Factors Affecting Consumer Attitudes towards Organic Food Products

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Abstract: *Abstract: Eco-friendliness and conscious food choices have impacted populations globally. Everyone in the modern-day Pakistani market is also becoming more aware about the importance of choosing healthy, preservative-free, and quality organic food products. Several previous studies have studies that consumer attitudes toward organic food purchase intention, but none was conducted showing the relationship of consumer attitudes and purchase intention affecting satisfaction and brand loyalty. Moreover, this study also affects the impact of independent variables including subjective norms (SN), health consciousness (HC), environmental and economic concerns (EEC), eco-friendly packaging (ECO), consumer perception (CP), eco-labeling (LBL), green product availability (GP), perceived reliability (PR), green marketing (GM), perceived value for money (PVM), and purchase intention (PI), in influencing consumers' attitudes towards organic products. A sample of 270 responses of male and female respondents was used limiting the demographic characteristics to Pakistan only. Moreover, IBM SPSS and IBM SPSS AMOS software programs were used to analyze the conceptual model and hypothesis testing. This research study can help organic food manufacturers and sellers create effective marketing, branding, and sales strategies in accordance with the factors that have an effect on consumer attitudes towards organic food products purchase intention.*

Keywords: *Eco-Friendliness, Environmental and Economic Concerns, Consumer Perception, Eco-Labeling, and Eco-Friendly Package.*

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Introduction

Environmental concerns and health consciousness have become popular concerns in recent years (Parashar et al., 2023; Jonathan & Tjokrosaputro, 2022). These concerns have directly impacted consumer food choices and have inclined them toward organic food products. Choosing green or organic food products plays a key role in promoting sustainable production and consumption (Lakatos et al., 2021).

Organic food products provide a suitable alternative to conventional food and drinks. They are produced without excessive use of pesticides, chemicals, preservatives, or artificial ingredients (Akter et al., 2023). As a result, it may lead to an improved and more positive consumer attitude toward choosing organic food products (Chiciudean et al., 2019).

Customers usually make organic food purchase decisions on how well they're marketed. Green marketing is environmentally safe as it promotes and advertises organic products (Conick, 2019). Companies are also trying to understand the factors such as subjective norms, environmental knowledge, and green label that can influence consumer behavior and their purchase intention toward green products (Alalei & Jan, 2023). Green marketing practices also affect consumer purchase intention, brand loyalty, consumer awareness, and social

responsibility. Overall, green marketing can also give organic food manufacturing companies an opportunity to gain a competitive advantage and access to a broader customer base (Chowdhury, 2021).

Earlier studies, however, haven't used highly relevant constructs to measure the impact of eco-literacy, green marketing practices, and social responsibility on organic food purchases. Despite the substantial studies, the determinants of organic purchasing behavior remain unclear, as studies do not focus on using customer behavior-related constructs (Funk et al., 2020). It causes a potential mismatch between the actual and perceived impact of green products consumption (Testa et al., 2019).

Some customers are not aware of the environmental issues such as climatic changes that are actually the fault of peoples' actions. The ecological crisis is a real danger(Reid, 2019). Customers often have negative perceptions about green products, viewing them as being of lower reliability, poor brand loyalty, less appealing, and costly (White, 2019). That's why it's important to understand the impact of attitudes, eco-literacy, subjective norms, health consciousness, economic and environmental concern, brand loyalty, green marketing, perceived price and satisfaction, eco-friendly packaging and labeling, and perceived reliability on organic food purchase decisions.

This study aims to identify consumer choices and buying behavior when it comes to green products. To measure the impact of eco-literacy and green product awareness on organic food purchase intention, a study was conducted (Rahayu et al., 2023). Another study analyses the effect of health consciousness and social concern on green products purchase decisions (Rana, 2019). However, our study has integrated all the relevant constructs into one analysis to understand a holistic impact of varying factors on customer purchase intentions toward organic food products. This study also extends the relevant constructs into a conceptual framework of organic food product purchase intentions.

Literature Review

We are living in the era where environmental protection is a global concern. There is an estimate that almost 70% of the planet's greenhouse gas footprint depends on the consumers products choices and usage and disposal of products in a sustainable manner (White et al., 2019). Thus, consumers are becoming more interested in environmental sustainability and reflecting their interest to buy green products (Darnall et al., 2012).

The United Nations Environment Programme (2011) (Panel, 2011)has projected that the market of green products doubles annually. An international research has shown that 73% of customers across 60 countries are willing to pay more for green products (Center, n.d.). In a research conducted by Harvard Business Review (White et al., 2019), 65% of the customers who were being surveyed said that they want to buy green products, but only 26% of them actually buys eco-friendly products, thus this is a paradoxical desire. The rapidly increasing interest of consumers in green products has expanded globally over the last few years (Chen et al., 2018).

There is an absence of definition of a universal, effective, and well-structured green product (Hartmann & Apaolaza Ibáñez, 2006 ;Ritter et al., 2015) ; Sdrolia & Zarotiadis, 2019). Though there is no internationally known definition, a green product is a sustainable and eco-friendly product intended to decrease its negative environmental impacts during its whole life-cycle and even after its disposal (Barbu et al., 2022). The researchers have associated organic products with environmental protection (Ottman et al., 2006), sustainability (de Medeiros & Ribeiro, 2017), waste reduction during the process (de Medeiros & Ribeiro, 2017), social

responsibility (Bhardwaj et al., 2020), economic benefits (Biswas, 2016), low energy consumption (Catană et al., n.d.), sustainable packaging (Sdrolia & Zarotiadis, 2019) etc.

However, other researchers have shown the negative aspects of green products as follows: high prices (Catană et al., n.d.), costly green certifications (Chaudhary, 2020), and the durability of the product is less (Lamoureux, 2017). Some researchers have studied consumer behavior toward the green products and have presented different viewpoints on the consumer perception about green products.

The consumers of green products protect the environment by refusing to buy the products which are harmful for the environment (Jacobs et al., 2018)**.** Green product consumers are not only concerned in the consumption process, but also in the production, and disposal processes of products (Bangsa & Schlegelmilch, 2020**;** Zeynalova & Namazova, 2022)**.**

Theoretical Background

The Theory of Reasoned Action (TRA) was developed to assess behaviors (Yang & Sattari, n.d.). That was further studied and extended. This concept is valuable for studying human attitudes and behaviors. Many studies have adopted TRA as the foundation of their conceptual and theoretical frameworks to predict the consumer attitude and consumer purchase intention. These studies comprise research on consumers' attitude towards green marketing (Chowdhury, 2021), Purchase intention (Alalei & Jan, 2023), subjective norms (Al-Swidi et al., 2014), environmental concerns (Bhardwaj et al., 2020).This study's' main focus is on customers' attitude towards organic food products purchase intention and the hypothesis developed in this study are originated from the relationships between the constructs.

