GREEN MARKETING AND CONSUMER BEHAVIOUR TOWARDS ORGANIC FOOD PRODUCTS: A PLS-SEM AND MULTI-GROUP ANALYSIS APPROACH

Marketing verde e comportamento do consumidor em relação a produtos alimentícios orgânicos: uma abordagem PLS-SEM e análise multigrupo

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ABSTRACT

This study examines the major determinants of green consumer behavior towards organic foods in an emerging economy, which incorporates the factors of both intrinsic and extrinsic drivers into an accepted validated PLS-SEM framework. Quantitative data consisting of a survey of 400 respondents from cities and country areas of Central India were obtained. The model assessed the impact of Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), Green Price Premium (GPP), and Eco-Label Credibility (ELC) on Green Purchase Intention (GPI) and Green Purchase Behavior (GPB). The findings demonstrated that PHV and GPK are the most dominant predictors of GPI, indicating the superiority of self-centered motives, such as personal health promotion and consumer consumerism. EC had a significant but slightly notable impact on GPI, whereas GPP and ELC failed to directly impact intention. Nevertheless, ELC played a dual role; it partly mediated and moderated the relationship between EC and GPI, intensifying intention when the credibility of labels was viewed as high. GPI was a significant predictor of GPB, as might have been anticipated; however, importantly, the mean behavioral outcome was less than the mean intention, indicating that a significant intention-behavior gap persists. Multi-Group Analysis (MGA) proved that rural and urban consumers have a similar psychological driver, with rural consumers displaying more sensitivity to the price, which effectively explains that the price premium is a superior barrier in such markets. This study is theoretically valuable for explaining the dual nature of eco-labels and presenting how health and knowledge are more fundamental than extrinsic indicators in the construction of sustainable purchase intentions. Managerially, it indicates the necessity of health-oriented conversations, teaching consumers, clear labelling, and segmentation-based pricing methods to promote the use of organic foods and reduce the intention–behavior discrepancy in emerging markets.

Keywords: Green Marketing, Organic Food Products, Green Purchase Intention, Green Purchase Behaviour, Structural Equation Modelling, Multi Group Analysis

MARKETING VERDE E COMPORTAMENTO DO CONSUMIDOR EM RELAÇÃO A PRODUTOS ALIMENTÍCIOS ORGÂNICOS: UMA ABORDAGEM PLS-SEM E ANÁLISE MULTIGRUPO

Green marketing and consumer behavior towards organic food products: a PLS-SEM and multi-group analysis approach

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RESUMO

Este estudo examina os principais determinantes do comportamento do consumidor verde em relação aos alimentos orgânicos em uma economia emergente, que incorpora os fatores de fatores intrínsecos e extrínsecos em uma estrutura PLS-SEM validada e aceita. Foram obtidos dados quantitativos que consistem em uma pesquisa com 400 entrevistados de cidades e áreas rurais da Índia Central. O modelo avaliou o impacto do valor percebido para a saúde (PHV), do conhecimento do Produto Verde (GPK), da preocupação ambiental (EC), do Prêmio de preço Verde (GPP) e da credibilidade do rótulo ecológico (ELC) na intenção de compra Verde (GPI) e no comportamento de compra Verde (GPB). Os achados demonstraram que PHV e GPK são os preditores mais dominantes de GPI, indicando a superioridade de motivos egocêntricos, como promoção da saúde pessoal e consumismo do consumidor. O EC teve um impacto significativo, mas ligeiramente notável, no GPI, enquanto o GPP e o ELC não impactaram diretamente a intenção. No entanto, o ELC desempenhou um duplo papel; mediou e moderou parcialmente a relação entre ce e GPI, intensificando a intenção quando a credibilidade dos rótulos era vista como alta. O GPI foi um preditor significativo de GPB, como poderia ter sido antecipado; no entanto, é importante ressaltar que o resultado comportamental médio foi menor do que a intenção média, indicando que uma lacuna significativa intenção-comportamento persiste. A análise multigrupo (MGA) provou que os consumidores rurais e urbanos têm um driver psicológico semelhante, com os consumidores rurais exibindo mais sensibilidade ao preço, o que efetivamente explica que o prêmio de preço é uma barreira superior em tais mercados. Este estudo é teoricamente valioso para explicar a dupla natureza dos rótulos ecológicos e apresentar como saúde e conhecimento são mais fundamentais do que indicadores extrínsecos na construção de intenções de compra sustentáveis. Gerencialmente, indica a necessidade de conversas voltadas para a saúde, ensino aos consumidores, rotulagem clara e métodos de precificação baseados em segmentação para promover o uso de alimentos orgânicos e reduzir a discrepância intenção-comportamento em mercados emergentes.
Palavras-chave: Marketing Verde, Produtos Alimentícios Orgânicos, Intenção De Compra Verde, Comportamento De Compra Verde, Modelagem De Equações Estruturais, Análise Multigrupo

INTRODUCTION

Background of the Study

The increasing challenges of environmental degradation, food safety risks, and unsustainable practices associated with conventional agriculture have accelerated consumer demand for sustainable alternatives, particularly organic food products. Organic foods are widely perceived as healthier, safer, and more environmentally responsible than their conventional counterparts, thus appealing to consumers seeking responsible consumption choices. Teng and Wang (2015) emphasize that organic food production avoids the application of chemical fertilizers and synthetic pesticides, aligning closely with sustainability concerns that increasingly drive consumer preferences. Similarly, Struik and Kuyper (2017) argued that sustainable agricultural practices are essential for mitigating the adverse effects of industrial farming, further reinforcing the shift towards organic alternatives.

Organic farming is characterized by the exclusion of synthetic fertilizers, pesticides, and genetically modified organisms while simultaneously fostering biodiversity and improving soil health (Teng & Wang, 2015). Struik and Kuyper (2017) highlighted the importance of sustainable intensification strategies that enhance local food systems and promote production methods that do not compromise environmental integrity. These principles align directly with the objectives of the United Nations Sustainable Development Goals (SDGs), particularly those that focus on responsible consumption and sustainable production patterns (Pan et al., 2021).

In this evolving context, green marketing has emerged as a critical tool for promoting organic and sustainably produced food. Zhang and Dong (2020) demonstrate that green marketing strategies, which emphasize eco-friendly production processes and the environmental benefits of products, play a vital role in enhancing consumer awareness and shaping preferences. The key components of these strategies include health-related messaging and eco-label certifications, which inform consumers about the positive attributes of organic food products (Valenzuela et al., 2022). Empirical research indicates that intrinsic motivators such as Perceived Health Value (PHV) and Green Product Knowledge (GPK) significantly influence consumer intentions to purchase organic food (Chen et al., 2021). At the same time, extrinsic cues such as Eco-Label Credibility (ELC) and price perceptions can reinforce or hinder purchase intentions, highlighting the multidimensional nature of consumer decision-making (Saleki et al., 2019).

Despite the rising interest and availability of organic food products, a persistent intention-behavior gap remains evident. Many consumers express willingness to purchase organic food, yet actual consumption rates often fall short due to barriers such as high price premiums, limited accessibility, and skepticism towards eco-certification (Rahman & Luomala, 2020). Saleki et al. (2019) noted that in certain markets, such as Malaysia, organic food consumption remains disproportionately low despite growing awareness and availability. Price sensitivity has been identified as a particularly critical factor, especially in emerging markets where variations in economic capacity significantly influence purchasing power and access to information about organic products (Michaud et al., 2012).

