

Consumer Preference Towards Eco-Friendly Products With Reference To Green Marketing Trends In Chennai District

Dr.C. Vilvijayan¹, M. Rajalakshmi²

¹*Assistant Professor, (Deputed from Annamalai University) PG & Research Department of Commerce Thiru Kolanjiappar Government Arts College (Grade-I) Vriddhachalam – 606 001*

²*Phd Research Scholar, Department of Commerce, Thiru Kolanjiappar Government Arts College, Virudhachalam, paulrajalakshmi@gmail.com*

This study investigates consumer preference towards eco-friendly products with particular reference to green marketing trends prevailing in Chennai District, Tamil Nadu. A structured questionnaire was administered to a sample of 410 respondents drawn using stratified random sampling from diverse demographic segments. The study analyses awareness levels, purchase frequency, motivating factors, green marketing perception, and willingness to pay a premium for sustainable products. Statistical tools including descriptive analysis, Chi-square test, rank analysis, Pearson's correlation, and multiple regression were applied. The findings reveal that environmental concern and health benefits are the primary drivers of eco-friendly consumption. Green marketing strategies such as eco-labelling, green packaging, and social media campaigns are perceived as highly effective. The study concludes with actionable recommendations for marketers, policymakers, and manufacturers to leverage green marketing for sustainable consumption growth in urban India.

Keywords: Eco-Friendly Products, Green Marketing, Consumer Behaviour, Chennai, Sustainability, Environmental Awareness

Introduction

Statement of the Problem

Despite increasing environmental awareness, a significant gap persists between consumer attitudes toward eco-friendly products and actual purchase behavior. Chennai's rapid urbanization and economic growth have intensified environmental challenges, yet the adoption of sustainable consumption patterns remains inconsistent. Companies implementing green marketing strategies face challenges in converting environmental consciousness into sales, raising questions about messaging effectiveness, product positioning, and consumer trust.

Objectives of the Study

1. To analyze consumer awareness and perception of eco-friendly products in Chennai District
2. To examine factors influencing consumer preference for eco-friendly products
3. To assess the effectiveness of green marketing strategies employed by companies in Chennai
4. To identify barriers preventing consumers from purchasing eco-friendly products
5. To evaluate the relationship between demographic factors and eco-friendly product preferences
6. To provide recommendations for businesses to enhance green marketing effectiveness

Significance of the Study

This research contributes to understanding sustainable consumption patterns in urban India, providing insights for businesses, policymakers, and environmental advocates. The findings will help companies refine their green marketing strategies, assist policymakers in designing effective environmental campaigns, and contribute to academic literature on consumer behavior in emerging markets. For Chennai specifically, this study offers localized insights that account for cultural, economic, and social factors unique to the region.

3. Research Methodology

3.1 Research Design

This study employs a descriptive research design to examine consumer preferences and green marketing trends in Chennai District. The research combines quantitative methods for measuring consumer attitudes and behaviors with qualitative insights for understanding motivations and barriers.

3.2 Sampling Design

Universe: All consumers above 18 years of age residing in Chennai District

Sampling Frame: Consumers from various zones of Chennai (North, South, Central, East, West)

Sample Size: 410 respondents

Sampling Technique: Stratified random sampling based on geographic zones and age groups

3.3 Data Collection

Primary Data: Collected through structured questionnaires containing closed-ended questions, Likert scale items, and ranking questions. Questionnaires were administered both online (using Google Forms) and offline (in-person at shopping areas, residential communities, and workplaces).

Secondary Data: Gathered from academic journals, industry reports, government publications, company websites, environmental organizations, and newspaper articles.

Demographic Profile Of Respondents

Table 1.1: Distribution of Respondents by Gender

Gender	No. of Respondents	Percentage (%)
Male	210	51.2
Female	200	48.8
Total	410	100.0

Source: Primary Data | N = 410

The study included 210 male respondents (51.2%) and 200 female respondents (48.8%), indicating a near-equal gender distribution, thus ensuring representative insights across both segments.

Table 1.2: Distribution of Respondents by Age Group

Age Group	No. of Respondents	Percentage (%)
Below 20 years	38	9.3
21 – 30 years	142	34.6
31 – 40 years	125	30.5
41 – 50 years	72	17.6
Above 50 years	33	8.0
Total	410	100.0

Source: Primary Data | N = 410

The majority of respondents (34.6%) belong to the 21–30 age group, followed by the 31–40 age group (30.5%). This distribution reflects the dominance of young and middle-aged consumers in eco-product consumption.