Conceptual Framework

This theoretical framework is extended through the theoretical model shown in the figure below which is followed by the discussion that supports the derived relationships between the variables of the theoretical framework.

Attitude towards Organic Products

Purchase intention towards an organic food product is considered as the best analyst of genuine consumer behavior(Yang & Sattari, n.d.). The concept about the consumer attitude and consumer behavior has an effect on the consumers' perceived attitude towards the green product. Consumer attitude concludes the final decision in the consumers' purchase intention. Therefore, based on the importance of consumer's attitude in buying decisions, a theoretical framework is developed.

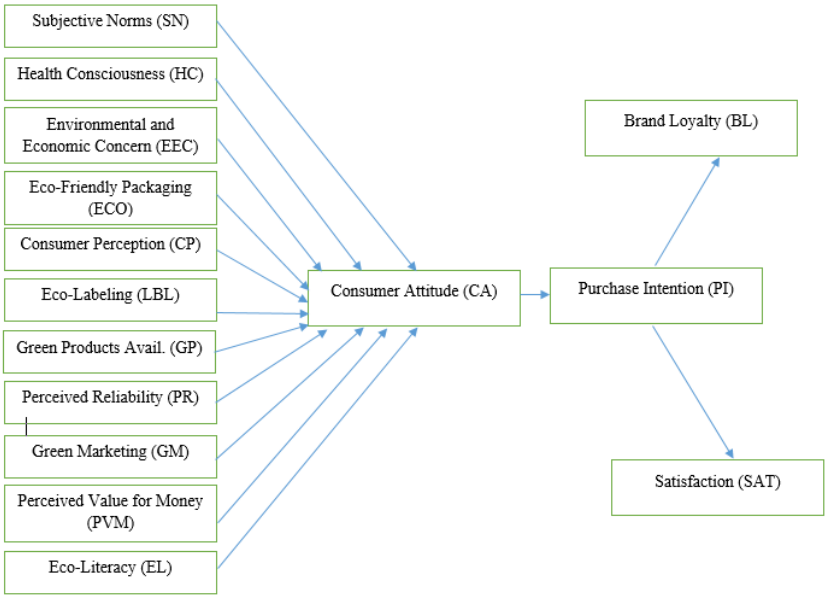

Figure 1 Theoretical Framework

The planned theoretical framework considers that the consumer attitude towards purchase intention of organic food products is positively influenced by various variables: Environmental Concern, Health consciousness, eco-label, Consumer perception, perceived reliability, green marketing and Subjective norms ("Consumers Attitude Towards Organic Food," 2015). The proposed framework for consumer attitude towards purchase intentions of organic food products is shown in the figure above.

Consumer Attitude and Purchase Intention

Consumer attitude is the most important analyst towards purchase intention of green products (Akter et al., 2023). There is a positive effect of consumer attitude towards organic food products in regards to environmental and social benefits and on organic food product purchase intention. It is determined that there is a positive significant relation between the consumer attitude towards organic food products purchase intention (Wee et al., 2014). It is determined that consumers' positive attitude towards the purchase intention of organic products is related to the concept of believing that organic food products are a healthy option, taste better, and maintain eco-friendly environment. Some reasons for low purchases of organic food products are that organic products are expensive and there is scarcity of organic food products.

H1: There is a positive and direct impact of consumer attitude on their purchase intention towards organic food products.

Eco-Friendly Packaging and Consumer Attitude

Eco-friendly packaging of organic food products is an external feature of the product which attracts and appeal to the customers. The need for eco-friendly packaging is progressively growing as non-eco-friendly packaging causes pollution and harm to the environment (Seo et al., 2016). Customers prefer environmental-friendly packed products over non-eco-friendly products. The eco-friendly packaging makes products more valuable. It is required to pay more consideration to consumers' preference for eco-friendly packaged products (Magnier et al., 2016).

H2: Eco-Friendly packaging of organic food products positively impacts consumer attitude towards organic food products.

Economic and Environmental Concerns and Consumer Attitude

Economic and Environmental concerns are vital as it encourages the consumers to purchase green products (Bhardwaj et al., 2020). There is sudden rise in economic and environmental concern and it is considered genuine by consumers. Consumers are keen to take ecologically friendly steps to improve ecological problems. Organic products have considerable awareness among customers. Consumers willing to pay more for organic food products(Funk et al., 2020).

H3: Economic and environmental concerns positively impact consumer attitude towards organic food products.

Green Marketing and Consumer Attitude

Companies are surveying new ways to connect with the consumers by adopting green marketing tools. Consumers are aware about global warming, climatic change, and other ecological issues which have encouraged the purchase and usage of eco-friendly products. Consumers react positively to green marketing and are eager to buy eco-friendly products (Nguyen and Le, 2020). Consumers' reaction to green marketing was significantly influenced by consumers' previous perception about the economic and environmental concern, subjective norms and health consciousness.

H4: Green marketing of organic food products positively impacts consumer attitude towards organic food products.

Green Products Availability and Consumer Attitude

One of the potential determinants of consumer intention and purchase decision is the easy availability of organic food products, which relates to consumer's behavioral control. The motivation to consume organic food products is high, but it may not be possible because of low availability of organic products. The availability of organic products is only one aspect that has an influence on consumers' behavioral control with respect to organic product consumption (Gomes et al., 2023).

H5: Green products availability positively impacts consumer attitude towards organic food products.

Health Consciousness and Consumer Attitude

Consumers who are health and diet conscious are aware and worried about their health and are motivated to maintain a healthy lifestyle and quality of life to prevent illness (Jonathan & Tjokrosaputro, 2022). These consumers are tending to be aware of nutritional fitness. (Michaelidou & Hassan, 2008) . Health consciousness has a positive impact on consumer attitude and purchase intention towards organic products since organic product consumers are aware that conventional food intake negatively affects their health, these consumers are ready to purchase green products to improve their health.

