes advancements in raw materials, manufacturing techniques, energy efficiency, recycling strategies, and social supply chain management. Enhancing sustainability in the electronics industry is an essential agent for change in the sector, given that it not only supports global ecological objectives but also responds to customer requests for cleaner and more ethical devices [2, 3]. Therefore, electronics manufacturers face increasing pressure from various parties to adopt sustainable marketing practices to improve their environmental performance and social responsibility [4].

A fundamental change in business and marketing has been brought about by the creation of sustainable marketing methods [5]. Companies are changing their methods to interact with clients and market their goods and services in response to increasing concerns about the environment and ethical issues. Sustainable marketing strategies emphasise long-term value creation while reducing adverse effects on people, the environment, and society. It entails examining social and moral issues in addition to environmental ones when developing marketing strategies [6]. Such strategies integrate accountability, transparency, and ethical consumption, demonstrating a dedication to establishing confidence in the company and satisfying the needs of a more conscious consumer group.

Sustainable marketing is a concept that integrates environmental, social, and economic aspects into marketing strategies and activities [7, 8]. It aims to create value for customers, organisations, and society by providing products and services that meet customer needs while minimising negative environmental and social impacts. Some sustainable marketing practices that electronics manufacturers can adopt include ethical pricing, eco-friendly product design, eco-friendly packaging, energy-efficient distribution, and social marketing campaigns [9].

Previous studies have mainly focused on other sectors, such as tourism, hospitality, retail, or banking, or used single or limited performance measures such as satisfaction, loyalty, and goodwill. A significant limitation of previous studies has been seen in the study. The study related to the electronic industry's sustainability-related green marketing has been covered less by the researcher, and it needs to consider the complex and multidimensional nature of business performance in electronics manufacturing, which includes financial, operational, innovation, customer, social, and environmental outcomes. However, there is a need for empirical evidence on how sustainable marketing practices influence business performance in the electronics manufacturing sector. Therefore, this study aims to fill this gap by examining the relationship between sustainable marketing practices and business performance in electronics production through a comprehensive and holistic approach.

The study components have been classified, and the related works are discussed in Section 2. The approaches are discussed in Section 3. The experiment's findings are presented in Section 4. Discussion is given in Section 5. The last section of this paper, Section 6, is the conclusion.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

A literature review critically examines the latest scientific research relevant to the topic under study. It is a crucial step in any research project, providing a basis for analysis and helping to define the context of the study. In this section, exploration of several studies, theories, and models previously developed have been studied, and it is critically analysed to identify gaps in the existing literature, inconsistencies, or areas that require further exploration. After reviewing the literature, hypotheses were formulated, and based on information from the literature review, predictive statements were tested using applicable statistics.

Sustainable marketing

Mukonza and Swarts [10] demonstrated that a green marketing approach improves a firm reputation and financial performance. By utilising recyclable and easily decomposable packaging, better prevention of pollution techniques, and more effective use of energy, green marketing is the dedication of a company or organisation to the production of safe, environmentally friendly goods and services. The association was established using both path evaluation and material analysis. The material suggests that businesses should use green marketing techniques to maintain their edge in the market, especially in the retail industry.

The research conducted by Luo *et al.* [11] utilised the "principal component analysis (PCA)" to assess the extent to which the metropolitan electronic economy has evolved, as well as many green city trademarks where available requests were utilised to indicate the phases of green innovation. The development of the internet-based economy may raise the amount of environmentally friendly innovation by indirect measures, such as enhancing the industrial framework, raising potential markets, and enhancing financial efficiency. The progressive difference-in-difference model built on the 'Broadband China' trial project additionally confirms that the advancement of the digital economy was capable of significantly advancing urban green technology.

Liao *et al.* [12] analysed the links to ascertain the reducing effects considering customer worth, mentality, and motivation to make green purchases of ecological advertising and green psychological benefits. Green consumer appreciation and thoughts about green items positively impacted environmentally friendly purchasing intention. Green psychological advantages (warm sparkle, self-expressive rewards, and natural experience) and ecological marketing (environmental promotion and word-of-mouth) influence the correlations between consumer value, attitude toward the green item, and green intent to purchase [13].

In addition, a study done by Alamsyah *et al.* [14] investigated the link between ecologically conscious advertising, marketing, and consumer awareness products in a way that affects their propensity to make purchases. The implemented strategy was to increase customer care and purchase intent for environmentally friendly goods. The marketing approach was being implemented more precisely. Additionally, through researching environmentally friendly products, their investigation can help the Indonesian government create a rule related to the global warming problem. Customer's understanding of environmentally friendly products increased, and green marketing strategies became increasingly popular.

