Debunking Gender Myths of South African Generation Y Consumers Towards Organic Food Products

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Abstract
Around every corner, billboard, social media post, television show, movie, or news broadcast is the likelihood of a message aimed at environmental degradation. Modern-day consumers are bombarded with various environmental issues and are subsequently asked to join the environmental cause. One way consumers have joined the environmental movement is by changing their food purchasing habits. Organic food products provide solace to consumers in their food purchases as these products are set to be free from harmful pesticides, hormone stimulants, and processed chemicals, which are known to cause not only harm to the natural environment but also the consumer ingesting them. As such, consumers are purchasing organic products for both personal benefits and environmental care. Traditionally, female consumers have been the main household purchasers; however, in today's modern society, any sex of the family purchases the month's groceries. Moreover, males have become self-conscious about what products they consume and are increasingly questioning what is in their purchasing food. Therefore, in terms of organic food products, the question begs to be asked: does the gender of the Generation Y consumer play a significant role in today's organic food market in South Africa? 500 Generation Y respondents aged between 18 and 35 years made up the study's sample. The respondents were drawn from across Southern Africa through a specialist data-collection organization. The results indicate that both Generation Y men and women are knowledgeable, have positive attitudes, and have perceived behavioral control toward organic food product purchase intentions. However, male's health consciousness had no significant effect on purchase intentions, as opposed to their counterparts. The results from the study emphasize the need for differentiated marketing campaigns geared towards gender in terms of organic food purchase behavior. Furthermore, this study helps business analysts and academics better understand the purchase intentions of Generation Y consumers in South Africa.

Keywords
Generation Y; Gender; Organic Food Products; South Africa.

Introduction

The world's population has grown to 8 billion inhabitants as of 2024 (Worldometer, 2024). The large human population has intensified modern agriculture production levels. Consequently, this rise in agriculture production has led to the exploitation of natural ecosystems to cope with humanity's vast food demand (Radojevic, Simin, Trbić, & Milić, 2020, p. 1). To meet the considerable needs of society for sustenance, large-

scale food production has become a necessity. To achieve this, modern civilization has used chemical interventions to facilitate mass-scale agricultural production, including the use of growth hormones, chemical agents, pesticides, and various other harmful techniques (Hoyos-Vallejo, Carrión-Bósquez, & Regalado, 2023, p. 3800; Dasic, Radosavac, Knezevic, & Djervida, 2019, p. 128). These harmful production techniques have not gone unnoticed by consumers, who are inundated with various environmental issues daily and are thus changing their purchase behavior. This behavioral purchase change is directed at environmental preservation, health concerns, and life longevity (Melovic, Dabic, Rogic, Durisic, & Prorok, 2020, p. 1131; Radojevic et al., 2020, p. 2). Evermore so, consumers are looking for alternatives from unsustainable and unhealthy food products to healthier lifestyles (Fatha & Ayoubi, 2023, p. 499).

On numerous occasions, organic food products have been associated with possessing health benefits because these particular food products are grown/produced free from harmful chemicals, growth hormones, or pesticides (Dasic et al., 2019, p. 129). Furthermore, the production process of organic products is more environmentally friendly than that of conventional products, i.e., food processing (humane stock management) and packaging methods (environmentally friendly containers), amongst others (South African Online, 2021). Awareness of organic food products is relatively in its infancy compared to conventional products; however, market demand is on the rise (Fatha & Ayoubi, 2023, p. 499). This holds true for Generation Y consumers, who feel more responsible for protecting and conserving the environment than preceding generations (Hoyos-Vallejo et al., 2023, p. 3802; Melovic et al., 2020). Consumer perceptions play a pivotal role in the consumer decision-making process, and this is no different from the recent uptrend in the organic food product industry (Ghorai, Sinha, & Bag, 2021, p. 48). Purchase behavior is often evaluated by gender across many industries, as is the case with environmental products and, subsequently, organic food products. In the environmental/green industry, the stereotypical green consumer is almost always considered a woman (Otterbring, 2023, p. 452). Prado and Maraes (2020, p. 357) add that women are more likely to be concerned about the environment. However, they postulate that some consumption needs of youthful men and women may differ as they are individualistic. The question put forward then is: Are there differences in the perceptions of South African male and female consumers towards organic food products? This paper investigates the perceptual factors of organic food knowledge, organic food attitudes, health consciousness, perceived behavior control, and purchase intentions of Generation Y consumers in South Africa.