H6: Health consciousness positively impacts consumer attitude towards organic food products.

Eco-Labelling and Consumer Attitude

The ecolabel information functionally impacts the consumer attitudes and green buying intentions (Nguyen & Le, 2020). Certification of eco-labels products demonstrates the

environmental message about the product. Green products are more expensive than conventional products of the same type, thus buyers determine the value of the offer, which is shortened by direct certification of eco-labelling. Consumers have no issue in paying more for eco-label products (Akter et al., 2023).

H7: Eco-Labelling of organic food products positively impacts consumer attitude towards organic food products.

Brand Loyalty and Purchase Intention

Three recent studies on the connection between brand loyalty, consumer attitudes toward organic food products, and purchase intention are summarized in this literature review. The purpose of the study is to investigate the connection between consumers' attitudes toward organic food and their intentions to purchase it (Chen et al., 2021). The outcomes propose that buyers who are faithful to a specific brand of natural food are bound to have an uplifting outlook towards it and, thus, have a higher purchase intention.

Another study found that consumer attitudes toward organic food and purchase intent are affected by brand loyalty. The outcomes recommend that brand devotion impacts the buy aim of customers who have an uplifting outlook towards natural food items (Škrinjarić, 2020). A coordinated model strategy to examine the job of brand steadfastness in the connection between customer perspectives towards natural food and buy goals. The findings suggest that a significant factor in the relationship between consumer attitudes toward organic food and intentions to purchase is brand loyalty.

H8: Purchase intention towards organic food products positively shapes consumer brand loyalty about organic food products.

Satisfaction and Purchase Intention

The relationship between a consumer's intention to buy an organic product and their attitude toward it has been the subject of numerous studies. These examinations found that fulfillment assumes a critical part in interceding the connection between customer disposition towards natural items and buy aim. For instance, fulfillment somewhat interceded the connection between buyer demeanor towards environmentally friendly power energy brands and buy aim (Huo et al., 2023).In a similar vein, researchers discovered that satisfaction completely mediated the relationship between the intention to purchase organic food and consumer attitude toward it (Chen et al., 2018). Another study found that satisfaction partially mediated the connection between the intention to buy organic food and perceived health benefits (Curvelo et al., 2019). According to these findings, satisfaction plays a significant role in determining whether or not consumers will purchase organic products.

H9: Purchase intention towards organic food products positively shapes consumer satisfaction.

Perceived Reliability and Consumer Attitude

Perceived reliability is an effective means by which trust can be measured, which is based on integrity, and competence. Reliability refers to the degree of trust toward consumer behavior and consumer perception (Chen et al., 2015).

H10: Perceived reliability positively impacts consumer attitude towards organic food products.

Perceived Value for Money and Consumer Attitude

Perceived value for money means the value of the product to be perceived by the customers in the form of benefits and prices consumers are expecting to experience (Hamid, 2014). Green products are thought to be expensive by the customers. Consumers find conventional products cheap than organic products (Biswas, 2016). Some consumers are ready to spend more on green products after knowing its benefits (Gomes et al., 2023). Consumer perceived value for money is found to be at a lower level than expected, and it has no significant impact on consumers' attitude towards the purchase intention of organic food products.

H11: Low Perceived value for money negatively impacts consumer attitude towards organic food products.

Subjective Norms and Consumer Attitude

Some studies have indicated that consumer attitude has a positive significance with subjective norms. There is a significant impact between subjective norms and consumer attitude towards purchase intention of organic food products (Al-Swidi et al., 2014). Subjective norms are related to the perceived social influence that indulges a consumer in a given behavior. Subjective norms show individuals' perception about how they would be viewed by their reference groups if they have certain behavior towards organic products (Testa et al., 2019).

H12: Subjective norms positively impacts consumer attitude towards organic food products.

Consumer Perception and Consumer Attitude

Consumers' perception and consumer attitudes towards organic food is important to enable the development of green marketing policies aimed to attract the conventional product consumers to the organic food product sector (Kong et al., 2014). Most consumers stated that they confuse the consumption of organic products with home and locally produced food. There is potential for growth of the organic food sector by spreading awareness to such consumers with appropriate information. Most of the consumers have a good perception of organic food products and consider it better for a healthy lifestyle and for their wellness and better quality (Barbu et al., 2022).

H13: Consumer perception of organic food products positively impacts consumer attitude towards organic food products.

Eco-Literacy and Consumer Attitude

Eco-literacy is the awareness of the impact of sustainable products on the ecosystem. Consumers' behavior, attitude, and intention changes when they are aware about the environmental and social issues (Cheah & Phau, 2011). Consumers who are aware of the environmental characteristics of the non-organic products are more likely to purchase eco-friendly products than those who are not aware of the environmental crisis. However, when consumers make purchase decisions based on their emotions rather than eco-literacy, the consumer attitude may negatively impact the purchase intention towards organic food products.

H14: Eco-Literacy of organic food products positively impacts consumer attitude towards organic food products.

Methodology

Procedure

A quantitative survey was conducted consisting of 270 consumers of organic products. The sample for the research was selected through a non-probability sampling approach, and convenience sampling technique was used. The consumer attitude towards purchase intention of organic food products are based on these variables: economical environmental concern, health consciousness, green marketing, perceived reliability, eco-labeling, eco-literacy, subjective norms, perceived value for money and brand loyalty.

Scale and Measure

The constructs used in the research are from the previously established constructs, which were changed to five-point Likert scale with options like Strongly Agree= 1, Agree = 2, Neutral = 3, Disagree = 4, and Strongly Disagree = 5. It is recommended that the results of this scale can produce strong correlations with the t-test results.

Results

Profile of the Respondents

There were a total 270 responses collected in our research through an online survey. However, 19 were eliminated after the filter question. Among the total, 146 (58.4%) were females and the rest 104 (41.6%) were males. Majority of the respondents i.e. 120 (47.8%) belonged to the age group 15-25, followed by 26-35 (40.6%). (66.3%) of the total were employed and the rest were (33.7%) unemployed. Moreover, 170 respondents (68%) suggested that they will refer organic food products to their friends and family based on the benefits they offer, while 79 (31.6%) were unsure.

