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Investigating the link between green preferences and organic food purchase: The mediating and moderating role of attitudes and environmental concerns on consumer purchase intentions

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Abstract: The global increase in organic food consumption underscores the need for in-depth research to understand the determinants of consumer purchase intentions towards organic products. Hence, this study aims to investigate the factors influencing the consumer purchase intentions towards organic food through an analysis involving 274 participants. Additionally, it also explores the mediating and moderating effects of attitudes and environmental concerns on the purchasing intentions towards organic food, providing insights in how these psychological and environmental factors influence consumer behavior. Using a quantitative method, data was gathered from the South Korean cities of Jinju and Changwon. However, analysis was performed through Partial Least Squares Structural Equation Modeling. The research findings illustrate that subjective norm, perceived behavioral control, and ethical consciousness significantly influence attitudes towards purchase intentions of organic foods. Moreover, the results indicate that attitude positively influenced consumer purchase intention towards organic food. Results reveal that attitude serves as a mediator in the relationship between subjective norms and consumer purchase intentions for organic food. Similarly, Likewise, attitude mediates the connection between perceived behavioral control and consumer purchase intention towards organic food. Additionally, the results indicate that attitude mediates the relationship between ethical consciousness and consumer purchase intention towards organic food. Furthermore, environmental concerns are found to significantly moderate the association between attitude and consumer purchase intention towards organic foods. The insights garnered from this study shed light on consumer intentions to purchase organic foods, equipping stakeholders such as marketers, retailers, and producers with valuable insights for creating effective marketing strategies aiming at promotion of these products. This research serves as a pivotal resource for developing targeted approaches to enhance the market share and consumption of organic foods.

Keywords: environmental concerns; attitude; ethical consciousness; purchase; subjective norms; intention of organic foods; perceived behavior control

1. Introduction

Consumer awareness of environmental issues has increased due to a marked increase in public knowledge about these issues in recent years. Despite this growing awareness, many consumers are still hesitant to purchase eco-friendly products (Kim and Lee, 2023). Historically, people have addressed environmental issues through

practices like recycling, though they rarely considered the global impact of their product choices (Winterich et al., 2023). Nevertheless, there has been a shift in public sentiment recently, as an increasing number of individuals are articulating their opposition to the production of environmentally harmful products and expressing dissatisfaction with the government's inadequate efforts to protect the environment. They have a higher propensity to choose environmentally conscious products and are more actively involved in adopting sustainable behaviour (Kim and Lee, 2023).

Variables such as environmental values, attitudes, knowledge, product price, and awareness have been extensively examined in studies aimed at understanding changes in consumer behaviour (Pahari et al., 2023; Yilmaz, 2023). Stojanova et al. (2021) emphasizes the need of promoting environmental awareness to bridge the gap between environmental concerns and sustainable behaviour. They further emphasize that individuals who prioritize social and environmental issues are more inclined to purchase environmentally-friendly products. Consumers who are environmentally and morally sensitive are more inclined to purchase products that have minimal impact on the environment (Kumar et al., 2023). Nevertheless, there is a lack of research establishing a direct correlation between attitude, environmental concerns and the adoption of eco-friendly buying habits. Although environmentally sensitive consumers may appear to choose eco-friendly products, this does not always result in actual sales (Elisa and Tjokrosaputro, 2024). In 2020, Korea Procter and Gamble (P&G) conducted a survey of 4000 Korean consumers and discovered that a mere 25.5% of them purchased environmentally friendly products, despite 82.2% expressing a willingness to do so. This indicates that customers' actual buying behaviour aligns with their tendency to purchase environmentally friendly products, even when these consumers have positive intentions towards the environment (Kim and Lee, 2023).

Despite previous study indicating a strong connection between intentions to buy environmentally friendly products and actual purchases, there is a large difference between the two. Considerable research has been dedicated to investigating this disparity (Kaur and Bhardwaj, 2021; Kim and Lee, 2023), nevertheless, the divergence between individuals' intentions and their subsequent behaviours persists. This can be explained by changes in their attitudes, views, morals, enthusiasms, and more serious stances on nutrition and processed food utilization. Hence, this article focuses on the organic food sector, which has been one of the fastest-growing industries in South Korea in recent years.

There has been a significant increase in the popularity of organic food products in South Korea, which is indicative of a broader shift in consumer preferences. A general consensus exists that organic food, devoid of genetically modified organisms or synthetic pesticides, is superior to conventional food in terms of both personal health and environmental impact (Garg et al., 2024). The increasing awareness of health, growing environmental concerns, and evolving cultural values are all factors that are driving this spike in demand (Ha et al., 2023). The expanding corpus of research on the health and environmental benefits of organic food is significantly influencing consumers' purchasing inclinations (Gauthier et al., 2020). Studies conducted in South Korea have shown that people's intentions to purchase organic food are significantly impacted by subjective criteria and their perceptions of their

own behavioral control (Garg et al., 2024). Behavioral control is the perception of how much control one has over their actions, and it influences the decisions they make when purchasing products (Zaini et al., 2024). On the other hand, subjective norms refer to the social pressure one perceives to engage in a particular activity (Kim and Lee, 2023). Consumers' opinions toward purchasing organic food are significantly influenced by ethical and environmental factors. Individuals who prioritize social matters and seek to align their actions with their values are more inclined to purchase organic food. Individuals' prioritization of the environmental benefits of organic food over other factors, such as cost and convenience, is determined by their level of environmental concern, which subsequently shape their intents (Kim and Lee, 2023).

