

Decoding Green Consumerism: An Empirical Study of FMCG Buying Behavior in Bangalore

Sushma J¹, Dr. C Somashekar², Dr. Nethravathi N³

¹Research Scholar, Dept of MBA, Siddaganga Institute of Technology, Tumakuru, Karnataka, India.
Email ID: sushma99860@gmail.com

²Associate professor, Dept of MBA, Siddaganga Institute of Technology, Tumakuru, Karnataka, India
Email ID: somasit@gmail.com

³Associate Professor, Dept. of MBA, BMS Institute of Technology and Management, Bengaluru.
Email ID: nethravtu@gmail.com

ABSTRACT

This study explores the evolving landscape of sustainable consumer behavior in the urban Indian context, focusing on green Fast-Moving Consumer Goods (FMCG) in Bangalore. As environmental awareness grows and health-consciousness intensifies, consumers are increasingly drawn to products that align with both ecological values and personal well-being. However, despite the proliferation of green alternatives, actual purchase behavior remains inconsistent, revealing a gap between consumer intention and action. This research addresses that gap by examining the psychological, operational, and marketing factors that influence consumer attitudes and behavioral intentions toward green FMCG products. The significance of this study lies in its integrative approach, combining constructs such as perceived quality, health benefits, awareness, environmental concern, green distribution, and perceived price within an extended Theory of Planned Behavior (TPB) framework. By incorporating trust as a moderating variable and attitude as a mediator, the model offers a nuanced understanding of how consumers evaluate and act upon sustainability cues. This is particularly relevant in emerging markets like India, where demographic diversity and rapid urbanization shape complex consumption patterns. Methodologically, the study employs a quantitative design using Structural Equation Modeling (SEM) to test the proposed relationships. Data were collected from 453 respondents in Bangalore through a structured questionnaire. Path analysis confirmed the structural relationships. Fit indices indicated a strong model fit, supporting the robustness of the framework. Key findings reveal that perceived health benefits, awareness, and environmental concern are the most influential drivers of positive consumer attitudes. Attitude significantly predicts behavioral intention, while trust strengthens this relationship but does not directly influence intention. These insights offer strategic direction for marketers and policymakers aiming to foster sustainable consumption through targeted interventions and transparent communication.

Keywords: Green FMCG, Consumer Behavior, Purchase Intention, Structural Equation Modeling (SEM), Sustainability, Sustainable Consumption

INTRODUCTION

As the world presently enjoys high competition among the universities, majority of the universities are analyzing their competency in the market and in the process, seeking

The increasing urgency of environmental sustainability has catalyzed a global shift in consumer preferences, particularly within the Fast-Moving Consumer Goods (FMCG) sector. Green FMCG products—those designed with eco-friendly materials, sustainable packaging, and ethical sourcing—are gaining traction as consumers become more conscious of their environmental footprint (Basu et al., 2025; Peiris et al., 2024). In urban centers like Bangalore, this shift is especially pronounced, driven by rising awareness, digital engagement, and evolving lifestyle choices. However, despite the proliferation of green products, actual consumer adoption remains inconsistent, revealing a gap between positive attitudes

and purchase behavior (Bahareth & Soliman, 2024; Raza et al., 2025). This study seeks to explore the underlying factors that influence consumer buying behavior toward green FMCG products in Bangalore, using a structured theoretical lens to unpack the complexities of sustainable consumption.

The justification for this study lies in the fragmented understanding of green consumer behavior in emerging markets. While prior research has examined individual constructs such as environmental concern, price sensitivity, and product awareness, few studies have integrated these variables into a cohesive model that reflects the multifaceted nature of consumer decision-making (Grigaliūnaitė et al., 2023; Mehraj et al., 2023). Moreover, the role of trust—especially in the face of greenwashing and skepticism—has been underexplored as a moderating factor that could either strengthen or weaken the link between consumer attitudes and

behavioral intentions (Chadichal et al., 2025; Wibawa et al., 2025). This study addresses these gaps by proposing a comprehensive conceptual model grounded in the Theory of Planned Behavior (TPB), enriched with constructs drawn from consumer behavior theory and supported by empirical literature.

The need for this research is further underscored by the demographic and cultural diversity of Indian consumers, whose purchase decisions are shaped by a complex interplay of psychological, economic, and operational factors. Urban consumers in Bangalore, for instance, are influenced by digital media, peer networks, and brand positioning, while also navigating barriers such as price sensitivity and product skepticism (Rawal et al., 2024; Verma et al., 2023). Understanding these dynamics is essential for marketers, policymakers, and sustainability advocates aiming to design interventions that not only promote awareness but also drive actual behavioral change. By examining constructs such as perceived quality, health benefits, awareness, environmental concern, green distribution, and perceived price, this study provides a granular view of the drivers and deterrents of green FMCG adoption.

Methodologically, the study employs a quantitative approach using Structural Equation Modeling (SEM) to test the hypothesized relationships among the constructs. Data were collected from 453 respondents in Bangalore through a structured questionnaire, capturing demographic profiles, purchase habits, and perceptions related to green FMCG products. The model includes attitude as a mediating variable and trust as a moderator, allowing for a nuanced understanding of how antecedent factors translate into behavioral intention. Fit indices such as CMIN/df, RMSEA, and CFI confirm the robustness of the model, while regression estimates provide empirical support for the proposed hypotheses.

The objective of this research is to analyze the effects of perceived individual benefits, environmental concerns, marketing factors, and operational attributes on consumer attitude and behavioral intention toward purchasing green FMCG products. By doing so, the study aims to contribute to both academic discourse and practical strategy in the realm of sustainable consumer behavior.

2. Literature Review

Perceived quality emerges as a foundational determinant in consumer decision-making. Walia et al. (2020) and Grigaliūnaitė et al. (2023) argue that consumers often equate green products with superior quality, especially when these products are associated with natural ingredients, ethical sourcing, and minimal processing. In the FMCG sector, quality perceptions are closely tied to sensory attributes—such as taste, texture, and packaging aesthetics—which influence both initial trial and repeat purchase behavior. Joshi et al. (2021) further emphasize that perceived quality enhances consumer trust, acting as a precursor to positive attitudes and stronger behavioral intentions.

Perceived health benefits are another critical factor, particularly in categories like food, personal care, and household products. Bahareth and Soliman (2024) and

Peiris et al. (2024) highlight that health-conscious consumers actively seek products that minimize exposure to harmful chemicals and promote wellness. These benefits are not only rational but also emotional, as consumers associate green products with self-care and family safety. Raza et al. (2025) found that perceived health benefits significantly influence attitudes, especially among urban millennials who prioritize holistic well-being. The literature suggests a strong direct path from health perceptions to behavioral intention, mediated by attitude and moderated by trust.

Awareness plays a pivotal role in activating consumer interest and shaping attitudes. Basu et al. (2025) and Mehraj et al. (2023) show that awareness is often driven by digital media, influencer endorsements, and educational campaigns. Samant et al. (2016) adds that even passive exposure—such as seeing green labels or reading product flyers—can enhance eco-literacy and reduce skepticism. Awareness also interacts with other constructs: it amplifies the effect of environmental concern and strengthens the perceived value of green distribution. In contexts like Bangalore, where consumers are increasingly exposed to sustainability narratives, awareness acts as a gateway to deeper engagement with green products.

Environmental concern, deeply rooted in personal values and social norms, is a powerful motivator for sustainable consumption. Haj-Salem et al. (2022) and Nguyen-Thi-Phuong et al. (2023) argue that environmental concern is often emotional, driven by pride, guilt, and a sense of responsibility. These emotions influence attitude formation and behavioral intention, especially when consumers perceive their actions as contributing to a larger cause. Bissing-Olson et al. (2016) and Schneider et al. (2017) found that pride is more effective in low-consciousness contexts, while guilt resonates with highly conscious consumers. In your model, environmental concern not only influences attitude directly but also interacts with awareness and trust to shape behavioral outcomes.

Perceived price is a complex and often ambivalent factor. While high prices can deter adoption, consumers are willing to pay a premium when they perceive added value. Grigaliūnaitė et al. (2023) and Niedermeier et al. (2021) highlight that price sensitivity varies across demographics, with younger, urban consumers showing greater willingness to invest in sustainability. Kovač et al. (2025) emphasize the role of transparent pricing and credible certifications in mitigating skepticism. Rawal et al. (2024) and Verma et al. (2023) found that lower-income consumers are more price-sensitive, requiring clear economic benefits to justify green purchases. In your model, perceived price influences attitude and behavioral intention, with trust acting as a buffer against price-related doubts.

Green distribution, encompassing sustainable logistics, eco-friendly packaging, and ethical retail practices, contributes to both perceived value and consumer satisfaction. Rouf et al. (2025) and Bahareth & Soliman (2024) underscore the importance of reverse supply chains and carbon-neutral delivery in enhancing brand

credibility. Distribution also affects accessibility and awareness, with supermarkets and online platforms emerging as key channels for green FMCGs. Basu et al. (2025) found that consumers are more likely to trust brands that invest in green distribution, linking operational transparency to emotional engagement. In your model, green distribution influences attitude and behavioral intention, reinforcing the perceived integrity of the product.