Literature review

Consumers are actively seeking organic food products because of the health benefits they impose. Knowledge and understanding of these products may alter consumer attitudes toward favorable adoption behavior. Furthermore, the actual ability to obtain these products is a personal choice based on health claims that organic food products claim to have (Bernabeu, Nieto, & Rabadab, 2022, p. 1; Melovic et al., 2020, p. 1131).

Organic food knowledge

The organic food industry has adoption barriers, as would any other product. One of those barriers is a lack of knowledge about organic foods. Organic food knowledge

refers to whether a consumer is knowledgeable regarding the production or process methods of organic food products (Wang, Pacho, Liu, & Kajungiro., 2019, p. 7). Moreover, lack of information about organic products forms adoption purchase intention barriers (Hoyos-Vallejo et al., 2023, p. 3801). As such, consumers more knowledgeable and informed about organic products are more likely to become adopters of organic food products. This notion is supported by various studies that have found positive environmental knowledge to be directly linked to the formation of positive attitudes and, therefore, positive purchase intentions of organic food products (Hoyos-Vallejo et al., 2023; Fatha & Ayoubi, 2023; Wang et al., 2019). Hence, we hypothesize:

H_{1a} Organic food knowledge positively influences male Generation Y consumers' purchase intentions of organic food products.

H_{1b} Organic food knowledge positively influences female Generation Y consumers' purchase intentions of organic food products.

Organic food attitudes

Positive attitudes are directly linked with an individual's tenacity to purchase or engage in buying behavior for any product category. This aligns with the well-known theory of planned behavior proposed by Ajzen (1991). Therefore, it may be theorized that the same premise would apply to organic food products. Positive consumer attitudes toward organic products should result in the pro-purchase behavior of organic food products (Gundala, Nawaz, Harindranath, & Boobalan., 2022). However, male and female behavior differs because of the differences in their social upbringing according to the gender socialization theory (Chodorow, 1978). Similarly, men and women attitudes regarding organic food products may differ due to social upbringing (Gundala et al., 2022; Prado & Maraes, 2020, p. 357). Based on this assumption, the following hypotheses were made:

H_{2a} Organic food attitudes positively influence male Generation Y consumers' purchase intentions of organic food products.

H_{2b} Organic food attitudes positively influence female Generation Y consumers' purchase intentions of organic food products.

Health consciousness

The increase in consumer health consciousness and ecological protection concerns has increased the demand for organic food products (Prado & Maraes, 2020). Within the framework of the organic industry, a health-conscious consumer is an individual who is cognizant of a "healthy style of living" and is actively trying to live in this fashion (Afable, 2019). Health consciousness is the subjective intent of a consumer to improve their physical health by consuming organic products (Phan & Mai, 2016). Organic food products are considered healthier alternatives to conventional products because these products are free from harmful pesticides and chemicals; as such, health is a primary consideration in the purchase decision of consumers (Melovic et al., 2020, p. 1132; Wolfson, 2019). Thus, consumers with a higher sense of health consciousness are more

likely to have great purchase intentions toward organic food products. In accordance with this, the following hypotheses were made:

H_{3a} Health consciousness positively influences male Generation Y consumers' purchase intentions of organic food products.

H_{3b} Health consciousness positively influences female Generation Y consumers' purchase intentions of organic food products.

