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Green Marketing and Consumer Buying Behaviour Towards Eco-Friendly Products: An Empirical Study

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Abstract

Businesses around the world are being forced to adopt greener practices. Rising environmental consciousness of buyers, regulatory pressures and the fact that eco-friendly operations usually involve less expenditures in the long term have propelled green marketing from a niche to a mainstream marketing tool. But does any of this result in altered buying behaviour? This study attempts to address this question by surveying 100 consumers about their awareness and buying behaviour across five everyday product categories – FMCG, home appliances, stationery, clothing and non-toxic articles – and whether they shop for these products online or offline. Data were collected using a 35-statement Likert-scale questionnaire and analyzed through percentage analysis, One-Way ANOVA and independent samples t-tests. The attitude towards green marketing was found to be positive in all categories, with category mean scores ranging from 3.45 to 3.64 on a five-point scale. What is less encouraging is the dissociation between this attitude and more substantive commitments such as willingness to pay a premium – people agree to green marketing principles considerably more often than they act on them. Area of residence was the only demographic factor that consistently influenced attitude, affecting it in four of seven categories, while age, income, occupation and gender had little statistical impact. That leaves an impression of fairly evenly distributed green sentiment across the Indian consumer base rather than a concentrated one, a finding with implications for the targeting of green campaigns, as discussed in the recommendations that follow.

Keywords: Green Marketing, Eco-Friendly Products, Consumer Behaviour, Consumer Awareness, Sustainable Consumption

I. Introduction

The American Marketing Association defines green marketing simply as the marketing of products presumed to be environmentally safe. In practice it encompasses a range of activities including product redesign, changes on the factory floor, new packaging and advertising that takes environmental benefits into account. Some writers refer it to as environmental marketing, while others call it ecological marketing; the label is less important than the underlying assumption that buyers see a product’s “greenness” as relevant to their purchasing decision.

Peattie (2001) divides the history of the field into three rough phases. The first was an “ecological” phase that focused exclusively on addressing environmental problems. Then came an “environmental” phase that concentrated on clean technology – designing pollution and waste out of products from the outset. Finally, a “sustainable” phase took hold in the late 1990s that incorporated environmental concern into a broader set of social and economic goals, as opposed to being a separate box to tick. This shift is reflected in a real trend on the demand-side as well: as industrial expansion has visibly strained the environment, more consumers around the world have started to take environmental protection into account in their purchase decisions, a movement often referred to as “green consumerism.” Firms have responded by creating eco-labelling schemes such as ISO 14020 and ISO 14024 to lend environmental claims some third-party credibility.

None of this is without risk for a firm, however. Consumers are quick to dismiss environmental claims, especially if they appear hollow – a firm that markets itself as green but practices greenwashing (in the jargon of the industry) can suffer lasting reputation damage upon exposure. Three conditions tend to separate effective from ineffective green marketing: claims have to be genuine and consistent with the rest of the firm’s conduct; customers need to be informed not only of what is being done but why it is important; and, ideally, customers are given a concrete way to participate instead of just observing. Applied to the traditional marketing mix, this translates to reorienting product design towards resource conservation, pricing towards a premium that buyers will actually be willing to pay, promotion towards credible (rather than exaggerated) environmental statements and distribution towards making green options genuinely accessible.

In India, awareness of eco-friendly products has risen steadily, abetted by social media and digital exposure, but awareness rarely translates into purchase, and in particular not if a green product demands a price premium or is suspected of compromising on quality. This dissonance is the focus of this study, which looks at how consumers – in urban, semi-urban and rural India – actually respond to green marketing across a broad swath of everyday product categories rather than a single category.

II. Literature Review

Why is green marketing such a slippery concept to study? Kangis (1992) traced its history and found that one of the key impediments was the lack of consensus on what “green” really means, and buyers' general lack of understanding of cause and effect in terms of environmental consequences. If left unchecked, unscrupulous marketers could exploit this confusion and sell "green gold" rather than actually green products. Bhat (1993) approached the question from the supply side and laid out the necessity of building green credentials at the design stage – inputs, manufacturing, distribution and disposal are all locked in early – and gave source-reduction and waste-management criteria for comparing design alternatives. Grant (2008) wrote later on how firms successfully incorporate a greener strategy in practice and where the field appears to be heading.