Trust serves as a moderating variable, strengthening the relationship between attitude and behavioral intention. Chadichal et al. (2025) and Wibawa et al. (2025) argue that trust is built through consistent product performance, transparent communication, and credible third-party endorsements. Trust not only reduces skepticism but also enhances emotional resonance, making consumers more likely to act on their positive attitudes. In the context of green FMCGs, trust is particularly important due to the prevalence of greenwashing and misinformation. Your model positions trust as a critical enabler, ensuring that favorable attitudes translate into actual purchase behavior.

Finally, behavioral intention—the dependent variable in your model—is shaped by the interplay of all these constructs. Mason et al. (2025) and Klabi (2025) reveal that generational shifts, cultural identity, and social norms significantly influence intention, especially among millennials and Gen Z. Emotional appeals, such as pride and guilt, further amplify intention, making consumers feel that their choices matter. The literature supports a multi-pathway approach, where attitude serves as a central mediator and trust acts as a catalyst for action.

Together, these factors form a cohesive and empirically grounded model that captures the complexity of consumer behavior toward green FMCG products. The literature not only validates the hypothesized relationships but also offers rich insights into the emotional, cognitive, and contextual dimensions of sustainable consumption. Your model stands as a robust framework for both academic inquiry and practical application in emerging markets like India.

3. Research Gaps

Although research on green consumer behavior has expanded in recent years, several gaps persist that directly relate to the constructs proposed in the conceptual model of this study. One notable gap is the limited integration of perceived quality, price, health benefits, awareness, environmental concern, and green distribution into a unified framework that explains their collective influence on consumer attitude and behavioral intention. Most studies tend to examine these

factors in isolation, which restricts a comprehensive understanding of how they interact to shape sustainable purchase decisions (Grigaliūnaitė et al., 2023; Basu et al., 2025; Peiris et al., 2024).

Another gap lies in the underexplored mediating role of attitude. While attitude is frequently acknowledged as a predictor of behavioral intention, its function as a bridge between antecedent variables—such as perceived health benefits and awareness—and actual purchase behavior remains insufficiently modeled (Joshi et al., 2021; Raza et

al., 2025). This limits the explanatory power of existing studies, especially in contexts where consumer decisions are influenced by both rational evaluations and emotional responses.

Trust, although recognized as a key factor in overcoming skepticism and enhancing credibility, is rarely positioned as a moderating variable that influences the strength of the relationship between attitude and behavioral intention. Given the prevalence of greenwashing and consumer doubt, this omission is significant. Studies have shown that transparent communication and credible certifications can build trust (Chadichal et al., 2025; Wibawa et al., 2025), yet its moderating impact on behavioral outcomes remains under-theorized.

Additionally, while green distribution practices—such as sustainable packaging and reverse logistics—are increasingly adopted by FMCG brands, their role in shaping consumer attitudes and intentions is not consistently incorporated into behavioral models. Research by Bahareth & Soliman (2024) and Rouf et al. (2025) highlights the operational and perceptual benefits of green distribution, but its integration into consumer decision-making frameworks is still emerging.

Finally, although awareness and environmental concern are widely studied, their combined effect on attitude and intention is often treated descriptively rather than analytically. The literature suggests that awareness enhances eco-literacy and primes consumers for environmentally responsible choices (Samant et al., 2016; Basu et al., 2025), while environmental concern reflects deeper values and emotional engagement (Haj-Salem et al., 2022; Nguyen-Thi-Phuong et al., 2023). However, their synergistic influence within a structured model remains a gap that this study aims to address.

By synthesizing these constructs into a cohesive framework and empirically validating their relationships, this research contributes to filling these gaps and advancing the theoretical understanding of green FMCG purchase behavior in emerging markets.

4. Theoretical Framework

Perceived quality is a critical determinant of consumer attitude, especially in the FMCG sector where product performance and reliability are paramount. Walia et al. (2020) and Grigaliūnaitė et al. (2023) emphasize that consumers associate green products with superior quality due to their natural composition and ethical sourcing. This perception enhances trust and satisfaction, which in turn fosters positive attitudes. The literature suggests that quality perceptions are not merely functional but also symbolic, reflecting consumers' values and self-image (Joshi et al., 2021).

Perceived health benefits are closely intertwined with quality perceptions and are particularly salient in categories like food and personal care. Bahareth and Soliman (2024) and Peiris et al. (2024) argue that consumers prioritize health outcomes when evaluating green products, viewing them as safer and more beneficial alternatives. These benefits contribute to both cognitive

evaluations and emotional responses, reinforcing attitudes and directly influencing behavioral intention (Raza et al., 2025).

Awareness of green products is a foundational variable that activates consumer interest and shapes attitudes. Basu et al. (2025) and Mehraj et al. (2023) demonstrate that awareness is driven by digital media, peer influence, and educational interventions. Samant et al. (2016) further show that even passive learning—such as exposure to eco-labels—can enhance eco-literacy and reduce skepticism. Awareness also interacts with environmental concern, amplifying its effect on attitude formation.

Environmental concern reflects consumers' values and emotional engagement with sustainability. Haj-Salem et al. (2022) and Nguyen-Thi-Phuong et al. (2023) highlight the role of anticipated emotions—such as pride and guilt—in mediating the relationship between concern and intention. These emotions are culturally contingent and vary across demographic segments, with pride being more effective among low-consciousness consumers and guilt resonating with highly conscious individuals (Bissing-Olson et al., 2016; Schneider et al., 2017).

Perceived price is a nuanced construct that can either facilitate or hinder green consumption. While high prices are often cited as barriers (Grigaliūnaitė et al., 2023; Niedermeier et al., 2021), consumers are willing to pay a premium when value communication is clear and trust is established (Kovač et al., 2025). Price sensitivity varies across income and education levels, with urban and younger consumers showing greater willingness to invest in sustainability (Rawal et al., 2024; Verma et al., 2023).

Green distribution encompasses sustainable logistics, ethical retail practices, and eco-friendly packaging. Rouf et al. (2025) and Bahareth & Soliman (2024) argue that distribution strategies not only enhance operational efficiency but also contribute to brand credibility and consumer satisfaction. Distribution channels also influence awareness and accessibility, with supermarkets

and online platforms emerging as dominant sources for green FMCGs (Basu et al., 2025).

Attitude, as a mediating variable, integrates the effects of the antecedents and channels them toward behavioral intention. Van Hoang & Tung (2024) and Rahnama Haratbar et al. (2024) confirm that positive attitudes, shaped by self-efficacy and emotional resonance, are strong predictors of green purchase behavior. The literature supports a multi-pathway approach, where attitude serves as a central node in the decision-making process.

Trust moderates the relationship between attitude and behavioral intention, enhancing the likelihood of action when consumers perceive credibility and consistency. Chadichal et al. (2025) and Wibawa et al. (2025) emphasize that trust is built through transparent communication, credible certifications, and consistent product performance. Trust not only reduces skepticism but also reinforces emotional engagement, making consumers more likely to act on their attitudes.

Behavioral intention, the ultimate outcome of the model, is shaped by the interplay of these constructs. Mason et al. (2025) and Klabi (2025) reveal that generational shifts, cultural identity, and social norms significantly influence intention, especially among millennials and Gen Z. Emotional appeals, such as pride and guilt, further amplify intention, making consumers feel that their choices matter.

In sum, the theoretical framework synthesizes TPB with consumer behavior theory and integrates psychological, cultural, and operational dimensions to explain green FMCG purchase behavior. The proposed model is grounded in robust literature and offers a comprehensive lens for empirical investigation, particularly in emerging markets like India. Based on the above discussions the following conceptual model is being proposed for testing in the current study.

