The Scientific Temper
OCTOBER 2026 Vol. 17 (10): 7062-7072
ISSN: 0976-8653, E-ISSN: 2231-6396
DOI: 10.58414/SCIENTIFICTEMPER.2026.17.10.2576
A WEB OF SCIENCE JOURNAL

RESEARCH ARTICLE

Environmental Consciousness and Green Purchase Behaviour: A Study of Consumers Attitudes towards Eco-Friendly Home Appliances

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ABSTRACT

Today, businesses and consumers face a significant challenge in protecting and conserving the earth's natural resources and environment. Both organizations and consumers have become increasingly conscious of environmental issues and recognize that their production and consumption decisions have a direct impact on the natural environment. Green marketing has the potential not only to transform the existing competitive practices of businesses but also to create a distinctive competitive advantage by addressing the environmental needs and expectations of customers. In recent years, consumers have shown a growing preference for purchasing products from companies that demonstrate social and environmental responsibility. To minimize consumers' perceived risk and strengthen their trust, companies need to provide adequate and reliable information about their products, enabling consumers to evaluate and compare the environmental performance and functionality of products offered by different companies. The primary objective of this study is to gain a comprehensive understanding of the factors influencing consumers' green product purchase behaviour, environmental commitment, and environmental attitude, particularly in relation to the purchase of home appliances (white goods) in Tamil Nadu, India. The study examines 11 dimensions to assess customers' environmental attitude and buying behaviour towards green products with specific reference to home appliances. These dimensions include Environmental Attitude, Commitment towards Environment, Green Brand Image, Green Brand Satisfaction, Green Brand Trust, Green Brand Awareness, Green Brand Preference, Green Product Buying Behaviour, Personal Profile of the Respondents, and Level of Awareness towards Star Rating of Products, along with the other dimension included in the study framework. The study has formulated five objectives and developed ten hypotheses, along with one additional hypothesis concerning the personal profiles of the respondents. The geographical scope of the study is restricted to Tier-II cities in Tamil Nadu, specifically Coimbatore, Tiruchirappalli, Salem, and Madurai, which have been selected as the population areas for the study.

Keywords: *Green marketing, Environmental Attitude, Green Brand Image, Green brand satisfaction, Green brand trust, Green brand awareness, Green brand preference, Green product buying behavior.*

INTRODUCTION

The acceleration of economic development over recent decades has been accompanied by a substantial increase in global consumption, resulting in excessive utilization of natural resources and contributing significantly to

Received: 5th October, 2026 **Accepted: 7th October, 2026** **Published: 28th October, 2026**

environmental degradation. The continuation of unsustainable patterns of production and consumption is likely to intensify the severity of environmental challenges. Major consequences of environmental deterioration include global warming, depletion of the stratospheric ozone layer, contamination of marine and freshwater resources, noise and light pollution, acid rain and desertification. Consequently, growing recognition of climate change and environmental degradation has placed environmental protection and sustainable development at the centre of contemporary business and consumer discourse.

In response to these environmental challenges, business organizations have increasingly sought to incorporate environmental considerations into their marketing strategies and operational practices. Consequently, the concept of "greening" has gained considerable importance among managers and marketing professionals. The increasing environmental consciousness observed among consumers has resulted in greater willingness to adopt environmentally responsible lifestyles and consumption practices. Such behavioural changes have created new opportunities for organizations that incorporate environmental responsibility into their value propositions.

Consumer preference for a particular brand is an important determinant of its competitive position and market differentiation. This significance is equally applicable to green products and green innovations across consumer goods, industrial products and services. The increasing environmental impact of industrial production has encouraged societies worldwide to pay greater attention to ecological issues, thereby compelling organizations to recognize environmental responsibility as an important component of their business strategies. Environmental investments can consequently provide organizations with opportunities to achieve both ecological responsibility and competitive advantage. As a result, several organizations have moved beyond basic environmental compliance and have incorporated eco-efficiency into their broader business operations.

PURPOSE OF THE STUDY

The primary purpose of this study was to develop an in-depth understanding of what factors influence consumers' green purchase behavior and their commitment and attitude towards environment that trigger consumers green purchasing in Tamilnadu, India. While most of the behavioral theories have been developed and tested in Western countries, particularly in the United States, relatively little attention has been devoted to investigating their validity in other cultural settings. Therefore, this study also took into consideration, that what Indian consumers perspectives towards environment attitude, commitment and belief. This was an important factor because while consumers in general are concerned about the environment, green purchase behavior may vary from country to country.

