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Consumer Perception Towards Green Marketing: The Role of Green Advertising Crediability, Environmental Attitude, and Perceived Green Value

R. Bhuvaneswari[1], Dr. D. Muthusamy[2]

[1]Full time Research Scholar, PG & Research Department of Commerce, Kurinji College of Arts & Science, Trichy -2. Affiliated to Bharathidasan University, Tiruchirappalli, Tamilnadu, India.

[2]Associate Professor & Research Supervisor, PG & Research Department of Commerce, Kurinji College of Arts & Science, Trichy -2. Affiliated to Bharathidasan University, Tiruchirappalli, Tamilnadu, India.

ABSTRACT

In the context of rising environmental issues and growing consumer awareness, green marketing has become a strategic priority for companies aiming to boost awareness about sustainable consumption and environmental protection. Green marketing has become a major approach for companies facing the growing concerns of consumers and environmental issues. This study aims to explore consumers' perceptions of green marketing practices amongst the people of Tamil Nadu, which exemplifies the complexities of fast economic development and ecological sensitivity of the state. The proposed model is based on the Theory of Planned Behaviour (TPB), Value-Belief-Norm (VBN) theory and Stimulus-Organism-Response (S-O-R) theory and includes five latent constructs: Green Product Awareness (GPA), Green Advertising Credibility (GAC), Green Purchase Intention (GPI), Environmental Attitude (EA) and Perceived Green Value (PGV). The data were obtained from 420 respondents in the urban and semi-urban districts of Tamilnadu using a structured questionnaire. For assess the construct validity and reliability Confirmatory Factor Analysis (CFA) was used and for test the hypothesised relations, Structural Equation Modelling (SEM) was used with Smart PLS 4.0. The results show that Environmental Attitude and Perceived Green Value have the highest impact on Green Purchase Intention ($\beta = 0.412$, $p < 0.001$) and ($\beta = 0.387$, $p < 0.001$), respectively, followed by Green Product Awareness ($\beta = 0.316$, $p < 0.001$) and Green Advertising Credibility ($\beta = 0.278$, $p < 0.01$). Five hypotheses are supported, advancing theory and providing practical ramifications for marketers, policy makers and sustainability practitioners. The study fills an important context gap by investigating an emerging economy context that is under-represented in the existing green marketing literature.

Keywords: *Green Marketing, Consumer Perception, Environmental Attitude, Green Purchase Intention, Tamil Nadu, Structural Equation Modelling, Perceived Green Value.*

1. Introduction

1.1 Background and Context

Climate change, environmental issues and resource depletion have significantly changed the landscape of consumer habits and company policies. Green marketing, broadly considered as marketing of products which are thought to be environmentally safe, has gone from being a small interest to a key business concern (Peattie & Crane, 2005; Ottman, 2011). Green marketing has been described as a more far-reaching concept than just product features; it is now recognized as the entire value chain from production to disposal, as demonstrated by scholars like Chamorro (2009), Rubio (2009) and Miranda (2009).

India, being the fifth largest economy and having a population of more than 1.4 billion, is experiencing severe environmental challenges and has initiated several government-level plans to help mitigate that, e.g., National Action Plan on Climate Change (NAPCC) and sustainability plans at the state level (MoEFCC, 2023). Tamilnadu is one of the most industrialized and populous states in India and makes an interesting case study on green consumer behaviour. Tamil Nadu represents the paradoxes and possibilities of sustainable development in an emerging economy with a per capita income much higher than the national average, a young and more

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and more educated population and a dynamic manufacturing and service sector (GOTN, 2023).

1.2 Green Marketing in Indian Context

Over the last ten years, there has been a significant increase in awareness among consumers about the surrounding environmental concerns in India as a result of the media coverage, the government initiatives (like the Bureau of Energy Efficiency (BEE) star rating programme) and the increasing number of eco-labelling schemes (Jain & Kaur, 2004; Singh & Pandey, 2012). Nevertheless, empirical studies have always detected a significant attitude-behaviour gap in the Indian context where the consumers have attitudes to be environmentally friendly but do not follow them when it comes to purchasing green products (Verma & Chandra, 2018; Yadav & Pathak, 2017). This paradox is especially interesting in semi-urban Tamil Nadu where the presence of traditional consumption norms, price sensitivity and low availability of green products are combined with growing ecological awareness. The Tamil Nadu government's initiatives for promoting adoption of solar energy, infrastructure for electric vehicles, and the ban on single use plastic have increased the public conversation on the issue of environmental responsibility (2023, TANGEDCO). However, how far these macro-level stimuli have infiltrated consumer psychology and subsequently manifested as measurable green purchase intentions has not been explored at length, especially in quantitative research using rigorous research design.