The study taken by Shahzad *et al.* [15] created and tested the green innovation adoption (GIA) model, which was based on a single model of technology adoption. Using "Structural equation modelling (SEM)" and "artificial neural network (ANN)" techniques, the study showed that all of the research model's green integrated constructs, including expected performance, anticipated effort, hedonic inspiration, social impact, enabling circumstances, and invention cost, can predict sustainable behavioural intention. Green enabling conditions provide the highest relative relevance value for GIA, whereas ANN defines the durability and significance of all integrated constructs.

The research conducted by Mathiyazhagan *et al.* [16] outlined a structure for executing sustainable production methods in the manufacturing of electrical and electronic components, with an emphasis on emerging economies. They addressed integrating sustainable practices into lean manufacturing processes, providing insights into enhancing environmental and economic performance in the studied industry.

Eco-friendly location

Lam and Li, in their study [17], examined the current state of significant harbours worldwide, including the applications of green marketing (GM). According to GM theories, the harbours' reports, methods, structures, and functions indicate their green marketing status. Cross-case analysis was used to find similarities and trends across many benchmarked ports

and develop a green marketing focus. The cross-case investigation was valuable because it offers a worldwide viewpoint from important geographical locations. Obtaining and maintaining clients that respect sustainability was an essential motivator for sustainability.

Research conducted by Rainanto *et al.* [18] examined the way Green Marketing management affects attaining a sustainable and environmentally conscious industrial sector. The implementation of an "Environmental Management System (EMS)" and the cultivation of an environmentally conscious culture are crucial for the hotel sector's performance. A group of 136 individuals who held management or general manager positions participated in the research questionnaire. Increased tourist attractions promote more travellers and other industries that benefit from hospitality. A significant region's growing hospitality industry will impact the surrounding environment, including the organic, interpersonal, and financial aspects.

In their study [19], Li *et al.* examined the impact of innovative green technologies on business sustainability in China's energy industry from the supervisor's perspective via structural equation modelling (SEM). Additionally, the study demonstrated how green innovation greatly impacted energy-intensive industrial business sustainability. Different models that looked at the second-order components of innovative green practices and company sustainability were used to evaluate the inquiry's credibility and support its findings. It provided additional assistance for the development of a low-carbon, environmentally friendly marketplace and achieving an environmentally friendly goal.

Khan *et al.* [20] investigated how blockchain could improve supply chain sustainability. They explored using blockchain to build transparent and traceable supply chain networks, which can encourage sustainability by lowering inefficiencies and enabling improved monitoring of environmental and ethical practices throughout the supply chain.

Ethical prices

Negi *et al.* [21] examined how a green marketing mix approach affects an organisation's general success and financial performance by utilising the example of Jordanian auto dealers. The investigation discovered that the impacts of age, product, and marketing on the firm's financial success were considerable and favourable. These were the effects of size, training, expertise, goods, transportation, physical evidence, and procedure on the firm's overall performance. According to the data, government action limits how education and green marketing strategies affect a company's overall success.

Al-Murad's study [22] assessed the impact of GM strategy initiatives on market performance and competitive advantage. The findings were evaluated using Smart PLS 3.2.9 (www.smartpls.com). The results of partial least squares (PLS) route analysis provided evidence for the direct relationships between components and market performance. Based on the results, competitive advantage partially moderates the relationship between green marketing tactics and market performance to a certain degree.

The study conducted by Khan *et al.* [23] demonstrated the diverse ways in which sustainable consumers' purchasing behaviour can be influenced by adjusting product qualities and implementing green marketing tactics, aligning with the hypotheses stated in the study. Finally, the study presented the findings and interpretations of the results, providing valuable insights for managers seeking to design impactful green marketing campaigns aimed at influencing consumers' buying intentions towards environmentally friendly items.

The study done by Lee and Jin [24] examined the role that ethical marketing performs in establishing connections between consumers and brands. They investigated how consumers perceive and respond to ethical difficulties in marketing practices, focusing on how these problems affect customer trust and brand loyalty. They also analysed the importance of the relationship between ethics and marketing from the perspective of consumer behaviour and sustainability [25].