NEED FOR THE STUDY

Today, the green economy is a billion-dollar sector that includes everything from eco-friendly and green lifestyle products, organic agriculture, renewable energy and clean technology, water and waste management, to natural resource and land management. Due to the challenges of global warming, nations and people today have an all-time high concern for environmental protection. Hence, a new form of business has emerged: green business, which operates by practising a green philosophy. A green business strategy is no longer an option; the future depends on it. To gain a competitive advantage and ensure sustainable growth, companies today place socially responsible strategies at the top of their agendas.Many research findings support the idea of green marketing and state that customers today are willing to pay more for environmentally friendly products. Green marketing adds credibility to companies that practise a green philosophy. Furthermore, these companies can protect themselves from imitators for a sufficient period to ensure adequate returns on their investments.

IMPORTANCE OF THE STUDY

Today, environmental consciousness is not only an ideology held by activists but also a matter of market competition that influences consumer behaviour. The green vision is a reality and needs to be understood more functionally to help marketers develop strategies aimed at meeting the needs of green consumers. As the Indian market for green products continues to grow, understanding the factors that influence Indian consumers to purchase environmentally friendly or green home appliance products is crucial for businesses targeting green consumers. This study contributes to the understanding of green purchase behaviour among consumers and represents a first step towards promoting green consumption in Tamil Nadu, India. From a marketing perspective, it is important to identify the underlying factors that influence consumers' green purchase behaviour so that marketers can develop appropriate green marketing strategies to meet the needs of green consumers. The findings of this study can also help the Indian government develop appropriate policies to promote environmentally responsible consumption behaviours. Such policies could minimise the direct and indirect impacts of individual consumption on environmental degradation,

particularly in the context of urbanisation and changing lifestyles in India. In the long run, the findings of this study could contribute to reducing environmental problems in India and, subsequently, across the world.

PROBLEM IDENTIFICATION

Perceiving the catastrophic environmental pollution caused by industrial manufacturing activities around the world, consumers are increasingly becoming aware of environmental issues (Chen, 2011). As a result, companies are becoming more willing to consider environmental protection as part of their social responsibility. Environmental considerations have rapidly emerged as a mainstream concern due to global warming. Consequently, forward-thinking companies are increasingly seeking to take advantage of green business opportunities (Dwyer, 2009; Molina-Azorín, 2009).

In the environmental context, companies need to pay greater attention to green marketing, particularly in product categories such as information technology, home appliances, and electronic products (Kalafatis and Pollard, 1999). However, not all companies have sufficient capabilities to implement green marketing strategies. To implement green marketing successfully, companies should integrate green marketing concepts into all aspects of their routine marketing activities.

To gain a competitive advantage, companies should use green marketing strategies to enhance consumers' perceived quality and reduce their perceived risk in relation to environmental concerns (Chen, 2010). As green products become increasingly popular in the market, green marketing activities are also gaining importance.

There are five reasons for companies to adopt green marketing (Chen, 2008):

1. Enhancing corporate image.
2. Complying with environmental trends.
3. Taking advantage of green business opportunities.
4. Obtaining a competitive advantage.
5. Increasing product value.

Furthermore, adopting green marketing can enhance customer trust, satisfaction, awareness, and brand image. Although previous research has highlighted related issues, this study attempts to explore the impact of customers' environmental attitudes on green purchasing behaviour, focusing on green brand image, green brand trust, green brand satisfaction, and green brand awareness.