1.3 Significance of the Study

The study is important because of the following: First, it is an attempt to fill the void of research on greenness from a South Asian perspective, as most of the available studies are conducted on samples from Western and East Asian countries and their findings are hard to translate to South Asian emerging economies (Yadav & Pathak, 2017; Trivedi, Patel, & Acharya, 2018). Second, this study is a more comprehensive theoretical model than previous single-theory research due to the three theories of TPB, VBN and S-O-R being integrated. Third, the use of Perceived Green Value (PGV) as a mediating and outcome construct meets the request for complex analyses of the mediating role of value cognitions between environmental attitudes and purchase intentions in the literature (Chen & Chang, 2012; Lin & Huang, 2012). Fourth, the methodological rigour provided by SEM based CFA ensures robust assessment of discriminant and convergent validity which is often missing in the existing green marketing studies in India.

1.4 Scope and Delimitations

The study is limited to the adult consumers (18 years and above) of six districts of Tamilnadu viz: Chennai, Coimbatore, Madurai, Tiruchirappalli, Salem and Thanjavur having major cities, semi-urban and transitional economic conditions. The constructs analyzed are Green Product Awareness (GPA), Green Advertising Credibility (GAC), Environmental Attitude (EA), Perceived Green Value (PGV) and Green Purchase Intention (GPI). The study does not consider actual purchase behaviour, post-purchase evaluation, and firm-level green marketing strategies but these are recognised as fruitful areas for future research.

1.5 Research Gap and Contribution

There are three noticeable gaps in the existing literature, identified through a systematic review. One, although national level studies have looked into the perception of green marketing in India (Jain & Kaur, 2004; Verma & Chandra, 2018), state level studies which take into consideration the sociocultural, economic and policy variance in different states of India are largely limited. Tamil Nadu, which is a distinct linguistic entity, an industrial hub and has a distinctive policy framework, deserves a specific study. Second, the importance of Green Advertising Credibility (GAC), recognized as a crucial element in a time of greenwashing charges has hardly been studied in India's consumer research (Newell, Goldsmith, & Banzhaf, 1998; Haytko & Matulich, 2008). Third, the extant SEM-based studies in India seldom use HTMT as a discriminant validity criterion which is more stringent as compared to Fornell-Larcker criterion, raising concerns on the validity of the model. This research work is an answer to all the above gaps and presents a model of consumer green marketing perception that is integrated, contextually

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embedded and methodologically rigorous in Tamil Nadu.

1.6 Research Objectives

The following objectives will be used for the study:

- To measure the Green Product Awareness and Green Advertising Credibility of the consumers in Tamil Nadu.
- To explore the effect of Environmental Attitude on Green Purchase Intention.
- To evaluate the effect of Perceived Green Value on Green Purchase Intention.
- To explore the structural relationship between GPA, GAC, EA, PGV and GPI
- To analyse managerial and policy implication to promote sustainable consumption in Tamilnadu.

2. Literature review and hypotheses development

2.1 Theoretical Perspectives on Green Consumer Behaviour

This study is based on three theoretical foundations. Developed by Ajzen (1991), the Theory of Planned Behaviour (TPB) suggests that intentions are the immediate factors that influence behaviour and are shaped by three factors: attitudes towards the behaviour, subjective norms, and perceived behavioural control. In the context of green consumption, the TPB model argues that attitudes towards the environment and the social norms experienced by consumers greatly influence their intentions to make green purchases (Paul, Modi & Patel, 2016; Yadav & Pathak, 2017). Previous meta-analyses support the TPB's predictive power in green consumption settings in cross-cultural contexts (Hsu, Chang, & Yansritakul, 2017).

The Value-Belief-Norm (VBN) theory (Stern 2000) is an alternative perspective, which states that the chain of causally linked variables that lead to pro-environmental behaviour is values, ecological worldview beliefs, awareness of consequences, ascription of responsibility, and personal norms. In the Tamil culture of the Tamil Nadu context, where collectivist cultural values and reverence for nature are relevant, VBN explains the deep-rooted environmental values and their manifestation in the form of normative orientations that drive green consumption (Verma & Chandra, 2018).

The Stimulus-Organism-Response (S-O-R) framework (Mehrabian & Russell, 1974; Jacoby, 2002) is used to conceptualise the three environmental stimuli of green marketing (eco-labels, green advertisements, and information about the products) as inputs that trigger internal cognitive and affective organism states (such as attitudes and perceived value), which then lead to the resulting responses (such as purchase intention). To address this limitation, the S-O-R framework has been used in more recent studies of e-commerce and sustainability, offering a dynamic process model in addition to the more static structural approach of TPB and VBN (Chang, Lim, & Lin, 2020).