Table 1: Measure of Constructs

Construct	Author	Reliability in Earlier Studies
Consumer Attitude (CA)	Abir Alalei, 2023	0.801
Purchase Intention (PI)	Abir Alalei, 2023	0.795
Eco-Literacy (EL)	Fleming, 2008	0.861
Subjective Norms (SN)	Mingyan Yang, 2014	0.799
Health Consciousness (HC)	Katirji, 2017	0.706
Environment and Economic Concerns (EEC)	Adams, 2012	0.841
Brand Loyalty (BL)	Adams, 2012	0.861
Satisfaction (SAT)	Lakatos, 2021	0.800
Eco-Friendly Packaging (ECO)	Aarón González, 2009	0.751
Consumer Perception (CP)	Katirji, 2017	0.900
Green Product Availability (GP)	Isaacs, 2015	0.720
Eco-Labeling (LBL)	John Thøgersen, 2009	0.710
Perceived Value for Money (PVM)	Katirji, 2017	0.721
Green Marketing (GM)	BAKER, 2003	0.760
Perceived Reliability (PR)	Adams, 2012	0.720

Descriptive Statistics

We conducted the descriptive statistics analysis to ascertain the univariate normality of the adopted constructs used in our research study.

Table 2: Descriptive Statistics

Construct	Mean	Std. Deviation	Skewness	Kurtosis
Consumer Attitude (CA)	2.2	0.576	-0.202	0.949
Purchase Intention (PI)	2.2	0.584	-0.194	0.007
Eco-Literacy (EL)	2.3	0.581	-0.237	0.695
Subjective Norms (SN)	2.4	0.539	-0.04	1.464
Health Consciousness (HC)	2.1	0.579	-0.149	-0.032
Environment and Economic Concerns (EEC)	2.1	0.586	-0.341	-0.184
Brand Loyalty (BL)	2.2	0.62	0.374	1.084
Satisfaction (SAT)	2.2	0.578	-0.13	-0.004
Eco-Friendly Packaging (ECO)	2.2	0.586	-0.15	0.198
Consumer Perception (CP)	2.3	0.539	-0.378	0.677
Eco-Labeling (LBL)	2.2	0.584	0.071	0.954
Green Product Availability (GP)	2.5	0.63	-0.334	0.672
Perceived Value for Money (PVM)	2.3	0.641	0.634	1.595
Perceived Reliability (PR)	2.1	0.582	0.018	0.723
Green Marketing (GM)	2.3	0.61	0.436	1.499

The highest Skewness level is (SK= -.398) for the Subjective Norms (SN) (Mean = 2.45, SD=0.57) and the minimum Skewness level (SK= -.028) is for the Health Consciousness (HC) (Mean= 2.07, SD= .66). Green Products (GP) (Mean=2.09, SD=.43) has the maximum Kurtosis level (KR= 1.472). Thus, all the adopted constructs meet the criteria for Kurtosis i.e. ±3 and Skewness i.e. ±1.

Reliability Analysis

We used the Cronbach Alpha technique to ascertain the reliability values for the constructs used in our study. The summarized results are shown below:

Table 3: Reliability Analysis

Constructs	Items	Cronbach Alpha
Consumer Attitude (CA)	3	0.719
Purchase Intention (PI)	4	0.777
Eco-Literacy (EL)	3	0.561
Subjective Norms (SN)	5	0.664
Health Consciousness (HC)	3	0.7
Environment and Economic Concerns (EEC)	3	0.701
Brand Loyalty (BL)	3	0.727
Satisfaction (SAT)	3	0.699
Eco-Friendly Packaging (ECO)	4	0.794
Consumer Perception (CP)	3	0.715
Eco-Labeling (LBL)	5	0.815
Green Product Availability (GP)	3	0.73
Perceived Value for Money (PVM)	3	0.724
Perceived Reliability (PR)	3	0.685
Green Marketing (GM)	3	0.746
Overall Cronbach Alpha		0.928

According to Table 3 above, Eco-Label (M=2.31, SD=.67) has the highest reliability (α=.866) and Eco-Literacy (EL) (M=2.26, SD=.60) has the lowest reliability (α=.670). The overall Cronbach's alpha for all the constructs is (α=.710). The values are above the required value of 0.8, thereby meeting the internal consistency criteria.

Exploratory Factor Analysis (EFA)

Table 4 shows that summarized results for exploratory factor analysis test, which was used to ascertain the relationship between dependent and independent variables in our study:

Table 4: Exploratory Factor Analysis

Constructs	Items	KMO	BToS	CFL
Consumer Attitude (CA)	3	0.658	150.989	64.08%
Purchase Intention (PI)	4	0.766	257.44	59.95%
Subjective Norms (SN)	3	0.643	111.921	59.99%
Health Consciousness (HC)	3	0.671	131.182	62.62%
Environment and Economic Concerns (EEC)	3	0.68	151.943	64.71%
Brand Loyalty (BL)	3	0.601	139.548	61.61%
Satisfaction (SAT)	4	0.785	285.281	61.91%
Eco-Friendly Packaging (ECO)	3	0.65	153.973	63.91%
Consumer Perception (CP)	5	0.816	398.581	57.96%
Eco-Labeling (LBL)	3	0.681	154.889	64.99%
Green Product Availability (GP)	3	0.659	158.177	64.58%
Perceived Reliability (PR)	3	0.66	121.198	61.37%
Green Marketing (GM)	3	0.684	170.31	66.36%

Note: Kaiser Meyer Olkin, Bartlett Test of Sphericity, Cumulative Factor Loading

The Kaiser-Meyer-Olkin (KMO) test suggests that the KMO value for all construct should ideally be greater than 0.6. The table above shows all values meeting the intended criteria. Moreover, the value for cumulative factor loading is also greater than 50%, thus meeting the required values for exploratory factor analysis.