RESEARCH GAP

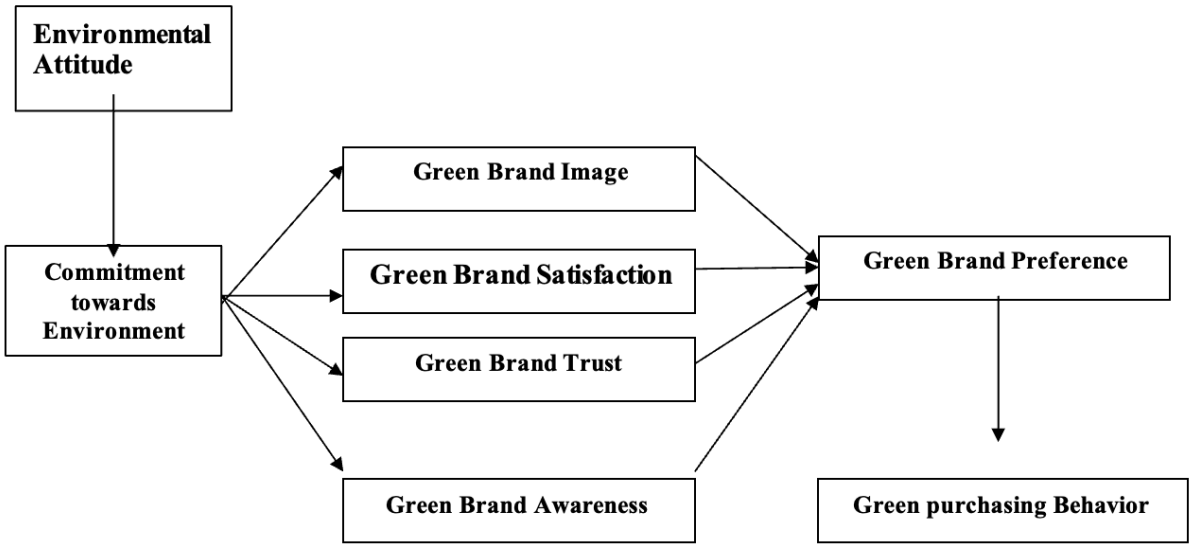
This study aims to address the existing research gap. Many previous studies have focused on the green strategies adopted by manufacturers to predict brand equity, determine whether they have achieved a competitive advantage, or assess whether they have increased their customer base. However, this study adopts a different perspective by examining whether customers possess the appropriate environmental attitudes and levels of commitment. Based on consumers' levels of environmental commitment, this research examines green brand image, green brand trust, green brand satisfaction, and green brand awareness. It also investigates consumer green brand preference based on environmental attitudes and the green strategies adopted by manufacturers. Finally, the study identifies whether green brand preference influences green purchasing behaviour. The uniqueness of this study lies in its integration of novel constructs, including environmental attitude, green strategies, and green brand preference, into a comprehensive framework to predict green purchasing behaviour.

THEORETICAL FRAMEWORK

The proposed conceptual framework assumes a positive relationship between green brand preference, the dependent variable, and four other mediating variables. Green brand preference indicates the extent to which consumers' perceptions of a brand influence their choice (Gunasti and Ross, 2010). The first variable is **green brand image**, which refers to a set of perceptions and associations in the consumer's mind that are linked to a particular offering (Keller, 1993; Cretu and Brodie, 2007; Padgett and Allen, 1997; Chen, 2009). The second variable is **green brand satisfaction**. Satisfaction can be defined as the level of pleasure consumers experience after consumption when their desires are fulfilled (Oliver, 1996; Paulssen and Birk, 2007; Ruyter and Bloemer, 1999). Accordingly, Chen (2009) defined green satisfaction as the fulfilment of customers' environmental expectations and green needs. The third variable is **green brand trust**, which refers to the confidence that another party will behave according to one's expectations (Hart and Saunders, 1997). Trust is based on three main beliefs: ability, benevolence, and integrity (Blau, 1964; Schurr and Ozanne, 1985). Therefore, trust can significantly influence consumers' purchasing decisions (Gefen and Straub, 2004). Chen (2009) linked these definitions to a brand's environmental performance to establish the concept of green trust. Finally, **green brand awareness** refers to consumers' ability to recognise and recall a brand as an environmentally friendly brand based on its green activities and associated attributes. Environmental attitude and

environmental commitment are considered the input dimensions of the proposed conceptual framework. These dimensions are expected to influence consumers' perceptions of green brands and, consequently, their green brand preferences.

Figure 1: Research Model



The above mentioned model consists of three stages. The stage I consists of respondents perception towards environment, and their commitment toward environment. The stage II consists of dimensions factors affecting green brand preference. The dimensions are Green Brand Image, Green Brand Satisfaction, Green Brand Trust and Green Brand Awareness. The stage III consists of two dimensions Green Brand Preference and Green Purchase behaviour. The model is developed based on the Keller (1993) consumer based brand equity and Chen (2009) variables considered to measure and build green brand equity.The research model is unique in the way that, both the above mentioned model measures only brand equity, but this research model measure green brand preference by including awareness and commitment dimensions of environment. Thus the newly developed research model included environment and measures green brand preference rather than brand equity. Based on the model, the researcher suggest that depend on the environment commitment level of the customers green brandimage,greenbrandtrust,greenbrandsatisfaction andgreenbrandawarenesswillchange and vary. The proposed research model assumed positive relationship between all the dimensions, and only formative paths was considered for the study.

OBJECTIVES OF THE STUDY

1. To study the environmental attitudes and commitment levels of the selected respondents and examine their association with the respondents' personal profiles.

2. To identify the various green marketing initiatives adopted by selected manufacturers of white goods and home appliances.