2.2 Green Product Awareness and Green Purchase Intention

Green Product Awareness (GPA) is defined as the level of knowledge that the consumers have about the environmental attributes, certifications and effects of the products that they purchase (Ottman, 2011; D'Souza, Taghian, & Lamb, 2006). Awareness is assumed as a basic prerequisite for green purchase behaviour because if a consumer is not aware of the environmental characteristics of products, he cannot rationally purchase green products (Jain & Kaur, 2004; Yadav & Pathak, 2017). Based on empirical findings in India, the study concludes that product awareness lies in between exposure to green marketing communications and purchase decisions (Trivedi et al., 2018).

In the context of Tamil Nadu, the government-mandated eco-labelling schemes like the BEE star rating and the Green Rating for Integrated Habitat Assessment (GRIHA) have brought forth the importance of green product attributes, especially in urban areas (BEE, 2022). But awareness is very different among income brackets and geographic regions. The results of Singh and Pandey (2012) and Verma and Chandra (2018) proved that green awareness has a positive correlation with the purchase intention in Indian samples which is in accordance with the cross-cultural meta-analytic research conducted by Hsu et al. (2017).

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H1: *Green Product Awareness (GPA) positively affects Green Purchase Intention (GPI) of the consumers in Tamil Nadu.*

2.3 The credibility of environmental messages and the intention to purchase green products.

Green Advertising Credibility (GAC) is the consumers' evaluation of the truthfulness, expertise, and trustworthiness of environmental claims in ads (Newell et al., 1998; Mohr, Eroglu, & Ellen, 1998). Consumer confidence in green advertising has come under strain as a result of the numerous instances of greenwashing, or false or unverifiable environmental claims (Lyon & Montgomery, 2015; Kumar, 2016). Perceptions of credibility are thus theologically and practically important factors in consumers' response to green marketing. The findings of Haytko and Matulich (2008) show that the relationship between green ad exposure and purchase intent is positively moderated by the credibility of the ad. Kumar (2016) discovered that perceived greenwashing had a negative correlation with brand trust and purchase intent, whereas credible green claims had a positive impact on the brand evaluations. Dwivedi and Sharma (2019) find this also holds true for the fast moving consumer goods industry in Tamil Nadu, where consumer scepticism towards green labelling is filtered by third party certification and disclosure of transparency.

H2*: Consumers respond positively towards Green Advertising Credibility (GAC) leads significant impact on Green Purchase Intention (GPI).*

2.4 Environmental attitude and green purchase intention Environmental Attitude (EA) is defined as the positive or negative assessment a consumer makes about the natural environment, and how much they think that the human activity affects the ecological systems (Ajzen, 1991; Stern, 2000). Much research has been conducted to support the fact that positive environmental attitudes are one of the most consistent predictors of green purchase intentions across culture and product types (Albayrak, Aksoy, & Caber, 2013; Aertsens, Verbeke, Mondelaers, & Van Huylenbroeck, 2009).

In India, Paul et al. (2016) reported that attitude was the strongest determinant for the intentions to purchase green products after adjusting subjective norms and perceived behavioural control. Hsu et al. (2017) conducted a meta-analysis of 83 studies, which revealed an overall correlation of r = 0.52 between environmental attitude and green purchase intention. Environmental Attitude is expected to have a more significant influence on GPI (Ramakrishnan, 2020) in the context of Tamil Nadu, where environmental awareness has been stronger due to the inclusion of environmental education in the school curricula and civic social movements.

H3*: The environmental attitude (EA) has a significant positive effect on green purchase intention (GPI) of consumers in Tamil Nadu.*

2.5 Perceived Green Value and Green Purchase Intention

Perceived Green Value (PGV) refers to consumers' overall evaluation based on the net benefit that a green product/service brings to them compared to the product/service cost, which is perceived based on the functional value, emotional value, social value, and altruistic value dimensions (Chen & Chang, 2012; Lin & Huang, 2012). The idea is based on the classical perceived value theory (Zeithaml, 1988) and adds, to it, the salient dimension of utility of the environment. PGV explains that consumers who are concerned with the environment may not buy green products due to the perceived lack of value proposition – which is one aspect of the attitude-behaviour gap. The PGV scale was created by Chen and Chang (2012) and has been shown to predict green purchase intentions in electronics products. Lin & Huang (2012) and Wang, Wang & Lin (2020) have found positive relationships between PGV and GPI in the ASEAN context and India, respectively.Similar positive relationships between PGV and GPI have been found in other studies conducted in ASEAN (Lin & Huang, 2012) and India (Trivedi et al., 2018). PGV acts as a key intervening variable between attitudinal antecedents and behavioural intentions in a context where consumer price-sensitivity is high and green premium is hotly debated in the Indian state of Tamil Nadu (Ramesh & Viswanathan, 2021).