Eco-friendly products

Kaur *et al*., in their research [26], examined the relationship between environmentally friendly advertising methods and consumers' inclinations to buy green in emerging economies. The emphasis was on young people's plans to buy environmentally friendly products for personal use and the way environmentally friendly advertising campaigns might impact those intentions. Consumers' environmental attitudes and the impact of their demographics as control factors were also evaluated. Individual customer's intentions to make green purchases vary depending on their income and level of education. Marketers have the opportunity to articulate their primary areas of excellence and the path to the eventual concentration of their energies.

One study taken by Sun and Wang [27] enhanced the variables that affect consumer consumption of sustainable goods in emerging economies in the framework of social networking promotion. The investigation intended to track customer perceptions regarding and intent to buy sustainable goods on internet platforms and to investigate the connections between social media advertising, perceived customer efficacy (PCE), product understanding, personality norms, perceived control of behaviour, price awareness, and attitudes toward and intentions to buy sustainable goods.

Dinh *et al*., in their study [28], utilised the stimulus-organism-response paradigm to investigate the direct influence of green marketing equipment on the factors pertaining to ecological reputation and intention to buy green. The information underwent analysis utilising the partial least squares (PLS) strategy, a technology employed inside the domain of modelling structural equations (SEM). The findings of the study make notable additions to the comprehension of the effects of beliefs regarding green sponsorship and marketing on several aspects of green company reputation, along with the creation and administration of green branding equity, including intentions to buy green.

Rehman *et al.* [29] examined the connection between environmentally friendly banking procedures and both their immediate and long-term effects on the environment. Testing the links between variables has been done using structural equation modelling. Regarding policy-making and financial investments in green initiatives, the influence of environmentally friendly methods has been recognised as having a considerably higher impact. To find and identify the factors supporting an acceptable degree of environmentally friendly banking in the nation, interested parties can use the investigation's suggested framework.

The research conducted by Pietrelli *et al.* [30] highlighted the methods for recovering metal from printed circuit boards that were both affordable and ecologically friendly. They investigated sustainable strategies to extract valuable metals, decrease environmental effects, and promote recycling. They provided insights into creative ways for metal recovery in the framework of electronic waste management, which was vital for conserving resources and minimising the negative consequences of e-waste disposal [31].

Businesses performance

Al-Shammari *et al.* [32] examined the correlation between the implementation of green human resource management practices and green innovation and their influence on sustainability performance, as assessed through the Triple Bottom Line framework. They provided evidence that organisations' adoption of Green Innovation (GI) can be improved by including Green Human Resource Management (GHRM) practices, hence contributing to the overall sustainability of these organisations. Furthermore, the research both validates and enriches conventional comprehension. The study also demonstrated that implementing environmental management methods within the domains of human resources and innovation can lead to enhanced sustainability.

The study conducted by Abubakar *et al.* [33] examined the influence of corporate social responsibility (CSR) on business performance by analysing the adoption of environmentally friendly practices. Empirical evidence demonstrated a considerable impact of CSR and green

behaviour on business performance. Moreover, the results indicated that adopting environmentally friendly practices has a mediating role in the connections between CSR and the financial success of firms.

Another study [34] investigated the function of a sustainability plan in the relationship between an online company's strategy and financial performance. It revealed that a sustainability plan enhances the relationship between leadership capacity and economic achievement but restricts the association with operational effectiveness and its finances. Four established hypotheses were examined using a regression approach to investigate the relationship between economic achievement, ecological plan, and digital business strategy. The relationship between operational competence and financial performance was impacted by managerial ability and economic performance.

Furthermore, Jung *et al.* [35] examined the impact of sustainable marketing strategies on consumer brand loyalty in the traditional fashion business. They focused on consumer loyalty to conventional companies, which was impacted by eco-friendly initiatives and ethical practices in the fashion industry. The results provided insight into sustainability's role in influencing brand loyalty in this industry.

Hypotheses

This study proposes the following hypotheses:

Hypothesis 1 (H1): The relationship between having an eco-friendly product and business performance is supported.

Hypothesis 2 (H2): The relationship between ethical pricing and business performance is supported.

Hypothesis 3 (H3): The relationship between having an eco-friendly location and business performance is not supported.

Hypothesis 4 (H4): The relationship between sustainable marketing and business performance is supported.

RESEARCH METHODS

Creating environmentally friendly marketing techniques entails creating methods that market goods or services and consider their effects on the environment, society, and the economy. The overall approach promotes a business model that is more socially and environmentally responsible, which is advantageous to the organisation and its customers. **Figure 1** shows the conceptual structural model, and **Table 1** shows the study requirements.