In summary, while the demand for organic food continues to grow, consumer behavior is shaped by a complex interplay of socio-demographic factors, intrinsic motivators such as health awareness and environmental concerns, and extrinsic barriers such as price and eco-label trust. These complexities pose challenges for marketers and policymakers seeking to promote organic food consumption. Future research should integrate the roles of health value, environmental concern, product knowledge, eco-label credibility, and price sensitivity into cohesive behavioral models. Moreover, examining these determinants across different consumer segments, particularly in urban and rural contexts, would provide deeper insights into the diverse factors influencing organic food-purchasing behaviors.

This synthesis highlights the evolving landscape of organic food consumption, while underscoring the multifaceted challenges that consumers, marketers, and policymakers must navigate in fostering sustainable consumption patterns.

Research Gaps and Motivation

The sustainable consumption has been a topic of scholarly interest recently, but empirical studies of the way in which consumers approach organic food items are limited, especially occurring in developing economies.

Existing studies relate organic buying intention to health mindfulness and environmental care, but they have not focused on the synergistic effect of green product information, price perceptions, and the credibility of eco-labels. In addition, despite the academic focus on the intention-action gap, existing variables do not provide much explanation. Price sensitivity is one example that has been stated as an outstanding barrier, but it does not always have the same impact in socio-demographic populations, that is, between urban and rural populations due to the difference in purchasing power, exposure to information, and priorities of their lifestyle. To fill these gaps, this study combines various green marketing aspects, including Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), Green Price Premium (GPP), and Eco-Label Credibility (ELC), into one validated PLS-SEM model to predict Green Purchase Intention (GPI) and Green Purchase Behavior (GPB). In addition, Multi-Group Analysis (MGA) explains urban-rural inhomogeneity, which provides a more sophisticated representation of the segment-specific drivers of organic food adoption.

Objectives and Contributions

Based on the identified gaps, this study seeks to develop and evaluate an integrated model that describes consumer behavior towards organic food products, including critical green marketing determinants. In particular, research has tended to achieve the following goals:

1.To analyze how the variables Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), Green Price Premium (GPP), and Eco-label Credibility (ELC) influence Green Purchase Intention (GPI).

2. To assess the association between Green Purchase Intention (GPI) and Green Purchase Behavior (GPB) to resolve the intention behavior gap issue.

3. To determine the mediating effect of Eco-Label Credibility (ELC) in the interconnection between Environmental Concern (EC) and Green Purchase Intention (GPI).

4. To determine whether the moderating role of Eco-Label Credibility (ELC) changes the extent, to which Environmental Concern (EC) and Green Purchase Intention (GPI) relate.

5. To examine the possible urban-rural variations in structural relations using Multi-Group Analysis (MGA).

The theoretical contributions of this research include the extension of knowledge on how green marketing and sustainable consumption are perceived in an emerging economic environment. It also combines health reasons, knowledge impacts, environmental attitudes, and label trustworthiness into a single PLS-SEM model, which provides more insight into the psychological processes involved in making a green purchase decision. This study also explicates the two roles of the credibility of eco-labels as a mediator and moderator, which have previously been under-researched in the literature. Practically, the results can be used by marketers, policymakers, and the people involved in supply chains to provide actionable information that can be used to encourage the use of organic food. The study will thus allow more specific marketing, giving of prices, and establishing certification rules to create sustainable consumption by identifying what most effectively influences purchase intention and actual behavior and the variance in these drivers between urban and rural consumers.

1 LITERATURE REVIEW

1.1 Organic Food Consumption and Green Marketing

Organic food products are produced through environmentally sustainable farming practices that avoid the use of synthetic fertilisers, pesticides, and genetically modified organisms. They are widely perceived as healthier, safer, and more environmentally friendly alternatives to conventional foods (Schleenbecker and Hamm 2013). As consumers increasingly recognise the environmental and health implications of their dietary choices, the demand for organic food has grown significantly, aligning with the Sustainable Development Goals (SDGs) for responsible consumption and production (Baranski et al., 2014). Thus, organic food consumption represents a tangible step towards sustainable living by simultaneously promoting ecological well-being and personal health (Reganold & Wachter 2016.)

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Green marketing is a phenomenon that has been able to influence consumer attitudes and behaviour towards organic products by stressing the benefits of organic foods in terms of their nutritional value, natural production process, and environmental friendliness. According to Kurnia et al. (2022), well-designed and executed green marketing communication will go a long way in facilitate positive shifts in consumer attitudes and make consumers more inclined towards organic food products. This involves strategies such as transparent communication, eco-friendly packaging, and credible certification through eco-labels to build consumer trust (Rana & Paul, 2012). Effective green marketing enhances perceived value and positively influences both purchase intention and actual buying behaviour (Michaelidou and Hassan, 2008). In emerging economies such as India, organic food adoption remains at a nascent stage compared to that in developed markets. Limited awareness, higher price premiums, and scepticism regarding certification authenticity often hinder widespread acceptance (Yadav & Pathak, 2016). Nevertheless, studies suggest that urban Indian consumers with higher education and income levels are more willing to purchase organic products driven primarily by health and environmental motivations (Paul & Rana, 2012). This highlights the importance of consumer education and credible green marketing interventions to accelerate sustainable consumption in developing countries.

1.2 Perceived Health Value (PHV) and Green Purchase Intention

Perceived Health Value (PHV) refers to the belief that consuming organic food enhances personal health and wellbeing. Health consciousness has consistently emerged as one of the strongest motivators for organic food consumption, often surpassing environmental concerns (Pino, Peluso, & Guido, 2012; Paul & Rana, 2012). Consumers associate organic products with reduced exposure to harmful chemicals and better nutritional quality, which enhance their perceived health benefits (Schleenbecker & Hamm, 2013).

From the perspective of the theory of planned behaviour (TPB), PHV creates positive attitudinal beliefs that strengthen behavioural intentions towards sustainable food choices (Sun & Wang, 2019).

Empirical studies confirm that perceived health benefits significantly predict organic purchase intentions, especially in emerging markets where food safety concerns are prevalent (Paul & Rana, 2012). However, despite this strong attitudinal link, external barriers such as price and availability may hinder the translation of health motivation into actual behaviour (Yadav & Pathak, 2016).

1.3 Green Product Knowledge (GPK) and Green Purchase Intention

Green Product Knowledge (GPK) reflects consumer awareness and an understanding of the qualities, benefits, and certification standards of organic products. Huda et al. (2023) acknowledge that consumer knowledge regarding green products influences the intentions to buy the product and state that their higher awareness concerning the health and environmental impact of organic products has a positive effect on consumer motivation to make sustainable choices. Higher product knowledge reduces uncertainty, improves confidence in decision-making, and fosters positive attitudes towards green products (Aertsens et al., 2011). Well-informed consumers are more likely to trust the authenticity of organic foods and appreciate their added value.

Empirical research shows a significant positive association between product knowledge and green purchase intention, as informed consumers perceive fewer risks associated with organic product claims (Paul and Rana, 2012). Moreover, knowledge dissemination through green marketing can enhance trust and credibility in organic food supply chains.

1.4 Environmental Concern (EC) and Green Purchase Intention

Environmental Concern (EC) denotes the degree of consumer awareness and responsibility for environmental preservation. Individuals with higher environmental concerns are more inclined to adopt behaviours that minimise ecological harm (Baur et. al, 2024). Pro-environmental attitudes are known to influence both green purchase intention and willingness to pay for sustainable products (Aertsens et al., 2011; Rana & Paul, 2020). In the context of organic food, EC shapes the moral and ethical motivations behind consumption choices. Consumers with heightened concerns about climate change, biodiversity loss, and environmental pollution are more likely to support sustainable agriculture through their purchasing decisions. Mudholkar (2024) observes that nowadays

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consumers are becoming increasingly cynical about the transparency and integrity behind the products of agriculture.