Perceived behavior control

The purchase of organic food products is largely dependent on their availability. Perceived behavioral control can be defined as a consumer's perceptive capability to obtain or carry out a behavior despite any prevailing barriers they may face (Hoyo-Vallejo et al., 2023, p. 3804). The availability of organic food products often faces availability concerns in some regions. Furthermore, organic food products are somewhat more expensive than traditional food products. These barriers may cause negative attitudes to form in consumers. However, individuals who continuously engage in the behavior despite the barriers may develop positive attitudes toward the behavior (Cherry, 2021; Ajzen, 1991). As such, the following hypotheses were formed:

$H4_a$ Perceived behavior control positively influences male Generation Y consumers' purchase intentions of organic food products.

H4b Perceived behavior control positively influences female Generation Y consumers' purchase intentions of organic food products.

The youthful Generation Y cohort "includes individuals born between 1986 and 2005" (Markert, 2004, p. 21), which makes these individuals between the ages of 18 and 38 years in 2024. The South African Generation Y cohort constituted approximately 42 percent of the population in 2022 (Statistics South Africa, 2022). The preceding section outlines the research objectives undertaken in the study.

Based on the literature discussed above, the authors proposed the following theoretical model for both male and female samples. The model is displayed in Figure 1 below:

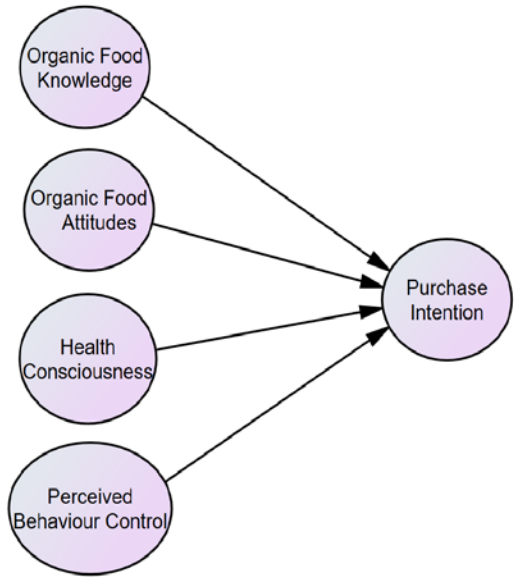

Figure 1: Proposed theoretical model (Authors' work)

Research objectives

The study delineated the following research objectives:

- To examine the relationships between organic food knowledge, organic food attitudes, health consciousness, perceived behavior control, and purchase intentions of Generation Y consumers.
- To investigate the influence of organic food knowledge and attitudes, health consciousness, and perceived behavior control of male Generation Y consumers towards purchase intentions of organic food products.
- To investigate the influence of organic food knowledge and attitudes, health consciousness, and perceived behavior control of female Generation Y consumers towards purchase intentions of organic food products.

The study's methodology is presented below.

Methodology

Research design

The methodological approach for this study encompassed a descriptive research design using a single cross-sectional analysis to collect the required data. Moreover, the study's research paradigm was grounded in the positivist approach. As a cross-sectional study, data were collected at a single point in time, whereas a positivist approach assumes that reality is objective and can be observed through empirical methods (Hair, Black, Babin, & Anderson, 2019, p. 28; Malhotra, Nunan, & Birks, 2017).

Target population

South African Generation Y consumers aged between 18 and 35 years were the intended target population for the study. The target population parameters are outlined below:

- Element: South African citizens
- Sampling unit: IPSOS research company panel
- Extent: South Africa
- Size: 500 participants
- Period: 2022

Sampling technique and data collection

The internationally reputable research company IPSOS was contracted to collect the data required to achieve the study's objectives. The South African division of IPSOS boasts a comprehensive dataset of approximately 40,000 consumers across the country. Owing to the significantly sized participant pool, response rates of 100 percent of the researchers' desired sample sizes are not uncommon. Researchers must specify the parameters/criteria for IPSOS to collect accurate data from respondents. The parameters for this study included any South African citizen aged between 18 and 35. The data timeframe was set at three days in 2022. To account for biased results, IPSOS complies with all ethical research practices, such as the POPI Act of South Africa.