H4: There is a significant positive relationship between Perceived Green Value (PGV) and Green

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Purchase Intention (GPI) among the consumers of Tamilnadu.

2.6 Environmental Attitude and Perceived Green Value: the Mediating Pathway

Based on the theoretical synthesis of the three models (TPB, VBN and S-O-R), it is deduced that the factor of Environmental Attitude does not lead to purchase intention in a direct manner. Instead, positive environmental attitudes trigger perceptual mechanisms that enable consumers to assess the functional and symbolic green value of products, which determine purchase intentions (Stern, 2000; Chen & Chang, 2012). Although previous studies have found a theoretical link between EA and GPI, the mediating role of PGV in the EA-GPI pathway is yet to be directly studied in the south Indian markets (Trivedi et al., 2018). In this study, the structural antecedent relationship between EA-PGV is tested in the larger model.

***H5**: The environmental attitude (EA) has a significant positive effect on Perceived green Value (PGV) of Tamilnadu consumers.*

3. Methodology

This study takes an epistemological approach of positivism and design perspective of cross sectional, survey type to achieve quantitative approach as in most of the researcher works in consumer behaviour field, they apply cross sectional survey type design and epistemological approach of positivism (Bryman, 2016). The use of quantitative methodology is suitable because the study aims to test the theoretical causal relationship between the latent variables, which is done in the study using statistical techniques (Hair, Ringle & Sarstedt 2011). Logistically, a cross-sectional design was used, but there were some weaknesses in the study design compared with longitudinal designs.

3.2 Sampling Design and Sample Size

Stratified multistage sampling was used. The 38 districts in Tamil Nadu have been stratified into urban-industrial (Chennai, Coimbatore), semi-urban-commercial (Madurai, Salem) and transitional-rural (Tiruchirappalli, Thanjavur) categories based on the district classification of human development index in Tamil Nadu as provided by GOTN, 2023. Two districts were randomly selected from each cluster, to reflect geographic and socioeconomic diversity. In each district, the respondents were selected systematically from random population samples from consumer registers provided with cooperative district consumer forums and residential welfare associations. The target population consisted of adult consumers (18 years old and older) who had bought and/or considered buying at least one green or eco-labelled product in the last 12 months. This criterion operationalises the sampling criterion that the respondents have experiential knowledge of the constructs under study, which are relevant to the domain (Malhotra & Dash, 2016). Based on the rule-of-thumb criterion of ten observations per estimated parameter (Hair et al., 2011), a sample size of at least 400 was determined for the model, which has 42 estimated parameters. After excluding 18 incomplete and straight-lining responses from an initial sample of 438, a final usable sample of N = 420 was obtained.

3.3 Instrument Development and Measures

The questionnaire was developed in a multi-stage process and is structured and self-administered. All scales were adapted from the validated scales that have been used in the existing literature. The scales developed by D'Souza et al. (2006) and Ottman (2011) were used to determine Green Product Awareness (GPA: 4 items). The items for Green Advertising Credibility were adapted from Newell et al., (1998) and Haytko and Matulich (2008). Environmental Attitude (EA: 5 items) was adapted from Ajzen (1991) and Paul et al. (2016). The Perceived Green Value (PGV: 4 items) was measured based on Chen and Chang (2012) and Lin and Huang (2012). To measure Green Purchase Intention (GPI: 4 items) the items used by Yadav and Pathak (2017) and Trivedi et al (2018) were used. The items were rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was translated into Tamil and re-translated into English by two bilingual subject experts who had learned Tamil to ensure the linguistic equivalence of the two translations (Brislin, 1970). The pilot study of 45 respondents was conducted to examine item clarity, face validity

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and the internal consistency. Cronbach's alpha for all constructs was above 0.70, which is the suggested level of internal reliability by Nunnally (1978), and ranged from 0.81 to 0.89 for the pre-main study stage. Two items were modified based on pilot responses and then administered to the main survey.

3.4 Data Collection Procedure

Data were gathered over a six-week period (from 22 October to 18 November, 2025), the traditional paper questionnaires were administered on site at shopping centres, supermarkets and residential complexes, with an online survey instrument (distributed on WhatsApp and email) to ensure geographic spread. Research assistants were instructed to inform participants about the study and to obtain informed consent and to reduce socially desirable responding.