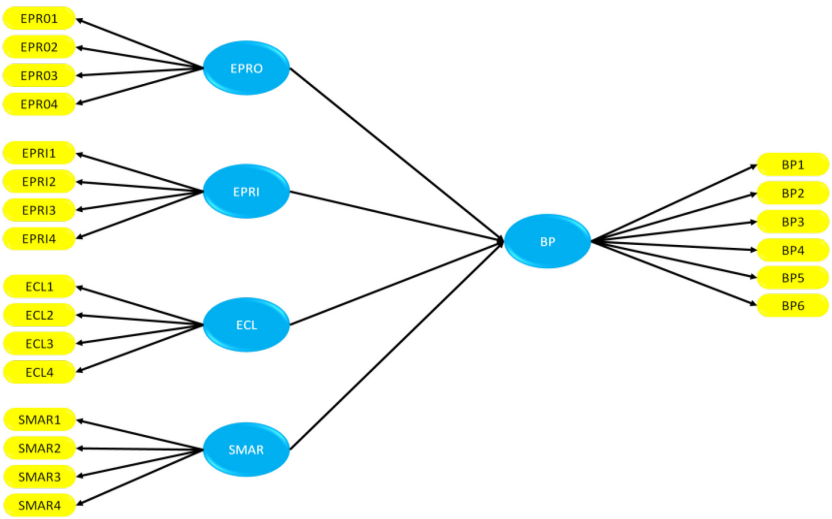

Figure 1. Conceptual structural model

Table 1. Study requirements for measurement

Variables	Items
Sustainable marketing	1. Customers who buy green items from our company provide exclusive discounts, coupons, and other benefits.
	2. The adverts for our company's environmentally friendly goods provide many details regarding those products.
	3. Our company's marketing effort emphasises our products' harmful effects.
	4. Our company routinely adds material about protecting the environment to our webpage.
Eco-friendly location	5. We work with the other channel participants to establish shared ecological preservation objectives.
	6. We work with vendors and distributors to create environmentally responsible marketing campaigns.
	7. We urge retailers and vendors to include environmental sensitivity and accountability in their operations.
	8. We provide clear guidelines and requirements for environmental responsibility and track channel participants' responses.
Ethical prices	9. The price of the good includes the cost of ecological conformity.
	10. We use the cost advantages of employing environmentally friendly procedures to improve products pricing.
	11. We leverage the commercial success of several products and services that are environmentally friendly to lower their costs.
	12. By using environmentally friendly processes, we can provide our consumers with low costs.
Eco-friendly product	13. We make environmentally friendly goods.
	14. To make our goods more environmentally friendly, we work to enhance their quality and aesthetic.
	15. To emphasise ecological advantages, we frequently change the labelling and packaging choices we make.
	16. To be environmentally sustainable, we take care when selecting our products' components and initial supplies.
Business performance	17. A fresh market is open to our company.
	18. Our business can grow by margins or share of the market.
	19. Our company's edge over the competition can grow.
	20. Our business can boost the company's profit.
	21. Satisfaction with clients might rise attributable to our business.
	22. Our company's brand reputation and recognition can improve within the industry.

The study adopts the sampling strategy since it is an effective way to understand and explore the components of the marketing mix for environmental sustainability. The sampling strategy is used since it is the most effective for small populations and includes information about the entire target population. The investigation's target participants are executives or business development managers from Indian Electrical & Electronics (E&E) companies enrolled with the IEM. The study targeted respondents of Indian E&E factor's production managers and marketing directors, executives, and managers of marketing or business development officers employed there. This population was chosen because, compared to other people, these professionals have more expertise and knowledge of their business strategies. The individual organisation or firm will be the unit of investigation to determine how the green marketing strategy would affect sustainable performance. The data were collected using online convenience and snowball sampling methods. Using the electronic communication method, targeted respondents (Executives and Managers) in 195 E&E enterprises in India were invited to participate in the study to ensure the content's relevancy, readability, and completeness. Out of the total number of 175 responses that were obtained, 160 responses from completed surveys

were finally considered for the analysis of the study [36]. Table 2 displays the overview of respondent profiles.