Sample size

Prior studies similar to this study served as the basis for the sample size. The following studies' sample sizes were analyzed and compared: Bernabeu *et al*. (2022, p. 2) (sample size: 415); Hansmann, Baur, and Binder (2020, p. 1) (sample size: 620); Gundala et al. (2022, p. 1) (sample size: 633); Tandon, Jabeen, Talwar, Sakashita, and Dhir (2021: 104077) (sample size: 928); Radojevic et al. (2020, p. 6) (sample size: 496); Wang, Thuy, & Dang. (2020, p. 1) (sample size: 518) and Dasic et al. (2019, p. 129) (sample size:400). Accordingly, the chosen sample size of 500 respondents was then seen as appropriate for the needs of this study.

Measuring instrument and data collection technique

The data collection company IPSOS uses various data collection techniques. This study made use of the company's FastFacts data collection method. This technique involves each respondent undertaking a self-administered, structured online questionnaire at their leisure in a specified period. The participants could only complete the questionnaire once, and all measuring constructs were adopted from prior validated research. The questionnaire itself included a cover page outlining the purpose of the study, displaying the ethics number, and ensuring the anonymity of the survey. The cover letter also explained that all responses would be used statistically. The questionnaire was split into two components, namely Section (A), which captured the demographics of the respondents, and Section (B), which recorded the measurement scale's constructs.

The validated scale of Sing and Verma (2017) was used to assess the target samples' level of organic food knowledge. Attitude towards organic food products was

measured using Yadav and Pathak (2016), whilst health consciousness was taken from Tarkiainen and Sundqvist (2005). Finally, the scales of Kim and Choi (2005) and Mostafa (2007) were used to measure Millennials' perceived behavior control and purchase intentions towards organic food products. All measuring constructs were adapted to fit the needs of this study without changing the intent or purpose of each item. The questionnaire used a six-point Likert scale, with 6 indicating “strongly agree” and 1 indicating “strongly disagree.”

The physical distribution of the questionnaire used the FastFact program, which prevents respondents from moving back and forth between pages/questions. Furthermore, the program does not allow respondents to advance to the next section until all responses have not been selected, nor does it enable the participants to skip or select two answers for one question. The parameters of the questionnaire given to IPSOS by the researcher were twofold: first, the questionnaire was available to respondents for 3 days, and second, only 500 questionnaires were allowed to be completed. Consequently, the questionnaire will be closed if the three-day time limit expires before reaching the 500-response mark or the 500-questionnaire limit is reached before the three-day time limit. The respondents were rewarded with a small shopping voucher from the research company for completing the assigned questionnaire. The nature of the structured questionnaire design, coupled with the guided restrictions of answering the questionnaire, often ensures a 100 percent response rate. The response rate for this study was 100 percent.

Ethics

Standard research practices require that the measuring instrument be subjected to ethical measures. As such, the studies questionnaire was subjected to the ethics committee of the Economics and Management Sciences Research Ethics Committee at North-West University. The study was deemed non-invasive to respondents and received the ethics number NWU-00567-20-A4.

Results and discussion

IBM’s Statistical Package for Social Sciences (SPSS), version 29, was used to analyze the captured data for this paper. Various statistical methods were used to achieve the study's research objectives, including outlier statistics, internal consistency reliability, descriptive statistics, correlation analysis, and multiple regression analysis. The empirical portion of the study is presented below.

Outlier statistics

Regarding data collection, the 500-questionnaire limit was reached well before the allotted 3-day time frame, resulting in a 100 percent response rate. Outlier statistics were undertaken to identify cases deviating significantly from the general population's opinion (Hair *et al*., 2019; Pallant, 2016;). Furthermore, this study analyzed gender differences; the data sets were split into male and female data sets. Each data set was subjected to the Mahalanobis statistic outlier detection test. A variable construct constitutes that any Mahalanobis statistic greater than 20.515 is considered an outlier and subsequently deleted from the data set (chi-square value for a=0.01 at 5 degrees of

freedom). To conduct the outlier analysis, the data set case numbers were set as a dummy dependent variable, and the measuring constructs were set as the independent variables. It must be noted that two respondents did not indicate their gender. As such, those two cases were omitted entirely from the data set. The results are shown in Table 1 below.