3. To analyse the environmental commitment levels of customers and examine their impact on green marketing initiatives related to selected white goods and home appliances.

4. To identify the relationship between green marketing initiatives and green brand preference for white goods and home appliances.

5. To examine whether green brand preference influences the purchasing behaviour of consumers regarding white goods and home appliances.

Hypotheses

H1: Environmental attitude of customers has a positive and significant impact on their commitment towards the environment.

H2: Environmental commitment has a positive and significant impact on green brand image.

H3: Environmental commitment has a positive and significant impact on green brand satisfaction.

H4: Environmental commitment has a positive and significant impact on green brand trust.

H5: Environmental commitment has a positive and significant impact on green brand awareness.

H6: Green brand image has a positive and significant impact on green brand preference.

H7: Green brand satisfaction has a positive and significant impact on green brand preference.

H8: Green brand trust has a positive and significant impact on green brand preference.

H9: Green brand awareness has a positive and significant impact on green brand preference.

H10: Green brand preference has a positive and significant impact on green purchasing behaviour.

Methodology

The study is descriptive, deductive, and applied research aimed at proposing solutions for corporate branding. It follows a quantitative research paradigm, using a large sample and hypothesis testing. The study is cross-sectional, as data were collected once through a structured questionnaire to examine factors influencing brands from the consumer perspective.

The study covered Tier-II cities in Tamil Nadu, particularly Coimbatore, Tiruchirappalli, and Madurai. The sample comprised customers who purchased any one of the selected white home appliances—refrigerator, washing machine, or air conditioner—during January–April 2016 and considered energy efficiency, environmental friendliness, and environmental care as important purchase criteria.

Data were collected using a structured questionnaire from 200 selected customers in each city through judgment sampling at leading shopping malls and authorized sales outlets. Of the 600 questionnaires distributed, 593 were returned and 570 were usable, resulting in a final sample of 570 respondents.

Most questionnaire items were adapted from Chen (2009), with additional and modified items developed to suit the research objectives and target respondents. A five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), was used. A pilot study with 30 respondents was conducted to assess understanding, following which unclear and similar-response items were modified or removed.

The study used both primary and secondary data. The primary data were collected through a structured questionnaire comprising two parts: personal details of respondents and eight dimensions related to the study. The eight dimensions were Environmental Attitude, Commitment towards Environment, Green Brand Awareness, Green Brand Image, Green Brand Satisfaction, Green Brand Trust, Green Brand Preference, and Green Purchasing Behaviour. Secondary data were obtained from journals, magazines, books, research journals, and articles published by manufacturers.

Figure 2: Modeling Green Brand Preference and Green Product Buying Behaviour Based On Green Brand Image, Green Brand Satisfaction, Green Brand Trust, Green Brand Awareness, And Environmental Attitude