On the consumer side, the evidence is mixed. Rahbar and Wahid (2011) surveyed 250 shoppers in Penang, Malaysia and found that trust in eco-labels and eco-brands plus perception of the brand itself predicted actual green purchase behaviour rather than stated intent – a finding built on for this paper's own Indian market survey. Johri et al. (1998), working in Thailand's cosmetics and toiletries sector, found the opposite – a handful of firms were genuinely trying to market green, but Thai buyers still were not choosing products primarily on environmental attributes. Purohit (2011) surveyed postgraduate students and found all four elements of the marketing mix were significantly linked to green buying intention, with a large chunk of respondents willing to pay more for eco-friendly products even if this involved a slight sacrifice in quality.

Mostafa (2007) categorized green purchase behaviour simply as consumption that is benevolent, recyclable and ecologically sensitive. D'Souza et al. (2006), however, found that the relationship could be negative – green perception had a negative association with purchase intent once price or perceived quality worked against the product. Closer to home, Hemantha (2009) surveyed 100 consumers in Bangalore and found awareness of green issues somewhat firm, while Mourad (2012) drilled into what shapes green brand preference in an emerging market. MohdSuki (2013) showed that environmental concern, product awareness, pricing and brand image work together to shape Malaysian green purchase decisions. Two India-specific studies complete the review: Nagamani and Navaneetha (2014) documented how women students in Coimbatore used specific green items – paper bags, areca plates, eco-bowls – while Mahesh and Gomathi (2016) examined the question of rural influence on green buying decisions in Tirupur district villages.

Taken together, these studies point to roughly the same conclusion: attitude towards green products tends to be positive, but how intense it is and whether it translates into practice depends heavily on a price sensitivity, perceived quality and how credible the information is. That is precisely what this study aims to delve into: how consumers across a broad set of product categories behave in relation to green marketing.

III. Objectives of the Study

- To study the demographic profile of the consumers surveyed for the research.
- To assess the level of awareness of green marketing and eco-friendly products among consumers.

- To analyse consumer buying behaviour towards eco-friendly products across five major product categories: FMCG, home appliances, stationery, clothing, and non-toxic articles.
- To study the influence of the online and offline buying channel on green purchase decisions.
- To examine whether demographic variables (age, gender, income, education, occupation and area of residence) significantly influence consumer attitude towards green marketing.

IV. Research Methodology

A descriptive research design was adopted for this study. Primary data was collected through a structured questionnaire comprising 35 Likert-scale statements distributed across seven thematic sections – awareness of green marketing, FMCG products, home appliances, stationery items, clothing and wearables, non-toxic materials, and online versus offline buying behaviour – in addition to six demographic questions covering area of residence, age, gender, occupation, education, and income. Responses were recorded on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) so that both the direction and intensity of consumer attitude could be captured.

Respondents were selected using a convenience sampling technique, yielding a total sample of 100 valid responses drawn from urban, semi-urban and rural areas. The collected data was tabulated using frequency distribution and percentage analysis, presented graphically and tested statistically using One-Way ANOVA (for demographic variables with three or more categories) and an independent samples t-test (for gender, which has two categories), with the significance level for all tests set at 5% ($p < 0.05$)

V. Research Analysis and Interpretation

A. Demographic Profile of the Respondents

Out of 100 respondents, a majority (59%) belong to urban areas, followed by semi-urban (22%) and rural (19%) areas, indicating that the findings are most representative of urban and semi-urban consumer sentiment, where organised retail of eco-friendly products is currently concentrated.