1.5 Green Price Premium (GPP) and Green Purchase Intention

The Green Price Premium (GPP) reflects consumers' sensitivity to higher prices typically associated with organic food products. Although some consumers are willing to pay more for perceived quality and sustainability, prices often remain a significant barrier in emerging markets (Even et al. 2024). Studies suggest that consumers in lower-income groups or rural areas are more price sensitive, which can weaken their intention to purchase organic products despite recognising their benefits (Nakavachara et al., 2025). In some cases, higher prices signal better quality and enhance intention; in others, they discourage purchase due to financial constraints. In developing economies, such as India, price sensitivity remains a major limiting factor for widespread adoption.

1.6 Eco-Label Credibility (ELC): Mediation and Moderation Roles

Eco-Label Credibility (ELC) refers to the level of trust that consumers place in certification labels that verify a product's organic authenticity. Eco-labels serve as information cues to reduce uncertainty and build confidence in green product claims (Henninger, C. E.,2015). When consumers perceive eco-labels as credible, their trust in the product increases, thereby strengthening their purchase intentions. When consumers acknowledge eco-labels as valued, they also strengthen their confidence in the ecological genuineness of merchandise and boost their intent to spend money on related products (Delmas & Lessem,2016). ELC may also play a dual role in shaping consumer decision-making. First, it can mediate the relationship between environmental concerns and purchase intention by enhancing the trustworthiness of product claims. Second, it can moderate this relationship by amplifying the impact of environmental concerns when the label credibility is high. Literature supports the significance of eco-labels as both a signalling mechanism and a trust-enhancing factor (Damberg et al.2024).

1.7 Green Purchase Intention (GPI) and Green Purchase Behaviour (GPB)

Green Purchase Intention (GPI) reflects consumers' willingness to buy sustainable products, whereas Green Purchase Behaviour (GPB) denotes the actual act of purchasing them. Although the theory of planned behaviour suggests a strong link between intention and behaviour, many studies have identified an intention–behaviour gap in green consumption (Lane & Potter, 2007). External factors such as price, availability, and trust can inhibit the translation of intention into action. Nevertheless, meta-analyses have confirmed that intention remains a significant predictor of actual behaviour, even if moderated by contextual constraints (Paul & Rana, 2012).

1.8 Urban–Rural Differences in Green Consumer Behaviour

Socio-demographic context strongly influences green consumption. Urban consumers have greater access to information, higher incomes, and more diverse retail options than rural consumers who may face limited product availability and affordability constraints. Studies have highlighted distinct behavioural differences between urban and rural segments in developing economies, particularly regarding price sensitivity and eco-label awareness (Yadav & Pathak, 2016).

To account for these potential differences, this study employs a Multi-Group Analysis (MGA) to evaluate whether the structural path relationships vary significantly between urban and rural respondents.

2 CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Based on the reviewed literature, the relationships among the key constructs were hypothesised as follows:

H1: *Perceived Health Value (PHV) positively influence Green Purchase Intention (GPI).*
H2: *Green Product Knowledge (GPK) positively influences Green Purchase Intention (GPI).*

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H3: *Environmental Concern (EC) positively influences Green Purchase Intention (GPI).*

H4: *Green Price Premium (GPP) negatively influences Green Purchase Intention (GPI).*

H5: *Eco-Label Credibility (ELC) positively influences Green Purchase Intention (GPI).*

H6: *Green Purchase Intention (GPI) positively influences Green Purchase Behaviour (GPB).*

H7: *Eco-Label Credibility (ELC) mediates the relationship between Environmental Concern (EC) and Green Purchase Intention (GPI).*

H8: *Eco-Label Credibility (ELC) moderates the relationship between Environmental Concern (EC) and Green Purchase Intention (GPI).*

Figure 1 - Conceptual Framework for Green Purchase Behaviour
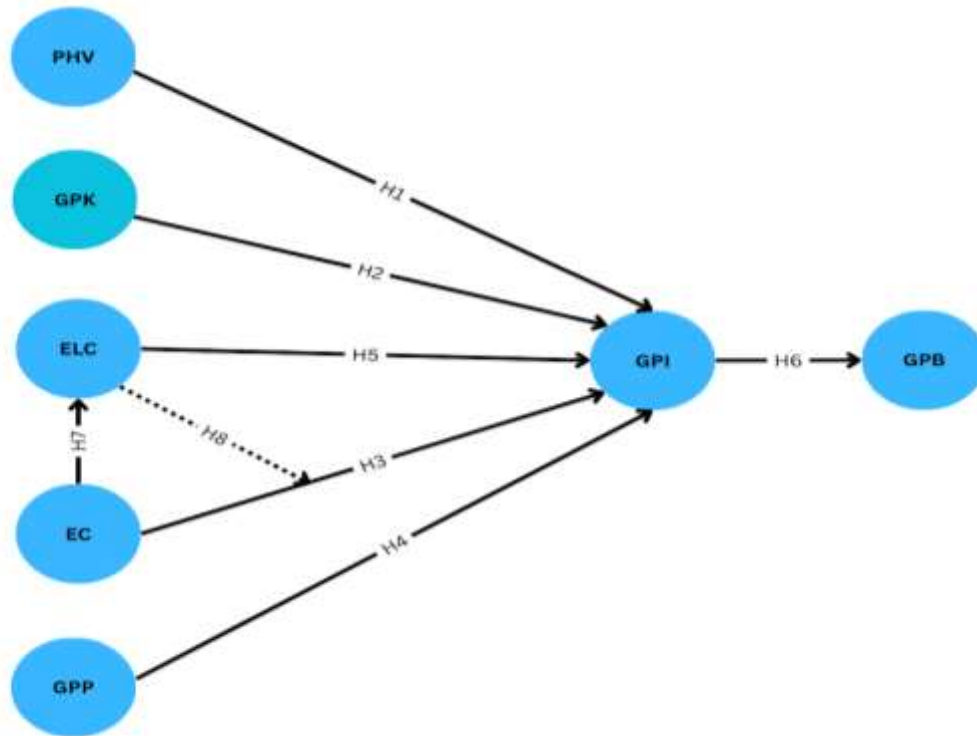
This study formulates a conceptual framework that combines the key determinants of green consumer behaviour identified in the existing literature. It hypothesises that Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), Green Price Premium (GPP), and Eco-Label Credibility (ELC) have direct effects on Green Purchase Intention (GPI) which is in turn a predictor of Green Purchase Behaviour (GPB). This framework provides the attitudinal and cognitive factors of sustainable consumption, in addition to discussing the intention-behaviour relationship in organic food products. In addition to these direct relationships, Eco-Label Credibility (ELC) plays a dual role in the model. First, it acts as a mediator between Environmental Concern (EC) and Green Purchase Intention (GPI), strengthening the connection and realising consumer confidence in organic certifications. Second, it has moderator effects, such that the relational strength between Environmental Concern and Green Purchase Intention is magnified when a prominent level of eco-label credibility is perceived. This two-fold perception corresponds to the findings of previous studies that noted the signalling and trust-building roles of eco-labels in decreasing consumer uncertainty. To further explain contextual heterogeneity, a Multi-Group Analysis (MGA) that included a test of the equality of structural relationships between Urban and Rural consumers was included. Considering the socio-demographic differences in information access, purchasing power, and availability of products, it is possible that there could be a difference in the underpinning behavioural dynamics across these segments. In the case of MGA, a simplified model which did not include mediation or moderation effects was used to compare the key structural relationships between Urban and Rural groups.