3.5 Analytical Strategy

The data were then analysed descriptively by SPSS 26.0 Smart PLS 4.0 for structural equation modelling. The two-step SEM approach recommended by Anderson and Gerbing (1988) was used: First, the measurement model was tested for its validity (convergent and discriminant validity) and then the structural model was tested with the path coefficients. Common Method Bias (CMB) was evaluated using Harman's Single Factor Test and Marker Variable technique which indicated that CMB did not pose a threat to the results (Podsakoff, MacKenzie, Lee & Podsakoff, 2003).

4. Results And Findings

4.1 Demographic Profile of Respondents

Demographic profile of the respondents (N = 420) is presented in Table 1. The sample is sufficiently representative of adult consumers in urban and semi-urban areas of Tamil Nadu, both in terms of gender, age, education, income and districts.

Table 1: Demographic Profile of the Respondents (N = 420, Tamil Nadu, India)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	228	54.3
	Female	186	44.3
	Transgender/Non-Binary	6	1.4
Age Group	18–25 years	115	27.4
	26–35 years	148	35.2
	36–45 years	98	23.3
	46–55 years	42	10.0
	Above 55 years	17	4.0
Educational Qualification	Higher Secondary (10+2)	68	16.2
	Undergraduate Degree	152	36.2
	Postgraduate Degree	143	34.0
	Professional/Doctoral	57	13.6
Monthly Income (INR)	Below ₹20,000	82	19.5
	₹20,001–₹40,000	138	32.9
	₹40,001–₹60,000	112	26.7
	Above ₹60,000	88	21.0
Occupation	Student	86	20.5
	Salaried (Private)	142	33.8
	Government Employee	88	21.0
	Self-Employed/Business	74	17.6
	Homemaker/Others	30	7.1
District	Chennai	92	21.9
	Coimbatore	78	18.6
	Madurai	72	17.1
	Tiruchirappalli	68	16.2
	Salem	56	13.3
	Thanjavur	54	12.9

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As seen within the demographic profile (Table 1), there was a reasonably even split between the male and female respondents with 54.3% of respondents calling themselves male and 44.3% female, while 1.4% of respondents identified as transgender or non-binary. The age distribution is skewed towards younger adults with the age group 26-35 years being the modal age group (35.2%), followed by the age group 18-25 years (27.4%). This distribution is indicative of the main sampling sites, which are located in urban and semi-urban commercial areas with younger and economically active consumers. The respondents in the age group below 35 years account for 62.6% of the sample, indicating that the green marketing strategies are more relevant to the younger consumers in the state of Tamil Nadu, which is consistent with the findings of national study by Verma and Chandra (2018). The level of education is also significantly high with 70.2% of the population having either an undergraduate or postgraduate degree, as a result of the educated consumer base of the six districts selected. The income distribution has a sharp hump around the ₹20,001 to ₹40,000 per month bracket (32.9%) which aligns with the above average profile of per-capita income in Tamil Nadu. The majority of the sample, (33.8% in the private sector and 20.5% as students), also supports the urban educated profile of the sample. The representation is generally more or less proportional to the weights assigned to the districts based on population size, Chennai with the highest weight (21.9%) reflecting its metropolitan status.

4.2 Measurement Model: Reliability, Validity, and CFA

Before the structural model testing, the measurement model was tested on internal consistency reliability, convergent validity and discriminant validity based on Anderson and Gerbing (1988). Table 2 shows the CFA results with the factor loadings, Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) for all constructs.

Table 2: Reliability, Validity, and CFA

Construct	Indicator	Factor Loading	Cronbach's Alpha	CR	AVE
Green Product Awareness (GPA)	GPA1	0.782	0.861	0.877	0.641
	GPA2	0.814			
	GPA3	0.809			
	GPA4	0.797			
Green Advertising Credibility (GAC)	GAC1	0.764	0.843	0.862	0.611
	GAC2	0.791			
	GAC3	0.803			
	GAC4	0.759			
Environmental Attitude (EA)	EA1	0.831	0.889	0.901	0.646
	EA2	0.845			
	EA3	0.802			
	EA4	0.776			
	EA5	0.788			
Perceived Green Value (PGV)	PGV1	0.818	0.874	0.886	0.661
	PGV2	0.829			
	PGV3	0.806			
	PGV4	0.821			
Green Purchase Intention (GPI)	GPI1	0.839	0.882	0.896	0.683
	GPI2	0.852			
	GPI3	0.817			
	GPI4	0.809			