Table 2. Summary of participant profiles

No.	Demographic influences		Frequency	Share [%]
1	Local manage	Ownership	44	28.6
	Foreign manage		36	28.5
	Joint local & foreign		80	43
	Total		160	100
2	Electronic components	Sub-sector	70	33.5
	Industrial electronics		20	18.6
	Consumer electronics		24	15
	Electrical products		26	18
	Other		20	14.8
	Total		160	100
3	Retail products (phone, computer, automobile)	Initial products	58	36
	Industrial goods (machinery, devices)		50	34.8
	Other		52	29.2
	Overall		160	100
4	Less than 6 years	Business operation	20	11.6
	6–10 years		20	12.4
	11–15 years		24	12
	16–20 years		30	16.5
	More than 20 years		66	47.5
	Total		160	100
5	Below $4 \cdot 10^6$ INR	Total revenue	20	9.6
	$4 \cdot 10^6$ to $8 \cdot 10^6$ INR		46	21.2
	$8 \cdot 10^6$ to $12 \cdot 10^6$ INR		40	16.2
	$12 \cdot 10^6$ to $16 \cdot 10^6$ INR		24	14.6
	Above $16 \cdot 10^6$ INR		30	38.4
	Overall		160	100
6	1–5 years	Experience	44	23.4
	6–10 years		40	31.8
	11–15 years		30	22.3
	16–20 years		20	12.6
	More than 20 years		26	9.8
	Overall		160	100
7	Female	Gender	60	52.4
	Male		100	47.6
	Total		160	100
8	21–30	Age	50	19.6
	31–40		30	32.2
	41–50		36	28.8
	51–60		44	19.4
	Total		160	100

The survey instrument was validated, and the key hypotheses were tested in this quantitative investigation using appropriate statistical tests. As in India, the E&E sector is substantial. Hence, this industry was examined since it dominates India's industrial sector and considerably boosts exports.

The Questionnaire had six primary elements using a Likert scale of 1 to 5 for the study, such as 1. Respondent Information: This section comprised five questions designed to learn more about the respondents. 2. Ethical Pricing: This section consisted of four questions that examined Ethical Pricing for electronic products. 3. Sustainable Marketing: This section consisted of four questions that examined the importance of sustainable marketing strategies. 4. Eco-Friendly Product: The section included four questions about the development and production of eco-friendly electronic products. 5. Eco-Friendly Location: This section consisted of four questions that examined the company's current location in terms of supporting eco-friendly practices. 6. Success of Indian electronics manufacturing businesses performance: The final section included six questions about Indian companies that manufacture electronics. The received responses were analysed with the PLS method.

RESULT ANALYSIS

Structured questionnaires were distributed to the business development and marketing managers working for Indian E&E production companies. As already mentioned, all 175 questionnaires were received successfully, and 160 of them had responses to every question to the further analysis.

Measurement model

The results of the estimation model demonstrate the association connecting the latent factor and the visible variables. Initially, the conceptual framework for the study needs to be tested, and the reliability of the measurement method needs to be established.

The range of the composite dependability values is 0.8784 to 0.9386, and they are all more than 0.8. The AVE varies between 0.6585 and 0.7948. **Figure 2** and **Figure 3** show the CR and AVE performance. The AVE must be greater than 0.6.

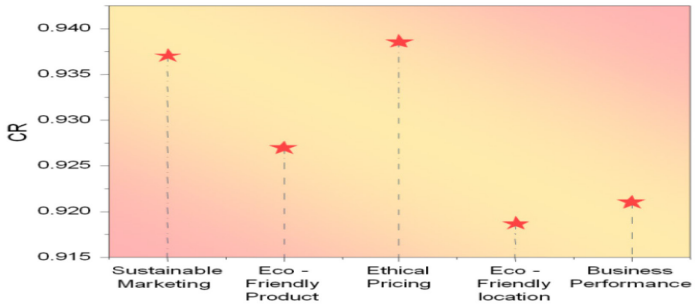

Figure 2. CR performance

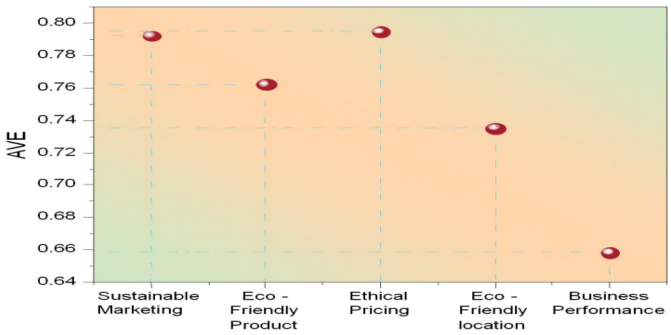

Figure 3. AVE performance

In the final analysis, the measurement model effectively demonstrates the conceptual model's convergent validity. This study also examined the reliability of the discriminant. Comparing the squared connections between the concept and the variance generalised for an assumption represents what discriminant validity means.