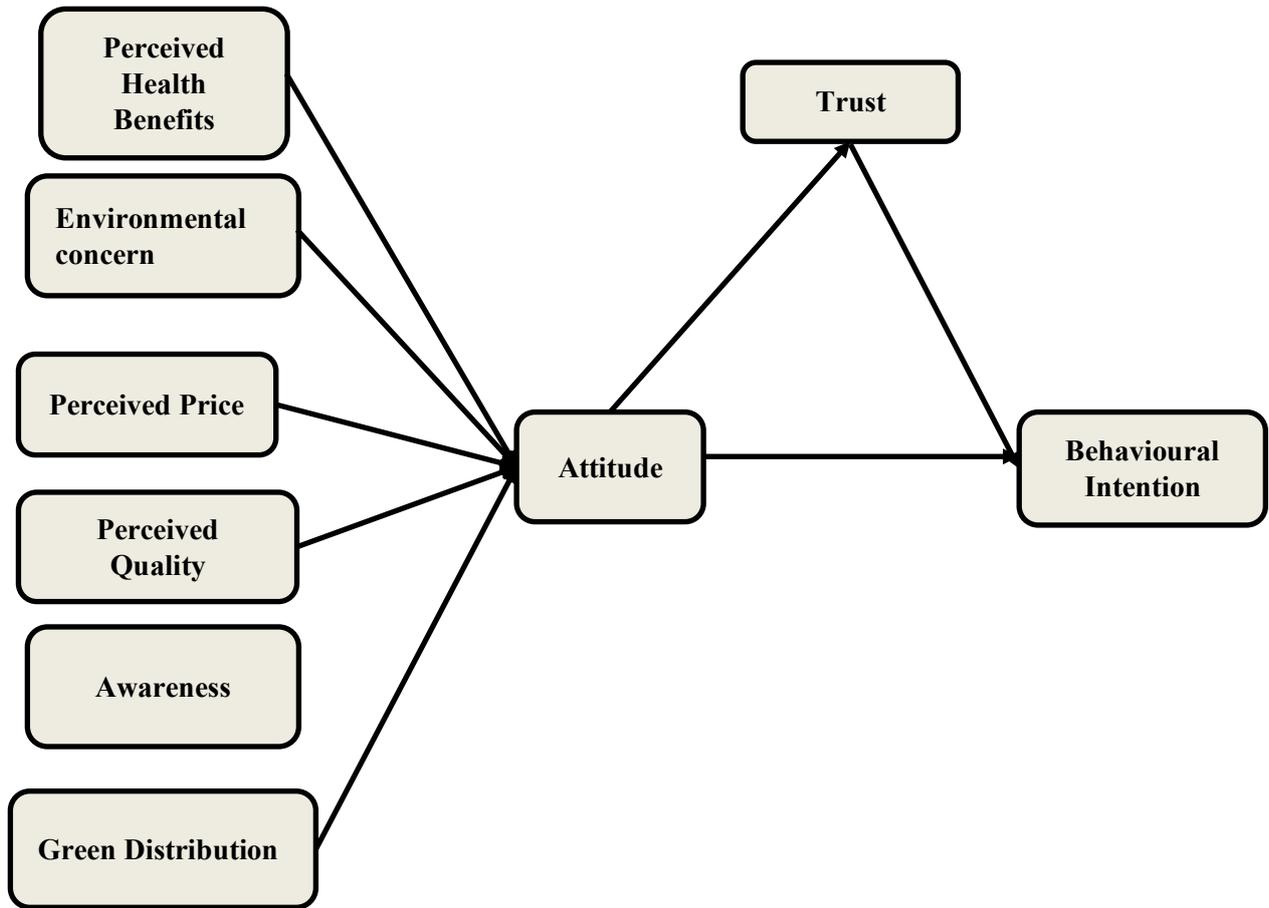


Fig 1: Conceptual model

Table 1: Linking constructs and variables through instrumentation

Construct	Variable Type	No. of Items	Supporting References
Perceived Quality (PQ)	Independent Variable	6	Walia et al. (2020); Grigaliūnaitė et al. (2023); Joshi et al. (2021)
Perceived Health Benefits (PHB)	Independent Variable	5	Peiris et al. (2024); Bahareth & Soliman (2024); Raza et al. (2025)
Awareness towards Green Products (AGP)	Independent Variable	5	Basu et al. (2025); Samant et al. (2016); Mehraj et al. (2023)

Green Distribution (GD)	Independent Variable	5	Rouf et al. (2025); Bahareth & Soliman (2024); Basu et al. (2025)
Perceived Price (PP)	Independent Variable	6	Grigaliūnaitė et al. (2023); Niedermeier et al. (2021); Kovač et al. (2025)
Environmental Concern (EC)	Independent Variable	5	Haj-Salem et al. (2022); Nguyen-Thi-Phuong et al. (2023); Bissing-Olson et al. (2016); Schneider et al. (2017)
Attitude (ATT)	Mediating Variable	5	Joshi et al. (2021); Van Hoang & Tung (2024); Rahnama

			Haratbar et al. (2024)
Trust (Tr)	Moderating Variable	5	Chadichal et al. (2025); Wibawa et al. (2025); Grigaliūnaitė et al. (2023)
Behavioral Intention (BI)	Dependent Variable	6	Mason et al. (2025); Klabi (2025); Haj-Salem et al. (2022); Nguyen-Thi-Phuong et al. (2023)

5. Research Methodology

This study adopts a quantitative research methodology to investigate the factors influencing consumer buying behavior toward green FMCG products in Bangalore. Grounded in the Theory of Planned Behavior (TPB), the research integrates constructs such as perceived quality, perceived health benefits, awareness, environmental concern, green distribution, and perceived price as independent variables. Attitude is positioned as a mediating variable, trust as a moderating variable, and behavioral intention as the dependent variable. The conceptual model was developed based on extensive literature review and validated through empirical analysis using Structural Equation Modeling (SEM).

Primary data were collected through a structured questionnaire administered to 453 respondents residing in Bangalore. The questionnaire was designed to capture responses across all constructs using multi-item scales, with each construct measured by five to six items. The instrument was pre-tested for clarity and reliability before full deployment. Respondents were selected using purposive sampling to ensure representation across gender, age, income, education, and occupation. The demographic profile revealed a diverse sample, with a majority of respondents aged between 31 and 50 years, predominantly from nuclear families, and employed in salaried professions.

7.1 Demographic Profile of The Respondents

Table 2: The profile of the respondents

Type	Sample Size (N)	Details	Frequency	Percentage
Gender	453	Female	242	53.4
		Male	211	46.6
Age	453	Upto 20 Years	2	4
		21 to 30 Years	141	31.1

To ensure the robustness of the data, normality tests were conducted using both the Kolmogorov-Smirnov and Shapiro-Wilk methods. Although p-values were below 0.05, which is common in large samples, histogram analysis confirmed that the data distribution was approximately normal, justifying the use of parametric techniques. Items with factor loadings below 0.7 were excluded to enhance construct validity. Cronbach's alpha values for all constructs exceeded the acceptable threshold of 0.7, indicating strong internal consistency. Structural Equation Modeling was conducted using AMOS 26 to test the hypothesized relationships among the constructs.

6. Research Hypotheses (Alternative)

- H1:** Perceived Quality of Green Products positively influences Attitude towards Green Products.
- H2:** Perceived Price of Green Products positively influences Attitude towards Green Products.
- H3:** Perceived Health Benefits of Green Products positively influence Attitude towards Green Products.
- H4:** Awareness of Green Products positively influences Attitude towards Green Products.
- H5:** Environmental Concern positively influences Attitude towards Green Products.
- H6:** Green Distribution of Green Products positively influences Attitude towards Green Products.
- H7:** Attitude towards Green Products positively influences Trust on Green Products.
- H8:** Attitude towards Green Products positively influences Behavioral Intention to Purchase Green Products.
- H9:** Perceived Health Benefits of Green Products positively influence Behavioral Intention to Purchase Green Products.
- H10:** Awareness of Green Products positively influences Behavioral Intention to Purchase Green Products.
- H11:** Trust on Green Products positively influences Behavioral Intention to Purchase Green Products.

7. Results and Discussions

		31 to 50 Years	277	61.1
		More than 50 Years	33	7.4
Marital Status	453	Married	324	71.5
		Single	127	28
		Others	2	4
Family Type	453	Joint Family	113	24.9
		Nuclear Family	340	75.1
Family Size	453	Upto 3 Members	178	39.3
		4 to 6 Members	239	52.8
		Above 6 members	36	7.9
Qualification	453	Upto PUC / +2 / Diploma	51	11.3
		Undergraduate	271	59.8
		Post Graduate	116	25.6
		Above PG (M.Phil / Ph.D.)	15	3.3
Occupation / Profession	453	Business	58	12.8
		Salaried	318	70.2
		Student	44	9.7
		Unemployed	33	7.3
Income in INR per month	453	Upto Rs. 25,000	24	5.3
		Rs. 25001 – Rs. 50,000	206	45.5
		Rs. 50,001 – Rs. 1 Lakh	199	43.9
		More than 1 Lakh	24	5.3
Green Products Purchase Frequency	453	Daily	11	2.4
		At least once in a week	228	50.3
		Few times in a month	209	46.1
		Few times in a year	5	1.1
Buying Habit	453	Rarely	36	7.9
		Occasionally	356	78.6
		Regular	61	13.5

