



REVIEW ARTICLE

Understanding consumer preferences and willingness to pay for geographical indication-tagged products: A systematic review

M Sethu Raman¹, M Anjugam^{1*}, S Varadha Raj², A Janaki Rani³, M Malarkodi⁴ & R Kalpana⁵

¹Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore 641 003, Tamil Nadu, India

²Department of Basic and Social Science, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam 641 301, Tamil Nadu, India

³Department of Extension Education, Tamil Nadu Agricultural University, Coimbatore 641 003, Tamil Nadu, India

⁴Department of Agricultural Rural Management, Tamil Nadu Agricultural University, Coimbatore 641 003, Tamil Nadu, India

⁵Department of Agronomy, Tamil Nadu Agricultural University, Coimbatore 641 003, Tamil Nadu, India

*Correspondence email - anjugam.m@tnau.ac.in

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Abstract

Geographical indications (GIs) tags are types of certifications that identify products with unique characteristics and qualities linked to their geographical origin. This review article investigates consumer preferences and willingness to pay (WTP) for GI products in India, which is gaining importance with the rapid growth of GI registration in the country. Through an extensive review of the literature, this study aims to explore complex interrelations among factors that are relevant in forming behaviour- and decision-making about GI products. The review also highlights the significance of consumer-related factors, product-related factors and place-of-purchase factors in determining WTP for GI products. This study underlines the importance of effective marketing and policies for the development of the GI products market, along with its associated economic benefits, while ensuring rural development and the preservation of traditional knowledge. Overcoming challenges in promoting consumer awareness and understanding of GIs, as well as cultivating a supportive legal and policy environment, is critical for leveraging the potential of GIs as a catalyst for rural development. The results provide evidence that illustrates GI products of higher quality and authenticity can positively influence consumers' WTP. The factors that influence consumer preference are quality and distinctiveness of their product, promotion tools with a good product differentiation by GI labelling and certification, traditional and sustainable production methods and personal attitude. Willingness to pay is influenced by quality perception, consumer knowledge and awareness of GIs, self-attitude and sociodemographic factors. Geographical indications products enhance consumer trust and enable premium pricing through perceived quality and authenticity. They support rural development, preserve traditional knowledge and strengthen market differentiation in emerging and competitive economies. This study is significant because it provides a comprehensive synthesis of the determinants influencing consumer behaviour towards GI products and offers policy-relevant insights for strengthening GI-based rural development.

Keywords: consumer preference; geographical indications; geographical indication tag; intellectual property rights; willingness to pay

Introduction

A geographical indication (GI) is an intellectual property right that signposts products as originating from a specific area or location (1). It provides legal protection to products with unique characteristics, reputations or qualities, often related to their geographical origin, reputation and quality of the site. This certification also helps manufacturers to promote their products and differentiate them from similar products. There is a clear connection between the product and its place of origin. One of the earliest GI products in India is Darjeeling tea, which received GI status in 2004. In India, GI tags are governed by the GI of Goods (Registration and Protection) Act, 1999, which has been implemented since 2003. Obtaining a GI tag can improve the economic prospects of a region by enhancing market value and supporting local traditions and craftsmanship.

India initiated its first GI registration process in 2004 (1) and the country grants GI status to a wide range of products, including handicrafts, which ranked highest followed by agriculture, manufactured products, foodstuffs and natural products. Some of the foreign Countries products were registered as GI products in India. About 37 different GI products from 15 countries are registered in India. The first product registered by Peru (Peruvian Pisco, Manufactured Goods) during 2009–10 (2, 3). Protection of designation of origin (PDO) registration ensures that the entire production cycle of a product, including production, processing and preparation, takes place within a single geographical area (World Intellectual Property Organisation). This certification guarantees that the product adheres to conventional methods and quality standards specific to its country of origin (4).

Role of geographical indication in local economy

Rural tourism

Geographical indications play a vital role in enhancing rural tourism by promoting authentic regional products and reinforcing cultural identity (Fig. 1). Studies have shown that GIs can stimulate tourism by attracting tourists through local specialities (5). Protection of designation of origin certification has been demonstrated to strengthen branding and contribute to rural economic development (6). Protected geographical indication (PGI)-labelled legumes in Asturias were found to contribute to sustainable agriculture and safeguarded customs, thereby attracted agrotourism (7). In some cases, conservation programmes can be transformed into tourist assets that generate income while conserving local biodiversity (8). Plantation cultivation has also been shown to enhance farmers' incomes and contributes to rural economic development (5, 9). Geographical indication-labelled products improve regional reputation, making them attractive to tourists (10). Geographical indications also protect native products and preserve cultural identity, thereby adding value to tourism. Furthermore, GI products support rural development and culinary tourism (8, 11).

Local economic development

Geographical indications serve as essential tools for strengthening agricultural value chains, supporting rural livelihoods and promoting regional economic development. Studies have emphasised that GIs support product differentiation, increase demand and create employment opportunities in production and marketing, thereby promoting rural industrialisation through local value chain development (12–14). This process supports employment generation by increasing labour demand in production, processing, packaging and marketing activities, thereby fostering rural industrialisation. Geographical indications have also been found to enhance market access and competitiveness in traditional sectors such as agriculture, agri-food processing and handicrafts (15, 16). Research has highlighted that GI labels contribute to price premiums, consumer loyalty and brand visibility, depending on consumer awareness and effective implementation (5, 17, 18). Case studies such as Mishima potato in Japan (19) and Basmati rice and Sindhri mangoes in Pakistan (20)

illustrate how GIs increase farm income and promote sustainable practices. Diverse indigenous banana cultivars in Bangladesh have also been identified as potential GI products, thereby supporting rural resilience (21). Geographical indication certification for Guntur Sannam chilli was reported to increase cultivation and farmer income (22). Similarly, the GI-labelled Melitopol Cherry strengthened export markets and regional branding (23). Geographical indications also contribute to increasing local income while preserving traditional knowledge (24). In Brazil, the underutilised potential of GIs could further enhance artisanal livelihoods and cultural preservation (25). Moreover, GI branding has been observed to reduce economic disparities between regions by narrowing income inequalities between urban and rural areas, reducing the income gap by 0.16 units within the region and by 0.133 units in neighbouring regions (26).

Conservation and sustainable development

Conservation-linked GI schemes contribute to sustainable rural development by combining environmental stewardship with local identity. Plantation farming contributes to economic growth by enhancing productivity, generating employment and promoting value-added activities. This contribution occurs through employment generation, improved farm productivity and the expansion of value-added activities (9). Geographical indication products have been observed to significantly enhance farmers' income and show a moderate correlation between the GI Product and product price (27). The need for integrated policy frameworks to align GIs with sustainable agricultural development has also been emphasised (28). Collaborative value creation among stakeholders is essential for the successful GI initiatives (29). Trust in GI products is largely shaped by local relationships rather than formal certifications (30). Producers have also viewed GIs as a trust-building tool despite concerns regarding the complexity of registration procedures (31). Challenges in the implementation of GI systems, such as low awareness and bureaucratic hurdles, have constrained the effective functioning of GI mechanisms for products like Wonogiri cashew nuts, thereby limiting their role in preserving traditional knowledge and promoting sustainable rural development (32). These challenges further hinder effective GI implementation and reduce their contribution to environmental conservation and sustainable rural development.