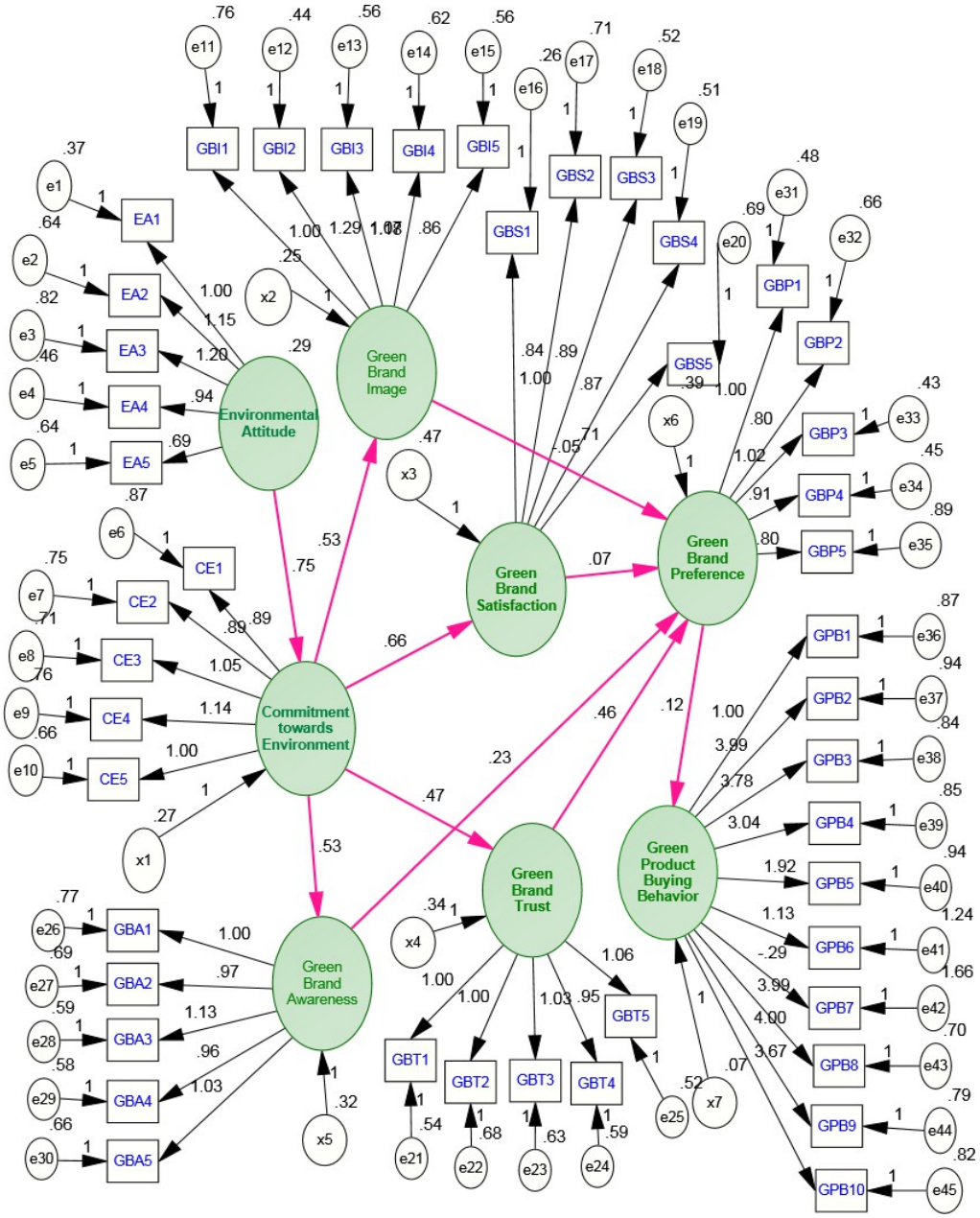


Table 1: Regression Weights:

Hypothesis	Hypothesis Statement	Proposed Effect	Estimate	S.E.	C.R.	P-value
H1	Environmental attitude of customers has a positive and significant impact on commitment towards the environment.	+	0.755	0.085	8.904	***
H2	Environmental commitment has a positive and significant impact on green brand image.	+	0.528	0.062	8.478	***
H3	Environmental commitment has a positive and significant impact on green brand satisfaction.	+	0.656	0.069	9.514	***
H4	Environmental commitment has a positive and significant impact on green brand trust.	+	0.475	0.060	7.913	***
H5	Environmental commitment has a positive and significant impact on green brand awareness.	+	0.530	0.065	8.132	***
H6	Green brand image has a positive and significant impact on green brand preference.	+	-0.051	0.065	-0.795	0.427
H7	Green brand satisfaction has a positive and significant impact on green brand preference.	+	0.066	0.046	1.433	0.152
H8	Green brand trust has a positive and significant impact on green brand preference.	+	0.464	0.065	7.126	***
H9	Green brand awareness has a positive and significant impact on green brand preference.	+	0.225	0.060	3.727	***
H10	Green brand preference has a positive and significant impact on green product buying behaviour.	+	0.121	0.026	4.681	***

The result of model is shown in the above table.The hypotheses show that all the hypotheses were formulated positive and proposed effect. Among the ten hypotheses formulatedandtested,8hypothesesweresupported andtheremaining2hypotheses(H6&H7) were not supported based on the path loading. The result explains that of environment commitment increases, Green Brand Image, Trust, Satisfaction and Awareness increases to optimum level. At the same time, green brand image creates negative influence towards green brand preference. Green brand satisfaction creates positive impact on Green brand preference, but it is not significant. Green brand trust and awareness creates significant impact on Green Brand Preference. The model conforms that if green brand preference increases by one unit, Green Product Buying Behaviour increases by .121 units.

ANOVA

Hypothesis

There is no significant relationship between the monthly income of the respondents and the dimensions related to the study.