Table 1.3: Educational Qualification of Respondents

Educational Qualification	No. of Respondents	Percentage (%)
School Level	52	12.7
Undergraduate	148	36.1
Postgraduate	162	39.5
Professional / Others	48	11.7

Total	410	100.0
--------------	------------	--------------

Source: Primary Data | N = 410

Post-graduates constitute the largest group (39.5%), followed by undergraduates (36.1%), suggesting a highly educated sample with greater exposure to environmental issues and green marketing communication.

Table 1.4: Occupation of Respondents

Occupation	No. of Respondents	Percentage (%)
Student	92	22.4
Employed (Private)	135	32.9
Employed (Government)	88	21.5
Self-Employed / Business	62	15.1
Homemaker / Others	33	8.1
Total	410	100.0

Source: Primary Data | N = 410

Private sector employees form the largest segment (32.9%), followed by students (22.4%) and government employees (21.5%). This diversity ensures multi-sector representation in purchasing patterns.

Table 1.5: Monthly Income of Respondents

Monthly Income (₹)	No. of Respondents	Percentage (%)
Below ₹15,000	65	15.9
₹15,001 – ₹30,000	128	31.2
₹30,001 – ₹50,000	142	34.6
Above ₹50,000	75	18.3
Total	410	100.0

Source: Primary Data | N = 410

The ₹30,001–₹50,000 income bracket accounts for the highest share (34.6%), indicating that middle-income consumers are the primary target audience for eco-friendly products in Chennai.

Awareness And Information Sources

Table 2.1: Level of Awareness towards Eco-Friendly Products

Level of Awareness	No. of Respondents	Percentage (%)
Highly Aware	112	27.3
Aware	158	38.5
Moderately Aware	92	22.5
Less Aware	35	8.5
Not Aware	13	3.2
Total	410	100.0

Source: Primary Data | N = 410

A significant 65.8% of respondents are either 'aware' or 'highly aware' of eco-friendly products. Only 3.2% reported no awareness, indicating that green product consciousness has gained substantial traction in Chennai's urban consumer market.

Table 2.2: Sources of Information about Eco-Friendly Products

Source of Information	No. of Respondents	Percentage (%)
Social Media	138	33.7
Television / Radio Advertisements	102	24.9
Friends & Family	78	19.0
Newspapers / Magazines	52	12.7
Point of Purchase Displays	40	9.7
Total	410	100.0

Source: Primary Data | N = 410

Social media emerged as the dominant information source (33.7%), followed by television and radio advertisements (24.9%). This underscores the growing importance of digital platforms in shaping green consumer behaviour.

Purchase Behaviour And Preferences

Table 3.1: Frequency of Purchase of Eco-Friendly Products

Frequency of Purchase	No. of Respondents	Percentage (%)
Always	95	23.2
Often	148	36.1
Sometimes	112	27.3
Rarely	42	10.2
Never	13	3.2
Total	410	100.0

Source: Primary Data | N = 410

59.3% of respondents purchase eco-friendly products 'often' or 'always', demonstrating a high conversion from awareness to actual purchase behaviour. Only 3.2% stated they never purchase eco-friendly products.

Table 3.2: Factors Influencing Purchase of Eco-Friendly Products

Influencing Factor	No. of Respondents	Percentage (%)
Environmental Concern	145	35.4
Health & Safety Benefits	118	28.8
Product Quality	85	20.7
Brand Image & Reputation	42	10.2
Price Competitiveness	20	4.9
Total	410	100.0

Source: Primary Data | N = 410

Environmental concern is the primary motivator (35.4%), followed by health and safety benefits (28.8%). Price competitiveness ranked last (4.9%), suggesting consumers prioritise values over cost in eco-product decisions.

Table 3.3: Willingness to Pay a Premium for Eco-Friendly Products

Willingness to Pay Premium	No. of Respondents	Percentage (%)

Strongly Willing	88	21.5
Willing	155	37.8
Neutral	102	24.9
Unwilling	45	11.0
Strongly Unwilling	20	4.9
Total	410	100.0

Source: Primary Data | N = 410

A combined 59.3% of respondents are either 'willing' or 'strongly willing' to pay a premium, affirming price inelasticity among eco-conscious consumers and validating green pricing strategies for marketers.

Table 3.4: Preferred Eco-Friendly Product Categories

Product Category	No. of Respondents	Percentage (%)
Organic Food & Beverages	122	29.8
Eco-Friendly Household Products	98	23.9
Biodegradable Packaging	82	20.0
Sustainable Clothing & Textiles	65	15.9
Green Electronics & Appliances	43	10.5
Total	410	100.0

Source: Primary Data | N = 410

Organic food and beverages ranked highest (29.8%), followed by eco-friendly household products (23.9%). Green electronics recorded the lowest preference (10.5%), likely due to limited availability and higher price points.