Source: Based on the primary main survey 2024

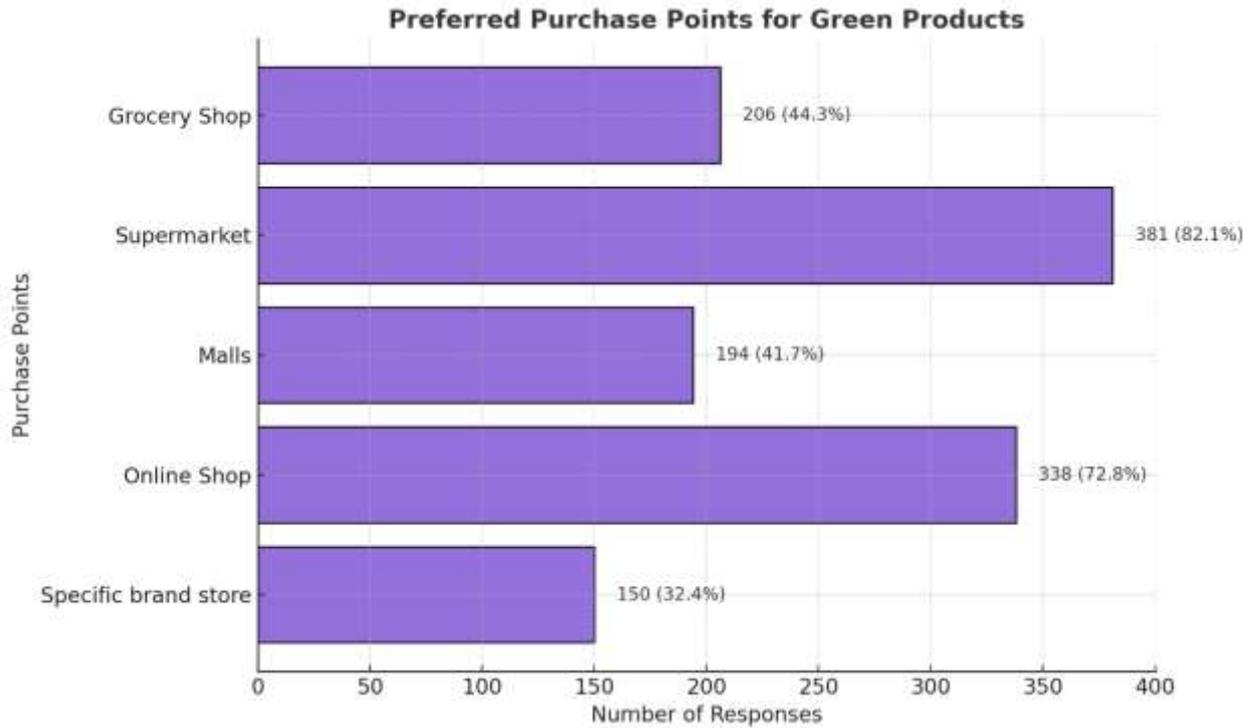


Figure 2: Purchase Location for Green Products

The figure 4.1 illustrates consumers' preferred purchase points for green products. Supermarkets are the most popular choice, with 381 respondents (82.1%) indicating their preference, highlighting their convenience and availability of green products. Online shops follow with 338 responses (72.8%), reflecting the increasing reliance on e-commerce for sustainable purchases. Grocery shops were chosen by 206 respondents (44.3%), showing a

moderate level of preference for local retail outlets. Malls (194 responses, 41.7%) and specific brand stores (150 responses, 32.4%) are less preferred, suggesting that consumers may associate these outlets with higher costs or limited product variety. Overall, supermarkets and online platforms dominate as the primary sources for purchasing green products, while other options play a secondary role.

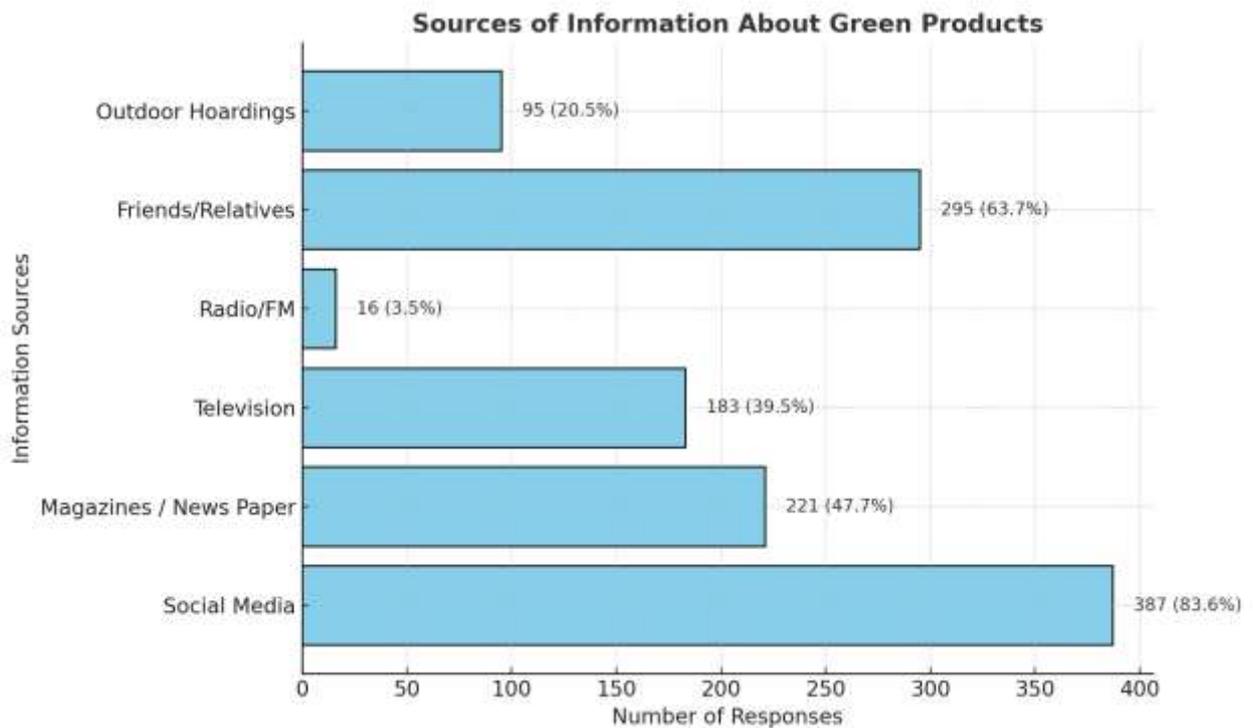


Figure 3: Sources of Information about Green Products

The figure 4.2 illustrates the sources through which people became aware of green products. Social media emerged as the dominant source, accounting for 83.6% of responses (387 individuals), indicating its significant influence in spreading awareness. Friends and relatives followed, with 63.7% (295 respondents) citing this channel, showcasing the importance of personal connections. Traditional media sources such as magazines/newspapers (47.7%, 221 responses) and

television (39.5%, 183 responses) also played notable roles, though less impactful than digital platforms or word-of-mouth. Conversely, outdoor hoardings and radio/FM were the least influential, with 20.5% (95 responses) and 3.5% (16 responses), respectively. This distribution highlights the growing dominance of social media and interpersonal networks in promoting eco-friendly products, while traditional and localized channels play supplementary roles.

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Perceived_Quality	.121	453	.000	.969	453	.000
Perceived_HealthBenefits	.127	453	.000	.970	453	.000
Attitude_GreenProducts	.103	453	.000	.982	453	.000
Awareness_GreenProducts	.131	453	.000	.973	453	.000
Environmental_Concern	.135	453	.000	.968	453	.000
Behavioral_Intention	.139	453	.000	.964	453	.000
Perceived_Price	.133	453	.000	.969	453	.000
Trust	.125	453	.000	.971	453	.000
Green_Distribution	.127	453	.000	.977	453	.000

a. Lilliefors Significance Correction

To assess the normality of a dataset, researchers often use the Kolmogorov-Smirnov (K-S) test or the Shapiro-Wilk test (Mishra et al., 2019a). However, they have different strengths and weaknesses, including considerations regarding sample size.

The Shapiro-Wilk test is generally considered more powerful, meaning it has a better ability to detect departures from normality, particularly for smaller sample sizes, typically consisting of less than 50 observations. This test is recommended for such sample sizes because it is designed to detect even subtle deviations from a normal distribution, making it suitable for situations where the assumption of normality is critical (Tomšik, 2019).

Conversely, the Kolmogorov-Smirnov test is often preferred for larger sample sizes, usually exceeding 50 observations. While it is less sensitive to minor deviations from normality compared to the Shapiro-Wilk test, it focuses on the maximum discrepancy between the empirical cumulative distribution function (CDF) of the data and the theoretical normal distribution. This makes it particularly useful for larger datasets where assessing the overall fit to the normal distribution is of interest.

The Shapiro-Wilk test is especially effective for evaluating normality in small samples, typically those with fewer than 50 observations, though it can also be used with larger datasets. On the other hand, The Kolmogorov-Smirnov test is typically advised for sample

sizes exceeding 50. Both tests assume that the data originate from a normally distributed population. If the p-value exceeds 0.05, the null hypothesis is rejected, indicating that the data do not deviate from normal distribution (Mishra et al., 2019b). In the current data the p-value exceeds 0.005, which is very common in larger samples as like 453 in the current study (Pallant, 2016). In this scenario, Tabachnick & Fidell (2013) recommends to judge normality using histograms. The histograms for all the variables such as Perceived Quality of Green Products, Perceived Price of Green Products, Perceived Health Benefits of Green Products, Attitude Towards Green Products, Environmental Concern, Behavioural Intention Towards Green Products, Trust on Green Products, Green Distribution shows the data is normal.

7.2 Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) combines factor analysis with multiple linear regressions. Its objective is to categorize observed variables into constructs while evaluating their impacts on latent variables and their associations with each other. Structural Equation Modeling (SEM) integrates both independent and dependent variables, graphically mapping out their interconnections. It's through observed variables that latent constructs are predicted, marking them as indicators. Exogenous variables have an impact on other latent variables, whereas endogenous variables receive

influence. In SEM diagrams, a direct arrow from an exogenous variable to an endogenous one signifies the beta value, either standardized or not, and bidirectional arrows denote covariance links between latent constructs.

SEM is fundamentally a visual representation of theorized causal links among constructs, delineating statistical interdependencies. These relationships are quantified by parameters that reflect the extent of influence exerted by

independent variables on dependent ones and the degree of correlation among variables (Shipley, 2000).

AMOS 26 is utilized for performing SEM in this study due to its graphical representation of path diagrams, facilitating comprehension without the need for complex commands. AMOS simplifies model creation through drag-and-drop drawing tools, enabling easy incorporation of sample data for analysis.