Correlation Analysis

The correlation assessment is a test which tells us the unique relationships between two variables in a study. It is conducted to rule out the issue of multi-collinearity, and as a prerequisite for hypothesis testing. The following Table 5 shows the summarized results at 95% confidence level:

Table 5: Bivariate Correlation

	CA	PI	SN	BL	SAT	ECO	CP	LBL	GP	PVM	PR	GM	EEC	HC
CA	1													
PI	.703**	1												
SN	.571**	.564**	1											
BL	.574**	.620**	.540**	1										
SAT	.513**	.626**	.472**	.620**	1									
ECO	.383**	.499**	.242**	.455**	.573**	1								
CP	.435**	.452**	.291**	.421**	.527**	.691**	1							
LBL	.506**	.495**	.520**	.508**	.545**	.395**	.438**	1						
GP	.533**	.571**	.454**	.481**	.628**	.622**	.542**	.563**	1					
PVM	.467**	.515**	.491**	.632**	.537**	.304**	.331**	.618**	.539**	1				
PR	.409**	.456**	.459**	.509**	.481**	.426**	.393**	.588**	.619**	.600**	1			
GM	.438**	.500**	.336**	.371**	.539**	.544**	.570**	.481**	.550**	.299**	.397**	1		
EEC	.490**	.560**	.377**	.498**	.523**	.619**	.606**	.570**	.591**	.432**	.463**	.505**	1	
HC	.472**	.562**	.361**	.504**	.537**	.616**	.596**	.448**	.481**	.404**	.418**	.479**	.644**	1

The above correlation table shows that the pair of purchase intention (PI) and green products (GP) has the strongest correlation (r=.834). It shows that the weakest correlation value was found for the pair of economic and environmental concern (EEC) and subjective norms (SN) (r=.339). However, we can conclude that all variables and their relationships with each other is distinct, free of multi-collinearity issue, and between .30 and .90.

Construct Validity

As the constructs used in the study are taken from various sources, thus the construct validity has been determined tests validity, which includes two type: convergent and discriminant.

Convergent Validity

Convergent validity is a business analytics test conducted to check the variance explained for each construct. The value for AVE should be greater than 0.50 or 50% to maintain that the constructs have good internal consistency. The following Table 6 shows summarized results for convergent validity test on our research study:

Table 6: Convergent Validity

Constructs	Items	Cronbach Alpha	Average Variance Explained
Consumer Attitude (CA)	3	0.719	0.64
Purchase Intention (PI)	4	0.777	0.59
Subjective Norms (SN)	3	0.7	0.59
Health Consciousness (HC)	3	0.701	0.62
Environment and Economic Concerns (EEC)	3	0.727	0.64
Brand Loyalty (BL)	3	0.699	0.61
Satisfaction (SAT)	4	0.794	0.62
Eco-Friendly Packaging (ECO)	3	0.715	0.64
Consumer Perception (CP)	5	0.815	0.58
Green Product (GP)	3	0.73	0.65
Perceived Value for Money (PVM)	3	0.724	0.64
Perceived Reliability (PR)	3	0.685	0.61
Green Marketing (GM)	3	0.746	0.66

Discriminant Validity

Discriminant validity test is used to ascertain whether or not the constructs used in a research study are distinct and unique. Its criteria is the square root of variance explained should be more than each correlation value (pair). The following Table 7 shows that each correlation pair in our study is unique:

Table 7: Discriminant Validity

	CA	PI	SN	BL	SAT	ECO	CP	LBL	GP	PVM	PR	GM	EEC	HC
CA	0.80													
PI	.703**	0.77												
SN	.571**	.564**	0.81											
BL	.574**	.620**	.540**	0.80										
SAT	.513**	.626**	.472**	.620**	0.78									
ECO	.383**	.499**	.242**	.455**	.573**	0.79								
CP	.435**	.452**	.291**	.421**	.527**	.691**	0.80							
LBL	.506**	.495**	.520**	.508**	.545**	.395**	.438**	0.76						
GP	.533**	.571**	.454**	.481**	.628**	.622**	.542**	.563**	0.81					
PVM	.467**	.515**	.491**	.632**	.537**	.304**	.331**	.618**	.539**	0.80				
PR	.409**	.456**	.459**	.509**	.481**	.426**	.393**	.588**	.619**	.600**	0.78			
GM	.438**	.500**	.336**	.371**	.539**	.544**	.570**	.481**	.550**	.299**	.397**	0.81		
EEC	.490**	.560**	.377**	.498**	.523**	.619**	.606**	.570**	.591**	.432**	.463**	.505**	0.79	
HC	.472**	.562**	.361**	.504**	.537**	.616**	.596**	.448**	.481**	.404**	.418**	.479**	.644**	0.77

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis to test the fitness of our model in AMOS. It allowed us to test the relationship between observed variables and their underlying relationships within the constructs. The above data shows that the tested model is a good fit since the value for CMIN/DF= 1.724 is less than 3.0, RMR = 0.031, IFI > CFI> TLI> 0.9, and RMSEA =0.054. Based on the reported fit indices (Model Fit Summary shown above), the CFA model in this study has a good fit. The study has reported fit indices from Absolute, Relative, Comparative, and Parsimonious Fit Indices categories, as recommended by Pituch and Stevens (2015).

The Chi-Square statistic ($\chi 2$) is used as a measure of goodness of fit, but it is sensitive to sample size, and the significance level can be affected. Therefore, the study has also reported the Relative Chi-Square ($\chi 2/df$) value, which is a better determinant of model fit. The results of this study fall within the threshold of good model fit as $\chi 2/df = 1.725$, which is less than 3.0. The study also reports RMSEA (90% CI), which should be closer to 0.00 in the ideal case, but a value of <0.05 is acceptable. In this study, the reported RMSEA value is 0.054, which falls within the acceptable range. The Parsimony-Adjusted Model also shows the values of PRATIO, PCFI, and PNFI to be 0.848, 0.69, and 0.77, which are all above the acceptable range of >0.7, indicating a good fit model. The NFI value for the default model is .822 and the RFI value for the default model is .791, which are both close to the threshold of 0.90, indicating a moderate model fit. Finally, the TLI and CFI values for the default model are .900 and .915, respectively, greater than minimum 0.90, indicating a good model fit.

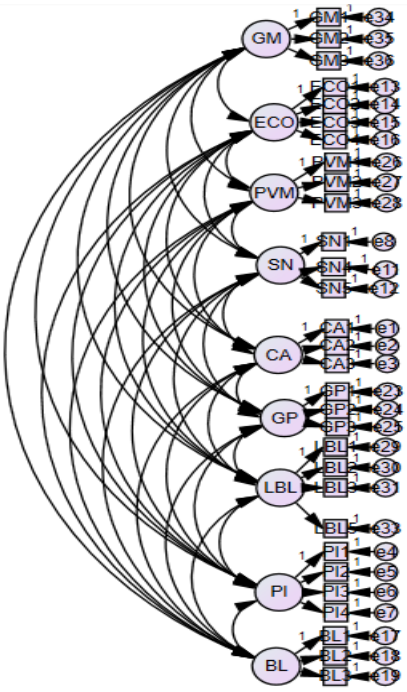

Figure 2 CFA Model on AMOS

Structural Equation Modeling (SEM)

The conceptual framework of our research was tested using the covariance-based SEM approach on SPSS AMOS.