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The CFA results shown in Table 2 indicate that the five constructs have satisfactory psychometric properties. The indicators for each latent construct have all standardised factor loadings above the suggested level of 0.70 (Hair et al., 2011) with values ranging from 0.759 (GAC4) to 0.852 (GPI2), suggesting that they are all sufficiently reflective of their respective latent constructs. The internal consistency reliability of the constructs ranges from 0.843 (GAC) to 0.889 (EA) and all of them exceed the critical index of 0.70 suggested by Nunnally (1978). The range of Composite Reliability (CR), which is a more conservative estimate of reliability than Cronbach's Alpha, is 0.862 (GAC) to 0.901 (EA), which is higher than the suggested value of 0.70 (Fornell & Larcker, 1981). The average Variance Extracted (AVE) values range from 0.611 (GAC) to 0.683 (GPI) which is greater than the recommended minimum AVE value of 0.50 as suggested by Fornell and Larcker (1981), thus convergent validity is achieved. The ENC construct shows the highest psychometric score as it is well theoretically grounded and has a history of scale development (Ajzen, 1991; Paul et al., 2016). These results collectively indicate that the measurement model has good reliability and convergently validity and can support the evaluation of the structural model.

4.3 Discriminant Validity Assessment

Discriminant validity was measured with the Fornell-Larcker criterion as well as by using the more stringent criterion of the Heterotrait-Monotrait Ratio of Correlations (HTMT) (Henseler et al., 2015). The results are shown in Table 3.

Table 3: Discriminant Validity

Construct	GPA	GAC	EA	PGV	GPI
GPA	0.801*	0.412 [0.486]	0.458 [0.527]	0.436 [0.502]	0.469 [0.538]
GAC		0.782*	0.394 [0.461]	0.381 [0.448]	0.422 [0.493]
EA			0.804*	0.512 [0.581]	0.538 [0.607]
PGV				0.813*	0.527 [0.594]
GPI					0.827*

*Note: AVE values (Fornell-Larcker criterion) are in bold in the diagonal. The lower triangle values that are not on the diagonal are the inter-construct correlations. The values of HTMT are in square brackets [ ]. * is AVE square root. All values for the HTMT were below 0.85 which ensures the discriminant validity (Henseler et al., 2015).*

Table 3 provides support for discriminant validity in two different ways. Each construct's AVE (bold diagonal values) is greater than every inter-construct correlation in the row and column for the Fornell-Larcker criterion. The correlation between EA and GPI is highest (r = 0.538), but is still significantly lower than the square root of the AVE value of EA (0.804). Furthermore, the scores on the HTMT ratios (shown in square brackets) range from 0.448 (GAC-PGV) to 0.607 (EA-GPI), with all of these scores below the conservative threshold of 0.85 recommended by Henseler et al. (2015), and the stricter threshold of 0.90 for conceptually distinct constructs. All five constructs are empirically distinct, as confirmed by these results, which gives a good basis for the estimation of the structural models.

4.4 Structural Model and Hypotheses Testing

The path coefficients were calculated by SmartPLS 4.0 software through the bootstrapping process (number of subsamples = 5,000) with measurement model validity confirmed, the structural model was estimated to obtain t-statistics and p-values for the path coefficients. The model fit indices demonstrated satisfactory fit: $\chi^2/df = 2.18$ (< 3.0); CFI = 0.963; TLI = 0.957; RMSEA = 0.053 (90% CI: 0.041–0.064); SRMR = 0.048. The results of the path estimation and hypothesis testing are summarized in Table 4.

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Table 4: Structural Model Estimates and Hypotheses Testing

Hyp.	Path	Relationship	β Coefficient	t-value	p-value	Decision
H1	GPA → GPI	Green Product Awareness → Green Purchase Intention	0.316	5.842	< 0.001	Supported
H2	GAC → GPI	Green Advertising Credibility → Green Purchase Intention	0.278	4.916	< 0.01	Supported
H3	EA → GPI	Environmental Attitude → Green Purchase Intention	0.412	7.284	< 0.001	Supported
H4	PGV → GPI	Perceived Green Value → Green Purchase Intention	0.387	6.903	< 0.001	Supported
H5	EA → PGV	Environmental Attitude → Perceived Green Value	0.443	8.127	< 0.001	Supported

Note: β = standardised path coefficient; bootstrapping with 5,000 subsamples; Model fit: $\chi^2/df = 2.18$; CFI = 0.963; TLI = 0.957; RMSEA = 0.053; SRMR = 0.048; R^2 (GPI) = 0.561; R^2 (PGV) = 0.197.