As a result, environmental concerns and ethical awareness are considered seen as equally significant in the purchase of organic food. This study proposes environmental concern and ethical consciousness as new dimensions to extend the theory of planned behaviour (TPB) as predictors of organic food purchase intention (PI). In addition, past research indicates that the primary elements influencing people's purchasing power for green products are social media advertisement (SMA), SNs, perceived behaviour control (PBC), ethical consciousness, and environmental concerns (Hewei and Youngsook, 2022; Kirmani et al., 2022; Rahman et al., 2021). Whereas theory of planned behaviour TPB emphasizes the association among PI and attitudes, SNs and perceived behaviour control (PBC). This is particularly useful for predicting green customer behaviour (Qi and Ploeger, 2021). Several authors have illustrated the significance of these antecedents in envisaging customer willingness to purchase green products (Ahmed et al., 2021; Rahman et al., 2021; Tewari et al., 2021). Moreover, some studies extend the theory of planned behaviour TPB by suggesting additional factors, emphasizing the inclusive strength and importance of the theory (Wongsaichia et al., 2022).

Recent studies (Van Tonder et al., 2023) have shown that customers' beliefs of their own ethical awareness, their perceived behaviour to change their conduct, and their subject norms strongly influence their choices to buy organic food. Insufficient study has been conducted on the relationship between these qualities and their impact on attitude, specifically in relation to intentions to purchase organic food. It is essential to develop a more complete model that incorporates these features in order to get a deeper knowledge of these factors that impact the decision-making process of organic food consumers (Khan et al., 2022).

Previous research has mainly focused on the direct correlations between individual attributes and purchase behaviour, without considering attitude as a mediator (Khan et al., 2022). Pant et al. (2024) highlight that an individual's inclination to purchase organic food is greatly impacted by their mind-set. However, there is lack of research on the role of attitudes in mediating between, subjective norms, perceived behavioural control, ethical awareness and consumer purchase intention towards organic food. It is important to use a more advanced method that considers attitude as a mediator in order to accurately assess the impact of these traits on choices.

The current body of research lacks sufficient investigation into the potential influence of the moderating role of environmental concerns on the correlation between attitudes and consumer purchase intentions towards organic food (Akter et al., 2023;

Daraboina et al., 2024). Exploring the moderating role of environmental concerns would be useful to gain a more comprehensive understanding of the correlation between environmental attitudes and consumer behaviour. This could potentially lead to a more comprehensive comprehension of individuals' purchasing intentions.

To address these gaps, the current study proposes an extension of the Theory of Planned Behaviour (TPB) by introducing a conceptual model that examines how subjective norms, perceived behavioural control, and ethical consciousness influence consumer intention towards organic food. This model also aims to clarify the mediating role of attitude in the relationship between these factors and purchasing intentions towards organic food. Additionally, the study investigates how environmental concerns moderate the connection between attitude and consumer purchasing intentions towards organic food, thereby offering a more comprehensive understanding of the dynamics influencing organic food consumption. By integrating these elements, the research seeks to provide new insights into consumer behaviour and enhance the predictive power of the TPB in the context of organic food.

Hence, the current research aims to address the following research questions through the lens of persuasion theory:

Q-1: In what extent do subjective norms, perceived behavioural control, and ethical consciousness influence consumer purchase intention towards organic food?

Q-2: In what ways does attitude mediate the relationship between subjective norms, perceived behavioural control, ethical consciousness and consumer purchase intention towards organic food?

Q-3: How do environmental concerns moderate the connection between attitude and consumer purchase intention towards organic food?

The organization of this article is as follows: Section II, titled "Literature Review and Theoretical Foundation," provides a comprehensive examination of pertinent literature and establishes the theoretical framework upon which hypotheses are formulated. Section III, under "Methodology," provides a comprehensive explanation of the research design, processes for collecting data, the measurement of items used, and the methodologies utilized for analysing the data. Section IV, titled "Results," presents the results pertaining to the reliability, validity, and hypothesis testing. Section V, titled "Discussion," provides a thorough examination of the findings and conclusion. Section VI presents the theoretical and practical implications of the study, restating its limits, and proposing suggestions for further research.

2. Literature review and theoretical support for developing hypotheses

The proposed conceptual model is illustrated in **Figure 1**. This model is based on eight hypotheses derived from six constructs: attitude, subjective norms, perceived behavioural control (PBC), and ethical consciousness (EC), which serve as independent variables for hypotheses H1, H2, and H3. Additionally, hypothesis H4 examines the direct effect of attitude on consumers' purchase intentions towards organic food. Hypotheses H5, H6, and H7 explore the role of attitude as a mediating variable, while hypothesis H8 explore the moderating effect of environmental concerns. The dependent variable in this model is consumer purchase intention

towards organic foods

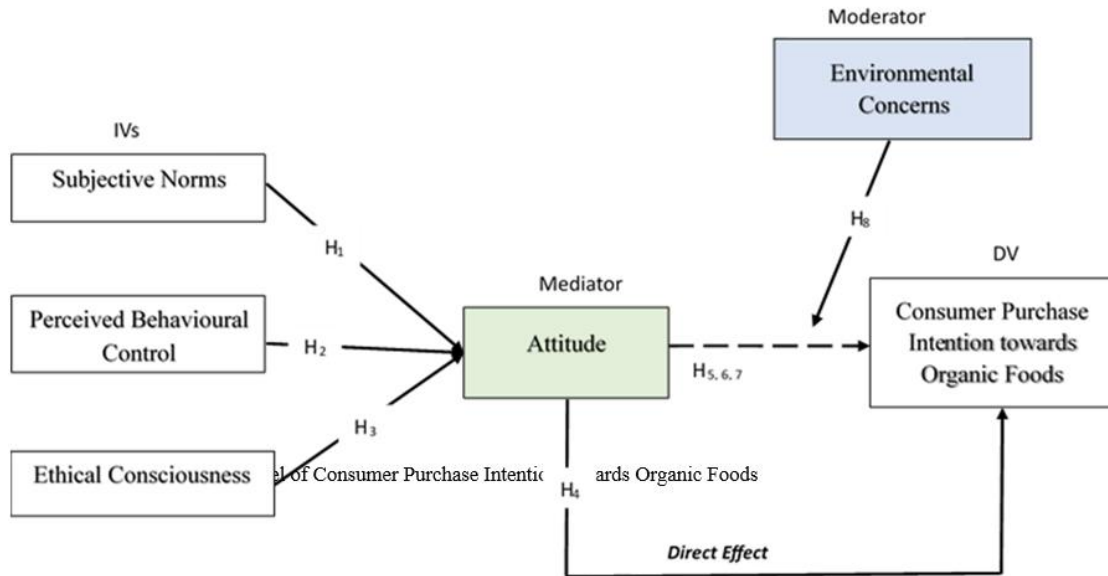


Figure 1. Conceptual model of consumer purchase intention towards organic foods.