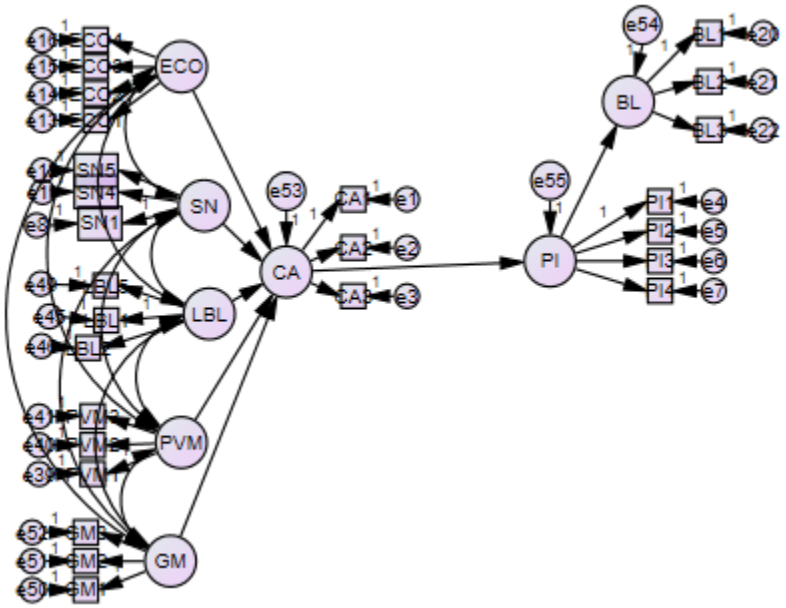

Figure 3 SEM MODEL on AMOS

SEM can only be conducted after acceptable results are achieved in CFA analysis. Getting accepted for model fitness via CFA is necessary before evaluating the estimates and P-values AKA significance for hypothesis testing.

Table 8: SPSS AMOS SEM Model Regression Weights

Parameter			Estimate	Lower	Upper	P
CA	<---	LBL	-.312	-1.450	.084	.245
CA	<---	ECO	.112	-.300	.435	.522
CA	<---	SN	.616	.292	1.087	.030
CA	<---	PVM	.540	.213	1.171	.025
CA	<---	GM	.096	-.229	.580	.576
PI	<---	CA	.992	.944	1.033	.021
BL	<---	PI	.895	.767	.985	.013

The above table 8 shows that the hypotheses indicating P values less than 0.05 are failed to reject, signifying statistically significant relationships between the variables. In this test, we also run bootstrapping to measure specific effects of variables. And to say whether the relationship is significant, the recommended value of P is less than 0.05. The results of hypothesis are discussed below:

- Subjective Norms (SN) has a significant positive effect of Consumer Attitudes (CA) (p = .030).
- Perceived Value for Money (PVM) has a significant positive effect on Consumer Attitudes (CA) (p = .025).
- Eco-Labeling of Organic Food Products (LBL) has no significant effect of LBL on Consumer Attitudes (CA) (p = .245).

- Eco-Friendly Packaging of Organic Food Products (ECO) has no significant effect of ECO on Consumer Attitudes (CA) (p = .522).
- Green Marketing (GM) has no significant effect of GM on Consumer Attitudes (CA) (p = .576).
- Consumer Attitudes (CA) has a significant positive effect on Purchase Intention (PI) (p = .021).
- Purchase Intention (PI) has a statistically substantial positive impact on Brand Loyalty (BL) (p = .013), which is an indirect positive impact of Consumer Attitudes (CA) on Brand Loyalty (BL) through Purchase Intention (PI).

The constructs Consumer Perceptions (CP), Health Consciousness (HC), Economic and Environmental Concerns (EEC), Green Product Availability (GP), Perceived Reliability (PR), Green Marketing (GM), and Satisfaction (SAT) were removed as the estimates for their items were less than 0.60, hence, all the pertaining hypothesis are rejected.

Discussion and Conclusion

Modern-day customers have become pickier, empowered, and decisive about the food products available in the market. The increased eco-consciousness trend has also resulted in a significant impact on buying behaviors and attitudes toward organic food products. The Theory of Reasoned Action applies here as the consumer attitudes are affected by several factors that ultimately shape their purchase intention and behaviors towards organic food products. That's why we conducted this study to establish and measure the impact of several factors on consumer attitudes.

Firstly, the construct Eco-Literacy (EL) was dropped as it did not provide a Cronbach Alpha value above the recommended value (0.70). The study proceeded with Exploratory Factor Analysis, Correlation, and Validity analysis, establishing that all of the constructs were correctly chosen for this study. In this test, we also run bootstrapping to measure specific effects of variables. And to say whether the relationship is significant, the recommended value of P is less than 0.05.

We also conducted Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) through SPSS AMOS. The model was concluded as fit in the model fit analysis and SEM also provided standardized regression weights and significance values for hypothesis testing.

In conclusion, this study's findings are consistent with previous research, highlighting the importance of several factors, including subjective norms (SN), eco-friendly packaging (ECO), eco-labeling (LBL), green marketing (GM), perceived value for money (PVM), and purchase intention (PI), in influencing consumers' attitudes towards green products. Moreover, a relationship was also established about how Consumer Attitudes (CA) affects Brand Loyalty (BL) through Purchase Intention (PI), supporting the Theory of Reasoned Action. Therefore, companies should consider these factors when developing their marketing strategies to promote green products and increase consumers' purchase intention and loyalty.

This research study can help policymakers, manufacturers, marketers, retailers, and wholesalers improve organic food production and sales. They should focus on generating consume awareness regarding organic food products, establishing brand loyalty, and providing value for money. They can also shape consumer attitude using factors such as Subjective Norms and lifestyle influences, green marketing practices, and eco-labeling and drive positive purchase intention toward organic food products.

Research Limitation and Scope of Future Research

A few limitations need to be considered with respect to our research about consumer attitudes toward organic food products purchase intention. The sample of our study was limited to a specific geographic and demographic group, limiting the result's generalizability. We studied the impact of purchase intention on brand loyalty and satisfaction, which may overlook any other potential factors causing an effect within this relationship. Lastly, the constructs of this study were adopted from other research papers, therefore new constructs may be developed to understand the subject in a better way.