Table 2: Relationship between the monthly income of the respondents

Dimensions Related to the Study	Sources of Variation	Sum of Squares	df	Mean Square	F	Sig.
Environmental Attitude	Between Groups	4.042	3	1.347	2.706	**.045**
	Within Groups	281.783	566	.498		
	Total	285.825	569			
Commitment towards Environment	Between Groups	1.579	3	.526	.744	.526
	Within Groups	400.220	566	.707		
	Total	401.798	569			
Green Brand Awareness	Between Groups	1.694	3	.565	.816	.486
	Within Groups	391.957	566	.693		
	Total	393.651	569			
Green Brand Image	Between Groups	1.092	3	.364	.593	.620
	Within Groups	347.275	566	.614		
	Total	348.367	569			
Green Brand Satisfaction	Between Groups	.363	3	.121	.180	.910
	Within Groups	380.661	566	.673		
	Total	381.025	569			
Green Brand Trust	Between Groups	2.026	3	.675	1.051	.369
	Within Groups	363.546	566	.642		
	Total	365.572	569			

Green Brand Preference	Between Groups	3.931	3	1.310	2.022	.110
	Within Groups	366.736	566	.648		
	Total	370.667	569			
Green Product Buying Behaviour	Between Groups	1.388	3	.463	.716	.543
	Within Groups	365.868	566	.646		
	Total	367.256	569			

The above table shows the results of significant relationship between monthly income of the respondents and the dimensions Environmental Attitude, Commitment towards Environment, Green Brand Awareness, Green Brand Image, Green Brand Satisfaction, Green Brand Trust, Green Brand Preference, and Green Product Buying Behaviour. Based on the mean square value, F value, and Significant value the significant relationship between the analyzing dimensions and dependent dimensions will be confirmed. The significance value of the customer environmental attitude is (.045), which is less than the required criteria ensure the significant relationship between environmental attitudes and monthly income of the respondents.

The significant value of the remaining dimensions are above the required criteria, which shows that there is no significant relationship between monthly income of the respondents and Commitment towards Environment, Green Brand Awareness, Green Brand Image, Green Brand Satisfaction, Green Brand Trust, Green Brand Preference, and Green Product Buying Behaviour.

Hierarchical Regression Incremental Power of Each Predictor on Green Purchasing Behaviour

Table 3: Model Summary

Step	Predictors	R^2	ΔR^2	F of R^2 Δ	Sig F Change
Step 1	Environmental Attitude	.046	.046	27.608	.000
Step 2	Environmental Attitude Commitment towards Environment	.051	.005	2.975	.085
Step 3	Environmental Attitude Commitment towards Environment Green Brand Awareness	.098	.047	29.584	.000
Step 4	Environmental Attitude Commitment towards Environment Green Brand Awareness Green Brand Image	.113	.015	9.449	.002
Step 5	Environmental Attitude Commitment towards Environment Green Brand Awareness Green Brand Image Green Brand Satisfaction	.114	.001	.646	.422
Step 6	Environmental Attitude Commitment towards Environment Green Brand Awareness Green Brand Image Green Brand Satisfaction Green Brand Trust	.128	.014	9.001	.003
Step 7	Environmental Attitude Commitment towards Environment Green Brand Awareness Green Brand Image Green Brand Satisfaction Green Brand Trust Green Brand Preference	.190	.062	43.211	.000

Hierarchical Regression Analysis

The model summary table presents the results of the hierarchical regression analysis, which examines the contribution of each independent variable to predicting green product buying behaviour.

Step 1: In the first step of the hierarchical regression analysis, environmental attitude explains 4.6% of the variance in green product buying behaviour. The F-value is 27.608, indicating that the regression model is statistically significant.

Step 2: In the second step, environmental attitude and commitment towards the environment jointly explain 5.1% of the variance in green product buying behaviour. The change in R-squared compared with Step 1 is approximately 0.5 percentage points. The F-value for the change in R-squared is 2.975, indicating that the additional contribution is statistically significant only if the corresponding p-value is below the chosen significance level. The reported significance level should therefore be verified.

Step 3: In the third step, green brand awareness is added to environmental attitude and commitment towards the environment. The model continues to explain approximately 5.1% of the variance in green product buying behaviour. The reported F-value for the change in R-squared is 29.584, with a significance value of 0.000 ($p < 0.001$). However, the reported R-squared and F-change values should be checked against the original statistical output for consistency.

Step 4: In the fourth step, green brand image is added to the model. The variables collectively explain 11.3% of the variance in green product buying behaviour. The reported F-value for the change in R-squared is 9.449, with a significance value of 0.001. This indicates that adding green brand image significantly improves the model's predictive ability.

Step 5: In the fifth step, green brand satisfaction is added to the model. The model explains 11.4% of the variance in green product buying behaviour, representing an increase of approximately 0.1 percentage points. The F-value for the change in R-squared is 0.646. Although the reported significance level is stated as 0.001, this appears inconsistent with the F-value and should be verified using the original statistical output before drawing a conclusion about statistical significance.