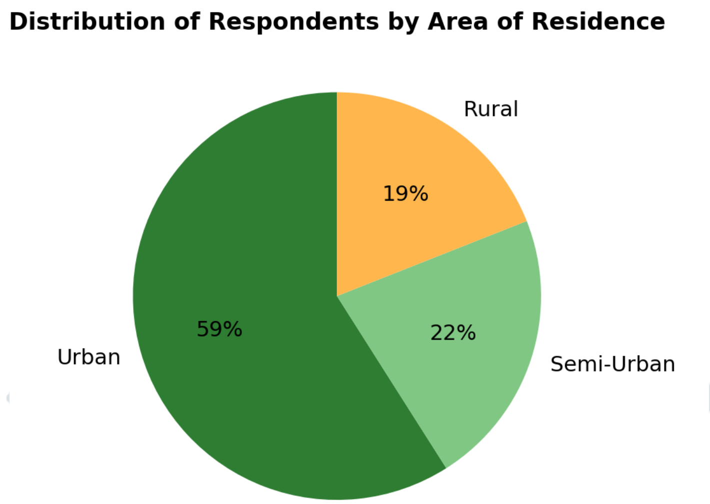

Figure 1: Distribution of Respondents by Area of Residence

The gender split was nearly even, with female respondents forming a slight majority (51%) over male respondents (49%), which strengthens the reliability of gender-based comparisons drawn later in this study.

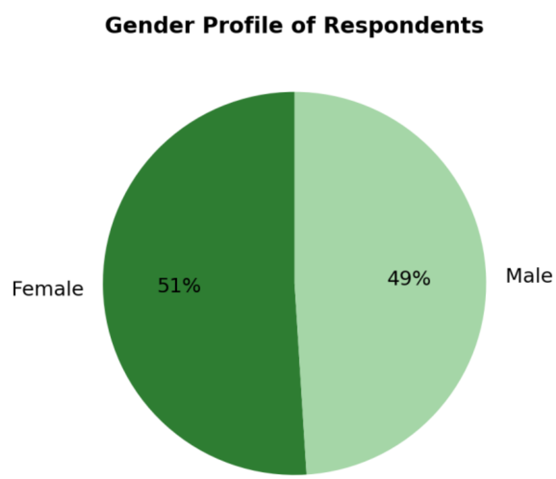

Figure 2: Gender Profile of Respondents

Respondents were fairly concentrated in the younger and middle age brackets, with 28% aged 18–25, 23% aged 26–35 and 22% aged 36–45, tapering to 18% in the 46–55 bracket and 9% aged 56 and above. This concentration in the economically active population is beneficial for green marketing initiatives, since younger consumers tend to be more receptive to sustainability-linked messaging.