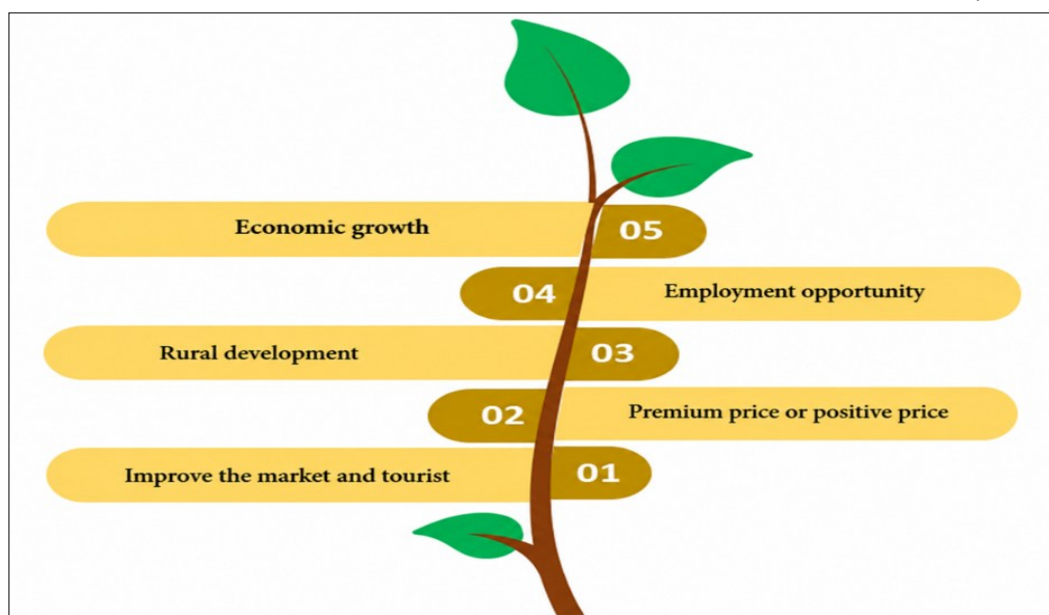


Fig. 1. Benefits of geographical indications.

Policy frameworks

European Union (EU) policies have demonstrated how quality-based GIs can strengthen rural development and agri-food competitiveness. Geographical indication certification enhances rural supply chains and local wealth (33). Geographical indication-labelled agricultural and food products enhance agri-food supply chains by promoting value addition and increasing farmers' returns, with evidence based on multiple GI product categories rather than a single specific product, particularly in products such as grains, fruits and processed GI commodities (34). Successful GIs foster regional branding, employment and value retention (15). Geographical indications also support local economies through processing and branding (5). A meta-analysis confirmed that GIs improve competitiveness and foster sustainable development worldwide (18). Producers value GIs for product protection, while consumers view them as supporting local economies (35). The trade effects of GIs depend on consumer perceptions and mutual recognition across borders (36).

Potential rural development outcomes and marketing strategies

Geographical indications facilitate sustainable rural development by increasing income, preserving traditions and creating market differentiation. Geographical indications help expand employment, retain populations and protect cultural heritage (37). Marketing innovation adds value to products and improves farmer welfare (38). Geographical indications also enhance regional branding and preserve cultural assets (39). Protected geographical indication (PGI)-certified Beni-Guil sheep support nomadic traditions and high-quality meat production (40). Health and environmental factors influence Albanian consumers preference for locally produced fruits and vegetables (41). Consumer willingness to pay (WTP) for GI-labelled Alanya bananas is shaped by preferences and habits (42). Negative perception of foreign Geographical indication-labelled cheese was reduced with product information was provided (43). Sustainability and indigenous production increased consumer valuation of Arctic char (44). Geographical indication recognition, reputation and cultural significance drive consumer loyalty and online sales (14, 45).

Status of geographical indications

A total of 643 GIs has been registered in India as of March 2024. Among these, handicraft products account for the largest share (53.5 %; 344 GIs), followed by agricultural commodities (30.94 %; 199 GIs), manufactured goods (7.77 %; 50 GIs), foodstuffs (7.15 %; 46 GIs) and natural goods (0.62 %; 4 GIs) (Fig. 2).

As illustrated in Fig. 3, the trend of GI registrations from 2004–05 to 2023–24 shows a consistent upward trajectory. Registrations began with only three GIs in 2004–05, increased to 24 in 2005–06 and stabilised between 23 and 33 registrations annually during 2011–12 to 2019–20. A temporary decline was observed in 2020–21 due to the COVID-19 pandemic, followed by a strong recovery with 50 and 55 registrations in 2021–22 and 2022–23, respectively. A significant peak of 168 registrations in 2023–24 highlights India's growing emphasis on GI protection for preserving cultural heritage and promoting rural economic development.

Despite the rapid growth of GI registrations in India, empirical evidence on consumer preference and WTP remains limited and fragmented. Existing studies are predominantly cross-sectional and lack longitudinal validation, thereby restricting causal inference. Furthermore, there is insufficient focus on context-specific determinants such as rural-urban heterogeneity, regional identity and socio-cultural influences that are particularly relevant in the Indian setting. While international literature provides valuable insights, inconsistencies remain in the magnitude and drivers of WTP across regions. Therefore, this review aims to critically synthesise existing evidence while explicitly identifying gaps in Indian GI research, with particular emphasis on the need for longitudinal and context-sensitive empirical studies.