2.1. Theoretical combination

The theory of planned behaviour model is thought to be the most accurate in forecasting customer behaviour and desire to purchase green things. The theory of planned behaviour TPB framework, an extension of Reasoning Action Theory, is one of the most frequently explored models for predicting behavioural intentions among social psychologists (Parker et al., 1995). The aim is a deliberate course of action that calls for specific behaviour and motivation to carry it out. Numerous researches have detailed the intention, which is typically regarded as the best predictor of behaviour and effectively moderates the impact of attitudes, SNs, and PCB (IAjzen and Technologies, 2020; Kim et al., 2013). More specifically, the basis of the TPB framework is based on the idea that intent is the strongest predictor of human behaviour currently available (Paul et al., 2016). Rezai et al. (2011) applied TPB to Malaysian consumers' propensity to purchase green foods, demonstrating the significance of consumer greenness for recognizing green foods and the benefits to a green economy. Environmental sustainability is the capacity to preserve elements or properties of significant value in the physical environment (Jones et al., 2011).

2.2. SNs and organic food purchase intentions

SNs relate to the perceived social pressure to engage in a behaviour or refrain from doing so (Li et al., 2020). The opinions of others that influence how customers make decisions are known as subjective norms (Cohen et al., 1988). SNs have a significant effect on green products and are at the heart of many models and concepts of healthy food items (Roh et al., 2022). As a result, the SNs are an important component of guaranteeing customers' desire to purchase organic goods, in other words, whether or not a person engages in the relevant behaviour is influenced by their perception of social pressure (Rahman et al., 2021). It reflects people's beliefs about how their peer group will perceive them if they engage in certain behaviours. The SNs

are made up of two interconnected components: a person's desire to perceive the behaviour of others (normative beliefs) and an evaluation of each belief, either positive or negative (Lim and An, 2021).

Hence, on the basis of previous studies following hypothesis is made:

H1: Subjective norms positively influence attitude.

2.3. Perceived behavioural control (PBC)

PBC refers to a person's perception of how straightforward it is to carry out a given activity or the amount to which a person feels that the performance or non-performance of the action in question is under their volitional control (Lim and An, 2021). As a result, it refers to the level of control individuals have over their behavioural performance. However, PBC is dependent on how consumers perceive their own talents and limits, which affects their willingness to purchase organic food. This makes price awareness and availability key deterrents to consuming organic food (Yeh et al., 2021). According to customers who are interested in eating these products might be willing to pay premium pricing, argue by Sultan et al. (2021). However, for a variety of reasons including the recession or money issues, they might not be able to purchase it (Kuźniar et al., 2021). Personal views so influence our shopping decisions. The following hypotheses were tested in order to determine how PBC affected consumers' intentions to buy organic food.

It has been found in the existing literature that:

H2: Perceived behavioural control positively influences attitude.

2.4. Ethical consciousness

Consumer ethics are the moral guidelines that inform people's (or organisations') behaviour while making decisions about what to buy, how to use it, and how to sell it (Muncy and Vitell, 1992). Either a person's values or an enduring conviction might be construed as having ethical awareness (Vitell and Muncy., 1992). Ethical idealism, which is a person's moral philosophy based on an appreciation of the inherent appropriateness of action, regardless of its consequences, might be one manifestation of ethical consciousness (Liu et al., 2020). The moral consciousness, or the ego that one is ethical, is another manifestation of ethical awareness. The ethical orientation of buyers is assessed using both ethical idealism and ethical self-concept (Arli et al., 2020). According to Öberseder et al. (2014), consumers appear to be more involved in learning about the manufacturing of acquired products in order to behave ethically. As a result, businesses that create goods ethically may be more appealing to today's educated and well-aware consumers who generally behave more ethically while making purchases (Wehrmeyer, 2017). Nevertheless, a huge majority of customers are still unaware of problems with corporate ethics. However, according to Carrigan and Attalla (2001), just 26% of respondents were able to name businesses that were considered to be socially responsible. This indicates that consumers are not sufficiently aware of and knowledgeable about businesses' unethical behaviour. Researchers and marketers also stress the need of looking at information sources to discover how consumers see a company's ethical guidelines. Consumers require reliable information in order to make moral decisions (Uusitalo and Oksanen, 2004).

Hence, on the basis of previous studies following hypothesis is made:

H3: Ethical consciousness significantly affects purchase intention.

2.5. Attitude

According to Wang et al. (2023), the inclination to purchase organic food is greatly impacted by an individual's mind-set. Khan et al. (2022) and Mehdi et al. (2024) are only two examples of several studies that have examined the relationship between individuals' perspectives and their inclination to buy organic products. Consumers often have a positive view of organic food due to several factors, such as its health benefits, environmental friendliness, animal welfare considerations, and higher nutritional content (Cao et al., 2023; Liu et al. 2021). Wang et al. (2023) highlight that health-conscious individuals often have a positive reception towards organic meals. Pahari et al. (2023) found that customers' inclination to purchase organic food is positively correlated with their favourable perception of it. On the other hand, Pang et al. (2021) argue that a memory contact between a specific object and a summative evaluation of that thing is known as an attitude. The psychological evaluations of consumers toward products are likely to be shown via attitudes. Previous studies have concentrated in particular on the connection between attitudes and deliberate behaviour (Dangi et al., 2020). Shan et al. (2020) conclusion: Consumers' inclinations to buy are influenced by their environmental attitudes. They emphasised that one of the key determinants of a consumer's propensity to purchase green goods is mind-set. Nguyen et al. (2019) discovered that there is a strong correlation between attitudes and behavioural intentions across numerous cultural contexts. It is clear that attitude plays a part in the choice to accept a certain behaviour. The following hypothesis can be developed because the literature research indicates that attitude affects the decision to buy environmentally friendly goods (Hasan et al., 2020).