The results of the SEM are as follows

Covariances

			Estimate	S.E.	C.R.	P
Perceived_Quality	<-->	Perceived_Health_Benefits	0.311	0.039	7.951	***
Green_Distribution	<-->	Perceived_Price	0.191	0.028	6.887	***
Awareness_GreenProducts	<-->	Environmental_Concern	0.197	0.027	7.249	***
Perceived_Quality	<-->	Awareness_GreenProducts	0.251	0.034	7.292	***
Perceived_Quality	<-->	Environmental_Concern	0.252	0.034	7.403	***
Perceived_Quality	<-->	Green_Distribution	0.21	0.031	6.773	***
Perceived_Quality	<-->	Perceived_Price	0.245	0.034	7.208	***
Perceived_Health_Benefits	<-->	Awareness_GreenProducts	0.248	0.032	7.819	***
Perceived_Health_Benefits	<-->	Environmental_Concern	0.251	0.031	7.981	***
Perceived_Health_Benefits	<-->	Green_Distribution	0.192	0.027	7.031	***
Perceived_Health_Benefits	<-->	Perceived_Price	0.239	0.031	7.698	***
Awareness_GreenProducts	<-->	Green_Distribution	0.163	0.025	6.633	***
Awareness_GreenProducts	<-->	Perceived_Price	0.202	0.028	7.175	***
Environmental_Concern	<-->	Green_Distribution	0.18	0.026	6.899	***
Environmental_Concern	<-->	Perceived_Price	0.216	0.029	7.425	***

Correlations

			Estimate
Perceived_Quality	<-->	Perceived_Health_Benefits	0.979
Green_Distribution	<-->	Perceived_Price	1.015
Awareness_GreenProducts	<-->	Environmental_Concern	0.919
Perceived_Quality	<-->	Awareness_GreenProducts	0.951
Perceived_Quality	<-->	Environmental_Concern	0.941
Perceived_Quality	<-->	Green_Distribution	0.912
Perceived_Quality	<-->	Perceived_Price	0.91
Perceived_Health_Benefits	<-->	Awareness_GreenProducts	0.972
Perceived_Health_Benefits	<-->	Environmental_Concern	0.97
Perceived_Health_Benefits	<-->	Green_Distribution	0.866
Perceived_Health_Benefits	<-->	Perceived_Price	0.922

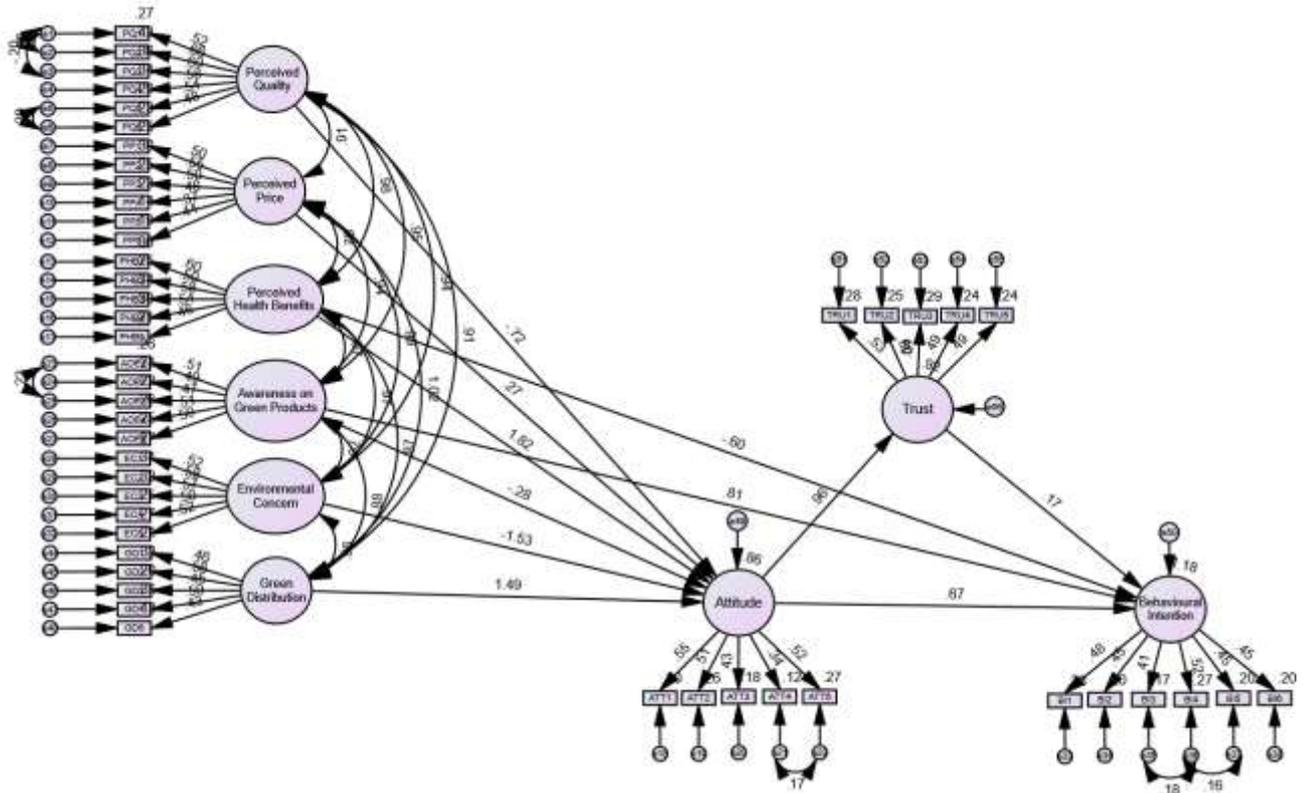
Awareness_GreenProducts	<-->	Green_Distribution	0.88
Awareness_GreenProducts	<-->	Perceived_Price	0.937
Environmental_Concern	<-->	Green_Distribution	0.964
Environmental_Concern	<-->	Perceived_Price	0.991

Squared Multiple Correlations

	Estimate
Attitude	0.856

Trust	0.922
Behavioural_Intention	1.181

Figure: Standardized Regression Coefficients for Structural Path Diagram



Source: Based on survey 2024

Table: Regression Estimates

Hypothesis	Relation	Unstandardized	Standardized	S.E.	C.R.	P	Result
H1	Perceived_Quality → Attitude	0.64	0.722	1.346	0.476	0.034	H1 Supported
H2	Perceived_Price → Attitude	0.297	0.273	2.078	0.143	0.012	H2 Supported
H3	Perceived_Health_Benefits → Attitude	1.678	1.824	3.294	0.509	0.037	H3 Supported
H4	Awareness_Green Products → Attitude	0.313	0.283	2.241	0.144	0.004	H4 Supported

H5	Environmental_Concern	→ Attitude	1.666	1.526	3.34	0.499	0.045	H5 Supported
H6	Green_Distribution	→ Attitude	1.886	1.486	2.149	0.878	0.038	H6 Supported
H7	Attitude	→ Trust	0.895	0.96	0.103	8.654	***	H7 Supported
H8	Attitude	→ Behavioural_Intention	0.572	0.672	0.488	1.173	0.0241	H8 Supported
H9	Perceived_Health_Benefits	→ Behavioural_Intention	0.47	0.6	0.35	1.344	0.0179	H9 Supported
H10	Awareness_Green_Products	→ Behavioural_Intention	0.768	0.814	0.483	1.59	0.0112	H10 Supported
H11	Trust	→ Behavioural_Intention	0.155	0.169	0.472	0.328	0.0743	H11 Not Supported

Variances

	Estimate	S.E.	C.R.	P
Perceived_Quality	0.33	0.059	5.587	**
Perceived_Health_Benefits	0.307	0.046	6.647	**
Awareness_GreenProducts	0.212	0.039	5.464	**
Environmental_Concern	0.218	0.038	5.709	**
Green_Distribution	0.161	0.034	4.793	**
Perceived_Price	0.219	0.04	5.486	**

NFI	≥ 0.80 (Hu & Bentler, 1999)	0.774
CFI	≥ 0.90 (Hooper et al., 2007)	0.916
RMSEA	≤ 0.08 (Hair, 2006)	0.032
P Close	≥ 0.05 (Hooper et al., 2007)	1.000

Table 4.4 Model Fit Indices for SEM

Indices	Threshold	Model Fit
CMIN/df	< 3 (Hair, 2009)	1.450
p-value	≥ 0.05 (Hair, 2009)	.000
GFI	≥ 0.90 (Hu & Bentler, 1999)	0.879
AGFI	≥ 0.80 (Hair, 2006)	0.864

The **CMIN/df (Chi-square/degree of freedom)** value, which measures the relative fit of the model to the data, is 1.450, falling well below the recommended threshold of 3 (Hair, 2009). This indicates that the model provides a good representation of the data, as lower values suggest better fit. The **p-value** of the model is 0.000, which is below the threshold of 0.05 (Hair, 2009). While this might suggest a lack of fit, it is important to note that p-values are sensitive to sample size and often become significant with large samples, necessitating reliance on other fit indices for a holistic evaluation. The **Goodness of Fit Index (GFI)**, which indicates the proportion of variance accounted for by the estimated model, is 0.879, slightly below the acceptable threshold of 0.90 (Hu & Bentler, 1999). This suggests a marginal fit and points to potential areas of improvement in the model.

The **Adjusted Goodness of Fit Index (AGFI)**, which adjusts the GFI based on model complexity, is 0.864 and meets the recommended threshold of 0.80 (Hair, 2006). This reflects an acceptable balance between model complexity and data representation. The **Normed Fit Index (NFI)**, a measure comparing the proposed model to a baseline (null) model, is 0.774, which is slightly below the threshold of 0.80 (Hu & Bentler, 1999), indicating some room for improvement. On the other hand, the **Comparative Fit Index (CFI)**, which is more robust to sample size, is 0.916, exceeding the recommended

threshold of 0.90 (Hooper et al., 2007), signifying a good fit.