Methodology

This study followed the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines (Fig. 4). Articles were collected from three different databases: Google Scholar, Scopus and AgEcon Search. The articles were identified through a keyword-based search and the search strategy was further refined using Boolean operators to ensure comprehensive coverage of

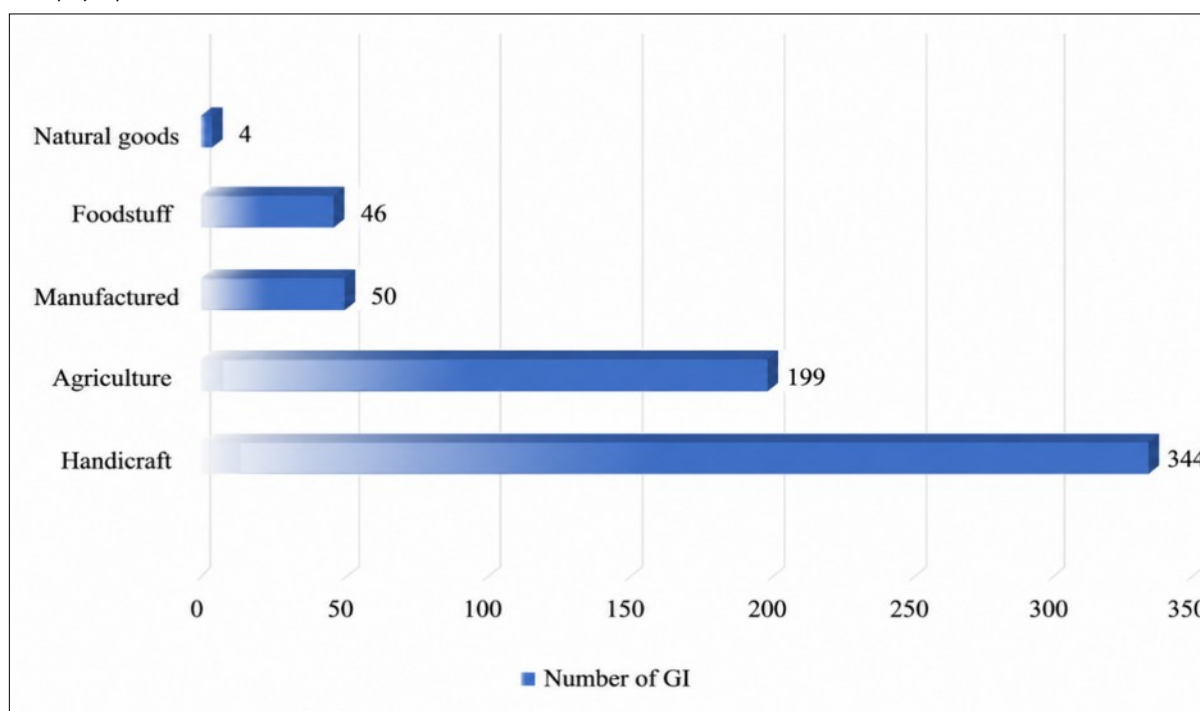


Fig. 2. Product-wise geographical indications registered products in India. [Source: Intellectual Property India, Government of India.]

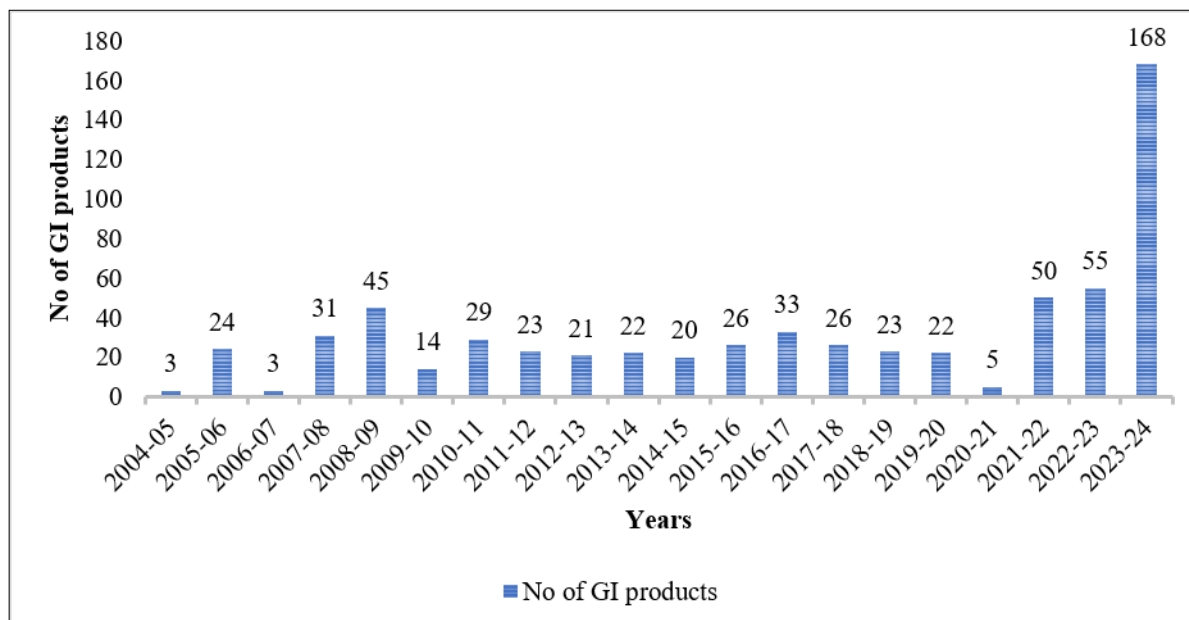


Fig. 3. Geographical indications products registered in India during 2004–24. [Source: Intellectual Property India, Government of India.]

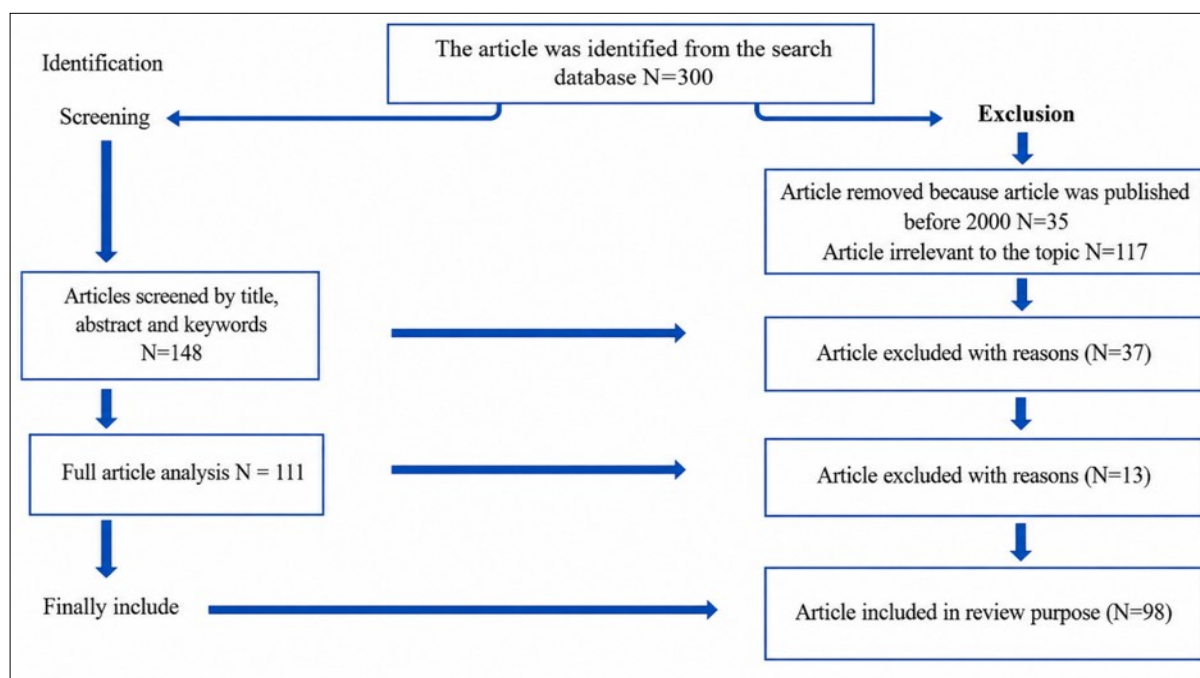


Fig. 4. Preferred reporting items for systematic reviews and meta-analyses (PRISMA).