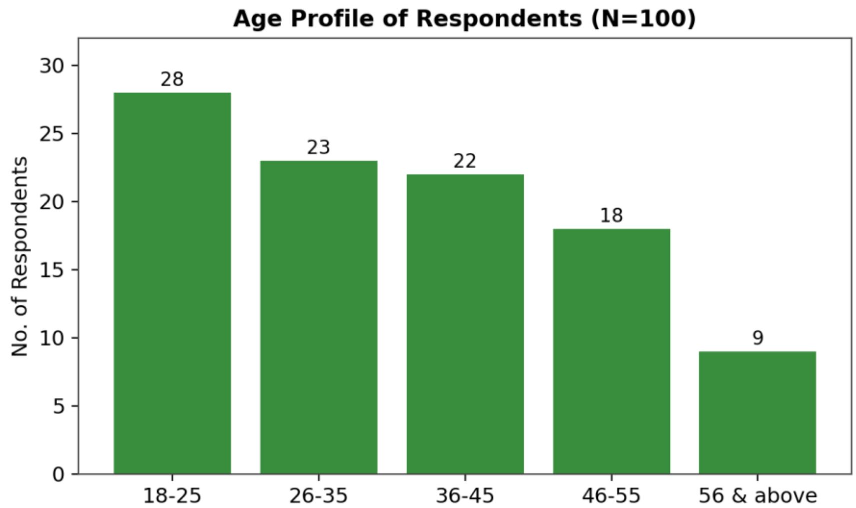

Figure 3: Age Profile of Respondents

In terms of occupation, 30% of respondents held a private job, 25% were students, 20% held a government job, 13% were homemakers, and 12% ran their own business – a spread that captures purchasing contexts ranging from salaried consumption to household procurement decisions. Educationally, the sample was weighted towards graduates (41%), followed by undergraduates (33%) and postgraduates (26%), indicating a slightly higher general awareness level than would be found in a less-educated population. On income, respondents were fairly spread across brackets, with the largest share (32%) earning between ₹40,000–₹60,000 per month, allowing the study to probe whether willingness to pay a premium for eco-friendly products varies with income.

B. Consumer Attitude Towards Green Marketing, by Category

Each of the seven thematic categories was scored on the five-point Likert scale described above, and a mean attitude score was computed for each category across its constituent statements. Table 1 summarises these results, and Figure 4 presents them graphically.

Product Category	Mean Score (/5)	Statement with Highest Agreement
Awareness of Green Marketing / Eco-Friendly Products	3.55	Actively seeking information about a brand's environmental practices (69%)
Daily Life / FMCG Products	3.45	Belief that eco-friendly FMCG products are as effective as regular ones (67%)

Product Category	Mean Score (/5)	Statement with Highest Agreement
Home Appliances	3.51	Willingness to pay more for energy-efficient appliances (70%)
Stationery Items	3.54	Willingness to pay slightly more for sustainable stationery (64%)
Clothing & Wearables	3.51	Checking material composition before buying clothes (67%)
Non-Toxic Materials & Ingredients	3.57	Belief that non-toxic products are safer for family's health (67%)
Online vs Offline Buying Behaviour	3.64	Finding it easier to compare eco-friendly products online (70%)