It has been found in the existing literature that:

H4: Attitude positively influences consumer purchase intention towards organic foods

H5: Attitude positively mediates the affiliation between subjective norms and consumer purchase intention towards organic foods.

H6: Attitude positively mediates the affiliation between perceived behavioural control and consumer purchase intention towards organic foods.

H7: Attitude positively mediates the affiliation between ethical consciousness and consumer purchase intention towards organic foods.

2.6. Environmental concerns (ENC) of the consumer towards purchase intention

Al-Quran et al. (2020) one of the key variables influencing customers' purchasing attitudes is their environmental concerns. Kumar et al. (2021) argue that they are second only to health and product quality in explaining attitudes and intentions. Awareness of health implications, consumer ENC, and good environmental behaviour creates a more favourable atmosphere for environmentally conscious behaviour. Teixeira et al. (2021) concluded that consumers who believe that human behaviour is

significantly affecting and destroying the environment appear to be more willing to buy organic food. Canio et al. (2021) emphasize the importance of environmental concerns (ENC) in explaining organic food purchase intentions, especially among environmentally conscious young consumers. Awareness and health awareness of the importance of a healthy lifestyle are cited as major factors driving the preference for organic food. The literature states that health awareness is the best predictor of consumer attitudes toward organic food (Saut and Saing, 2021). Organic food is widely considered a healthier option compared to current conventional foods, people who show greater concern for their health are more likely to buy this type of food because of its clear benefits. People who are more health conscious need a healthy lifestyle and a healthy diet, as well as good nutrition (Kumar et al., 2021). As a result, several studies correlate health awareness and perception with the propensity to buy fresh produce, demonstrating that customers who are more concerned about their well-being have more favourable feelings regarding nutritious foods (Kumar et al., 2022; Li et al., 2021).

Consistent with the existing literature, the research hypothesis is defined as follows:

H8: The connection between attitude and consumer purchase intention towards organic food is positively moderated by environmental concerns.

3. Research methodology

To examine the given set of hypotheses the present study employed a quantitative research method. According to Martin and Bridgmon (2012), quantitative techniques employ objective measurement and statistical analysis of data collected through various means, including surveys, to explain particular occurrences (Bahari, 2010). The current study used a simple random sampling strategy, which entails picking a subset of a broader population such that each person has an equal chance of being picked. This strategy assures that every person in the population has an equal chance to be included in the sample, allowing for impartial representation within the study's sample (Alvi, 2016). The information from a sample of people was gathered using questionnaires, which are particularly helpful for describing and examining human behaviour. To acquire data from participants, this study employed a field survey approach (Alvi, 2016).

To assess the current understanding of organic food, a pilot survey was carried out. A questionnaire was developed to explore knowledge and motivations related to organic food purchases. For this pilot study, 40 questionnaires were distributed in each target city. The results showed a nearly identical understanding of organic products in Jinju and Changwon, South Korea. Following the preliminary survey, a structured questionnaire was designed to collect quantitative data. To ensure semantic equivalence, the questionnaires were initially drafted in English and then translated into Korean. Any discrepancies identified between the two versions before distribution were addressed.

Data was collected from April to June 2024. This period was employed to eliminate any seasonal biases in opinions towards purchase intention towards organic food and to guarantee that answers would represent a constant and similar period. The

survey employed a five-point Likert scale to evaluate various concepts. Stratified random sampling was utilized to select respondents, with the following criteria: (1) all participants were responsible for household grocery shopping; (2) most participants used social media and consumed organic food at least three times a week. The study focused on middle-class respondents, defined as individuals with a monthly income of 1.5 to 3.5 million won or more. The middle class was chosen due to its consistent consumption patterns and potential receptivity to the value of organic food.

Questionnaires were distributed electronically, with links sent via social media platforms such as Facebook, WhatsApp, WeChat, and official group mailboxes. Out of 305 distributed questionnaires, 274 were completed and used for analysis. Data analysis was performed using Partial Least Squares Structural Equation Modelling (PLS-SEM), a statistical method for examining complex variable relationships.

Measurement items and respondent profile

A measurement of each variable on the suggested theoretical model was provided in the questionnaire. However, bias was prepared toward materials that had already been created and verified as appropriate for this study by other researchers. Scales used for organic goods are therefore treated with prejudice. A Likert scale with five possible outcomes, ranging from 1 (strongly disagree) to 5, was used to measure each component (strongly agree). The following are the measurement scales that have been modified from the literature:

For subjective Norms, three items are borrowed (Ahmed et al., 2021). For the scale for measuring perceived behaviour control, four items were taken from a previous study (Maichum et al., 2016). To measure ethical consciousness four items were carried out (Basgoze, 2012). To measure environmental concerns (ENC) four items were taken (Wei et al., 2018). To measure attitudes toward organic foods four items were employed from an earlier study (Maichum et al., 2016). Finally, to measure the purchase intention for organic food four items were carried out in a study conducted by (Yadav and Pathak, 2017).

Table 1 displays information on respondents' socioeconomic level.

Table 1. Respondents' profile.

	Frequency	Percentage
Respondents' Gender Classification		
Men	180	65.6%
Women	94	34.3%
Range of Respondents' Age		
21–30	61	22.2%
31–40	113	41.2%
41–50	70	25.5%
51–60	30	10.9%

Table 1. (Continued).