relevant literature. The combinations included: (“geographical indications” OR “GI products”) AND (“consumer preference” OR “consumer behaviour”) AND (“willingness to pay” OR “WTP”) AND (“conjoint analysis” OR “contingent valuation”). These structured search strings enhanced the accuracy and reproducibility of the literature selection process. The first 300 publications were identified for review purposes. Some articles were removed after downloading because they were irrelevant and published before 2000. Articles were excluded during the screening process based on their titles, abstracts and keywords, resulting in the selection of 152 articles. During the full-text screening stage, 148 articles were excluded based on predefined criteria, while additional articles were excluded following detailed full-text analysis. Finally, 98 publications were selected for review and summarised in this paper (Table 1). It is important to note that most of the reviewed studies are based on observational and cross-sectional designs, which limit the ability to establish causal relationships between GI attributes and consumer WTP. Therefore, the findings of this review should be

interpreted as associative rather than causal. The selection of econometric models such as logistic regression, Tobit and conjoint analysis is based on their suitability for analysing discrete choice behaviour and censored WTP data. However, several studies did not provide sufficient justification for model selection and lack robustness checks such as sensitivity analysis and validation tests. Future research should incorporate model diagnostics, goodness-of-fit measures and sensitivity analysis to enhance the reliability and reproducibility of findings.

Table 1. Inclusion and exclusion criteria adopted in this study

Exclusion criteria	Inclusion criteria
The article is not about consumer preference and WTP	The article talks about consumer preference and WTP for GI products
The article is not focusing on GI	The article talks about the benefits of the GI products
The article does not focus on the Benefits and factors influencing WTP	

*GI: geographical indications; WTP: willingness to pay.

Networking analysis

The networking analysis in Fig. 5 presents a keyword co-occurrence network illustrating the thematic structure of the literature. Keywords are grouped into interconnected clusters, with node size indicating frequency of occurrence and colour representing the average publication year. Central themes include consumer behaviour, WTP, pricing, labelling and GIs. Recent research trends are observed in topics like yield, public policy and food quality, which are highlighted in yellow, indicating increasing attention in recent years. The network shows strong linkages among the economic, policy and marketing aspects of agricultural products, especially those with GIs. A citation-based temporal network of publications is displayed in Fig. 6. Each node represents a paper, with vertical positioning reflecting citation count and horizontal positioning indicating the year of publication. The network demonstrates the progression of research over time, with older foundational studies positioned on the left and recent publications on the right. Citation linkages among the publications reveal knowledge flow and scholarly influence across years. A notable concentration of recent works appears in the lower-right section, reflecting the growing research interest in recent years. This pattern indicates the expanding influence and development of the field over time.

Consumer preference for geographical indication product

Consumer preference for GI products is primarily driven by perceived quality, authenticity and origin-specific uniqueness (Fig. 7). Empirical evidence consistently shows that consumers associate GI-labelled products with superior quality and credibility compared to non-GI alternatives. Geographical origin acts as a strong quality signal linked to attributes such as taste, craftsmanship and cultural heritage, thereby positively influencing purchase decisions (46).

Perception of quality and authenticity

Consumers perceived products with GI certification as having better flavour, craftsmanship and distinctiveness than non-GI products. Since their production relied on specific regions and traditional methods, consumers were more likely to view them as more authentic. The author also stated that consumers perceived GI-certified products as more reliable because they originated from a specific region and carried distinct value along with a higher level of consumer trust (13). Traditional methods of production provided a mark of authenticity that consumers often associated with superior quality, safety, taste (5) and cultural heritage (47, 48). Products produced under strict production guidelines were perceived as authentic due to the preservation of cultural heritage (49).

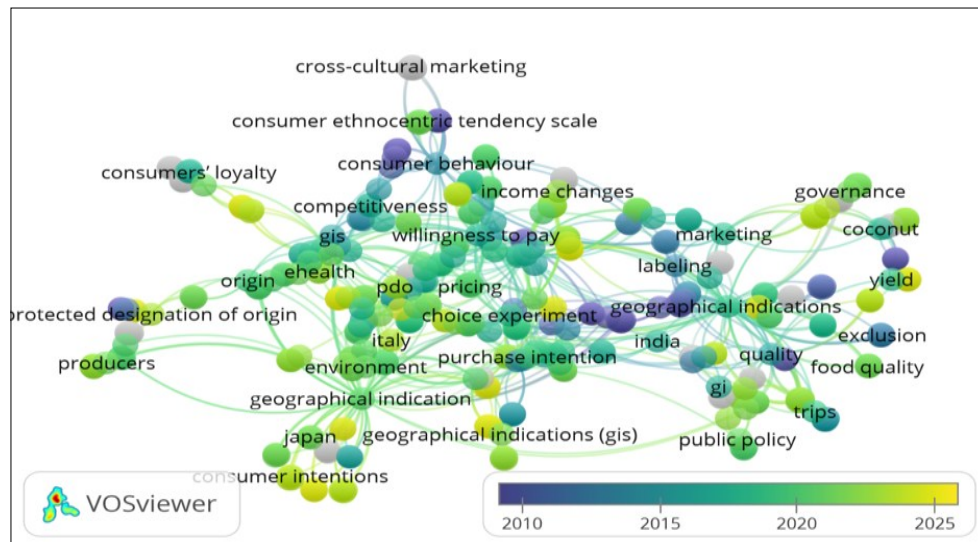


Fig. 5. Co-occurrence network map of author keywords.