3 METHODOLOGY

3.1 Research Design

The current study is driven by a cross-sectional, quantitative design aimed at examining how specified green marketing variables affect consumer behaviour in opinions about organic food products. This conceptual model determines the influence of Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), Green Price Premium (GPP), and Eco-Label Credibility (ELC) on green purchase intention (GPI), which in turn predicts Green Purchase Behaviour (GPB). In addition, the mediation and moderation effects are also specified to explain the minor psychological dynamics that explain the basis of sustainable purchasing decisions, and a secondary analysis known as Multi-Group Analysis (MGA) is used to understand whether urban and rural consumers show different decision-making pathways.

3.2 Population and Sampling Procedure

This study evaluated the buying behaviour of Central Indian consumers who were exposed to organic food products earlier. Simple random sampling was used to ensure a well-balanced and unbiased selection of the sample, where all participants had an equal chance of being selected, hence mirrored well on the representativeness of the research outcomes. A total of 400 valid responses were obtained from both the urban (50 %) and rural (50 %) respondents. This equalised composition made further multivariate group comparisons possible.

3.3 Instrument Development and Measures

The questionnaire was designed based on validated scales existing in previous green marketing and consumer behaviour databases. Three reflective constructs were used to measure each latent construct on a five-point Likert scale (1= highly disagree, 5= highly agree).

- Perceived Health Value (PHV) measures consumers' perceptions of the health benefits of organic foods.
- Green Product Knowledge (GPK) assesses the degree of information and consumer exposure to organic products.
- Environmental Concern (EC) covered personal concerns and responsibility concerning the protection of the environment.
- The Green Price Premium (GPP) measures how sensitive a person is to an increase in the price of organic food products.
- Eco-Label Credibility (ELC) studied consumer confidence towards certification and the result of organic labelling system.
- Green Purchase Intention (GPI) was used to determine the future purchase of organic products by the consumer.
- Green Purchase Behaviour (GPB) measures self-reported behaviour of purchasing organic products.

The questionnaire was pretested for clarity and contextual relevance, and the same was refined prior to large-scale data collection.

3.4 Data Collection Procedure

Data collection involved the use of a structured self-administered survey, which was made available to the targeted districts of Central India online and otherwise. A brief description of the study was provided to the respondents, accompanied by assurance of confidentiality and the voluntary nature of participation. Complete responses were retained for analysis.

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3.5 Analytical Approach

The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4.0 (Ringel et al,2024**).** by using a two-step procedure.

Measurement Model Assessment: Internal consistency (Cronbach α and Composite Reliability (CR)) was used to determine internal consistency reliability.

- Convergence validity was evaluated using Average Variance Extracted (AVE).
- Discriminant validity was confirmed using the Fornell-Larcker criterion and Heterotrait Monotrait (HTMT) ratio.

II. Structural Model testing

- Path coefficients (β) explaining the variance (R square) and effect size (f-square) were estimated.
- Bootstrapping (5000 subsamples) was used to evaluate the mediation and moderation effects to obtain reliable results on the significance of the results.
- The level of model fit was evaluated based on SRMR, d_ULS, d_G, and NFI.

In the Multi-Group Analysis (MGA), the PLS-MGA procedure was used to compare the Urban and Rural subsamples. To do so, as it was mentioned, the simplified structural model (without the consideration of mediation and moderation) was employed to focus on the main direct relationships between the constructs. Differentiation between the groups based on a p-value of $0 < 0.05$ (2-tail probability) was considered significant. The methodological approach adopted means that it is rigorous, replicable, and dependable, allowing the fullness of the determinants of green purchase intention and behaviour and any contextual variations that may exist between Urban and Rural consumers.

4 DATA ANALYSIS AND INTERPRETATION

The survey was structured using a sample of 400 valid responses representing a random spread across various districts within Central India with an equal balance between urban and rural customers (50 % each). The excellent response rate offered a wide range of representation in gender, age, level of education, and income, so that the behaviour or attitude towards organic food products could be compared easily. The main objective of the analysis was to study the influence of the main green marketing determinants–Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), and Green Price Premium (GPP)–on Green Purchase Intention (GPI) and its further reflection on Green Purchase Behaviour (GPB). Moreover, this study sought to examine the mediating and moderating effects of the Eco-Label Credibility (ELC) and examine inter-urban rural variance using Multi-Group Analysis (MGA). These objectives are in line with the suggested hypotheses that evaluate the direct and indirect relationships between constructs.

4.1 Demographic Profile of Respondents

Table 1 - Demographic profile of Respondents

Demographic Variables	Category	Frequency	Percentage
Gender	Male	214	53.5
	Female	186	46.5
Age	18-30	146	36.5
	30-45	144	36.0
	45-60	76	19.0
	Above 60	34	8.5
Education	School Level	35	8.75
	UG/Diploma	126	31.5
	Post Graduation	182	45.5
	Professional Degree	57	14.25
Income (In INR)	Below 50000	59	14.75
	50000-1 Lac	111	27.75
	1 Lac-1.5 Lac	132	33.0
	More than 1.5 Lac	98	24.5
Location	Urban	200	50
	Rural	200	50

The current study involved a sample of 400 participants whose demographic criteria showed significant representativeness in terms of Gender, age, education level, household income level, and geographical distribution. The characteristics are listed in Table 1. The proportion of male and female respondents was the same: 53.5 % male (n = 214) and 46.5 % female (n = 186). Bias in age distribution, with more respondents belonging to younger generations: 36.5 % of the participants belonged to the age group of 18 to 30 years and 36.0 % between the age groups of 30 and 45 years. The 45–60-year group comprised 19.0 % of the participants, and only 8.5 % were > 60 years old. Regarding education, 45.5 % had postgraduate education, 31.5 % were undergraduate or diploma holders, 14.25 % of the respondents had professional degree holders, and 8.75 % of the respondents have had formal schooling. Concerning the income, there was 33.0 % earning INR 1,00,000 to INR 1,50,000 and that of INR 50,000 to INR 1,00,000 (27.75 %). A remarkably high percentage (24.5 %) responded that they received INR 1,50,000, and 14.75 % less than INR 50,000. The geographical spread was also even with half of the respondents in the urban centres and half in the rural areas, which made it easy to compare the behaviour of the consumers in urban and rural environments.

4.2 Descriptive Statistics for Each Variable

Table 2 - Details of Descriptive Statistics

Construct	Items	Mean	Std. Deviation	Min.	Max.
Green Purchase Behaviour (GPB)	GPB1, GPB2, GPB3	3.662	0.874	2	5
Green Purchase Intention (GPI)	GPI1, GPI2, GPI3	4.325	0.699	1	5
Perceived Health Value (PHV)	PHV1, PHV2, PHV3	4.225	0.733	1	5
Green Product Knowledge (GPK)	GPK1, GPK2, GPK3	4.241	0.819	1	5
Green Price Premium (GPP)	GPP1, GPP2, GPP3	4.073	0.701	2	5
Environmental Concern (EC)	EC1, EC2, EC3	3.890	0.731	1	5
Eco Label Credibility (ELC)	ELC1, ELC2, ELC3	3.951	0.661	1	5

Descriptive statistics indicated the highest mean score (4.325, SD = 0.699) for Green Purchase Intention (GPI) which implies that the respondents were strongly willing to purchase organic food products. The Green Product Knowledge (GPK) (4.241, SD = 0.819) and Perceived Health Value (PHV) (4.225, SD = 0.733) were also high, indicating that knowledge and health value to the individual are incredibly significant in motivating them. In comparison, the Green Price Premium (GPP) scored 4.073 (SD = 0.701), implying that price is a moderate obstacle to real purchases.