		Frequency	Percentage
Social Media Users			
Non-Social Media Users			
Economic Status			
	Upper Level	35	12.7%
	Middle Level	199	72.6%
	Lower Level	40	14.5%
Monthly Income Level (Won)			
	1,500,000–2,000,000	59	21.5%
	2,100,000–2,500,000	66	24.0%
	2,600,000–3,000,000	79	31.6%
	3,100,000–3,500,000	70	28.8%
Respondents' Gender Classification			
	Men	180	72%
	Women	70	28%
Range of Respondents' Age			
	21–30	51	20.4%
	31–40	99	39.6%
	41–50	70	28%
	51–60	30	12%
Social Media Users			
Non-Social Media Users			
Economic Status			
	Upper Level	35	14%
	Middle Level	185	74%
	Lower Level	30	12%
Monthly Income Level (Won)			
	1,500,000–2,000,000	35	14%
	2,100,000–2,500,000	66	26.4%
	2,600,000–3,000,000	79	31.6%
	3,100,000–3,500,000	70	28%

4. Results and interpretations

Our methodology began with doing confirmatory factor analysis to evaluate the measurement model, followed by examining the structural linkages. We validated our assessment model by assessing content, convergent, and discriminant validity. Content validity was ensured by matching measuring items with existing literature, with input from experienced experts, and by conducting initial testing of the instrument. Convergent validity was assessed by examining the internal consistency, composite reliability, and average variance extracted from the measurements. The reliability of the measures was assessed by calculating Cronbach's alpha and factor loadings. According to Ghazali (2016), a Cronbach's alpha value more than 0.7 and factor

loadings higher than 0.7 were considered to show dependability. The Cronbach’s alpha values for our constructs ranged from 0.722 to 0.821, and all measure loadings were over 0.7, indicating sufficient internal consistency for validation. While many research using Partial Least Squares Structural Equation Modelling (PLS-SEM) have used a 0.5 reliability criterion, it is recommended to adopt a 0.7 threshold to ensure construct reliability (Kamranfar et al., 2023). The composite reliability values ranged from 0.827 to 0.882, as seen in **Table 2**. According to the rule of thumb to attain an AVE of at least 0.50. An AVE below this level suggests that the explained errors are greater than the variation within your constructs. It is essential to calculate an AVE for each construct in a measurement model, with a minimum threshold of 0.50 (Hair et al., 2021). **Table 2** shows that the AVE for each measure above the criterion of 0.5, ranging from 0.545 to 0.652, indicating good convergent validity.

Table 2. Measurement model.

Constructs	Items	Outer Loadings	Cronbach’s Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Attitude (AT)	AT 1	0.727	0.729	0.730	0.551
	AT 2	0.745			
	AT 3	0.746			
	AT 4	0.753			
Customer Purchase Intention towards Organic Food (CPITOF)	CPITOF 1	0.745	0.727	0.730	0.548
	CPITOF 2	0.737			
	CPITOF 3	0.707			
	CPITOF 4	0.772			
Ethical Consciousness (EC)	EC 1	0.815	0.856	0.865	0.697
	EC 2	0.856			
	EC 3	0.844			
	EC 4	0.823			
Environmental Concerns (ENC)	ENC 1	0.855	0.834	0.853	0.750
	ENC 2	0.840			
	ENC 3	0.901			
Perceived Behavioural Control (PBC)	CRB 1	0.830	0.837	0.839	0.672
	CRB 2	0.818			
	CRB 3	0.820			
	CRB 4	0.809			
Subjective Norms (SNs)	SNs 1	0.834	0.874	0.875	0.725
	SNs 2	0.866			
	SNs 3	0.859			
	SNs 4	0.846			

4.1. Discriminant validity

In order to establish the distinctiveness of the research constructs, discriminant validity was developed. It demonstrates that the research construct has its own identity and is not significantly connected with other research constructs. Heterotrait-Monotrait (HTMT) ratio and Fornell and Larcker Criterion were used to establish the discriminant validity of SMART-PLS.

4.2. Heterotrait-Monotrait (HTMT) ratio

HTMT ratings close to 1 indicate a lack of discriminant validity. Using HTMT as a metric involves comparing it to a set threshold. If the HTMT exceeds this criterion, it indicates a lack of discriminant validity. Some researchers suggest establishing this

threshold at 0.85. On the other hand, Hair and Alamer (2022) recommend a discriminant validity criterion below 0.90. All HTMT values obtained in **Table 3** are significant and below the specified threshold, demonstrating good discriminant validity.

Table 3. Discriminant validity assessment and Heterotrait-Monotrait (HTMT).

Constructs	ATD	CPITOF	EC	ENC	PBC
ATD					
CPITOF	0.746				
EC	0.78	0.398			
ENC	0.41	0.43	0.34		
PBC	0.811	0.571	0.778	0.404	
SNs	0.79	0.598	0.682	0.55	0.779

AT= Attitude, EC= Environmental Concerns, ECN= Ethical Consideration, PBC= Perceived Behavioural Control, SN= Subjective Norms. CPITOF = Purchase Intention towards Organic Foods.

4.3. Discriminant validity assessment: Use of Fornell and Larcker

The Fornell-Larcker criterion serves as a technique to evaluate discriminant validity (Hamid et al., 2017). This approach entails comparing the square root of the Average Variance Extracted (AVE) for each construct against its correlations with other constructs. For discriminant validity to be established, a construct must account for more variance in its own indicators than in those of other constructs. Essentially, the square root of the AVE for any given construct needs to surpass its correlation figures with other constructs (Hair et al., 2011). Evidence in **Table 4** supports discriminant validity, demonstrating that for each construct, the square root of its AVE exceeds its respective correlation values with other constructs.

Table 4. Discriminant validity assessment (Fornell and Larcker).

Constructs	ATD	CPITOF	EC	ENC	PBC	SNs
ATD	0.743					
CPITOF	0.559	0.741				
EC	0.632	0.338	0.835			
ENC	0.316	0.342	0.289	0.866		
PBC	0.638	0.459	0.666	0.334	0.82	
SNs	0.632	0.488	0.598	0.467	0.665	0.852

4.4. Examining the structural models

Prior to evaluating the significance and correlation of the path coefficients and the explanatory and predictive capacity of the model, PLS-SEM structural model evaluation first evaluates the possibility of collinearity between the predictor constructs in the structural model regression (Hair and Alamer, 2022).