The convergent reliability of this study is displayed in **Table 3**. Each of the item reliability measurements is referred to as loading. All reliability levels must exceed the advised threshold of 0.60, which designates a specific figure for each question. The study employed Cronbach's alpha's item consistent reliability value to verify the dependability. The results are greater than 0.60 and vary from 0.7692 to 0.9320.

Table 3. Validity of concepts that coincide

Construct	Loadings	Question item	CR	AVE
Sustainable marketing	0.8320	SMAR1	0.9371	0.7923
	0.9208	SMAR2	-	-
	0.9128	SMAR3	-	-
	0.8910	SMAR4	-	-
Eco-friendly product	0.8648	EPRO1	0.9270	0.7623
	0.8362	EPRO2	-	-
	0.8741	EPRO3	-	-
	0.9083	EPRO4	-	-
Ethical pricing	0.8482	EPRI1	0.9386	0.7948
	0.9294	EPRI2	-	-
	0.9320	EPRI3	-	-
	0.8523	EPRI4	-	-
Eco-friendly location	0.8398	ECL1	0.9187	0.7352
	0.8406	ECL2	-	-
	0.9174	ECL3	-	-
	0.8428	ECL4	-	-
Business performance	0.8475	BP1	0.9210	0.6585
	0.8522	BP2	-	-
	0.8087	BP3	-	-
	0.8126	BP4	-	-
	0.7840	BP5	-	-
	0.7692	BP6	-	-

Table 4 displays the discriminant reliability of the constructs and shows the correlation construct's diagonal elements. The connection there is an off-diagonal component in between the constructs. Each construct's AVE is greater than its association with the other concepts in the study. The hypotheses are tested using the measurement model.

Table 4. Constructs' discriminatory reliability

Construct	Sustainable marketing	Eco-friendly product	Ethical pricing	Eco-friendly location	Business performance
Sustainable marketing	0.8897	0.5646	0.5610	0.4985	0.4548
Eco-friendly product	-	0.8737	0.6710	0.6878	0.4786
Ethical Pricing	-	-	0.8920	0.7178	0.4997
Eco-friendly location	-	-	-	0.8680	0.3611
Business performance	-	-	-	-	0.8118

Structural model

The research uses a structural model and hypothesis testing to analyse the data. The output of the Smart PLS used to evaluate the hypothesised model is shown in **Table 5**. This method aids in determining the path coefficient's significance in statistics. The bootstrapping procedure is random and unique every time the bootstrap technique is executed. Hence, the result was calculated with 500 bootstrapping samples and interpreted whenever needed.

Table 5. Structure of the architecture in broad terms

	Hypothesis	Decision	t-value	Std error	Std beta
H4	Sustainable marketing → Business performance	Supported	1.7882*	0.1155	0.2089
H3	Eco-friendly location → Business performance	Not supported	1.1134	0.1226	–0.1362
H2	Ethical pricing → Business performance	Supported	2.4986**	0.1283	0.3206
H1	Eco-friendly product → Business performance	Supported	2.1525*	0.1123	0.2387

*95% confidence level, **90% confidence level

Considering the framework and its distinguishing qualities, such as eco-friendly goods (H1: β= 0.2387, p <0.05), ethical pricing (H2: β = 0.3206, p<0.01), eco-friendly location (H3: β= 0.1362), and sustainable marketing (H4: β = 0.2089, p <0.05), path coefficients (β) and t-statistics are computed. H2, H1, and H4 are therefore all in agreement. Because of this, H3 is irrelevant and not supported. The measurement model is shown in **Figure 4**.