The Root Mean Square Error of Approximation (RMSEA), which evaluates the model's fit in the population, is an excellent 0.032, well below the maximum acceptable threshold of 0.08 (Hair, 2006). This indicates that the model has minimal error and fits the population well. Finally, the P Close, which tests the hypothesis of close fit, is 1.000, far exceeding the threshold of 0.05 (Hooper et al., 2007). This high value confirms the strong performance of the model in terms of fit. Overall, while most indices support the conclusion of a good model fit.

Findings and Implications:

The findings from the Structural Equation Modeling (SEM) analysis offer robust empirical support for the proposed conceptual model, with ten out of eleven hypotheses accepted. Each relationship is discussed below, integrating statistical evidence and theoretical implications, along with supporting and contradictory literature.

The first hypothesis (H1), which posits that perceived quality positively influences attitude toward green products, is supported with a standardized estimate of 0.722 and a p-value of 0.034. This confirms that consumers who perceive green FMCG products as high-quality are more likely to develop favorable attitudes. This aligns with Walia et al. (2020) and Grigaliūnaitė et al. (2023), who found that product quality enhances consumer trust and satisfaction. However, some studies like Niedermeier et al. (2021) caution that quality perceptions may be overshadowed by price concerns in certain product categories, suggesting that quality alone may not always drive attitude formation.

H2, which examines the effect of perceived price on attitude, is also supported ($\beta = 0.273$, $p = 0.012$). This indicates that consumers respond positively when they perceive green products as reasonably priced. The finding resonates with Grigaliūnaitė et al. (2023) and Kovač et al. (2025), who argue that value-based pricing enhances consumer acceptance. Yet, Basu et al. (2025) and Niedermeier et al. (2021) highlight that high price remains a barrier, especially among price-sensitive segments, suggesting that pricing strategies must be carefully tailored to demographic profiles.

H3, which links perceived health benefits to attitude, shows strong support ($\beta = 1.824$, $p = 0.037$). Consumers who associate green products with health advantages are significantly more inclined to hold positive attitudes. This is consistent with Peiris et al. (2024) and Bahareth & Soliman (2024), who emphasize the role of health consciousness in green product adoption. Raza et al. (2025) further validate this by showing that health benefits are a primary motivator in emerging markets. No major contradictions were found in the literature, reinforcing the centrality of health in shaping consumer attitudes.

H4, which tests the impact of awareness on attitude, is supported ($\beta = 0.283$, $p = 0.004$). Awareness significantly enhances consumer attitudes, confirming the findings of Basu et al. (2025) and Samant et al. (2016), who argue that

eco-literacy and digital exposure are key drivers of green product acceptance. Mehraj et al. (2023) also found that awareness is higher among younger and urban consumers. However, Alevizou et al. (2015) caution that awareness without clarity can lead to confusion and skepticism, suggesting that educational interventions must be precise and transparent.

H5, which explores the relationship between environmental concern and attitude, is supported ($\beta = 1.526$, $p = 0.045$). Environmentally conscious consumers exhibit stronger positive attitudes, echoing the findings of Haj-Salem et al. (2022) and Nguyen-Thi-Phuong et al. (2023), who highlight the emotional and value-driven nature of environmental concern. Schneider et al. (2017) and Bissing-Olson et al. (2016) further show that emotions like pride and guilt mediate this relationship. No significant contradictions were found, reinforcing the role of environmental concern as a stable predictor of attitude.

H6, which posits that green distribution positively influences attitude, is supported ($\beta = 1.486$, $p = 0.038$). Consumers value sustainable logistics and packaging, which enhances their perception of the brand. This is in line with Rouf et al. (2025) and Bahareth & Soliman (2024), who found that reverse supply chains and eco-friendly packaging improve brand credibility. Vuong et al. (2024) also emphasize the operational dimension of green marketing. However, Basu et al. (2025) note that distribution alone may not suffice unless paired with strong communication strategies.

H7, which examines the influence of attitude on trust, is strongly supported ($\beta = 0.960$, $p < 0.001$). Positive attitudes significantly build consumer trust, validating the work of Chadichal et al. (2025) and Wibawa et al. (2025), who argue that transparency and consistency in brand messaging foster trust. This finding underscores the mediating role of attitude in trust formation, with no major contradictions in the literature.

H8, which links attitude to behavioral intention, is supported ($\beta = 0.672$, $p = 0.024$). Consumers with favorable attitudes are more likely to purchase green products, confirming the TPB framework and studies by Joshi et al. (2021) and Van Hoang & Tung (2024). This relationship is further reinforced by Rahnema Haratbar et al. (2024), who found that attitude mediates the effect of values and emotions on intention. The literature consistently supports this pathway, with no significant contradictions.

H9, which tests the direct effect of perceived health benefits on behavioral intention, is supported ($\beta = 0.600$, $p = 0.017$). Health benefits not only shape attitudes but also directly motivate purchase behavior. This aligns with Peiris et al. (2024) and Raza et al. (2025), who found that health-conscious consumers are more likely to act on their beliefs. The literature strongly supports this dual pathway, with no conflicting evidence.

H10, which examines the impact of awareness on behavioral intention, is supported ($\beta = 0.814$, $p = 0.011$). Awareness drives purchase behavior, especially when consumers are well-informed and confident in their

choices. Basu et al. (2025) and Samant et al. (2016) emphasize the role of digital media and passive learning in shaping intention. However, Kovač et al. (2025) caution that awareness must be accompanied by credible information to avoid skepticism, suggesting that awareness campaigns must be strategically designed.

H11, which posits that trust influences behavioral intention, is not supported ($\beta = 0.169$, $p = 0.074$). While trust is important, it does not significantly enhance purchase intention in this context. This finding contrasts with Chadichal et al. (2025) and Wibawa et al. (2025), who argue that trust is a key driver of green consumption. The discrepancy may be due to the maturity of the market or the presence of other dominant factors like price and health benefits. It suggests that trust-building efforts, while valuable, may not directly translate into behavior unless supported by other motivators.

In summary, the findings validate the proposed model and offer actionable insights for marketers and policymakers. Emphasizing product quality, health benefits, and awareness can significantly enhance consumer attitudes and intentions. Environmental concern and green distribution further reinforce these effects, while trust plays a more nuanced role. The study contributes to the literature by empirically testing a comprehensive framework and highlighting the relative importance of each construct in shaping green FMCG purchase behavior.

Conclusion

The present study offers a comprehensive understanding of consumer buying behavior toward green FMCG products in Bangalore, integrating psychological, operational, and marketing constructs within the framework of the Theory of Planned Behavior. The empirical validation of the conceptual model confirms that perceived quality, health benefits, awareness, environmental concern, green distribution, and price significantly shape consumer attitudes, which in turn influence trust and behavioral intention. While trust was found to be a strong outcome of attitude, its direct impact

REFERENCES

1. Agarwal, S., Kweh, Q. L., Goh, K. W., & Wider, W. (2025). Redefining marketing strategies through sustainability: Influencing consumer behavior in the circular economy: A systematic review and future research roadmap. *Cleaner and Responsible Consumption*, 18. <https://doi.org/10.1016/j.clrc.2025.100298>
2. Alevizou, P. J., Oates, C. J., & McDonald, S. (2015). The well(s) of knowledge: The decoding of sustainability claims in the UK and in Greece. *Sustainability (Switzerland)*, 7(7), 8729–8747. <https://doi.org/10.3390/su7078729>
3. Bahareth, A., & Soliman, K. (2024). The Role of Sustainable Packaging in Saudi Arabian Supply Chains FMCG: Analyzing Consumer Acceptance and Marketing Strategies for Enhancing Environmental Impact. *Journal of Ecohumanism*, 3(8), 3012–3031. <https://doi.org/10.62754/joe.v3i8.5795>
4. Basu, S., Rani, S., Sarker, R. K., & Dasgupta, M.

on behavioral intention was not statistically significant, suggesting that trust may function more effectively as a relational or contextual enabler rather than a standalone predictor.

The findings underscore the importance of aligning product attributes with consumer values and perceptions. Health benefits and awareness emerged as particularly influential, indicating that consumers are motivated not only by environmental ideals but also by personal well-being and informed decision-making. The role of green distribution and environmental concern further reinforces the need for brands to communicate sustainability through both operational transparency and emotional resonance. These insights provide actionable implications for marketers and policymakers seeking to foster sustainable consumption in urban Indian contexts.

Future research could benefit from exploring the temporal dynamics of consumer trust and its evolution in response to sustained brand engagement and regulatory interventions. Longitudinal studies may reveal how repeated exposure to green marketing and consistent product performance influence trust and behavioral intention over time. Additionally, comparative studies across urban and rural settings could illuminate contextual differences in perceived behavioral control, access, and cultural framing of green consumption. Investigating the role of digital technologies—such as blockchain for traceability or AI-driven personalization—in enhancing consumer confidence and reducing skepticism presents another promising avenue.