This study collects route coefficients and their meaning using 5000 bootstrapping and 274 instances. A thorough explanation of structural model evaluations and data pertaining to the moderating influence of quality seekers is provided in **Figure 2** and **Table 5**. Streukens and Leroi-Werelds (2016) suggested that to assess a

measurement’s variance, PLS-SEM suggests calculating the R^2 coefficient, often known as the coefficient of determination. R^2 values were established as a general rule at 0.60, 0.33, and 0.19, and these values were characterised as substantial, moderate, and weak (Cohen, 1988). The R^2 coefficient is said to rely on the conditions under which particular research was conducted (Hair et al., 2011). However, Williams et al. (2000) suggested that the R^2 value was 1.00, indicating that all of their reported values landed perfectly on the optimal diluting curve. On the other hand, weak, medium, and strong coefficients of determination are often described by thresholds of 0.25, 0.5, and 0.7 (Hair et al., 2011). **Table 5** demonstrates that the R^2 suggested by this study is between 0.355 to 0.527. The predictive correlation Q -square (> 0 is excellent) is a metric used to determine if a model has a predictive correlation. Furthermore, Q^2 confirmed the endogenous structure’s projected importance. Indicating that data are accurately rebuilt and the model is predictively relevant is a Q -squared value above zero (Hair et al., 2011). Results show that, the endogenous constructions’ Q -square values (exceeded zero). As a result, the predictive values in **Table 5** are established.

Table 5. Coefficient of determination (R^2).

Variables	R -square	Q -quare
ATD	0.527	0.510
CPITOF	0.355	0.244

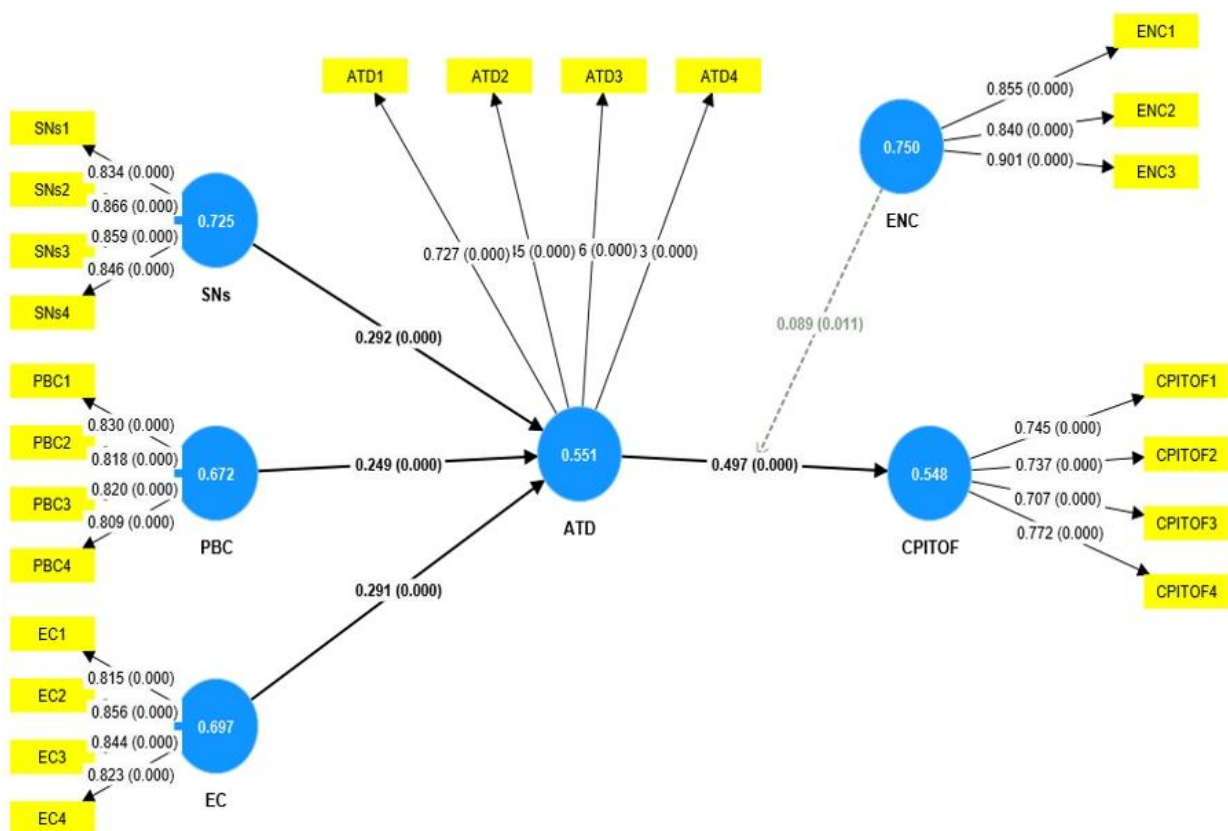


Figure 2. Structural model.

4.5. Testing hypotheses

Structural equation modelling (SEM) is a group of statistical methods for

analysing correlations between observable and latent variables. Similar to regression analysis but more effective, it assesses linear causal relationships between variables while simultaneously considering measurement error (Hair et al., 2011). Using structural equation modelling in PLS 4.0, the proposed model was evaluated as shown in **Figure 2**. The path coefficient analysis approach was used to determine how well a model matched a data set and to assess interrelationships between variables at the same time. The data was used in a bootstrapping strategy since this procedure has been recommended as the optimum option when sample sizes are modest to medium. The results of the structural model as well as the average coefficients of determination suggest that the structural model’s elements are positively correlated.

Table 6 provides evidence supporting Hypothesis 1 by showing that subjective norms have a significant influence on attitudes. A Beta coefficient of 0.292, a *t*-statistic of 4.717, and a significance level of $p < 0.001$ show this. The results confirm Hypothesis 2 by demonstrating a significant positive impact of perceived behavioural control on attitude, with a Beta coefficient of 0.249, a *t*-statistic of 3.770, and a significance level of $p < 0.001$. The study confirms that ethical awareness significantly influences attitude, with a Beta coefficient of 0.291, a *t*-statistic of 4.772, and a *p*-value of less than 0.001, strongly supporting Hypothesis 3. The study shows a strong positive correlation between attitude and consumer purchase intention towards organic food, with a Beta coefficient of 0.497, a *t*-statistic of 11.012, and a *p*-value of less than 0.000, confirming Hypothesis 4 (see **Table 6**).