Table 1: Category-wise Mean Attitude Score and Leading Statement

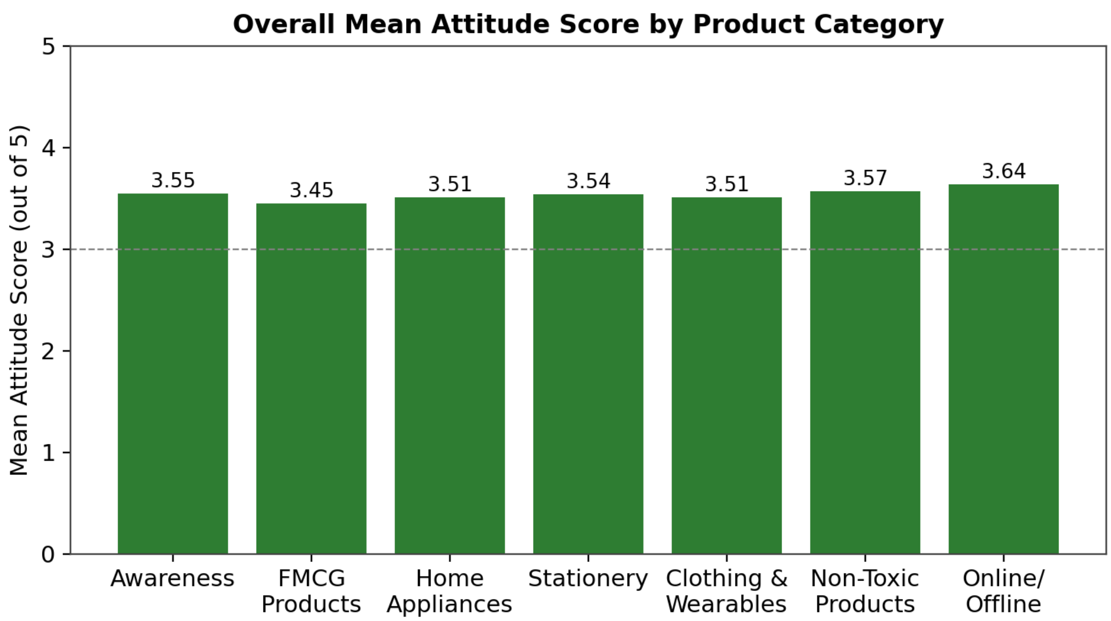

Figure 4: Overall Mean Attitude Score by Product Category

"Online vs Offline Buying Behaviour" comes out on top here (3.64), and "Daily Life / FMCG Products" sits at the bottom (3.45) – but "bottom" is relative, since every single category clears the neutral midpoint of 3.00. That is the headline result: there is no category where sentiment actually tips negative. What stands out more, though, is how tight the spread is – just 0.19 points between the highest and lowest scores – which argues against the idea that green enthusiasm is concentrated in one or two trendy categories. It looks more evenly spread than that. Dig into the individual statements, though, and a pattern from the literature review is picked up again: whenever a statement asks for something costly or effortful, like paying a premium, agreement dips a little compared to statements that ask simply whether someone believes or is aware. Attitude, in other words, is cheap; commitment is not.

C. Cross-Demographic Analysis: Area of Residence

Because area of residence emerged as the demographic variable most strongly associated with variation in green attitude (see Hypothesis Testing below), mean scores were further broken down by urban, semi-urban and rural respondents for each of the seven categories.

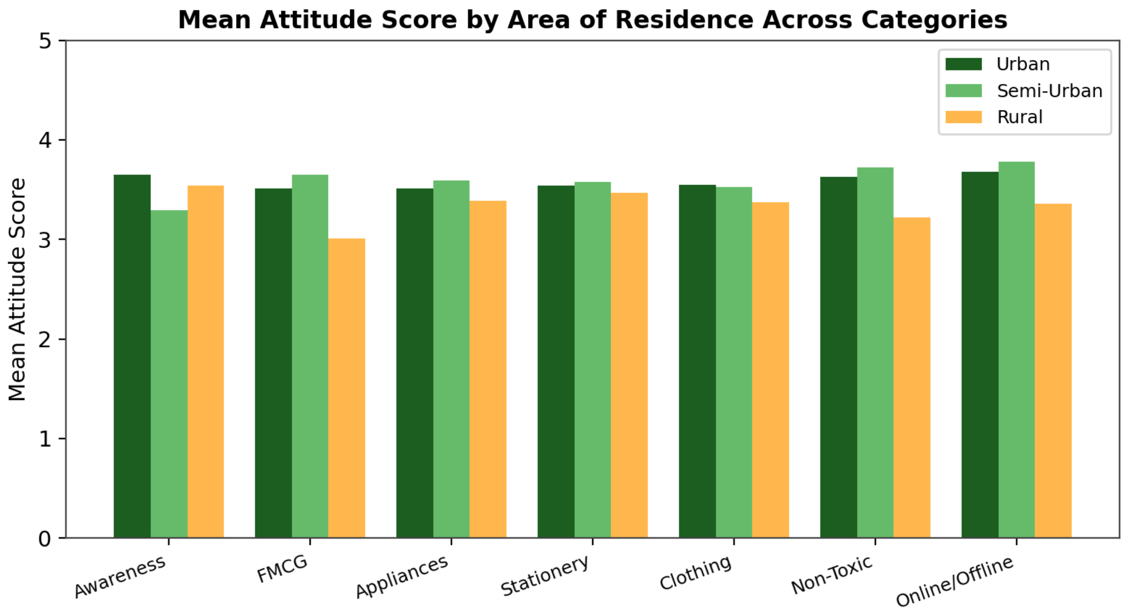

Figure 5: Mean Attitude Score by Area of Residence Across Product Categories

Semi-urban respondents come out ahead in most categories, urban respondents follow close behind, and rural respondents trail in every single one. The gap is widest for "Daily Life / FMCG Products" – a full 0.64 points between the top and bottom groups – which is intuitive: rural shoppers likely don't see eco-friendly FMCG options on the shelf as often as their urban counterparts do, so there is less for their attitude to latch onto.