Moreover, the interplay between demographic variables and emotional drivers warrants deeper examination. Understanding how generational cohorts interpret pride, guilt, and self-efficacy in relation to green products could refine segmentation strategies and message framing. Finally, integrating qualitative methods to capture narrative insights and lived experiences may enrich the quantitative findings, offering a more holistic view of the motivations and barriers that shape sustainable consumer behavior

- (2025). Influencing Factors Behind Green Consumer Choices for FMCGs in West Bengal: A Study towards Go Green. *Current Research in Nutrition and Food Science*, 13(2), 952–968. <https://doi.org/10.12944/CRNFSJ.13.2.29>
5. Bathmathan, V., & Rajadurai, J. (2019). Green marketing mix strategy using modified measurement scales – a performance on Gen Y green purchasing decision in Malaysia. *International Journal of Engineering and Advanced Technology*, 9(1), 3612–3618. <https://doi.org/10.35940/ijeat.A2699.109119>
6. Bissing-Olson, M. J., Fielding, K. S., & Iyer, A. (2016). Experiences of pride, not guilt, predict pro-environmental behavior when pro-environmental descriptive norms are more positive. *Journal of Environmental Psychology*, 45, 145–153. <https://doi.org/10.1016/j.jenvp.2016.01.001>
7. Bursan, R., Wiryawan, D., Jimad, H., Listiana, I., Riantini, M., Yanfika, H., Widyastuti, R. A. D., Mutolib,

- A., & Adipathy, D. A. (2022). Effect of Consumer Skepticism on Consumer Intention in Purchasing Green Product. *IOP Conference Series: Earth and Environmental Science*, 1027(1). <https://doi.org/10.1088/1755-1315/1027/1/012037>
8. Cai, S., Liu, Y., Aduldecha, S., & Junaidi, J. (2025). Leveraging Customer Green Behavior Toward Green Marketing Mix and Electronic Word-of-Mouth. *Sustainability (Switzerland)*, 17(6). <https://doi.org/10.3390/su17062360>
9. Chadichal, S., Raj, P. M., & Padashetty, S. (2025). Green Versus Greenwashing: How Consumers Differentiate Authentic Green Marketing from Deceptive Practices. In *Studies in Systems, Decision and Control (Vol. 237, pp. 145–166)*. Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-86708-8_12
10. Chinda, K., & Moorapun, C. (2015). A cross-cultural study of luxury perfume packaging design. *International Journal of Designed Objects*, 9(4), 17–31. <https://doi.org/10.18848/2325-1379/cgp/v09i04/38706>
11. Ding, Y., Meng, X., & Sun, C. (2024). Simplicity Matters: Unraveling the Impact of Minimalist Packaging on Green Trust in Daily Consumer Goods. *Sustainability (Switzerland)*, 16(12). <https://doi.org/10.3390/su16124932>
12. Favier, M., Sohier, G. P., & Celhay, F. (2018). Is Using Ornaments Still a Crime? Package Design Complexity and Brand Perception with Application to Champagne Labels: An Abstract. In *Developments in Marketing Science: Proceedings of the Academy of Marketing Science (pp. 41–42)*. Springer Nature. https://doi.org/10.1007/978-3-319-68750-6_11
13. Feng, Y., Feng, Y., & Liu, Z. (2025). The Impact Mechanism of Government Environmental Regulation and Green Consumer Orientation (GCO) on Green Purchase Intention: A Case Study of Zespri. *Sustainability (Switzerland)*, 17(6). <https://doi.org/10.3390/su17062575>
14. Grigaliūnaitė, V., Pažeraitė, A., & Račkauskas, M. (2023). Save Myself or Others? The Influence of Attitude toward FMCG Products from Recycled Material on the Intention to Buy Them: Hidden Motives and the Role of Income. *Sustainability (Switzerland)*, 15(15). <https://doi.org/10.3390/su15151528>
15. Hair, J. F. (2006). *Multivariate Data Analysis*.
16. Hair, J. F. (2009). *Multivariate data analysis*.
17. Haj-Salem, N., Ishaq, M. I., & Raza, A. (2022). How anticipated pride and guilt influence green consumption in the Middle East: The moderating role of environmental consciousness. *Journal of Retailing and Consumer Services*, 68. <https://doi.org/10.1016/j.jretconser.2022.103062>
18. Hooper, D., Coughlan, J., & Mullen, M. (2007). *Structural Equation Modeling: Guidelines for Determining Model Fit*. *The Electronic Journal of Business Research Methods*, 6.
19. Hsu, C.-L., Chang, C.-Y., & Yansritakul, C. (2017). Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating effects of country of origin and price sensitivity. *Journal of Retailing and Consumer Services*, 34, 145–152. <https://doi.org/10.1016/j.jretconser.2016.10.006>
20. Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
21. Hu, S., & Cong, Z. (2024). Paying for culture: Cultural factors in local speciality product packaging's effect on buying behaviour. *Journal of Cultural Marketing Strategy*, 9(1), 61–74. <https://doi.org/10.69554/VYDB4068>
22. Huang, H., Xing, X., He, Y., & Gu, X. (2020). Combating greenwashers in emerging markets: A game-theoretical exploration of firms, customers and government regulations. *Transportation Research Part E: Logistics and Transportation Review*, 140. <https://doi.org/10.1016/j.tre.2020.101976>
23. Jaśkiewicz, M., Piotrkowski, R., Sas-Bojarska, K., & Walaszczyk, A. (2023). Predictors of environmental guilt, and its role as a mediator of the association between human-nature relation and pro-environmental behavior intentions. *Polish Psychological Bulletin*, 54(4), 272–278. <https://doi.org/10.24425/ppb.2023.148846>
24. Joshi, Y., Uniyal, D. P., & Sangroya, D. (2021). Investigating consumers' green purchase intention: Examining the role of economic value, emotional value and perceived marketplace influence. *Journal of Cleaner Production*, 328. <https://doi.org/10.1016/j.jclepro.2021.129638>
25. Klabi, F. (2025). Factors affecting green product purchase intention in an emerging country: An empirical investigation. *Social Sciences and Humanities Open*, 11. <https://doi.org/10.1016/j.ssaho.2025.101570>
26. Kourav, V., & Sharma, A. (2023). Exploring Success Factors for New Product Selling in Fast-Moving Consumer Goods. *Indian Journal of Marketing*, 53(3), 8–25. <https://doi.org/10.17010/ijom/2023/v53/i3/172653>
27. Kovač, I., Dunković, D., & Kovač, B. (2025). Greenwashing and consumer skepticism toward eco-labels in Croatia: challenges and policy directions. *British Food Journal*. <https://doi.org/10.1108/BFJ-02-2025-0122>
28. Krishnan, A., & Mehta, S. (2023). Factors Affecting the Purchase Intention of Indian Youths: Special Reference to the Textile and Clothing Industry. In *Handbook of Research on Sustainable Consumption and Production for Greener Economies (pp. 178–197)*. IGI Global. <https://doi.org/10.4018/978-1-6684-8969-7.ch011>
29. Kumarasamy, P., Mathews, A. P., Vipulkumar, N. M., & Abdul Rasheed, A. P. K. (2024). A Study on Socio-demographic Factors Influencing Customers' Attitude in Purchasing FMCG Branded Products with Special Reference to Chennai, Tamil Nadu. In *Studies in Systems, Decision and Control (Vol. 536, pp. 475–486)*. Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-63402-4_40
30. Lee, Y.-K., Kim, M.-S., Katz-Gerro, T., & Kim, Y. (2019). Personal values, perceived consumer effectiveness and demographic effects on green purchasing behavior of Korean consumers. *Environmental Engineering and Management Journal*, 18(2), 349–358. <https://doi.org/10.30638/eemj.2019.033>
31. Mamun, A. A., Hayat, N., Malarvizhi, C. A. N., & Zainol, N. R. B. (2020). Economic and environmental