As presented in Table 4, the structural model yields that all five hypothesised paths are statistically significant with the coefficient of the path ranging from 0.278 to 0.443. Environmental Attitude emerges as the strongest direct predictor of Green Purchase Intention (β = 0.412, t = 7.284, p < 0.001), followed by Perceived Green Value (β = 0.387, t = 6.903, p < 0.001), Green Product Awareness (β = 0.316, t = 5.842, p < 0.001), and Green Advertising Credibility (β = 0.278, t = 4.916, p < 0.01). The coefficients for the hypothesized path between Environmental Attitude and Perceived Green Value (β = 0.443, t = 8.127, p < 0.001) are found to be the highest in the model, which suggests that favorable environmental attitudes can strongly influence the creation of perceptions of green value as a result of which a value-based segmentation strategy can be implemented. The R2 for GPI is 0.561, a value that shows that the model has good explanatory power when compared with other models used in similar studies in Indian context such as Yadav & Pathak (2017) and Trivedi et al (2018). The R2 value of PGV is 0.197 indicating that about 19.7% of the variance in Perceived Green Value is explained by Environmental Attitude, indicating that there are other antecedents of PGV that have not yet been explored.

5. Discussion, Implications, And Contributions

5.1 Discussion of Findings

Based on the empirical findings of this study, the study has some substantive findings relating to green consumer behaviors in Tamil Nadu. The strongest predictor of Green Purchase Intention (β = 0.412) is the Environmental Attitude, which corroborates the cross-contextual strength of the TPB-based models in green marketing research as reported by Hsu et al. (2017) and Paul et al. (2016). This salience of EA in Tamil Nadu can be explained, in part, by the relatively high literacy rate (82.9%), the active civil society presence around environmental issues in the state, such as the Periyar river protection movement and anti-plastic campaigns, and the Tamil cultural values of caring for the environment as expressed in the classical Sangam literature (Ramakrishnan, 2020).

The significant contribution of Perceived Green Value(β = 0.387) to Green Purchase Intention extends theChen and Chang (2012) model to the context of an emerging economy in South India, thus supporting the findings that the Tamil Nadu consumers are making economically rational calculations that considers functional and symbolic value with environmental benefits. This contradicts the mainstream view that price sensitivity in developing markets would reduce the uptake of green products because it indicates that consumers' price sensitivity in developing markets does not necessarily dampen their green purchase intentions, especially when they believe that there is a high level of perceived overall value, which extends beyond the economic to the ecological, social and emotional (Lin & Huang, 2012). The strong EA → PGV pathway (β = 0.443) also suggests that value

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perceptions are not formed independently, but are instead strongly influenced by the nature of the values that are held previously, which is consistent with VBN theory that values influence the nature of attitudinal cognition (Stern, 2000).

The moderate to strong impact of Green Product Awareness on GPI (β = 0.316) further validates the importance of information accessibility as a key lever for the development of green markets in Tamil Nadu. The somewhat lower coefficient compared to EA and PGV indicates that simply raising awareness is not enough, which reminds us to not rely in information-only campaigns and to stress the importance of communication approaches that develop attitudinal depth as well as value cognitions. The beta value of Green Advertising Credibility (β = 0.278) is also surprisingly low and could be attributed to the high scepticism level of Tamil Nadu, as mentioned by Kumar (2016) and Dwivedi and Sharma (2019) towards the originality of the green claims from the brand. This trust gap offers a challenge and an opportunity to companies willing to invest in transparent, third-party verified green credentials.

5.2 Managerial Implications

The results provide some practical suggestions for green marketing in the Tamil Nadu market and similar markets in the South. First, because of the salience of Environmental Attitude, marketers should focus on affective and normative approaches to environmental communication that resonate with consumers' existing attitudes toward the environment and their environmental identity, not just on rational, attribute-based approaches. Campaigns that draw on Tamil Nadu's environmental legacy, such as the Nilgiris biosphere and the Cauvery river ecosystem can be particularly effective in bringing the attitudinal precursors of green purchase intention to the fore.

Second, the value proposition communication should be stratified, since the environmental attitudes are built first via the brand storytelling and CSR activities, then value-based messaging can be sent out (Chen & Chang, 2012). This is a sequenced communication approach following the VBN theory's "norm" activation sequence and could be used to help close the attitude-behaviour gap. Third, in order to overcome the credibility crisis that exists with regards to green advertising, companies should strive to achieve independent third-party eco-certification (such as ISO 14001, BEE labels), communicate their green advertising based on scientific evidence and implement blockchain-based supply chain transparency – innovations that are proven to boost the credibility of advertisers in emerging green markets (Lyon & Montgomery, 2015). Moreover, the districts included as semi-urban districts (Tiruchirappalli, Salem, and Thanjavur) with low mean score on GPA and GPI are under-served market opportunities, and green awareness campaigns could be launched in these areas through a co-delivery approach with district consumer forum to speed up the adoption of sustainable consumption.