D. Hypothesis Testing

Six null hypotheses were tested to examine whether demographic characteristics significantly influence consumer attitude scores across the seven product categories, using One-Way ANOVA for area of residence, education, age, income and occupation, and an independent samples t-test for gender. Table 2 summarises the number of categories (out of seven) in which each demographic variable showed a statistically significant effect ($p < 0.05$).

Demographic Variable	Categories with $p < 0.05$	Overall Result
Area of Residence	4 of 7	Significant
Educational Qualification	1 of 7	Significant
Age Group	0 of 7	Not Significant
Monthly Income	0 of 7	Not Significant
Occupation	0 of 7	Not Significant

Demographic Variable	Categories with $p < 0.05$	Overall Result
Gender	0 of 7	Not Significant

Table 2: Summary of Hypothesis Testing Across Demographic Variables

Area came out as the standout variable, moving attitude significantly in four categories – Awareness of Green Marketing, Daily Life / FMCG Products, Non-Toxic Materials & Ingredients, and Online vs Offline Buying Behaviour. Education mattered as well, but only for one category, Stationery Items. Age, income, occupation and gender, on the other hand, showed essentially no statistical pull on attitude anywhere in the seven categories. If anything, that result is more interesting – it suggests green sentiment in this sample isn't the property of a particular income bracket or age group, but something spread fairly evenly across the consumer base, at least once you control for where people actually live.

VI. Key Findings

- The sample skews urban (59%) and young (28% aged 18–25), with a near-even gender split – so the results describe city and near-city India more confidently than they describe rural India.
- Every one of the seven categories scored above neutral, with means ranging 3.45 to 3.64 out of 5 – there's no category where green marketing is actually landing flat.
- The strongest response came in "Online vs Offline Buying Behaviour," while "Daily Life / FMCG Products" lagged the rest – not badly, just noticeably.
- Where someone lives matters more than any other demographic factor tested: urban and semi-urban respondents were consistently warmer to green marketing than rural respondents.
- Education left a smaller footprint, showing up mainly in categories like stationery where evaluating a claim (recycled paper, biodegradable material) takes a bit of product knowledge.
- Age, income, occupation and gender didn't move the needle in any category – green attitude here isn't a young-person thing, or an affluent-person thing.
- One pattern recurred across nearly every category: agreement dropped a little whenever a statement asked for money or effort, not just belief – the classic attitude-behaviour gap the literature keeps flagging.

VII. Conclusion

This paper set out with a fairly simple question: do Indian consumers actually respond to green marketing, and if so, who responds most? The answer, on this evidence, is a qualified yes. Urban and semi-urban consumers in particular are quite receptive to green marketing across daily-use, durable and apparel categories, and a majority say they actively look up a brand's environmental practices before buying rather than taking green claims at face value. But receptiveness in a survey is not the same as money changing hands, and the gap between the two – most visible around willingness to pay a premium – is the central finding of this study. It is both the bad news and the opportunity for marketers: the awareness groundwork has been largely laid, and the harder task now is converting that awareness into an actual purchase. Nothing in the literature reviewed here, or in this dataset, suggests that will happen through green messaging alone. It takes a firm that is actually doing what it claims, explaining why that matters in terms a buyer cares about, and giving that buyer some real stake in the outcome – the conditions for effective green marketing haven't really changed since Peattie and others first laid them out; what has changed is how many more product categories consumers now expect to see them applied to.

IX. Limitations of the Study

- The sample size of 100 respondents, while adequate for exploratory analysis, limits the extent to which findings can be generalised to the broader population.
- The sample is skewed towards urban and semi-urban respondents, which may result in an overall attitude score more favourable than would be observed in a nationally representative sample.
- Self-reported attitude on a Likert scale may not always translate into actual purchase behaviour — a gap commonly referred to in marketing literature as the 'attitude-behaviour gap.'
- The study is cross-sectional in nature, capturing consumer attitude at a single point in time; longitudinal research would be needed to observe how green attitudes evolve over time.

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