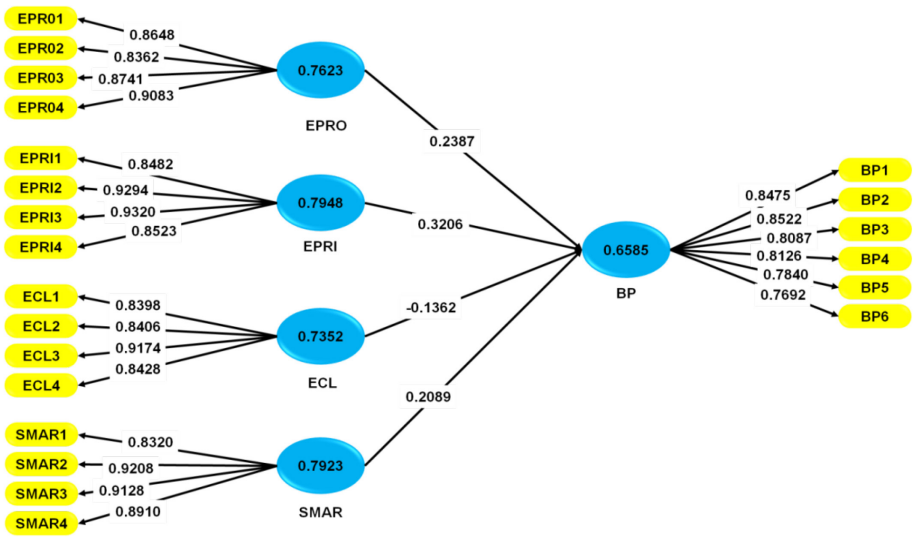

Figure 4. Measurement model

DISCUSSION

According to H1, eco-friendly products can significantly and favourably affect a company's performance. According to the findings, the p-value of the hypotheses is 0.05 (p<0.2387). H1 is acknowledged. Thus, environmentally friendly goods and business success are positively correlated. The findings of this study demonstrate that eco-friendly products have an impact on a company's performance. Manufacturing environmentally friendly goods in India will also have the added advantage of improving business performance. Using less hazardous components in manufacturing environmentally friendly products can reduce environmental

pollution. In pursuit of environmental preservation and adopting sustainable lifestyles, many individuals opt to transition from traditional product consumption to procuring environmentally conscious alternatives. This shift in behaviour forces manufacturing companies to create more sustainable products. Eco-friendly products are crucial for enhancing business performance. E&E manufacturing companies must continue to survive in today's competitive marketplace to meet consumer demand. Eco-friendly product manufacturers can expand into new markets, boost sales, and improve consumer satisfaction. Creating eco-friendly products has a significant impact on operational, marketing, and financial performance. Environmental pressure and increasing consumer demand for eco-friendly products propelled E&E manufacturing companies to increase productivity.

According to H2, ethical pricing and business performance have a large and favourable relationship. The p-value of this hypothesis is 0.3206 ($p > 0.01$). It indicates the widespread use of H2 and the positive impact of environmental pricing on company results. Thus, ethical pricing is one of the variables affecting company performance in India. The findings of this study demonstrate how ethical pricing affects business performance. For added value and to boost business performance, ethical prices are added. Customers who return recyclable packaging are eligible for refunds or discounts as part of the ethical pricing. The packaging's capacity for reuse and recycling is enhanced when it is sent back to manufacturing businesses, making ethical pricing an incentive for individuals to lessen their negative environmental effects. Given that it may be reused when buyers return the packaging, manufacturing companies are not obligated to spend more on product packaging. Ethical pricing's advantages, such as cost savings, forced manufacturing companies to adopt it to boost productivity.

Non-eco-friendly products may carry a higher price tag from manufacturers. For instance, India has begun its "No Plastic Bag Day" initiative; this will be in effect on weekends and intends to increase awareness of environmental issues. Green initiatives like banning plastic bags are regularly held in Penang. People are required to bring their bags when shopping during No Plastic Bag Day. If they need a plastic bag, they will have to purchase one. People may consume fewer things that are not eco-friendly of this. Ethical pricing is crucial in encouraging manufacturing companies to increase productivity. E&E manufacturing companies can also gain advantages, such as savings. To compete and succeed in the market, managers are under pressure from the performance of their companies.

According to H3, a weak and negative relationship exists between company performance and the green environment. According to the findings, this assumption has a value of 0.1362. Green space was thus recognised as a feature that has no bearing on the business's success. The findings demonstrate that the green environment is a variable that has no bearing on business performance. Indicated that green space had a favourable and significant impact on company performance, the result demonstrates the opposite. This outcome could be addressed because environmental issues are still a foreign idea to E&E manufacturing enterprises. Implementing green spaces comes at a significant expense, which raises the price of the outcome due to the demands of the business to purchase cleaner cars. Working with eco-friendly suppliers and distributors is challenging because so few businesses have implemented eco-friendly location policies. The absence of knowledge and resources among suppliers and distributors makes it more challenging to fully endorse the construction of green spaces. Manufacturing companies are unable to guarantee that the green spaces meet the government-set standards for regulation. Large international corporations also operate several E&E manufacturing companies. Consequently, it is highly challenging to control the actions of the vendors and distributors.