Environmental Concern (EC) (3.890, SD = 0.731) and Eco-Label Credibility (ELC) (3.951, SD = 0.661) had more positive but lesser means than health and knowledge, thus making them secondary drivers. The one with the lowest mean (3.662, SD = 0.874) was the Green Purchase Behaviour (GPB), which demonstrated that there exists a difference between intention and actual purchasing, probably because of the limitations with price and availability. Overall, the intention and awareness of consumers are high; however, economics keeps behaviour restrained.

4.3 Measurement model Evaluation

4.3.1 Construct Reliability and Validity

Table 3 - Construct Reliability and Validity

Construct	Cronbach's α	Composite Reliability (rho_a)	Composite Reliability (rho_c)	AVE
Environmental Concern (EC)	0.754	0.770	0.858	0.669
Eco-Label Credibility (ELC)	0.805	0.819	0.886	0.722
Green Purchase Behaviour (GPB)	0.856	0.857	0.913	0.778
Green Purchase Intention (GPI)	0.845	0.847	0.907	0.766
Green Product Knowledge (GPK)	0.893	0.919	0.933	0.822
Green Price Premium (GPP)	0.848	0.913	0.904	0.758
Perceived Health Value (PHV)	0.840	0.853	0.903	0.757

The assessment of internal consistency and convergent validity of the constructs was based on Cronbach α, composite reliability (rho a and rho c), and the Average Variance Extracted (AVE). The findings indicate that all constructs have reliable and valid values that are either acceptable or excellent. Environmental Concern (EC) showed a Cronbach α of 0.754, composite reliability of 0.770 (rho a) and 0.858 (rho c), and AVE of 0.669 which is sufficient reliability and convergent validity. Eco-Label Credibility (ELC) was a bit more dependable and demonstrated Cronbach A equal to 0.805, composite reliability equal to 0.819 (rho_a) and 0.886 (rho_c), and the actual build-up to equivalence equal to 0.722, which contributed to good internal consistency. The Green Purchase Behaviour (GPB) and Green Purchase Intention (GPI) both portrayed good reliabilities, with Cronbach α of 0.856 and 0845, respectively, composite reliabilities of over 0.90, and AVE of 0.778 and 0.766, respectively, and portrays decent quality of measurement. Green Product Knowledge (GPK) had the best reliability, which was 0.893, 0.919, and 0.933 for composite reliability (rho_a, rho_c, respectively) with an AVE of 0.822, indicating the superior reliability of the construct. Similarly, Green Price Premium (GPP) (α = 0.848, rho c = 0.904, AVE = 0.758) and Perceived Health Value (PHV) (α = 0.840, rho c = 0.903, AVE = 0.757) had strong internal consistency and convergent validity. Overall, all Cronbach values are above the recommended 0.70 limit, according to classical guidelines established by Nunnally and Bernstein (1978), Cronbach alpha values of 0.70 or higher, are indicative

of acceptable internal consistency for most research purposes. All of its composite reliability is above 0.85, and all AVE values are well above the suggested 0.50. A commonly accepted threshold for adequate convergent validity is an AVE value greater than 0.50 (Fornell & Larcker, 1981), all testifying to the fact that the measurement model shows high reliability and convergent validity for all measures.

4.3.2 Discriminant Validity

Table 4 - HTMT Ratio

	EC	ELC	GPB	GPI	GPK	GPPV	PHV
EC							
ELC	0.374						
GPB	0.265	0.394					
GPI	0.417	0.326	0.517				
GPK	0.243	0.156	0.242	0.651			
GPPV	0.107	0.053	0.058	0.040	0.062		
PHV	0.386	0.338	0.428	0.775	0.482	0.040	
ELC x EC	0.075	0.255	0.079	0.146	0.038	0.013	0.095

Table 5 - FORNELL-LARCKER Criterion

	EC	ELC	GPB	GPI	GPK	GPPV	PHV
EC	0.818						
ELC	0.297	0.850					
GPB	0.214	0.329	0.882				
GPI	0.336	0.271	0.440	0.875			
GPK	0.211	0.139	0.214	0.578	0.907		
GPPV	-0.087	0.040	0.000	0.031	0.037	0.871	
PHV	0.303	0.280	0.360	0.661	0.431	0.027	0.870

Discriminant validity was assessed using the Heterotrait–Monotrait ratio (HTMT) and Fornell–Larcker criterion, both of which are widely recommended approaches for PLS-SEM models.

Heterotrait–Monotrait ratio (HTMT): The HTMT ratio is regarded as a severe measure of discriminant validity, with less than 0.85 to pass strongly or less than 0.90 to pass loosely (Hair et el.2019). All HTMT values among the latent constructs were found to be well below the recommended value, with the largest value of 0.775, which was between PHV and GPI. The other relationships, including EC to GPI (0.417), PHV to GPB (0.428), and ELC to PHV (0.338), were also well below the cut-off. The HTMT ratios were found to be extremely low between constructs related to the price, such that GPP and GPI had a ratio of 0.040, which was extremely low, denoting a conceptual distinction. None of the values of HTMT were above 0.85 which showed that the model had satisfactory

discriminant validity and, hence, indicated that all constructs explained distinctive features related to green marketing behaviour towards organic food products.

Fornell–Larcker Criterion: Along with HTMT, discriminant validity was confirmed using the Fornell–Larcker criterion. Based on this criterion, the square root of the AVE for every construct must be larger than its correlation with other constructs (Hamid et al,2017). The analysis ascertained that all constructs met this requirement. The square root of the AVE of Green Purchase Intention (0.875) was above the correlation it had with PHV (0.661) or GPB (0.440). Equally, Eco-Label Credibility (0.850) surpassed its relationship with EC (0.297) and GPB (0.329), whereas GPB (0.882) surpassed its relationship with GPI (0.440) and PHV (0.360). The trend was the same for all latent variables, validating the conclusion that the constructs were empirically distinct. In combination with the Fornell–Larcker criterion, the HTMT ratios can be relied upon as indicators that the discriminant validity is attained and the constructs in this analysis are not only conceptually independent of one another, but also statistically distinct.

4.4 Structural Model Evaluation

The structural model was analysed in terms of explained variance (R^2), effect sizes(f^2), path coefficients, and mediation and moderation effects, whereas the overall quality of the model fit was measured using conventional PLS-SEM fit statistics. The hypothesised relationships were evaluated statistically using bootstrapping with 5000 subsamples.

Table 6 - Coefficient of Determination (R^2) and Adjusted R^2 of Endogenous Constructs

Endogenous Variable	R^2	Adjusted R^2
Eco-Label Credibility (ELC)	0.088	0.086
Green Purchase Intention (GPI)	0.564	0.558
Green Purchase Behaviour (GPB)	0.194	0.192

4.4.1 Explained Variance (R^2) and Effect Sizes (f^2)

The model proved to have moderate-to-high explanatory power. Green Purchase Intention (GPI) had an R^2 of 0.564 (Adjusted R^2 = 0.558) which means that 56.4 percent of the variance in intention is due to Perceived Health Value (PHV), Green Product Knowledge (GPK), Environmental Concern (EC), Green Price Premium (GPP), Eco-Label Credibility (ELC), and the interaction term of intention. Green Purchase Behaviour (GPB) had a lower value of R^2 at 0.194 (Adjusted R^2 = 0.192), which should be the case with actual behaviours which are also affected by external situational conditions. At the same time, Eco-Label Credibility (ELC) was also relatively low, with R^2 = 0.088, or 8.8 % of the variance, because of only one explanatory variable, Environmental Concern.