Step 6: In the sixth step, green brand trust is added to the model. The model explains 12.8% of the variance in green product buying behaviour, representing an increase of approximately 1.4 percentage points. The reported F-value for the change in R-squared is 9.001, with a significance value of 0.001. This suggests that green brand trust makes a statistically significant additional contribution to the model.

Step 7: In the final step, green brand preference is added to the model alongside environmental attitude, commitment towards the environment, green brand awareness, green brand image, green brand satisfaction, and green brand trust. The final model explains 19.0% of the variance in green product buying behaviour. The reported F-value for the change in R-squared is 43.211, with a significance value of 0.001. This indicates that green brand preference makes a statistically significant contribution to the prediction of green product buying behaviour.

Overall Interpretation: The hierarchical regression analysis indicates that the explanatory power of the model increases as additional variables are introduced. The final model explains 19.0% of the variance in green product buying behaviour. Green brand preference appears to make an important additional contribution to the model, highlighting its relevance in understanding consumers' green purchasing decisions.

RESULT AND DISCUSSIONS

The ANOVA test results indicate that the monthly income of the respondents has a significant relationship with environmental attitude. However, monthly income does not have a significant relationship with the other dimensions considered in the study. These dimensions include commitment towards the environment, green brand awareness, green brand image, green brand satisfaction, green brand trust, green brand preference, and green product buying behaviour.

The correlation analysis reveals that environmental attitude, commitment towards the environment, green brand awareness, green brand image, green brand satisfaction, green brand trust, and green brand preference are positively and significantly correlated with green product buying behaviour.

The hierarchical regression results indicate changes in the R-squared value as each dimension is added to the model to predict green product buying behaviour. The findings suggest that the dimensions considered in the study are important predictors of green product buying behaviour. However, the regression coefficients indicate that environmental commitment has a negative influence on green product buying behaviour.

Among the dimensions of green marketing strategies, green brand satisfaction also has a negative influence on green product buying behaviour. Of all the dimensions considered in the study, green brand preference is the strongest predictor of green product buying behaviour, followed by green brand awareness.

The stepwise regression results based on gender indicate an association between gender and the green marketing strategies adopted by home appliance manufacturers. The findings further confirm that green brand preference is the strongest predictor of green product buying behaviour for both genders, whereas green brand satisfaction has a negative influence on green product buying behaviour.

Table 4: Hypotheses Result

Hypotheses Statements	Result
H1: Environmental attitude of customers has a positive and significant impact on their commitment towards the environment.	Supported
H2: Environmental commitment has a positive and significant impact on green brand image.	Supported
H3: Environmental commitment has a positive and significant impact on green brand satisfaction.	Supported

H4: Environmental commitment has a positive and significant impact on green brand trust.	Supported
H5: Environmental commitment has a positive and significant impact on green brand awareness.	Supported
H6: Green brand image has a positive and significant impact on green brand preference.	Not Supported
H7: Green brand satisfaction has a positive and significant impact on green brand preference.	Not Supported
H8: Green brand trust has a positive and significant impact on green brand preference.	Supported
H9: Green brand awareness has a positive and significant impact on green brand preference.	Supported
H10: Green brand preference has a positive and significant impact on green product buying behaviour.	Supported

Based on the path loading and significant value, out of 10 hypotheses formulated in the research model shows that 8 hypotheses were accepted and the remaining two hypotheses are rejected.

Implications of the study

The study has highlighted important aspects of consumer purchasing patterns and demonstrated that consumer preferences for environmentally friendly products can be influenced by effective green marketing strategies.

Several important implications for green marketing strategies can be drawn from the findings of the present research. To gain a green competitive advantage and achieve business success, business executives and marketers should ensure that sustainable green marketing strategies are developed and implemented in home appliance manufacturing companies.

Business executives and marketers should emphasise the importance of environmental protection in India. Managers should organise workshops and seminars to educate internal and external stakeholders about environmental protection and sustainable consumption practices.

Various exhibitions and fairs should be organised in collaboration with non-governmental organisations (NGOs) to educate the public about the different green products currently available in the market and the benefits associated with environmentally responsible purchasing behaviour.

Another significant implication of the study concerns the importance of eco-labels, particularly star ratings, in influencing green purchasing behaviour. Eco-labels provide valuable information that enables consumers to make informed purchasing decisions.

Therefore, marketers should emphasise green product strategies and consider eco-labels an essential marketing tool for promoting green consumption. The findings of the present study provide empirical evidence that green labelling, star ratings, and green marketing strategies positively influence consumer purchasing behaviour.