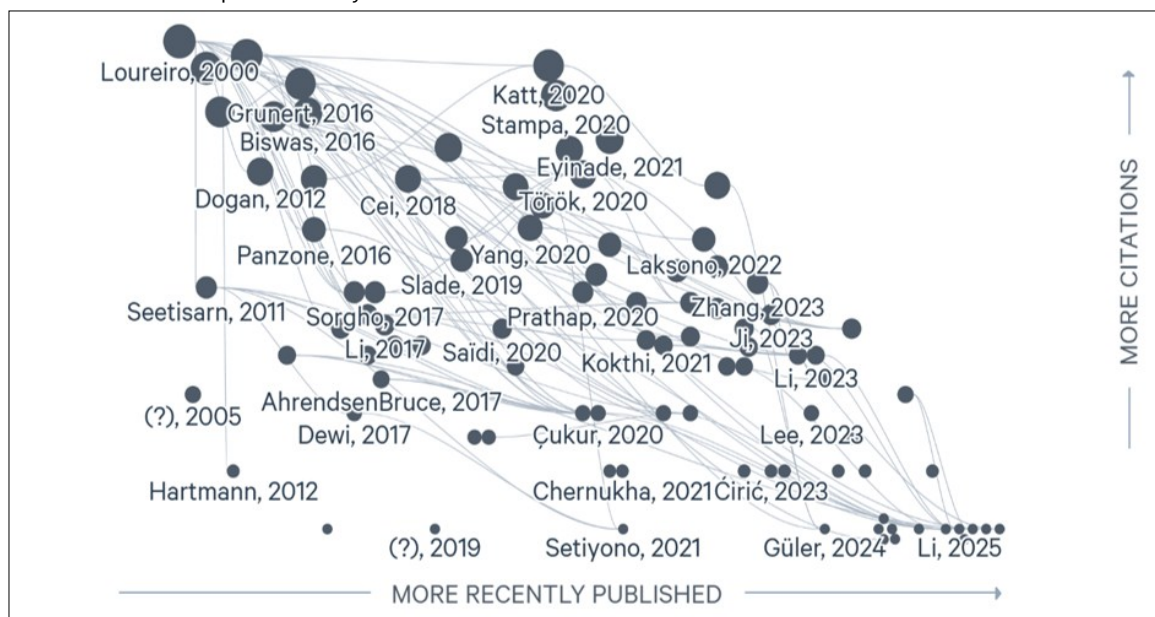


Fig. 6. Identification of papers related to this study.

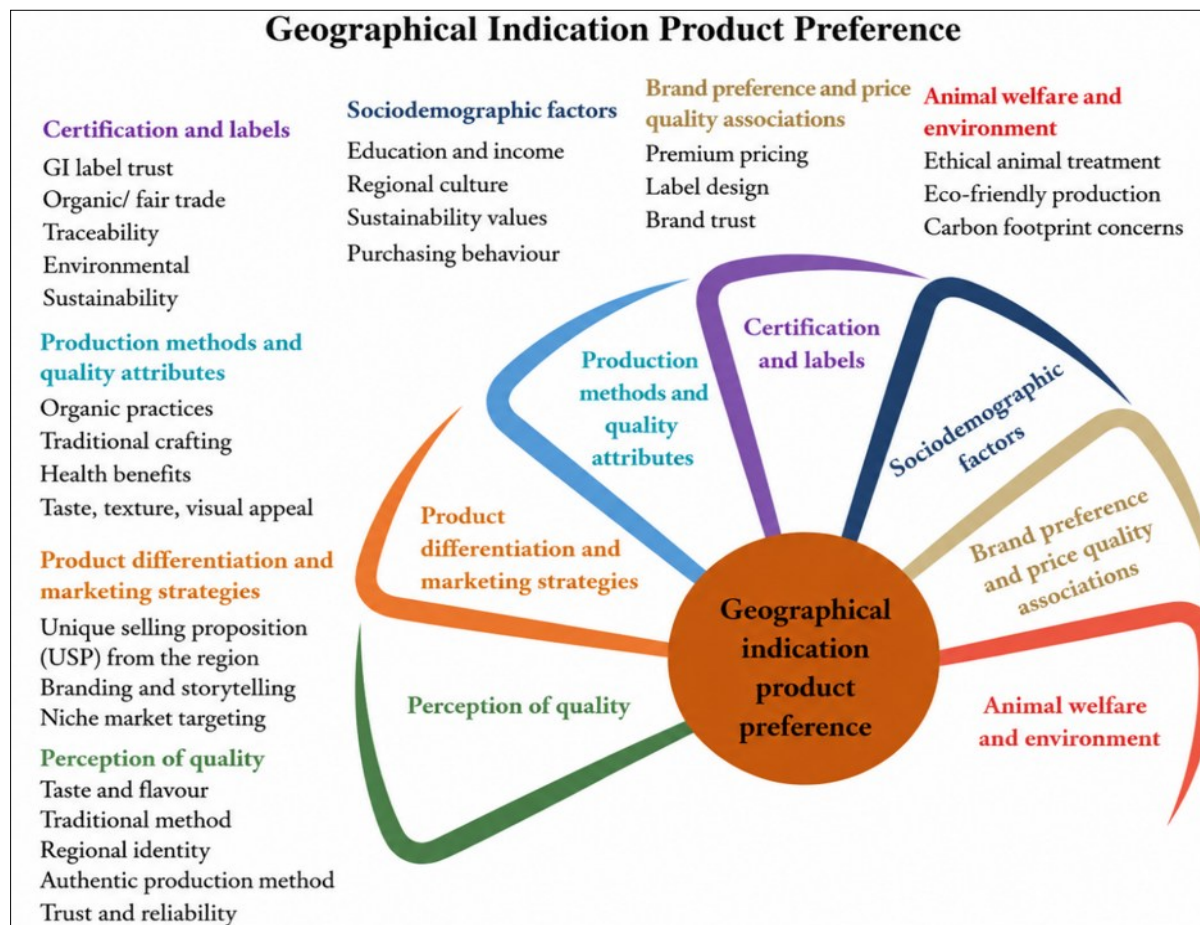


Fig. 7. Consumer preference attributes of geographical indication products.

Differences in qualities such as flavour and artistry were perceived to largely determine the market value of GI products, supporting the idea that consumers associated authenticity with branding and product identity (49, 50). Studies have also shown that consumers viewed GI certification criteria as a guarantee of better taste and craftsmanship (51, 52). As a result, the association of these products with authenticity and quality significantly influenced the marketability of GI-certified items (52). Authenticity played a critical role in consumer decision-making, as many preferred products that reflected traditional knowledge and regional identity. Research indicates that consumers were more likely to choose GI products when they believed them to be genuine representations of a region's artisanal and agricultural capabilities (50). Additionally, when consumers perceived products as genuine, emotional connections were formed, which enhanced repeat purchases and brand loyalty (53). Consumers highly valued the authenticity, quality and cultural significance of agro-GI products, with originality serving as a key motivator in their purchasing decisions (10, 54). Consumer loyalty towards GI products was mainly influenced by attitudes towards the production region, perceived quality and understanding of GI protection (45).

Product differentiation and marketing strategies

Companies are recognising that differentiation strategies are becoming essential in the competitive food marketplace. Businesses are utilising GI labels to highlight the uniqueness and to capture the value of product properties (55), which is helping them to build stronger customer relationships and maintain market advantage (56). The distinctive identification enables firms to tailor their offerings to specific consumer preferences. Labelling of the premium variety increases consumer trust and stabilised the local market price, influencing consumer preferences (38).