Table 7 - Effect Sizes (f^2) of Exogenous Variables on Endogenous Constructs

| Relationship	f-Square (f^2)
EC → ELC	0.097 (Small)
EC → GPI	0.026 (Small)
ELC → GPI	0.003 (Negligible)
ELC x EC → GPI	0.013 (Small)
GPI → GPB	0.241 (Medium-Large)
GPK → GPI	0.223 (Medium-Large)
GPP → GPI	0.000 (No effect)
PHV → GPI	0.352 (Large)

The indicated f^2 values of the effect sizes emphasised the importance of the contribution of each construct. The strongest effect was revealed for PHV $\rightarrow$ GPI (f 2 = 0.352), so health benefits were found to be the strongest predictor of purchase intention. Another mediating effect that emerged in GPK and GPI was the medium-to-large (f^2 = 0.223) effect, clearly showing that knowledge boosts intention. The intention-behaviour relationship was substantial (GPI -> GPB) (f^2 = 0.241). EC -> ELC showed a small-medium effect (f^2 = 0.097), and both EC -> GPI and ELC × EC -> GPI (f^2 = 0.026) worked out as small, implying that it can be used to supplement environment-related concerns in the absence of credible eco-labelling. ELC to GPI had the negligible impact (f^2 = 0.003), and GPP to GPI had no influence (f^2 = 0.000), thus concluding that, in this sample, price sensitivity has no significant effect on the purchase

4.4.2 Path Coefficients and Hypothesis Testing

Table 8 - Structural Model Path Coefficients, t-values, p-values, and Hypothesis Testing

Hypothesis	Path	β Coefficient	t-value	p-value	Supported?
H1	PHV → GPI	0.456	11.044	0.000	Yes
H2	GPK → GPI	0.348	8.475	0.000	Yes
H3	EC → GPI	0.118	2.876	0.004	Yes
H4	GPP → GPI	0.014	0.357	0.721	No
H5	ELC → GPI	0.042	1.061	0.289	No
H6	GPI → GPB	0.440	11.423	0.000	Yes
H7	EC → ELC → GPI	0.047 (indirect)	2.060	0.040	Partial
H8	ELC x EC → GPI	0.077	2.150	0.032	Yes

Figure 2 - Validated structural model with significant paths and explained variances (R²)
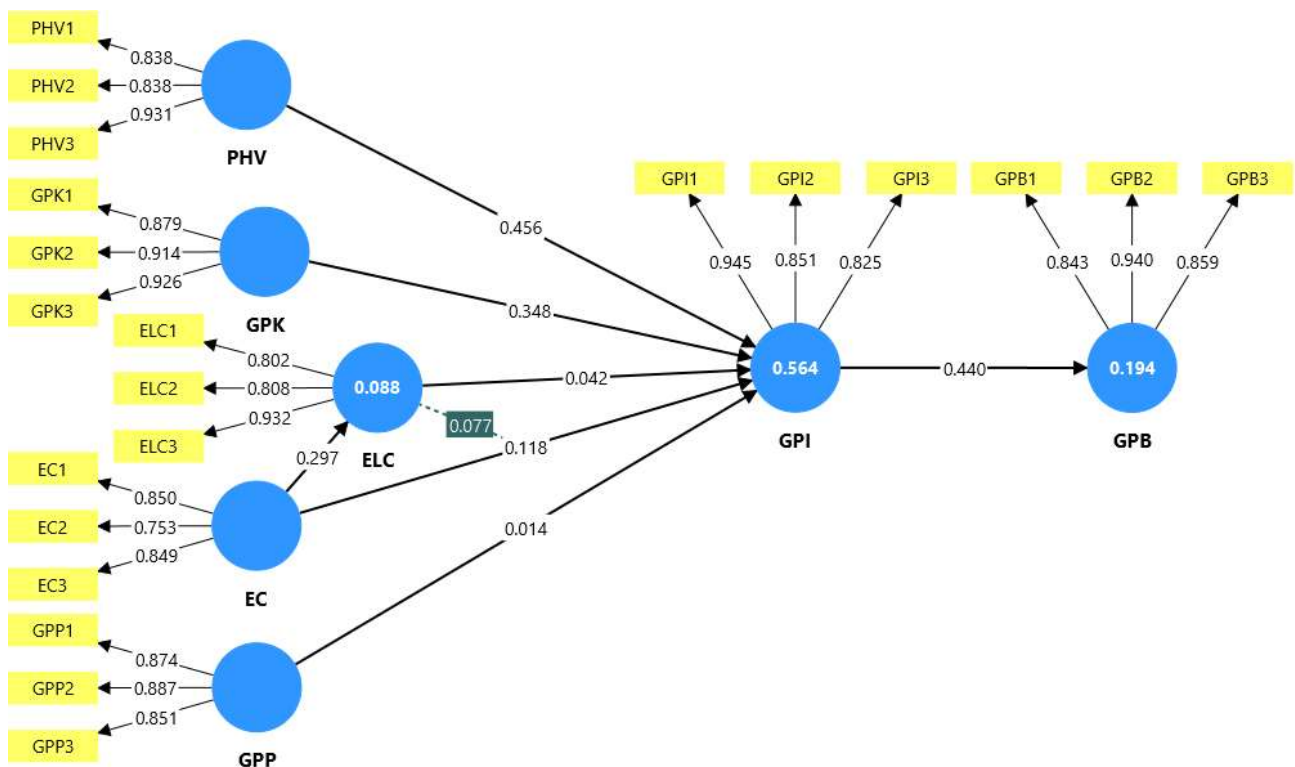
In the assessment of the structural model, the focus was on examining the strength and statistical substantiation of the hypothesised interrelationships among the constructs. To compute the t-values and p-values of each path coefficient (β), 5,000 subsamples were boot-strapped. The findings demonstrate that Perceived Health

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Value (PHV) has the most significant effect of influencing Green Purchasing Intention (GPI) (β = 0.456, t = 11.044, p < 0.001). This result demonstrates the importance of health-related motivations, which play a central role in the development of consumers' intentions towards organic food products.

Similarly, Green Product Knowledge (GPK) had an enormous and significant impact on GPI (β = 0.348 t = 8.475, p < 0.001), implying that the better the knowledge and understanding of green products by the consumer, the better the shape that influences purchase intention. A positive correlation was observed between environmental concern (EC) and GPI (β = 0.118, t=2.876, p=0.004), although the contribution was low. This means that environmental awareness is a factor in the formulation of intentions, but its effects might be ranked lower relative to other more individualistic reasons such as health and product awareness.

In contrast, the Green Price Premium (GPP) was not a significant predictor of GPI (β = 0.014, t = 0.357, p = 0.721), indicating that perceived differences in prices do not constitute a serious stop factor for this consumer group. Similarly, there was no significant direct effect of Eco-Label Credibility (ELC) on GPI (β 0.042, t = 1.061, p = 0.289), which means that label trust does not generate any direct effect on consumers' purchase intentions, unless paired with other intrinsic motivations. Green Purchase Intention was also strong in predicting Green Purchase Behaviour (GPI -> GPB), and the path coefficient was strong (β = 0.440, t = 11.423, p < 0.001), confirming the intention-behaviour relationship that was documented to be strong in the sustainable consumption literature. Moreover, indirect and conditional effects also occurred. In particular, Eco-Label Credibility mediated the association between Environmental Concern and GPI (β= 0.047, t= 2.060, p = 0.040), indicating that environmental concern plays an indirect role in the promotion of intention via increased trust in eco-labels. The interaction effect (ELC * EC-> GPI) was substantial (β = 0.077, t = 2.150, p = 0.032), which also proved that, when a greater level of eco-label credibility existed, the impact of environmental concern on purchase intention was enhanced, thus serving as an effective moderator. When combined, these results indicate that health value and product knowledge control intention shape more, whereas eco-labels and price have a less pervasive or contingent effect on mediation and moderation pathways.