References

Akter, S., Ali, S., Fekete-Farkas, M., Fogarassy, C., & Lakner, Z. (2023). Why Organic Food? Factors Influence the Organic Food Purchase Intension in an Emerging Country (Study from Northern Part of Bangladesh). *Resources*, *12*(1), Article 1. https://doi.org/10.3390/resources12010005

Alalei, A., & Jan, M. T. (2023). *Factors influencing the green purchase intention among consumers: An empirical study in Algeria*. *8*(1).

Al-Swidi, A., Huque, S. M., Hafeez, Dr. M. H., & mohd shariff, mohd noor. (2014). The role of subjective norms in theory of planned behavior in the context of organic food consumption. *British Food Journal*, *116*, 1561–1580. https://doi.org/10.1108/BFJ-05-2013-0105

Bangsa, A. B., & Schlegelmilch, B. B. (2020). Linking sustainable product attributes and consumer decision-making: Insights from a systematic review. *Journal of Cleaner Production*, *245*, 118902. https://doi.org/10.1016/j.jclepro.2019.118902

Barbu, A., Catană, Ştefan-A., Deselnicu, D. C., Cioca, L.-I., & Ioanid, A. (2022). Factors Influencing Consumer Behavior toward Green Products: A Systematic Literature Review. *International Journal of Environmental Research and Public Health*, *19*(24), Article 24. https://doi.org/10.3390/ijerph192416568

Bhardwaj, A. K., Garg, A., Ram, S., Gajpal, Y., & Zheng, C. (2020). Research Trends in Green Product for Environment: A Bibliometric Perspective. *International Journal of Environmental Research and Public Health*, *17*(22), 8469. https://doi.org/10.3390/ijerph17228469

Biswas, A. (2016). A Study of Consumers' Willingness to Pay for Green Products. *Journal of Advanced Management Science*, 211–215. https://doi.org/10.12720/joams.4.3.211-215

Catană, Ştefan-A., Toma, S.-G., & Grădinaru, C. (n.d.). *Circular Economy Applied to the Automotive Industry*. *1*.

Center, F. R. (n.d.). *Green Industry Analysis 2020 – Cost & Trends*. Franchisee Resource Center. Retrieved April 8, 2023, from https://www.franchisehelp.com/industry-reports/green-industry-analysis-2020-cost-trends/

Chaudhary, S. (2020, May 26). *Eco-Friendly Products: Its advantages and disadvantages*. Indies Education-Online Learning Library. https://indieseducation.com/eco-friendly-products-its-advantages-and-disadvantages/

Cheah, I., & Phau, I. (2011). Attitudes towards environmentally friendly products: The influence of ecoliteracy, interpersonal influence and value orientation. *Marketing Intelligence & Planning*, *29*, 452–472. https://doi.org/10.1108/02634501111153674

Chen, C.-C., Chen, C.-W., & Tung, Y.-C. (2018). Exploring the Consumer Behavior of Intention to Purchase Green Products in Belt and Road Countries: An Empirical Analysis. *Sustainability*, *10*(3), 854. https://doi.org/10.3390/su10030854

Chen, W. T., Merrett, H. C., Huang, Y.-H., Bria, T. A., & Lin, Y.-H. (2021). Exploring the Relationship between Safety Climate and Worker Safety Behavior on Building Construction Sites in Taiwan. *Sustainability*, *13*(6), Article 6. https://doi.org/10.3390/su13063326

Chen, Y.-S., Lin, C.-Y., & Weng, C.-S. (2015). The Influence of Environmental Friendliness on Green Trust: The Mediation Effects of Green Satisfaction and Green Perceived Quality. *Sustainability*, *7*(8), Article 8. https://doi.org/10.3390/su70810135

Chiciudean, G. O., Harun, R., Ilea, M., Chiciudean, D. I., Arion, F. H., Ilies, G., & Muresan, I. C. (2019).

Organic Food Consumers and Purchase Intention: A Case Study in Romania. *Agronomy*, *9*(3), Article 3. https://doi.org/10.3390/agronomy9030145

Chowdhury, S. (2021, February 13). *GREEN MARKETING-A NEW CORPORATE SOCIAL RESPONSIBILITY*. ResearchGate.

Conick, H. (2019, August 1). How Brands Can Help Consumers Green Up Their Act. *American Marketing Association*. https://www.ama.org/marketing-news/how-brands-can-help-consumers-green-up-their-act/

Consumers Attitude Towards Organic Food. (2015). *Procedia Economics and Finance*, *31*, 444–452. https://doi.org/10.1016/S2212-5671(15)01219-8

Curvelo, I. C. G., Watanabe, E. A. de M., & Alfinito, S. (2019). Purchase intention of organic food under the influence of attributes, consumer trust and perceived value. *Revista de Gestão*, *26*(3), 198–211. https://doi.org/10.1108/REGE-01-2018-0010

Darnall, N., Ponting, C., & Vazquez-Brust, D. A. (2012). Why Consumers Buy Green. In D. A. Vazquez-Brust & J. Sarkis (Eds.), *Green Growth: Managing the Transition to a Sustainable Economy: Learning By Doing in East Asia and Europe* (pp. 287–308). Springer Netherlands. https://doi.org/10.1007/978-94-007-4417-2_15

de Medeiros, J. F., & Ribeiro, J. L. D. (2017). Environmentally sustainable innovation: Expected attributes in the purchase of green products. *Journal of Cleaner Production*, *142*, 240–248. https://doi.org/10.1016/j.jclepro.2016.07.191

Funk, A., Sutterlin, B., & Siegrist, M. (2020). Consumer segmentation based on Stated environmentally-friendly behavior in the food domain | Elsevier Enhanced Reader. *Sustainable Production and Consumption*, *25*. https://doi.org/10.1016/j.spc.2020.08.010

Gomes, S., Lopes, J. M., & Nogueira, S. (2023). Willingness to pay more for green products: A critical challenge for Gen Z. *Journal of Cleaner Production*, *390*, 136092. https://doi.org/10.1016/j.jclepro.2023.136092

Hamid, A. R. (2014). *A Study on the Relationship between Consumer Attitude, Perceived Value and Green Products*. *7*(2).