Similarly, business executives should ensure that eco-labels are clear, comprehensible, and easy to interpret. The type, format, and presentation of information provided on eco-labels and star ratings should be designed to help consumers understand product attributes and make informed purchasing decisions. The survey findings indicate a positive association between consumers' willingness to purchase products from environmentally responsible companies and the ease of understanding eco-labels and star ratings.

CONCLUSION

Now is the right time to adopt green marketing globally. Significant changes in the business world could occur if all nations implement strict environmental regulations, as green marketing is essential to protecting the planet from pollution.

From a business perspective, a successful marketer is one who not only convinces consumers to purchase a product but also encourages them to participate in promoting it. Green marketing should not be considered merely another marketing approach; instead, it should be pursued with greater commitment because of its environmental and social significance.

With the threat of global warming becoming increasingly serious, green marketing must become the norm rather than an exception or a passing trend. The recycling of paper, metals, plastics, and other materials in safe and environmentally responsible ways should become more systematic and widespread. Similarly, the use of energy-efficient home appliances and other electrical goods should become standard practice.

Marketers also have a responsibility to educate consumers about the need for and benefits of green products compared with conventional alternatives. Furthermore, consumers, industrial buyers, and suppliers should collectively exert pressure on businesses to minimise their negative environmental impacts and adopt environmentally responsible practices.

Green marketing assumes even greater importance and relevance in developing countries such as India, where sustainable business practices and environmentally responsible consumption can contribute significantly to

environmental protection and long-term development.

Future study

This study focuses on the green marketing initiatives adopted by home appliance manufacturers (white goods). Therefore, future studies could focus on other industries or countries to compare their findings with those of the present study.

This study tested the proposed hypotheses using a questionnaire survey, which provided only cross-sectional data. Consequently, it could not examine the dynamic changes in green core competencies during the development of home appliance manufacturers through longitudinal data. Therefore, future research could adopt a longitudinal approach to investigate changes in customers' perceptions of the green marketing initiatives implemented by home appliance manufacturers over time.

Finally, this study hopes that its findings will be beneficial to managers, researchers, and government authorities. It also aims to contribute to relevant academic studies and serve as a reference for future research in the field of green marketing and sustainable consumer behaviour.

Conflict of interest: None.

Acknowledgement

We acknowledge the support of the Department of Management Studies, Jamal Mohamed College (Autonomous), Trichy, for providing computational resources. This research was not supported by any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

REFERENCES

Aaker, D. A., & Joachimsthaler, E. (2000). *Brand leadership*. The Free Press.

Abraham, N. (2011). The apparel aftermarket in India: A case study focusing on reverse logistics. *Journal of Fashion Marketing and Management, 15*(2), 211–227.

Ajzen, I. (1988). *Attitudes, personality, and behavior*. Dorsey Press.

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of Consumer Research, 13*(4), 411–454. https://doi.org/10.1086/209080

Albayrak, T., Caber, M., Moutinho, L., & Herstein, R. (2011). The influence of skepticism on green purchase behavior. *International Journal of Business and Social Science, 2*(13), 189–197. http://ijbssnet.com

AbdusSamad, K., & Thilagavathy, S. (n.d.). *A tentative study on consumers' perception and image on green hotels within Trichy district* (pp. 239–244). *International Journal of Management, 6*. https://www.academia.edu/download/40875663/A_TENTATIVE_STUDY_ON_CONSUMERS_PERCEPTION_AND_IMAGE_ON_GREEN_HOTELS_WITHIN_TRICHY_DISTRICT.pdf

CBS News. (2008, May 18). *A closer look at "green" products: Manufacturers are making more environmentally friendly products, but not all stand up to the test*. http://www.cbsnews.com/stories/2008/05/18/eveningnews/main4105507.shtml

CBO. (2006). LCBO bottle deposit system starts in February. CTV News. http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20061201/lcbo_deposits_061201/20061201?hub=TorontoHome

Diamantopoulos, A., Bohlen, G. M., & Schlegelmilch, B. B. (1994). Predicting green purchasing decisions from measures of environmental consciousness: A two-sample comparison. In *Conference proceedings of the Marketing Education Group* (pp. 252–261). Coleraine.

Gilg, A., Barr, S., & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures, 37*(6), 481–504. https://doi.org/10.1016/j.futures.2004.10.016

Polonsky, M. J. (1994). Green marketing regulation in the US and Australia: The Australian checklist. *Greener Management International, 5*, 44–53.

Wüstenhagen, R., & Bilharz, M. (2006). Green energy market development in Germany: Effective public policy and emerging customer demand. *Energy Policy, 34*(13), 1681–1696.