Production methods and quality attributes

Studies indicated that production methods significantly influenced the consumer preferences for GI products (49). Factors such as organic certification, natural ingredients and quality attributes shaped purchase decisions, while price considerations remained important determinants (5, 50, 53). Consumers chose these products primarily because of their perceived health benefits and natural production methods. Consumers preferred GI products for their authenticity, certified quality and regional uniqueness, with preferences influenced by factors such as education, digital promotion and cultural identity (28). For fruits such as cherries and loquats, consumers strongly associate GI labels with origin and quality, valuing origin as the most important attribute (57).

Importance of certification

Certification processes have become essential in influenced consumer choices for GI products (5). Recent studies highlighted that consumers place high value on certifications such as non-genetically modified organism (GMO) and organic labels, which are increasingly associated with authenticity and quality (57, 58). These certifications reflect traditional and environmentally friendly production methods, contributing to the perceived authenticity of the products. Labels such as GIs, organic and sustainability certifications help bridge the gap between producers and consumers by reducing information asymmetry and fostering trust. Consumers were often willing to pay a premium for products with these certifications, especially when they conveyed tradition, environmental sustainability and health benefits (59, 60). A COVID-19 accelerated the demand for eco-friendly production practices and GI products offered a better perspective of sustainable consumption (61).

Socio-demographic factors

Socio-demographic factors such as income, education, gender and cultural background played a significant role in shaping consumer preferences for GI products (62). Studies consistently showed that consumers with higher income levels and educational backgrounds were more likely to value attributes like sustainability, ethical sourcing and origin-affiliated certifications (51, 61). In contrast, price-sensitive consumers preferred more affordable and convenient options, sometimes showing less awareness of or interest in certification systems. Studies also found that socio-demographic characteristics, including income levels, educational background and cultural influences, were closely associated with purchasing habits (57, 63). Specifically, higher education and income were positively correlated with greater preference and WTP for GI-labelled products. Cultural norms and local traditions played a key role in guiding consumer decisions found that social identity influenced preference beyond product quality (64, 65).

Brand preferences and price-quality associations

Studies consistently demonstrated a strong connection between price-quality perceptions and brand preferences in the selection of GI products (57, 66). Consumers often equate higher prices with better quality (67), particularly in the case of branded GI products (68). This perception reinforced the belief that higher prices indicated superior standards and authenticity. Product labelling also played a key role in shaping consumer preferences by offering essential information about quality, sustainability, health benefits, brand association (69) and ethical practices. Labels such as GIs, organic certifications and sustainability claims helped reduce the information gap between producers and consumers, making purchase decisions more informed and confident. Research indicated that consumers generally viewed labelled products more favourably, associating them with higher quality, safety and authenticity (48). Labels emphasising sustainability and health benefits particularly influenced consumers, often encouraging them to pay a premium (70).

Branding further influenced purchasing behaviour. Products linked to reputable brands or sold through trusted retailers were perceived as more dependable and of higher quality (13). This perception fostered brand loyalty and increased consumers' WTP higher prices (48, 71). Together, strong brand identity and perceived quality played a decisive role in shaping consumer decisions. For instance, GI products such as Darjeeling tea and Basmati rice are widely recognised for their superior quality and origin authenticity, significantly influencing consumer preference.

Aspects of animal welfare and the environment

Protecting the environment and animal welfare have become essential aspects of marketing GI products. Studies concluded that consumers appreciate responsible production methods and sustainability parameters and were willing to pay a premium price (72). Studies on European consumer preferences for red meat labelling and organic animal products showed that the majority of respondents were willing to pay more for locally sourced and environmentally friendly options (57, 73).

Overall, there is broad consensus in the literature that perceived quality and authenticity are the primary determinants of consumer preference for GI products. However, contradictions exist regarding the influence of socio-demographic factors, as some

studies report strong effects while others find limited significance. These variations may arise due to regional differences, product categories and methodological approaches. Such inconsistencies highlight the need for more context-specific and comparative research frameworks.

Willingness to pay for geographical indication products

Geographical indication products, such as unique agricultural and food items, are strongly associated with their place of origin (47), which gives them unique characteristics and qualities (37). Due to their ability to preserve culture, enhance local economies and encourage sustainable practices, these products have attracted considerable interest from consumers, scholars and policymakers alike. This review seeks to integrate existing literature on consumers' WTP for GI products, focusing on the determinants of behaviour as well as the approaches used to measure WTP.

Methodologies used in estimating willingness to pay

Survey-based methodologies

Consumer surveys: The presence of GI labels and consumers' WTP have been widely assessed using structured consumer surveys. For instance, a consumer survey examined regional differences in WTP for local GI products such as sweet corn and BBQ sauce (74). Similarly, a large-scale consumer survey (N = 441) examined younger consumer's preferences for sustainable packaging in GI products (75).

Contingent valuation method (CVM): CVM has been found to be effective in measuring consumers' WTP (60). Likewise, CVM and binary logistic regression were used to investigate consumer preference for traceability systems in meat products (76).

Advanced statistical approaches

Structural equation modelling (SEM): SEM has proven valuable in understanding the relationships among multiple variables influencing consumer behaviour. The SEM was used to examine how GI labels influence perceived quality and trust in handloom apparel, ultimately affecting purchase intentions (49), as well as the favourable effects of GI labels on perceptions of food quality in the market (77).

Conjoint analysis: This methodology helps decompose consumer preferences into specific attributes. Conjoint analysis to analyse the critical variables influencing consumer preference for GI products, focusing on how labelling, pricing and regional signals work (3).

Choice experiments: Choice experiments have been found effective in understanding consumer decision-making processes. This approach was used to study Chinese consumers' preferences for GI-labelled beef and highlighted their WTP significantly higher prices for products branded with GI (63).

Mixed-method approaches

Literature review combined with market analysis: Some studies combined these methodologies. A literature review focusing on several agricultural products was conducted to assess how marketing and pricing strategies influence consumer preferences for GI products (78).

Sensory evaluation

Although relatively rare, sensory evaluation has been used to assess consumer preferences. This method explores the impact of GI labelling on consumers' visual perception and palate sensation toward aromatic rice (46).

This methodological review presented in Table 2 illustrates a variety of techniques used to elicit consumer preferences and WTP for GI products. Each approach has unique strengths illuminating various aspects of consumer behaviour, ranging from simple measures of preference to complex decision-making processes. The selection of a method depends on the specific research objectives, product type and market situation.

These methodological advances have contributed to exploring the full range of consumers considerations and decisions relation to GIs, providing valuable insight for both researchers and practitioners. The diversity of methods used has also highlighted the complexity of consumer behaviour regarding GI products and the need to combine approaches to obtain a more comprehensive understanding.