Hartmann, P., & Apaolaza Ibáñez, V. (2006). Green value added. *Marketing Intelligence & Planning*, *24*(7), 673–680. https://doi.org/10.1108/02634500610711842

Huo, H., Jiang, X., Han, C., Wei, S., Yu, D., & Tong, Y. (2023). The effect of credence attributes on willingness to pay a premium for organic food: A moderated mediation model of attitudes and uncertainty. *Frontiers in Psychology*, *14*, 1087324. https://doi.org/10.3389/fpsyg.2023.1087324

Jacobs, K., Petersen, L., Hörisch, J., & Battenfeld, D. (2018). Green thinking but thoughtless buying? An empirical extension of the value-attitude-behaviour hierarchy in sustainable clothing. *Journal of Cleaner Production*, *203*, 1155–1169. https://doi.org/10.1016/j.jclepro.2018.07.320

Jonathan, S., & Tjokrosaputro, M. (2022). *The Effect of Attitude, Health Consciousness, and Environmental Concern on the Purchase Intention of Organic Food in Jakarta*. 567–574. https://doi.org/10.2991/aebmr.k.220501.086

Khan, K. U., Atlas, F., Arshad, M. Z., Akhtar, S., & Khan, F. (2022). Signaling Green: Impact of Green Product Attributes on Consumers Trust and the Mediating Role of Green Marketing. *Frontiers in Psychology*, *13*. https://www.frontiersin.org/articles/10.3389/fpsyg.2022.790272

Kong, W., Harun, A., Sulong, R. S., & Lily, J. (2014). The Influence of Consumers Perception of Green Products on Green Purchase Intention. *International Journal of Asian Social Science*, *4*(8), Article 8.

Lakatos, E.-S., Nan, L.-M., Bacali, L., Ciobanu, G., Ciobanu, A.-M., & Cioca, L.-I. (2021). Consumer Satisfaction towards Green Products: Empirical Insights from Romania. *Sustainability*, *13*(19), Article 19. https://doi.org/10.3390/su131910982

Lamoureux, E.-C. (2017, July 28). Green Marketing Advantages and Disadvantages. *L'Autre Couleur*. https://lautrecouleur.com/green-marketing-advantages-disadvantages/

Magnier, L., Schoormans, J., & Mugge, R. (2016). Judging a product by its cover: Packaging sustainability and perceptions of quality in food products. *Food Quality and Preference*, *53*, 132–142. https://doi.org/10.1016/j.foodqual.2016.06.006

Michaelidou, N., & Hassan, L. M. (2008). The role of health consciousness, food safety concern and ethical

identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies*, *32*(2), 163–170. https://doi.org/10.1111/j.1470-6431.2007.00619.x

Nguyen, H. T., & Le, H. T. (2020). The effect of agricultural product eco-labelling on green purchase intention. *Management Science Letters*, 2813–2820. https://doi.org/10.5267/j.msl.2020.4.028

Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding Green Marketing Myopia: Ways to Improve Consumer Appeal for Environmentally Preferable Products. *Environment: Science and Policy for Sustainable Development*, *48*(5), 22–36. https://doi.org/10.3200/ENVT.48.5.22-36

Panel, U. N. E. P. I. R. (2011). *Decoupling Natural Resource Use and Environmental Impacts from Economic Growth*. UNEP/Earthprint.

Parashar, S., Singh, S., & Sood, G. (2023). Examining the role of health consciousness, environmental awareness and intention on purchase of organic food: A moderated model of attitude. *Journal of Cleaner Production*, *386*, 135553. https://doi.org/10.1016/j.jclepro.2022.135553

Rahayu, I., Suhardiman, H., Septiarini, E., Setiawan, R., Napitupulu, I., & Youwangka, R. (2023). CUSTOMER PURCHASING INTENTION OF GREEN PRODUCTS: A SYSTEMATIC REVIEW. *Seybold Report*, *18*, 2031–2048. https://doi.org/10.17605/OSF.IO/AMKQ6

Rana, J. (2019). Health motive and the purchase of organic food: A meta-analytic review—Rana—2020—International Journal of Consumer Studies—Wiley Online Library. *International Journal of Consumer Studies*. https://doi.org/10.1111/ijcs.12556

Reid, A. (2019). Climate change education and research: Possibilities and potentials versus problems and perils? *Climate Change Education and Research*, *25*(6), 767–790. https://doi.org/10.1080/13504622.2019.1664075

Ritter, Á. M., Borchardt, M., Vaccaro, G. L. R., Pereira, G. M., & Almeida, F. (2015). Motivations for promoting the consumption of green products in an emerging country: Exploring attitudes of Brazilian consumers. *Journal of Cleaner Production*, *106*, 507–520. https://doi.org/10.1016/j.jclepro.2014.11.066

Sdrolia, E., & Zarotiadis, G. (2019). A Comprehensive Review for Green Product Term: From Definition to Evaluation. *Journal of Economic Surveys*, *33*(1), 150–178. https://doi.org/10.1111/joes.12268

Seo, S., Ahn, H.-K., Jeong, J., & Moon, J. (2016). Consumers' Attitude toward Sustainable Food Products: Ingredients vs. Packaging. *Sustainability*, *8*(10), Article 10. https://doi.org/10.3390/su8101073

Škrinjarić, T. (2020). R&D in Europe: Sector Decomposition of Sources of (in)Efficiency. *Sustainability*, *12*(4), Article 4. https://doi.org/10.3390/su12041432

Testa, F., Sarti, S., & Frey, M. (2019). Are green consumers really green? Exploring the factors behind the actual consumption of organic food products. *Business Strategy and the Environment*, *28*(2), 327–338. https://doi.org/10.1002/bse.2234

Wee, C. S., Ariff, M. S. B., Zakuan, N., Tajudin, M. N. M., Ismail, K., Ishak, N., & Haji, L. T. (2014). *Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products*. *3*.

White, K. (2019). The Elusive Green Consumer. *Harvard Business Review*. https://hbr.org/2019/07/the-elusive-green-consumer

White, K., Hardisty, D. J., & Habib, R. (2019, July 1). The Elusive Green Consumer. *Harvard Business Review*. https://hbr.org/2019/07/the-elusive-green-consumer

Yang, M., & Sattari, S. (n.d.). *Consumer Attitude and Purchase Intention towards Organic Food*.

Zeynalova, Z., & Namazova, N. (2022). Revealing Consumer Behavior toward Green Consumption. *Sustainability*, *14*(10), Article 10. https://doi.org/10.3390/su14105806