- sustainability through green composting: A study among low-income households. *Sustainability* (Switzerland), 12(16). <https://doi.org/10.3390/su12166488>
32. Mason, M. C., Zamparo, G., Saleem, S., & Umar, R. M. (2025). Generational shifts: understanding the role of green self-identity, social norms and cohort differences in consumer intentions to purchase stigmatised recycled products. *Journal of Consumer Marketing*. <https://doi.org/10.1108/JCM-12-2023-6441>
33. Mehraj, D., Qureshi, I. H., Singh, G., Nazir, N. A., basheer, S., & Nissa, V. U. (2023). Green marketing practices and green consumer behavior: Demographic differences among young consumers. *Business Strategy and Development*, 6(4), 571–585. <https://doi.org/10.1002/bsd2.263>
34. Mishra, A. K., & Farooqi, R. (2024). Examining the Influence of Consumer-level Psychological Factors on Green Purchase Behaviour: Analyzing Socio-demographic Aspects Among Indian Millennials. *Global Business Review*. <https://doi.org/10.1177/09721509241238555>
35. Mishra, D., Behera, M. K., Satpathy, K., Goswami, A. K., Khuntia, K., & Jena, M. C. (2025). Influence of Sustainability Initiatives on Consumer Perceptions: A Case Study on Indian FMCG Industry. *Environmental Claims Journal*. <https://doi.org/10.1080/10406026.2025.2508749>
36. Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019a). Descriptive Statistics and Normality Tests for Statistical Data. *Annals of Cardiac Anaesthesia*, 22(1), 67. https://doi.org/10.4103/ACA.ACA_157_18
37. Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019b). Descriptive Statistics and Normality Tests for Statistical Data. *Annals of Cardiac Anaesthesia*, 22(1), 67. https://doi.org/10.4103/ACA.ACA_157_18
38. Mishra, V., & Kulshreshtha, K. (2023). Green product purchase decision: a conceptual model of factors influencing the decision of Indian consumers. *British Food Journal*, 125(9), 3160–3174. <https://doi.org/10.1108/BFJ-09-2022-0783>
39. Moon, S., Bergey, P. K., Bove, L. L., & Robinson, S. (2016). Message framing and individual traits in adopting innovative, sustainable products (ISPs): Evidence from biofuel adoption. *Journal of Business Research*, 69(9), 3553–3560. <https://doi.org/10.1016/j.jbusres.2016.01.029>
40. Muralidharan, S., & Xue, F. (2016). Personal networks as a precursor to a green future: a study of “green” consumer socialization among young millennials from India and China. *Young Consumers*, 17(3), 226–242. <https://doi.org/10.1108/YC-03-2016-00586>
41. Nguyen-Thi-Phuong, A., Le-Kim, S., To-The, N., Nguyen-Thu, H., & Nguyen-Anh, T. (2023). The influences of cultural values on consumers’ green purchase intention in emerging markets: an evidence from South Korea and Vietnam. *Current Psychology*, 42(34), 30293–30310. <https://doi.org/10.1007/s12144-022-04064-0>
42. Niedermeier, A., Emberger-Klein, A., & Menrad, K. (2021). Drivers and barriers for purchasing green Fast-Moving Consumer Goods: A study of consumer preferences of glue sticks in Germany. *Journal of Cleaner Production*, 284. <https://doi.org/10.1016/j.jclepro.2020.124804>
43. Pallant, J. (2016). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*. McGraw-Hill Education. <https://books.google.co.in/books?id=TSzOjwEACAAJ>
44. Palomino Rivera, H. J., & Barcellos-Paula, L. (2024). Personal Variables in Attitude toward Green Purchase Intention of Organic Products. *Foods*, 13(2). <https://doi.org/10.3390/foods13020213>
45. Peiris, T. K. A., Jasingha, D., & Rathnasiri, M. S. H. (2024). Examining the effect of consumption values on green FMCG purchase behaviour: a focus on the theory of consumption values. *Management and Sustainability*, 3(4), 385–403. <https://doi.org/10.1108/MSAR-07-2023-0040>
46. Polas, M. R. H., Jahanshahi, A. A., Kabir, A. I., Sohel-Uz-Zaman, A. S. M., Sikder, S., Al Fahad, A., & Mendoza, M. I. R. (2024). Towards a Greener Horizon: Unravelling the Links between Environmental Awareness, Consumption Values, and Packaging in Consumer Decision-Making. *IEEE Engineering Management Review*, 1–42. <https://doi.org/10.1109/EMR.2024.3438124>
47. Rahnama Haratbar, H., Saeedikiya, M., & Seif, M. H. (2024). The psychology of green behavior: when growth mindset, peer influence and warm glow meet the individual self. *Management of Environmental Quality: An International Journal*, 35(3), 485–505. <https://doi.org/10.1108/MEQ-09-2022-0268>
48. Rawal, T., Agarwal, S., Choudhury, T., & Pant, B. (2024). Analysing the Variance in Brand Awareness Metrics of Urban and Rural India of Flagship FMCG Brands in India. *Proceedings of International Conference on Communication, Computer Sciences and Engineering, IC3SE 2024*, 1898–1903. <https://doi.org/10.1109/IC3SE62002.2024.10592979>
49. Ray, S. K., & Sahney, S. (2022). Personal cultural orientation and green purchase intention: a case of electric two-wheelers in India. *Journal of Asia Business Studies*, 16(5), 729–746. <https://doi.org/10.1108/JABS-06-2020-0220>
50. Raza, Md. W., Rasheed, A., & Uddin, F. (2025). What affects the consumers’ green purchasing behaviour? A study from an emerging market. *International Journal of Productivity and Quality Management*, 45(4), 513–533. <https://doi.org/10.1504/IJPM.2025.148014>
51. Riswanto, A. L., Kim, S., Williady, A., Ha, Y., & Kim, H.-S. (2025). How Visual Design in Dairy Packaging Affects Consumer Attention and Decision-Making. *Dairy*, 6(1). <https://doi.org/10.3390/dairy6010004>
52. Rouf, M. A., Babu, M. A., Yusuf, K. M., Begum, H., Islam, M. R., & Islam, M. (2025). Ethical consumption through reverse supply chain: Exploring product’s nature as a mediator in the FMCG industry. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(3). <https://doi.org/10.1016/j.joitmc.2025.100608>
53. Samant, S. S., Crandall, P. G., & Seo, H.-S. (2016). The effect of varying educational intervention on consumers’ understanding and attitude toward sustainability and process-related labels found on chicken

- meat products. *Food Quality and Preference*, 48, 146–155. <https://doi.org/10.1016/j.foodqual.2015.09.005>
54. Schneider, C. R., Zaval, L., Weber, E. U., & Markowitz, E. M. (2017). The influence of anticipated pride and guilt on pro-environmental decision making. *PLoS ONE*, 12(11). <https://doi.org/10.1371/journal.pone.0188781>
55. Shipley, B. (2000). Cause and correlation in biology: a user's guide to path analysis, structural equations, and causal inference. 317.
56. Srivastava, K. (2025). Decoding Gen Z green purchase behavior in india by exploring green attitude, green customer perceived value, and green marketing mix. In *Green Marketing Perspectives: Effective Messaging for Sustainable Practices* (pp. 161–173). Emerald Publishing. <https://doi.org/10.1108/978-1-83608-772-420251014>
57. Strizhakova, Y., & Coulter, R. A. (2013). The “green” side of materialism in emerging BRIC and developed markets: The moderating role of global cultural identity. *International Journal of Research in Marketing*, 30(1), 69–82. <https://doi.org/10.1016/j.ijresmar.2012.08.003>
58. Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics*. Pearson Education. <https://books.google.co.in/books?id=ucjlygAACAAJ>
59. Timmons, S., Whelan, A., & Kelly, C. (2024). An experimental test of a greenwashing inoculation intervention in Ireland: Effects of ‘pre-bunking’ on identification, consumer trust and purchase intentions. *Sustainable Production and Consumption*, 47, 318–328. <https://doi.org/10.1016/j.spc.2024.03.030>
60. Tomšik, R. (2019). Power Comparisons of Shapiro-Wilk, Kolmogorov-Smirnov and Jarque-Bera Tests. 3, 238–243.
61. Twum, K. K., & Yalley, A. A. (2021). Green Integrated Marketing Communication. In *Palgrave Studies of Marketing in Emerging Economies: Vol. Part F3546* (pp. 117–144). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-74065-8_6
62. Uikay, A. A., Baber, R., Baber, P., Marak, Z. R., & Mishra, D. (2025). Which is the “green generation”? A multigroup analysis of millennials and Generation Z's green consumerism. *British Food Journal*. <https://doi.org/10.1108/BFJ-12-2024-1266>
63. Van Hoang, D., & Tung, L. T. (2024). Effect of Environmental Concern, Green Perceived Value on Young Customers' Green Purchase Intention: The mediating Roles of Attitude toward Green Products and Perceived Behavior Control. *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, 32(1). <https://doi.org/10.46585/sp32011920>
64. Verma, S., Rojhe, K. C., Horská, E., Sharma, S., & Šedík, P. (2023). Consumer Decision-Making Rules for FMCG Products—Study of Rural in North India. *Economies*, 11(1). <https://doi.org/10.3390/economies11010026>
65. Vuong, T. K., Lam, T. N., & Bui, H. M. (2024). Sustainable Consumer Behaviour in the Fast-Moving Consumer Goods Sector: Moderating Role of Competitive Intensity in Green Marketing. *Business Strategy and Development*, 7(4). <https://doi.org/10.1002/bsd2.70047>
66. Walia, S. B., Kumar, H., & Negi, N. (2020). Impact of brand consciousness, perceived quality of products, price sensitivity and product availability on purchase intention towards ‘green’ products. *International Journal of Technology Management and Sustainable Development*, 19(1), 107–118. https://doi.org/10.1386/tmsd_00018_1
67. Wibawa, M. A., Sundara, D., Limakrisna, N., & Susilo, W. H. (2025). Sustainability as a Competitive Advantage: A Study on Green Marketing Strategies in the FMCG Sector. *Procedia Environmental Science, Engineering and Management*, 12(1), 25–38. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-105006843650&partnerID=40&md5=ed3687cf5c124d2d67bc3f885d2c40b7>
68. Wu, S., Lim, A.-F., & Lim, W.-Y. (2025). The Role of Green Influencers in Shaping Green Brand Image: A Mediation Analysis of Green Consumer Trust. *Journal of Information and Knowledge Management*. <https://doi.org/10.1142/S0219649225500510>
69. Xia, T., Fan, X., Zhang, J., & Liu, T. (2023). Influence of Complexity in Low-Fat Food Packaging on Chinese Consumers' Purchase Intentions. *Sustainability (Switzerland)*, 15(4). <https://doi.org/10.3390/su15043697>
70. Zhang, D. (2018). When age meets culture: an investigation of children's package design preferences. *Journal of Consumer Marketing*, 35(2), 117–129. <https://doi.org/10.1108/JCM-06-2016-1852>