Factors influencing willingness to pay for GI products

There were a number of factors determining how and what consumers purchased (Fig. 8). A few researchers had already

divided these influences into three categories: consumer related, product related and purchase location factors (37). Even so, numerous companies and marketing analysts were realising that these elements were fundamental when designing appropriate strategies and offerings. There are more and more marketing strategies that target products to consumers' specific needs. Furthermore, the importance of shifts in consumer behaviour and its insightful traits has been increased. Decision-making processes were determined by several factors, for instance, users' level of satisfaction, spending behaviour, revenue streams, brand loyalty, store choice, assortment of goods, purchase time and frequency and attitude after the purchase (80, 81). In addition, studies stressed the important roles of prior knowledge and experience, access to information, social interaction and travel distance (80).

The most important criteria related to product purchase focus, dimension constraints and level of tidiness, which were the dominant factors shaping consumer buying choices (80, 82). It is

Table 2. Literature review from past studies

Methodology	Crop/Product	Findings	References
Binary logistic regression	Banana	Willingness to pay (WTP) was significantly influenced by occupation, preference for local products and perception of taste	(42)
Literature review	Various agricultural products	If geographical indications (GI) products are well-marketed and properly priced, consumers like them	(78)
Consumer survey	Sustainable food packaging	Younger consumers prefer biodegradable packaging, but their fears of costs and safety are evident	(75)
Consumer survey	Sweet corn, BBQ sauce	Consumers are willing to local/GI products generally command a premium, but consumer preferences differ across regions	(74)
Binary logistic regression	Fresh agricultural products	Consumers perceive that popularity, reputation, cultural history and quality of GI were higher would be better	(79)
Choice experiment	Beef	Chinese consumers prefer GI-labelled beef and are even willing to pay an extra for it	(63)
Consumer survey	Coffee, rice	Tanzanian consumers value GI-labelled products, but awareness is low	(66)
Conjoint analysis	GI Products	Consumer preference for GI products is influenced by labelling, price and place cues	(3)
Structural equation model	Food products	The consumers had purchased considerable food in GI products	(77)
Structural equation model	Handloom apparel	GI tags improve perceived quality and trust, influencing purchase intention	(49)
Contingent valuation method, Tobit model	Pestil (dried fruit pulp)	Consumers with a higher level of GI knowledge are willing to pay more for GI-labelled pestil	(60)
Contingent valuation method, binary logistic regression	Meat and meat products	Consumers prefer traceability systems associated with food safety and are willing to pay more for such products	(76)

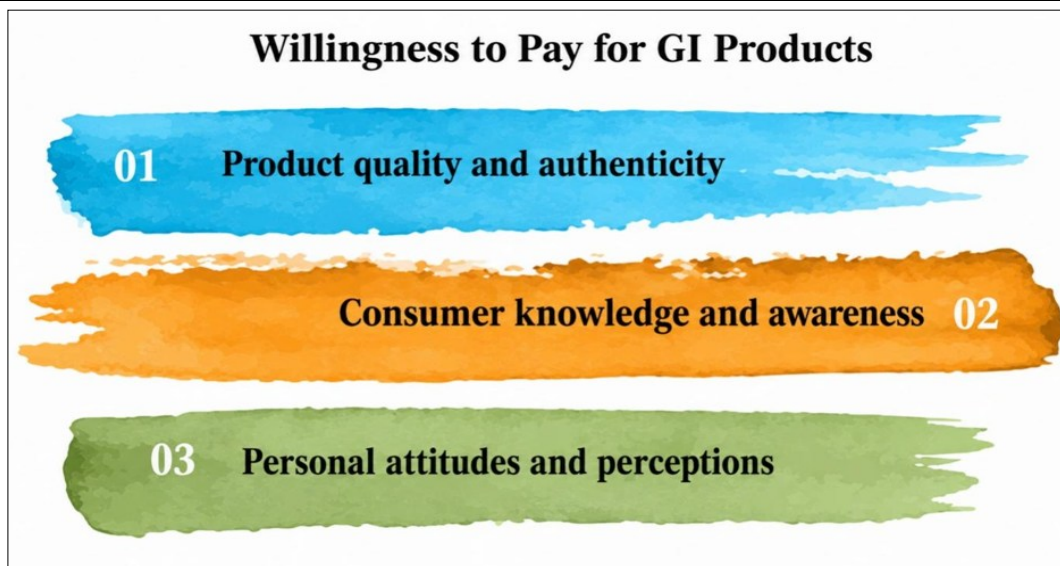


Fig. 8. Willingness to pay for geographical indication products.

noteworthy that buyers did not seem to consider cost as an important factor. Equally important, studies observed that in the context of GI-labelled bananas, quality was the most important consideration, even more than taste, perishable goods and intermediate medicinal benefits (51).

Market-related factors were gaining prominence, as studies identifying accurate pricing strategies and consumer trust as essential elements in fostering positive product attitudes (14). These findings highlight the necessity of maintaining fair pricing practices while nurturing strong customer relationships. Additionally, studies indicated that more than 50 % of consumers demonstrate repeat purchase behaviour for GI-certified products due to increased trust and perceived quality.

Environmental awareness played a growing role in shaping consumer behaviour. An increasing number of consumers who prefer eco-friendly products (83) and factors such as product quality, energy efficiency, environmental impact, cost-effectiveness and market appeal all influenced purchasing decisions (84). Consumers placed higher value on food labels backed by both public and private certification, reflecting a preference for reliable quality assurance (85). Similarly, studies showed that consumers were willing to pay more for organic and sustainably produced goods due to perceived health and environmental benefits (86).

Product quality and authenticity

The quality of GI-certified products was fundamental in defining consumer choices and their WTP a premium price (62). These products were often associated with the best production techniques, artisanal skill and unique regional traditions, which added to their value (49). Because of rigorous certification policies that guaranteed traceability and compliance with production standards, consumers perceived GI-labelled goods as being of higher quality (5, 52) and WTP was significantly increased with the perceived quality of the products (87). Consumer characteristics to spend more on GI products was influenced by the taste, craft and how natural product is made (53). Geographical indication certification also increased product desirability because it addressed consumers concerns regarding reputable purchasing and sustainability (58). In addition, trust and perceptions of product quality were influenced by organic attributes, non-GMO labels and compliance with production norms and practices (4). Increasing environmental awareness influenced consumer preferences, as customers valued green products (83), while purchasing behaviour was shaped by factors such as price (48), product quality, environmental impact, aesthetics and energy efficiency (84). In this context, PGI and GI certifications enhanced product authenticity and quality, thereby increasing consumer trust and WTP (7, 28). Studies also observed that consumers with a strong regional identity showed greater WTP for GI-labelled products (64). Chinese consumers were willing to pay more for EU and Irish GI-labelled dairy products due to familiarity and perceived quality (88). Similarly, despite low PGI recognition (22 %) but high WTP (70 %) a premium 32 % for Grojec apples because of their perceived quality (89). Students were more willing to pay for local foods when they had sufficient information about the products and perceived them as high quality (90).