5.3 Policy Implications

The results show that, for policy makers, the strategic role of environmental attitude formation as an instrument of public policy is paramount. If ecological values education is incorporated into the school and college curricula (in addition to the current environmental studies programme in Tamil Nadu), it may generate consumers with an ecological mindset. Furthermore, consumer value communication strategies would be useful for the ongoing promotion programmes of the state government on EVs and solar energy, which would focus on the savings in the entire life cycle and co-benefits of using these alternative vehicles, thus overcoming the barriers associated with PVG. Eco-labelling for SMEs in TNs Textile, Leather and Agro-processing industry could also provide democratisation of eco-labelling, bringing more credibly green products under the reach of consumers (MoEFCC, 2023).

5.4 Theoretical Contributions

There are four key theoretical contributions in this study. First, it brings the concepts of contextual specificity to green marketing theory as it proves that TPB, VBN, and S-O-R construct can be used and have differential effect sizes in an emerging economy in South India, where they are either not used or underrepresented in the literature (Yadav &

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Pathak, 2017). Second, it empirically confirms that the EA → PGV pathway is theoretically significant and empirical evidence of such a pathway is presented for the first time in Tamil Nadu using SEM based on a large sample size. Third, the use of Green Advertising Credibility as a separate construct, which was validated for discriminant validity from Green Product Awareness, is a methodological improvement compared to studies that combine both information and credibility dimensions (Newell et al., 1998). Fourth, the use of both Fornell-Larcker and HTMT discriminant validity criteria fills the gap in the methodology of green marketing studies in India, while also setting the bar high for the measurement of construct validity in the field of green marketing.

6. Conclusion, Limitations, And Future Research Directions

6.1 Conclusion

The study explored the consumer perception on green marketing in the state of Tamil Nadu in India, developed a unified theoretical framework by incorporating Environmental Attitude, Green Product Awareness, Green Advertising Credibility, Perceived Green Value and Green Purchase Intention and tested it with empirical analysis. A stratified sample of 620 respondents was taken from 6 districts in Tamil Nadu, and rigorous SEM-based analysis was conducted, supporting all 5 hypothesized paths. Environmental Attitude (β = 0.412) and Perceived Green Value (β = 0.387) proved as the strongest predictors of Green Purchase Intention, whereas the pathway between EA and PGV (β = 0.443) showed the attitudinal dimensions of the value (cognitions) of green consumption. The model found to be strong in terms of predictability with 56.1% explaining the variance in GPI.

The results as a whole serve to substantiate the theoretical hypothesis that green purchase intention in new economic environments is a multi-determinant phenomenon that is based on environmental value systems, product awareness, value perceptions, and the credibility of communication. These insights provide a timely evidence base for practitioners and policymakers working towards a transition towards sustainable consumption in the dynamic consumer market in Tamil Nadu, which is characterised by increasing education levels, rising environmental awareness and growing availability of green products.

6.2 Limitations

A number of restrictions need to be recognized. Firstly, the cross sectional design does not allow for causal analysis or an understanding of the directionality of the observed relationships, as would be offered by longitudinal studies. Secondly, the study was limited to six districts of Tamil Nadu, which might limit the generalisability of the study results to other rural areas, coastal or hilly areas with different social-economic and ecological characteristics. Third, the study assesses Green Purchase Intention but does not study actual purchase behaviour and the documented intention-behaviour gap (Verma & Chandra, 2018) has an impact on the extent of green market penetration. Fourth, Common Method Bias is a potential problem that is evaluated and controlled in self-report survey designs, but cannot be completely ruled out. Fifth, the measure of Green Advertising Credibility was based on consumers' perceptions of green advertising as a whole and not on particular brand-level ads, potentially resulting in construct contamination.

6.3 Future Research Directions

As stated above, there are several potentially fruitful areas of further research. Longitudinal designs tracking green attitudes and purchase behaviours over policy regime transitions, for instance Tamil Nadu's gradual e-waste policy or increasing single-use plastic bans would greatly contribute to the understanding of dynamic attitude formation. A comparative study of Tamil Nadu with other ecologically and culturally different states of India (such as Kerala, Maharashtra, Rajasthan, etc.) can help set the boundary conditions of the proposed model, which can be carried out in multiple states. Its limitations are structures that can be overcome by future studies, such as the use of real purchase behaviour based on data from green certified retailers, allowing intention-behaviour gaps to be used as an outcome variable instead of a limitation. Further, the hypothesized moderating effect of

digital literacy and the hypothesized moderating effect of social media green influencer exposure in the EA → GPI pathway and in the PGV → GPI pathway are theoretically promising extensions. Lastly, qualitative or mixed methods techniques, such as focus groups and/or phenomenological interviews with consumers in Tamil Nadu, can uncover the local versions of green value and environmental responsibility that are missing from the quantitative approaches.

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