4.4.3 Model Fit Summary

Table 9 - Model Fit Indices

Fit Index	Saturated Model	Estimated Model	Recommended Threshold
SRMR	0.064	0.085	< 0.08 acceptable
d_ULS	0.946	1.655	Should be < HI95
d_G	0.528	0.552	Should be < HI95
Chi-square	1246.010	1278.624	Expected to be sig.
NFI	0.756	0.749	>0.70 acceptable; >0.90 good

Multiple indices were used to determine model fit. The saturated model standardised root mean square residual (SRMR) was less than 0.08 which is recommended because the SRMR was 0.064, thus showing a good fit. In the estimated model, SRMR= 0.085 which is just over the ideal cut-off but within the favoured boundary in exploratory behaviour research designs. The values of d_ULS (squared Euclidean distance) were 0.946 (saturated) and 1.655 (estimated), whereas d_G (geodesic distance) were 0.528 (saturated) and 0.552 (estimated), all within a reasonable threshold of HI95 which ensured that there was no serious misspecification of the model. The two values of the Normed Fit Index (NFI) were 0.756 and 0.749 (saturated and estimated, respectively), which is slightly lower than the recommended threshold of 0.90, but within the acceptability bracket of complex PLS-SEM path diagrams. With a larger sample size (N = 400), chi-square statistics were significant, as is often expected (1246.010 in saturated and 1278.624 in estimated). Overall, SRMR, d_ULS, d_G, and NFI prove that the model is an acceptable approximate fit, shows no severe misspecification involved, and provides a sufficiently robust explanation of the structural relationships observed.

4.4.4 Urban vs Rural Consumer Comparison

To analyse the differences between groups, MGA was conducted between urban and rural respondents, and a simplified structural model with no mediation or moderation effects was used. The PLS-MGA methodology was used and a 2-tailed p-value < 0.05 was regarded as significant. Most of the structural segments were the same in both Urban and Rural groups. Environmental concerns (EC → GPI), Eco-Label Credibility (ELC → GPI), Green Product Knowledge (GPK → GPI), Perceived Health Value (PHV → GPI), and GPI → GPB had no significant results (p > 0.35), which demonstrates that none of these elements are subject to variation between the two consumer segments. Nonetheless, a considerable disparity has been found regarding Green Price Premium (GPP → GPI) (difference = -0.210, t = 2.339, p = 0.020). This signifies that the impact of price sensitivity on purchase intention is more adverse for rural consumers than for urban consumers.

Table 10 - MGA Results (Urban vs. Rural Group Comparison)

Path	Diff (Urban–Rural)	t-value	p-value	Significant?
EC → GPI	–0.074	0.937	0.350	No
ELC → GPI	0.026	0.367	0.714	No
GPI → GPB	0.019	0.251	0.802	No
GPK → GPI	0.025	0.308	0.758	No
GPP → GPI	**–0.210**	**2.339**	**0.020**	**Yes**
PHV → GPI	0.029	0.346	0.729	No

The findings infer that Urban and Rural people exhibit similar behavioural determinants of health value, information about the product, environmental concern, and label credibility, and there was no significant variation in the intention-behaviour relationship. However, the two segments vary in terms of price premium sensitivity. Consumers in rural areas are more price sensitive, and an increase in the price of organic foods will lower their purchase intention to a considerable degree compared to urban consumers, who are less put off by the cost factor and more by health and informational incentives.

5 DISCUSSION

This study contributes to the new knowledge on the determining factors of green consumer behaviour with reference to the consumption of organic food products in the context of an emerging economy. The valid structural model shows that Perceived Health Value (PHV) and Green Product Knowledge (GPK) are the strongest predictors of Green Purchase Intention (GPI), whereas Environmental Concern (EC) has a significantly lower but noteworthy influence. In contrast, Green Price Premium (GPP) and Eco-Label Credibility (ELC) did not significantly affect purchase intention directly. Further, a positive correlation between GPI and Green Purchase Behaviour (GPB) was established, but the difference between the actual behaviour (mean) and intentions implies the existence of an intention-behaviour gap. The fact that PHV has the strongest effect on GPI serves as further reinforcement of the idea of self-minded motives, especially those connected to personal health and well-being, serving as the main factors inducing organic food consumption. Previous studies have demonstrated that motivations related to health are more convincing about the sustainability of food decisions than motivations in the environment. The increased sensitivity to food safety issues, pesticide contamination, and lifestyle-health-related diseases in India further adds to the perceived health benefits of organic products. This indicates that personal health benefit-based marketing communication strategies may be more convincing in creating purchase intentions than the emphasis on environmental benefits. Similarly, the considerable influence of GPK on GPI demonstrates the value of consumer knowledge which can effectively diminish uncertainty and increase the level of trust in organic products.

Knowledgeable consumers are in a better position to estimate the legitimacy and importance of organic food; thus, in correspondence with past results, product knowledge has a positive impact on green purchase decisions. This finding is especially relevant to developing economies because a flaw of misinformation, inability to clearly identify certified products, and poor product knowledge tend to prevent the use of organic goods. It provides an indication of the importance of intensive consumer education programs and labelling transparency for greater market penetration.

Compared to EC, however, the effect on GPI was weaker but still significant, which would imply that, whereas pro-environmental attitudes play a role in the formation of intentions, this role falls behind more immediate, self-centred, health-related, and informed benefits. This finding is supported by older research that environmental concern by itself hardly turns into a highly positive purchase intention unless combined with personal gain. Further, the mediation and moderating role of ELC in both directions of the EC pathway to GPI shows that environmental concern needs to be strengthened by eco-labels with credibility to communicate their behavioural intentions to people. This confirms previous reports on the signalling and promotion of trust by eco-labels in minimising distrust among customers. Notably, GPP did not play a significant role in explaining GPI in the total population, which indicates that health- and knowledge-based consumers are less influenced by price premiums. This approach coincides with the literature pointing to the fact that some consumer groups display consumer willingness to pay to access sustainable products when there is a significant sense of added value. However, the MGA findings show that there are meaningful urban rural differences in terms of price sensitivity, with rural consumers being more sensitive to price. This observation is indicative of socio-economic differences: the urban population has a high disposable income and accessibility to markets where they can obtain organic products than their rural counterparts who have a budget problem with products. Therefore, intrinsic drivers, which include health and knowledge, are by no means universal considerations, but pricing reduction methods will have to be fine-tuned to meet the economic realities of rural markets, possibly by subsidising or cost-efficient models in the supply chain. Due to the lack of a strong direct relationship between GPI and ELC, there might be no close relationship between them which implies that label trust is ineffective in determining purchase intention when other intrinsic incentives are absent. Nevertheless, the presence of partial mediation and moderation effects shows that eco-label credibility increases the path of awareness of environmental concerns by decreasing perceived risk and confirmation of product authenticity. This subtle conclusion redefines the interpretation of eco-labels not as a direct predictor of behaviour but as a trust-building process that reinforces environmentally rooted motives. The link between GPI and GPB was significantly driven, confirming the importance of intention as a strong predictor of behaviour, in line with the theory of planned behaviour. However, when comparing the mean GPB with the GPI, one can still see that there is still an intention-behaviour gap (which is widely cited to be due to external bottlenecks, i.e. product availability, accessibility, and economy), which is also indicated by the lower GPB. Thus, it is important to focus on these structural barriers when transforming high intentions into sustainable consumption.