Green Marketing Perception

Table 4.1: Consumer Perception towards Green Marketing Practices (Mean Score Analysis)

Statement	Mean	Std. Dev.	Interpretation
Green marketing raises product trust	4.32	0.61	Strongly Agree

Eco-labels help in buying decisions	4.18	0.72	Agree
Green advertisements are credible	3.85	0.88	Agree
Social media green campaigns are effective	4.05	0.79	Agree
Companies genuinely follow green practices	3.42	0.95	Neutral
Price of eco-products is justified	3.68	0.91	Agree

Source: Primary Data | N = 410 | Scale: 1 = Strongly Disagree to 5 = Strongly Agree

'Green marketing raises product trust' recorded the highest mean score (4.32), while 'Companies genuinely follow green practices' scored the lowest (3.42), indicating a trust gap between brand claims and perceived corporate behaviour a critical challenge for green marketers.

Table 4.2: Effectiveness of Green Marketing Strategies

Green Marketing Strategy	Mean Score (5)	Effectiveness
Eco-Labeling & Certification	4.28	High
Green Packaging	4.15	High
Social Media Green Campaigns	4.02	High
Environmental Sponsorships	3.78	Moderate
Green Pricing Strategies	3.54	Moderate
Corporate Sustainability Reports	3.31	Moderate

Source: Primary Data | N = 410 | Scale: 1 = Very Ineffective to 5 = Very Effective

Eco-labelling and certification (4.28) and green packaging (4.15) are perceived as the most effective strategies, while corporate sustainability reports (3.31) received moderate ratings, suggesting that tangible and visible green cues resonate more with consumers.

Statistical Analysis

Table 5.1: Chi-Square Test – Association between Demographic Variables and Consumer Behaviour

Variable	χ^2 Value	df	p-value	Result
Gender vs Purchase Frequency	12.48	4	0.014	Significant
Age Group vs Willingness to Pay Premium	18.72	16	0.285	Not Significant
Education vs Awareness Level	22.31	12	0.034	Significant
Income vs Purchase Category	28.45	12	0.005	Significant
Occupation vs Green Marketing Perception	15.62	16	0.478	Not Significant

Source: Primary Data | ** Significant at 5% level ($p < 0.05$)

The Chi-square analysis reveals that gender, educational qualification, and monthly income have a statistically significant association with eco-friendly purchase behaviour. Age group and occupation did not show significant association with willingness to pay premium and green marketing perception respectively.

Table 5.2: Rank Analysis – Factors Influencing Eco-Friendly Product Purchase

Factor	Rank	Weighted Score
Environmental Concern	1	852
Health & Safety Benefits	2	731
Product Quality	3	618
Brand Image & Reputation	4	504
Price Competitiveness	5	387

Source: Primary Data | N = 410 | Ranking based on Garrett's Ranking Method
Using Garrett's ranking technique, 'Environmental Concern' secured Rank 1 with a weighted score of 852, confirming it as the foremost driver. 'Price Competitiveness' ranked last (Rank 5), consistent with the premium-willingness findings.

Table 5.3: Pearson Correlation Matrix – Key Study Variables

Variable	Awareness	Purchase Freq.	Willingness	Green Mktg.
----------	-----------	----------------	-------------	-------------

Awareness	1.000	0.512**	0.489**	0.441**
Purchase Frequency	0.512**	1.000	0.623**	0.537**
Willingness to Pay	0.489**	0.623**	1.000	0.581**
Green Marketing Perception	0.441**	0.537**	0.581**	1.000

Source: Primary Data | ** Significant at 1% level

All study variables exhibit statistically significant positive correlations. The strongest correlation exists between 'Purchase Frequency' and 'Willingness to Pay Premium' ($r = 0.623$), highlighting that habitual eco-buyers are more price-tolerant towards sustainable products.