Table 6. Path coefficient, *t*-statistic, and *p*-value.

Constructs	Beta Values	Standard deviation	<i>T</i> statistics	<i>P</i> values	Decision
SNs → ATD	0.292	0.062	4.717	0.000	Supported
PBC → ATD	0.249	0.066	3.770	0.000	Supported
EC → ATD	0.291	0.061	4.772	0.000	Supported
ATD → CPITOF	0.497	0.045	11.012	0.000	Supported

Table 7. Specific indirect effect (mediation and moderation tests).

Mediation Test					
Constructs	Beta Values	Standard deviation	<i>T</i> statistics	<i>P</i> values	Decision
SNs → ATD → CPITOF	0.145	0.034	4.272	0.000	Supported
PBC → ATD → CPITOF	0.124	0.035	3.565	0.000	Supported
EC → ATD → CPITOF	0.144	0.033	4.378	0.000	Supported
ENC × ATD → CPITOF	0.089	0.035	2.530	0.011	Supported

Mediation analysis was used to evaluate the indirect effects between different factors, as shown in **Table 7**. The analysis indicates that attitude significantly influences the connection between subjective norm and consumer purchase intention of organic food, with a Beta coefficient of 0.145, a *t*-statistic of 4.272, and a significance level of $p < 0.001$, strongly supporting Hypothesis 5.

Moreover, the data shows that attitude plays a substantial role in mediating the relationship between perceived behaviour control and consumer purchase intention of organic food. The mediation effect is statistically significant, shown by a Beta

coefficient of 0.124, a *t*-statistic of 3.565, and a *p*-value of less than 0.001, supporting Hypothesis 6.

The results indicate that attitude plays a crucial role as a mediator between ethical consciousness and consumer purchase intention of organic food. This is supported by a Beta coefficient of 0.144, a *t*-statistic of 4.378, and a *p*-value of less than 0.001, confirming Hypothesis 7.

The statistical analysis showed that the mediation effect of attitude between subjective norm (SN) and purchase intention towards organic food (PIOF) was not significant. A Beta coefficient of 0.003, a *t*-statistic of 0.171, and a *p*-value of 0.865 showed this.

The findings show that ENC play a substantial role in regulating the connection between attitude and consumer purchase intention of organic food. The effect is supported by a Beta coefficient of 0.089, a *t*-statistic of 2.530, and a *p*-value of 0.011, verifying Hypothesis 8.

5. Discussion

This study examines the variables influencing consumers' inclinations to buy organic food by examining data from 274 South Korean participants. It solves shortcomings in previous studies on environmentally friendly products, which frequently measure simply purchase intention without providing a sufficient predictor of attitude. The study specifically looks at the connections between ethical consciousness, perceived behavioral control, subjective norms, and attitudes towards buying organic food. It also looks at how attitudes play a mediating function and how environmental concerns have a moderating effect. Data were gathered from the South Korean cities of Jinju and Changwon using a quantitative approach, and analysed through Partial Least Squares Structural Equation Modelling (PLS-SEM).

According to our findings, opinions on organic food are highly influenced by perceived behavioral control, ethical awareness, and subjective norms. These findings support previous studies conducted in a variety of cultural situations, indicating the universal applicability of these concepts (Ahmed et al., 2020; Devi et al., 2023; Khan et al., 2022). The study conducted in South Korea demonstrates that attitudes have a major influence on consumers' intentions to purchase organic food, which is consistent with other studies that found a positive correlation between attitudes and purchasing behaviors. For instance, Rivera and Barcellos-Paula (2024) discovered that attitudes play a critical role in the decision-making process when it comes to organic products. This suggests that South Korean consumers with favourable views towards organic food are more likely to purchase it.

Our study additionally validates that attitude functions as a mediator in the correlation between consumer purchase intentions for organic food and subjective norms, perceived behavioral control, and ethical consciousness (Alam et al., 2023; Parashar et al., 2023). This lends credence to the theory of planned behavior, which holds that attitudes shape intentions through behavioral control that is perceived. It suggests that individual attitudes are the primary way in which social pressure influences purchase decisions, supporting research that found behavioral control and subjective norms predominantly affect individual attitudes to influence behavior. The

results show that attitude positively mediates the relationship between ethical consciousness and consumer intentions to purchase towards organic foods (Kumar et al., 2023; Kushwah et al., 2019). Our study emphasises the complex relationship between these factors and the critical importance of positive attitudes among Korean consumers in promoting sustainable consumer behaviour towards organic goods. In contrast to earlier research that solely looked at direct correlations (Chaturvedi et al., 2023). Another finding of the current study reveal that ethically conscious consumers are more likely to develop positive attitudes towards organic products, which, in turn, increase their purchasing intentions. This relationship highlights the growing ethical awareness among South Korean consumers and its influence on their shopping choices. In a collectivist culture like South Korea, the mediating role of attitude emphasizes the importance of social influences on consumer behaviour. The study suggests that a positive attitude strengthens the impact of consumers' beliefs about their control over their actions on their intentions to buy organic goods. This relation indicates that when consumers feel confident in their ability to choose eco-friendly options and have a favourable attitude towards such behaviours, they are more likely to purchase organic foods. This finding contributes to existing research by demonstrating the intricate way in which perceived behavioural control and attitudes together influence consumer buying intentions, highlighting the significant role of these factors in the decision-making process for organic food consumption (Aslan, 2023).