In general, the findings contribute towards theoretical knowledge of green consumer behaviour in that intrinsic reasons (health value, product knowledge) proved more powerful in influencing intention than extrinsic signals (price and eco-labels). The results also explain the mediation and modulation of the impact of environmental concern as a dual role of eco-labelling through credibility. Additionally, the study also shows that urban and rural consumers may have similar psychological motivations, but their subsequent behaviour would differ in price sensitivity and would be homogeneous with respect to socioeconomics. The findings indicated that ways to promote the adoption of organic food ought to focus on health messaging and educating consumers, labelling transparency, and overcoming price-related factors, especially in rural markets. Incorporating intrinsic drivers with friendly external factors, such as price and distribution avenues, can make it easy to narrow the intention-behaviour transit in the sustainable consumption process.

6 IMPLICATIONS

6.1 Theoretical Implications

This research makes several interesting contributions to the available literature on green consumer behaviour and sustainable marketing, especially in the context of emerging economies. First, the inclusion of various green marketing constructs, specifically Perceived Health Value (PHV), Green Product Knowledge (GPK),

Environmental Concern (EC), Green Price Premium (GPP), and Eco-Label Credibility (ELC) into an established yet validated PLS-SEM model, gives the research a more comprehensive view of the antecedents of Green Purchase Intention (GPI) and Green Purchase Behaviour (GPB). This multidimensional nature broadens an earlier methodology that has frequently studied these variables in isolation. Second, the study adds value to theory by clarifying that Eco-Label Credibility is both a mediator and a moderator of the association between EC and GPI. This subtle result expands on the signalling theory and allows generalisation of the Theory of Planned Behaviour (TPB), which shows that external cues on trust that are postulated to be on a label credibility would not only confirm the validity of the environmental attitudes but also strengthen its effect when credibility is increased. This two-fold explanation provides a conceptual layer in the realisation of how consumers utilise these sustainability cues in making their decisions. Third, the study through Multi-Group Analysis (MGA) brings about a socio-demographic twist in green consumer research by identifying that Urban and Rural consumers might be identical in their psychological drivers; however, they are substantially different in their level of regard to the pricing factor. This finding is important to the theory of segmentation, as it has shown that some pathways in behavioural processes can be moderated by factors such as structural variables such as income level, exposure, and availability which must be considered in subsequent modelling of behaviour.

6.2 Managerial Implications

This study has several practical implications for its management. Green Product Knowledge and Perceived Health Value significantly influence purchase intention, which signifies the necessity of health-based communication and knowledge imparting to consumers. Marketers should emphasise the personal health value of organic food products and undertake informative campaigns to enhance consumer literacy concerning organic labels, production methodologies, and certification. These initiatives may be enhanced with the help of online channels, in-shop experiments, and collaboration with celebrities in health matters. The importance of Eco-Label Credibility as a mediating and moderating variable indicates that trust in certification systems is important. Regulatory authorities and certification organisations ought to improve the visibility, transparency, and standardisation of eco-labels to promote their credibility. Consumer trust can be reinforced with initiatives related to third-party audits, government endorsements, and blockchain traceability, which indirectly increases purchase intention. Considering that the direct effect of the Green Price Premium on purchase intention in the general model is non-significant, but significant in rural segments, marketers should differentiate prices. In the case of urban markets, where consumers are less price-sensitive, companies can target value positioning and premium pricing. However, in rural markets, cost is one of the main limiting factors; thus, price subsidies, small packs, or cooperatives can be one way to make it more accessible and potentially increase adoption of behaviours. Finally, the proven intention-behaviour relationship and the revealed gap promote channel intervention in transactional and psychological friction reduction. The availability, visibility of organic products, and buying should be organised by managers, especially in Tier-II and rural centres. The intention-behaviour gap can be closed by improving distribution channels, enhancing retailing relationships, and through government schemes such as PM-FPO or eNAM.

CONCLUSION

This study analysed the major determinants of green consumer behaviour towards organic food products by combining various green marketing constructs in an acknowledged PLS-SEM model. The results indicate that Green Purchase Intention (GPI) is highly influenced by Perceived Health Value (PHV) and Green Product Knowledge (GPK), while environmental concern (EC) has a minor influence. By comparison, Green Price Premium (GPP) and Eco-Label Credibility (ELC) do not directly influence purchase intention, interacting more indirectly, with ELC strengthening the EC to GPI pathway by partially mediating and moderating it. GPI exhibits a considerable prevalence in predicting Green Purchase Behaviour (GPB), as postulated by the Theory of Planned Behaviour, but the behavioural mean was low, which suggests a long-term gap between intention on the one hand and behaviour on the other hand due to economic and structural barriers. Multi-Group Analysis (MGA) also indicated that Urban and Rural consumers are very much alike psychologically, with a significant convergence effect in stimuli of health value, product knowledge, and environmental concern being similar. However, rural

consumers are much more price sensitive, and thus, the cost is also a greater barrier in the case of such markets than in the urban section. The theoretical contribution to the study is the clarification of the dual role of eco-label credibility and the predominance of self-oriented motives for health and knowledge over extrinsic indicators in forming purchase intentions. The significance of socio-demographic segmentation in sustainable consumption research was also identified. As managers, every result signifies the significance of health-intended communication, consumer education, credible eco-labelling, and differentiated pricing models, especially in rural markets. Future research could build on this area of work by using longitudinal levels of behavioural data to bridge the intended-behaviour gap in a more holistic manner. Furthermore, the question of the role of digital platforms and the emergence of modern certification technologies could be discussed to find more use in increasing consumer trust in organic products. In conclusion, the adoption of organic food in emerging markets requires a balanced approach that unites intrinsic motivation, credible sources of information, and structural measures to transform the high purchase intention status to long-term behavioural change, thus contributing to sustainable consumption and sustainable environmental health.

Limitations and suggestions

This study offers extremely useful information about the factors that hinge green consumer behaviour towards organic food products, but there are some limitations that must be considered. The study design was cross-sectional, and it only captured the perceptions and behaviour of consumers at a certain moment in time, and it does not allow the study to observe the potential change in attitudes and purchase decisions over time. Following up on the trend of behaviour changes through the lenses of how awareness, market dynamics, and policy responses affect sustainable consumption are also prominent issues that will require a longitudinal design in future research on the impact of time on behaviour. The geographical scope of the sample was limited to Central India which was a balanced sample of both urban and rural consumers, but the general scope of characteristics of socio-cultural diversity exists elsewhere. Future studies should be able to generalise the results by expanding the coordinate space and enhancing the heterogeneity of the samples, and be able to make meaningful comparisons among markets with varying stages of organic product development. It is also possible that self-reported measures of intention to purchase and purchase behaviour can create social desirability bias and overestimate sustainable practices. Future work in this area might resolve this by deriving more objective data, including real purchase histories, choice modelling experiments, and observations to verify self-reported responses. Despite some of the pivotal intrinsic and extrinsic factors in this study, including health value, product knowledge, environmental concern, price sensitivity, and eco-label credibility, other prospectively influential characteristics, such as perceived behavioural control, subjective norms, trust in government policies, and social influence, were not captured. The inclusion of these elements in the future may provide a broad explanation of green consumer behaviour. Finally, the study was restricted to organic food products, a single type of sustainable consumption. Assessing the model in other product categories, such as eco-friendly household goods, sustainable fashion, and renewable energy solutions, would assist in determining the universality and cross-product applicability of the proposed framework. Future research on these issues would help strengthen the theoretical premises of green marketing, increase the predictive strength of behavioural theories, and aid more focused intervention efforts to facilitate sustainable consumption.

Conflict of interest
The authors (s) declare that they have no conflicts of interest.

Ethics statement

We adhered to the ethical principles throughout the research phase. We ensured the confidentiality and anonymity of all the participants, thereby preserving their privacy. We informed the participants of their right to withdraw from the study at any time, without facing negative repercussions. This study was conducted with integrity, honesty, and the utmost respect for the rights and well-being of all participants, strictly adhering to the ethical principles governing research.

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