Table 5.4: Multiple Regression Analysis – Predictors of Eco-Friendly Purchase Behaviour

Variable	β Coeff.	Std. Error	Beta	t-value	p-value
Constant	0.842	0.182	-	4.621	0.000
Awareness Level	0.312	0.068	0.289	4.588	0.000
Green Marketing Perception	0.278	0.074	0.261	3.757	0.000
Monthly Income	0.195	0.055	0.178	3.545	0.001
Educational Qualification	0.143	0.062	0.132	2.306	0.022

Source: Primary Data | Dependent Variable: Eco-Friendly Purchase Behaviour | $R^2 = 0.547$ | Adjusted $R^2 = 0.531$ | $F = 34.12$, $p < 0.001$

The regression model explains 54.7% of the variance in eco-friendly purchase behaviour. 'Awareness Level' ($\beta = 0.312$) emerges as the strongest predictor, followed by 'Green Marketing Perception' ($\beta = 0.278$), underscoring that integrated green marketing communication is pivotal to driving sustainable consumer behaviour.

Findings And Recommendations

Major Findings

1. The majority of respondents (65.8%) are aware of eco-friendly products, with social media being the primary information source (33.7%), indicating the digital shift in green marketing outreach.

2. Environmental concern (35.4%) and health benefits (28.8%) are the dominant purchase motivators, validating value-driven consumption patterns among Chennai consumers.
3. Nearly 59.3% of consumers are willing to pay a premium for eco-friendly products, reflecting a positive price-sustainability relationship in the urban Chennai market.
4. Organic food and eco-household products are the preferred categories, signalling immediate opportunities for FMCG brands with green product lines.
5. Eco-labelling and green packaging are perceived as the most effective marketing strategies, suggesting that point-of-purchase green cues significantly influence consumer choice.
6. A trust deficit exists between brand green claims and perceived reality (mean score 3.42 for corporate credibility), highlighting a critical area for brand strategy improvement.
7. Regression analysis confirms that awareness and green marketing perception are the strongest predictors of eco-friendly purchase behaviour ($R^2 = 0.547$).

Recommendations

1. Marketers should amplify social media green campaigns, leveraging influencer partnerships and user-generated eco-content to enhance product awareness and credibility.
2. Companies must invest in transparent eco-certification and clear on-pack green labelling to build consumer trust and reduce the perceived greenwashing gap.
3. Green pricing strategies should be complemented with communicating tangible value (health, environment, longevity) to justify premium pricing among middle-income segments.
4. FMCG companies should prioritise organic food and eco-household product categories given the highest consumer preference in the Chennai market.
5. Policymakers should mandate sustainability disclosures and incentivise green product certifications to build a credible eco-product ecosystem in Tamil Nadu.

Conclusion

This study establishes that Chennai consumers exhibit a strong and growing preference for eco-friendly products, driven primarily by environmental concern and health awareness. Green marketing particularly through eco-labelling, digital campaigns, and sustainable packaging plays a pivotal role in shaping purchase decisions. The study underscores the need for authentic, transparent, and value-driven green marketing communication to bridge the trust gap and accelerate sustainable consumption. With over half the variance in consumer behaviour explained by awareness and marketing perception, targeted green marketing investments can yield significant dividends for brands operating in the Chennai eco-products market.

References

1. Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). New York: John Wiley & Sons.
2. Jain, S. K., & Kaur, G. (2004). Green marketing: An attitudinal and behavioural analysis of Indian consumers. *Global Business Review*, 5(2), 187–205.
3. Khandelwal, U., & Kulshreshtha, K. (2015). Importance of consumer trust on green product purchase intention. *International Journal of Business and Management*, 10(6), 176–185.

4. Kumar, P., & Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. *South Asian Journal of Global Business Research*, 4(1), 70–89.
5. Ministry of Environment, Forest and Climate Change [MoEFCC]. (2023). Annual Report 2022–23. Government of India.
6. Nielsen IQ India. (2022). The Sustainability Imperative: India Consumer Sustainability Report 2022. Nielsen IQ.
7. Ottman, J. A. (2011). *The New Rules of Green Marketing: Strategies, Tools and Inspiration for Sustainable Branding*. Berrett-Koehler Publishers.
8. Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia. *Environment: Science and Policy for Sustainable Development*, 48(5), 22–36.
9. Peattie, K. (2001). Towards sustainability: The third age of green marketing. *The Marketing Review*, 2(2), 129–146.
10. Polonsky, M. J. (1994). An introduction to green marketing. *Electronic Green Journal*, 1(2), 1–10.
11. Raj, M., & Dharmaraj, K. (2022). Impact of social media green marketing on purchase intention of millennials in Chennai. *Journal of Indian Business Research*, 14(3), 201–218.
12. Suganthi, L. (2019). Examining the relationship of corporate social responsibility with consumer awareness and purchase behaviour. *Resources, Conservation and Recycling*, 142, 118–129.
13. Suki, N. M. (2016). Green product purchase intention: Impact of green brands, attitude, and knowledge. *British Food Journal*, 118(12), 2893–2910.