Consumer knowledge and awareness

Purchasing behaviours and spending willingness regarding GI products were highly impacted by the level of consumer

knowledge. More informed consumers were willing to spend more because they had greater trust in GI-certified products (91). Market demand increased through advocacy campaigns and educational programmes, which made the understanding of GI products easier for consumers (60). Consumers with prior experience of certified products showed a higher likelihood of repurchase. For example, 57.7 % of consumers were willing to pay a premium for traceable meat products, indicating continued purchase intention (76). The research further highlighted the important role of brand awareness for consumer WTP. Increased appreciation and WTP, along with a better understanding of GI products, were reported (60, 91). The lack of information and publicity surrounding GI products continued to be the primary obstacle regarding their use. Limited understanding of the monetary and legal relevance of GI certification greatly affected many consumers' WTP for premium products (47). Enhancing consumer education through targeted marketing strategies, legislative measures and transparency in labelling was important for building consumer trust and increasing competitiveness in the market (92). Awareness levels indicated that fair trade knowledge of GI certification stood out as a critical driver of premium WTP (60, 69). Informed consumers expressed stronger preferences for GI-labelled products (66, 93). In Tanzania, 62 % of consumers identified product quality and labelling as key factors in purchasing decisions, highlighting the need for public education, transparent certification and clear labelling to enhance the perceived value of GI products, which in turn builds trust and emotional value, leading to higher WTP (10, 66).

Personal attitudes and perceptions

Personal perspectives significantly influenced purchasing decisions, as research indicated that individual attitudes toward organic and eco-friendly products affected WTP for GI products (92, 94). Consumers who prioritised sustainability, health benefits and food safety (5) demonstrated a higher WTP for premium-priced products (81, 92). Consumer demographic characteristics affected WTP for GI products differently. Less-affluent respondents with lower levels of education were more likely to prefer low-cost and practical options, while those with higher income and education levels showed a positive correlation with origin-based and sustainable products (95). Additionally, urban respondents claimed that they were more informed and more exposed to quality guarantee systems; thus, their WTP for certified goods was higher (57). Willingness to pay increased by 8.2 % for GI-certified Tagonoura Shirasu, driven by freshness, regional authenticity, GI awareness, income and gender, whereas price-conscious consumers showed lower preference; on-pack labelling was also preferred (96). Empirical evidence suggests that consumer attitudes significantly influence WTP. For example, approximately 80 % of Albanian consumers are willing to pay a premium for local fruits and vegetables due to perceived health, taste and environmental benefits. Similar findings are reported for GI products such as Alanya bananas, where awareness, perceived quality and purchase motivation significantly influence WTP (41).

Although most studies agree that quality perception, awareness and certification significantly influence WTP, the magnitude of these effects varies across regions and product types. Differences in research design, particularly between stated and revealed preference methods, further contribute to inconsistent findings. These variations indicate the importance of adopting standardised methodologies and incorporating longitudinal approaches to improve comparability and causal interpretation.

For example, environmentally conscious consumers tend to show a higher WTP for sustainably produced GI products, while health-oriented consumers prefer GI-labelled goods due to perceived safety and nutritional benefits.

Limitations

This review consolidates existing literature on consumer preference and WTP for GI products; however, certain limitations should be acknowledged. Most of the included studies rely on cross-sectional data, which limited the ability to establish causal relationships between GI attributes and consumer WTP. Consequently, the findings largely reflect associations rather than definitive cause-and-effect relationships. The generalisability of the results is constrained by variations in geographical, cultural and socioeconomic contexts across studies. Consumer perceptions and valuation of GI products differ across regions and the concentration of studies in specific countries or product categories further restricts the broader applicability of the findings (97).

Despite the rapid growth of GI registrations in India, there remains a significant lack of empirical evidence specific to the Indian context. In particular, limited attention has been paid to rural-urban disparities, regional identity effects and culturally embedded consumption patterns, all of which play a critical role in shaping consumer behaviour in India. The use of diverse methodological approaches, such as logistic regression, conjoint analysis, contingent valuation and Tobit models, introduces variability in WTP estimates, making comparisons across studies less consistent and more complex (98). Future research should aim to overcome these limitations by adopting longitudinal designs, focusing on context-specific analyses, particularly in India and employing more standardised methodologies to improve the comparability and robustness of findings. Additionally, the reliance on stated preference methods such as contingent valuation and conjoint analysis may introduce hypothetical bias, thereby affecting the external validity of results. The absence of longitudinal and experimental designs further limits the robustness of causal interpretations.

Conclusion

The review highlights that consumer preference and willingness to pay (WTP) for geographical indication (GI) products are primarily driven by perceived quality, authenticity, uniqueness and strong regional identity. Empirical evidence consistently shows that consumers with higher levels of education, income and awareness of GI labels are more likely to pay a premium. In addition, positive attitudes toward sustainability, eco-friendliness and traditional production methods significantly enhance WTP. Methodological approaches such as logistic regression, conjoint analysis, contingent valuation and Tobit models have been widely applied and provide robust estimates of consumer valuation for GI products. However, important research gaps remain. First, there is limited comparative evidence across regions and cultures, which restricts the generalisability of findings. Second, insufficient attention has been given to product-specific variations and how different GI categories influence consumer behaviour. Third, longitudinal studies examining changes in consumer preferences over time are scarce. Finally, the role of external factors such as institutional trust, certification credibility, market structure and policy support requires deeper investigation. However, these findings should be

interpreted with caution, as most existing studies rely on cross-sectional and stated preference data, which limit causal inference and generalisability across different socio-economic contexts. Based on these findings, several actionable recommendations emerge. Policymakers should strengthen GI certification systems, enhance consumer awareness through targeted education campaigns and promote transparency to build trust. Marketers should focus more effectively on communicating authenticity, origin and sustainability attributes, while tailoring strategies to specific consumer segments based on socioeconomic characteristics. Future research should prioritise longitudinal and experimental designs, incorporate region-specific analyses within India and adopt standardised methodological frameworks to generate more robust and generalisable evidence on consumer behaviour toward GI products. Overall, strengthening GI governance, enhancing consumer awareness and adopting robust and standardised research methodologies are essential to fully realise the economic and cultural potential of GI products.

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Authors' contributions

MSR conceptualized the review, conducted the literature survey, and prepared the original draft of the manuscript. MA contributed to draft development, critical revision and manuscript refinement. SVR, AJR, MM and RK provided scholarly guidance, critical inputs and intellectual support throughout the review process. All authors have read and approved the final manuscript.

Compliance with ethical standards

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