The results also show that attitudes towards and intentions to purchase organic foods are favourably mediated by environmental concerns. Building on the work of (Daniel et al., 2023), highlighting how important consumer attitudes are in determining how purchases are made in relation to environmental awareness. Nevertheless, in contrast to other study that only looked at direct connections, our findings show the moderating interactions and the critical importance of positive perceptions in fostering sustainable consumer behaviour towards organic products (Prakash et al., 2023). Therefore, our results imply that the tendency to purchase organic food in South Korea is strongly influenced by environmental consciousness and knowledge. These results suggest that customers in Korea are more likely to engage in eco-friendly purchasing behavior if they have a significant interest in eco-friendly products and a greater level of environmental understanding. Furthermore, Korean consumers' propensity to buy eco-friendly products increases with their level of understanding of environmental concerns.

6. Conclusion, practical and theoretical implications

The current study aims to explore the factors influencing the consumer purchase intentions towards organic food. It also explores the mediating and moderating role of attitudes and environmental concerns on the purchasing intentions towards organic food, providing insights in how these factors influence consumer buying intention. The study was conducted in the Jinju and Changwon in South Korea. Findings reveal that customer perceptions of organic food are significantly influenced by subjective norms, perceived behavioral control and ethical consciousness. Customers' propensity to purchase organic items is positively influenced by these attitudes. The influence of

these factors on purchasing behavior is shown via their impact on attitudes, as demonstrated in analysis. This suggests that attitudes serve as a mediator in the relationship between subjective norms, perceived behavioral control, ethical consciousness, and purchase intentions. It indicates that buyers' confidence in their ability to obtain organic food, along with their ethical considerations and social influences, collectively affect their purchase intentions through their attitudes. The study found that environmental concerns moderate the connection between consumers' positive attitudes towards organic food and their intention to purchase. This showed that individuals with a higher level of environmental awareness are more inclined to purchase organic food due to their environmentally conscientious views. These findings provide crucial insights for marketers and politicians seeking to promote the use of organic food by emphasizing the importance of cultivating positive attitudes and addressing environmental issues.

The study offers useful insights for marketers, regulators, and educators interested in promoting organic food consumption by highlighting the mediating and moderating impacts of these characteristics. This study confirms previous research and introduces fresh insights into organic food buying habits. The study provides an in-depth analysis of the psychological and environmental influences on consumer decisions, offering a comprehensive perspective on the organic food industry that might guide future efforts to improve consumer involvement in sustainable and ethical food choices.

The current study provides theoretical and practical insights into the factors influencing consumer attitudes towards organic food, focusing on subjective standards, perceived behavioural control, and ethical awareness. The study investigates into how attitudes affect the link between these factors and the desire to purchase organic food, while also analysing the impact of ENC as a moderating element in this association.

- 1) This research enhances the current literature by offering a detailed insight into how different psychological and social elements come together to influence consumer attitudes and intentions. The study supports the importance of subjective standards, perceived behavioural control, and ethical awareness in promoting favourable attitudes towards organic food, in accordance with the Theory of Planned Behaviour. This study expands the theoretical paradigm by explaining how attitudes influence purchase intentions and by emphasising how ENC might moderate this relationship, including larger environmental and ethical factors.
- 2) The results of this research provide important insights for marketers, policymakers, and educators interested in encouraging the use of organic food. Recognising the significance of subjective standards, perceived behavioural control, and ethical awareness in influencing customer attitudes might aid in creating more impactful marketing tactics and educational initiatives. The techniques might aim to strengthen social influence, enhance behavioural control views via information provision, and promote ethical consciousness among customers.
- 3) Our results also have implications for the specific circumstances in which eco-friendly items are used. In order to boost the sales of these items, it is essential to

highlight both the reliability of green labeling and the ease of purchase. Merely possessing an ecological label does not inherently provide goods legitimacy. Brand managers should use discernment when selecting an environmental label from the plethora of options available in the market. Choosing the most suitable eco label is crucial for successful brand management, since these labels have a substantial impact on how brands and products are evaluated.

- 4) Moreover, seeing attitudes as a mediator highlights the need for strategies that might favourably affect consumer attitudes towards organic food, thereby boosting their desire to buy. Acknowledging the impact of ENC as a moderator implies that highlighting the environmental advantages of organic food may be more impactful in markets with strong environmental consciousness.
- 5) This study indicates that marketers and policymakers should take into account regional variations in the variables that affect organic food consumption. Customising approaches to cater to the distinct traits and inclinations of certain groups might result in greater effectiveness in marketing organic food.
- 6) This research enhances our theoretical comprehension of the elements that affect consumer attitudes and purchase intentions towards organic food. It also offers practical advice for creating more focused and efficient strategies to boost organic food consumption. The study emphasises the importance of subjective standards, perceived behavioural control, ethical awareness, and ENC in paving the way for future research and initiatives in sustainable consumer behaviour.

7. Limitations of the study

This study offers essential insights for stakeholders but it is crucial to recognise its limits, which may guide future investigations. Data was collected from three specific locations in South Korea, exclusively targeting individuals in the middle-income category. This method restricts the applicability of the results to various socioeconomic and geographic settings within these countries. Future research should expand its reach by including varied people from different locations and nations to improve the relevance of the results.

This research segmented the middle class only based on income levels. Future study on consumer behaviour towards organic food might be enhanced by including more demographic and psychographic characteristics. This might provide a more detailed perspective on the issues affecting organic food consumption.

Furthermore, the study's participants were restricted to persons who regularly use organic goods. Future studies might benefit from including both regular and occasional consumers of organic food to provide a more thorough knowledge of purchase habits and motives, which would provide better support for the findings made.

The selected factors in this research were meant to forecast purchase intentions, although they may not completely include the intricacies of consumer behaviour. Observational evidence indicates that real customer behaviour may deviate from the norms and intentions predicted by theoretical models. The Theory of Planned Behaviour (TPB) is reliable for predicting certain acts such as voting behaviour, but it may not always consider the intricacies of consumer decision-making processes.

Future study should broaden the scope of variables to include theoretical frameworks and empirical data from a wider array of disciplines to get deeper insights. By embracing a holistic and multidisciplinary approach, future research may provide more comprehensive and practical findings to enhance comprehension and prediction of consumer behaviour regarding organic food.

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