Study H4 provides evidence of a notable and favourable correlation between implementing green advertising techniques and achieving organisational success. Based on the results, the statistical significance level of H4 is 0.2089, greater than the conventional threshold of 0.05. This study provides empirical evidence supporting the validity of hypothesis 4 (H4) and highlights the favourable impact of sustainable advertising on the achievement of corporate

objectives. One of the elements that affect a business's performance is sustainable marketing. The study findings indicate that sustainable marketing affects business performance. By limiting the use of hazardous materials in product manufacture, green marketing can assist in minimising pollution. Resource conservation is becoming increasingly popular among customers as a way to protect the environment. Utilising more environmentally friendly products encourages directly manufacturers to promote sustainability. Manufacturing companies will benefit from environmental marketing regarding business performance when they promote the production process. Companies in India use sustainable marketing because it offers advantages, such as marketing being done for less money and with less environmental impact, particularly online. Sustainable marketing initiatives will help manufacturing companies more than those that do not participate. Additionally, by supporting a more user-friendly design, green advertising aims to inform consumers about the advantages of buying eco-friendly products.

The market percentage for manufacturing companies can expand through green marketing. Additionally, green marketing is crucial for enhancing business performance. Green marketing minimises adverse environmental effects through business marketing communications. By using reused paper in its catalogues, Dell, for instance, developed a sustainable marketing strategy. The sustainable marketing strategy aims to highlight the environmental friendliness of the products and services offered by manufacturing companies in order to enhance their profitability.

CONCLUSIONS

Electronics product manufacturers were only one of the numerous sectors where the importance of sustainability issues has a big impact on business. This study sheds light on the intricate relationship between green marketing strategies and the profitability of electronics enterprises using structural equation modelling, a powerful analytical tool. Investigating how several factors, such as ethical pricing, sustainable marketing, environmentally friendly products, and environmentally friendly locations, affect business success was the target. The finding of this research demonstrated that these factors had a significant effect on the growth of Indian electronics manufacturing companies. The eco-friendly location was still unfamiliar to E&E industrial companies. As a result, they rarely employ eco-friendly location methods. E&E manufacturing companies can think about several initiatives to enhance their performance, such as educating managers about green trends, incorporating environmental issues into decision-making, and lowering environmental pollution. The results of this research will benefit electronics businesses intended to maintain or increase their performance in a competitive market while increasing their attempts to be more sustainable, in addition to expanding the existing body of knowledge on green marketing.

Study limitations are identified as follows:

- Sector specificity − the study is limited to electronics manufacturing companies, and its results may not apply to other sectors.
- Geographical selection − the study focuses on Indian companies, which limits the generalizability of the results to other countries.
- Lack of awareness of green sites − green sites are poorly understood in the discovery and evaluation industry, which may lead to data bias.
- Due to the lack of financial support, it could not be covered at a broader level.

The practical implications for companies based on these constraints are:

- Sector specificity − companies in other sectors should be careful when applying the results of this study, as they may not apply directly to their context. They may need to conduct their research or consult industry studies.

- Geographical boundaries − electronics companies operating in different countries must consider local environmental regulations and market dynamics, which may differ significantly from those in India.
- Limiting factors − companies should consider other potentially important factors not included in this study when developing their green marketing strategies. It may include government policies, consumer awareness, and attitudes towards sustainability.
- Lack of awareness of green sites − companies should explore the concept of green sites and consider how to integrate it into their operations; it may involve conducting more in-depth research or consulting experts in the field.

Future research directions are envisaged as follows:

- Scope expansion − future studies could expand the scope to include other sectors outside the electronics industry. It would provide a better understanding of the impact of green marketing strategies in various sectors.
- Geographic expansion − conducting similar studies in different geographic regions would help understand whether the results of this study hold up in different cultural and organisational contexts.
- Incorporation of more factors − future research could take into account additional factors that may influence business success. Factors such as government policies, consumer awareness and attitudes towards sustainability, and the role of innovation in sustainable practices may be considered.
- Environmentally friendly locations − more research can be conducted on the concept of environmentally friendly locations and its impact on business performance.

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NOMENCLATURE

CR	Composite Reliability
AVE	Average Variance Extracted

Abbreviations

SMAR	Sustainable Marketing
EPRO	Eco-Friendly Product
EPRI	Ethical Pricing
ECL	Eco-Friendly Location
BP	Business Performance
PCA	Principal Component Analysis
ANN	Artificial Neural Network
GIA	Green Innovation Adoption
GM	Green Marketing
EMS	Environmental Management System
SEM	Structural Equation Modelling
PLS	Partial Least Squares
PCE	Perceived Customer Efficacy
GHRM	Green Human Resource Management
CSR	Corporate Social Responsibility
E&E	Electrical & Electronics

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