Table 1. Outlier statistics (Authors' work)

		Original data set		**Male sample**		**Female sample**	
		Case number	*Statistic*	*Case number*	*Statistic*	*Case number*	*Statistic*
Mah. distance	**1**	**128**	40.531	**364**	29.445	**128**	35.941
	2	**364**	29.889	**334**	24.943	**456**	29.721
	3	**334**	27.743	**152**	23.233	**6**	27.579
	4	**156**	27.212	**434**	23.223	**227**	27.579
	5	**6**	24.956	**84**	21.846	470	20.024
	6	**152**	24.956	189	18.882		
	7	**227**	24.956				
	8	**434**	24.956				
	9	**84**	22.850				
	10	**185**	21.637				
	11	**470**	20.764				
	12	146	18.814				
Note: Bold cases were deleted							

For the entire data set, 11 cases reported a Mahalanobis statistic above the threshold value 20.515. For the male data set, 5 cases exceeded 20.515, and the female data set recorded 4 cases above the threshold (chi-square value at a=0.001 with 5 degrees of freedom). As such, the 11, five, and four cases were considered outliers from each data set and were respectfully removed from each data set. Once the cases were removed from the data sets, it left 487 cases for the complete set, 238 for the male set, and 249 for the female data set.

Descriptive statistics and internal consistency reliability

The characteristics of the data set were outlined using descriptive statistics using a six-point Likert scale. Mean values above 3.0 are indicative of positive associations of the measuring constructs. The Cronbach alpha statistic measured the internal consistency reliability of the study. The results of the descriptive statistics are presented in Table 2 below.

Table 2. Reliability and descriptive statistics (Authors' work)

Constructs	**Items**	**Original data set N = 487**		**Male sample N = 238**		**Female sample N = 249**		**Cronbach alpha**
	n	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**α**
Organic food knowledge	3	4.57	1.01	4.63	1.01	4.51	1.01	0.77
Organic food attitudes	4	5.01	0.83	4.94	0.86	5.09	0.78	0.89
Health consciousness	3	4.76	0.97	4.79	0.98	4.75	0.97	0.86

Perceived behavior control	5	5.07	0.71	5.01	0.75	5.13	0.67	0.81
Purchase intention	3	4.75	0.93	4.70	0.98	4.81	0.88	0.89

As can be seen from Table 2, the mean scores for each variation of the data set are 4.00. The results indicate positive associations for Millennials regarding adopting organic food products. The measuring scale's reliability returned Cronbach alpha values exceeding 0.80 except for organic food knowledge, which returned an estimated 0.77. As such, all constructs can be considered to have good to excellent reliability (Malhotra, 2020). The preceding section concerns the correlation analysis of the study.

Correlation analysis

A Pearson product-moment correlation analysis was conducted to ensure no multicollinearity was present between the measuring constructs and to assert the nomological validity of the male and female data sets. The bottom half of the matrix displays the correlations of the male sample, whilst the top half of the matrix displays the correlations of the female sample. The correlation matrix can be found in Table 3 below.

Table 3. Correlation matrix of male and female samples (Authors' work)

Constructs	**1** *Female sample*	**2** *Female sample*	**3** *Female sample*	**4** *Female sample*	**5** *Female sample*
1. Organic food knowledge *Male sample*	1	0.645**	0.644**	0.445**	0.604**
2. Organic food attitudes *Male sample*	0.700**	1	0.545**	0.424**	0.645**
3. Health Consciousness *Male sample*	0.682**	0.602**	1	0.442**	0.615**
4. Perceived behaviour control *Male sample*	0.517**	0.585**	0.545**	1	0.541**
5. Purchase intention *Male sample*	0.701**	0.734**	0.610**	0.601**	1
**Correlation is significant at the 0.01 level (2-tailed)					

Both data sets returned statistically significant positive correlation coefficients between all measuring constructs at the p = 0.01 level. Malhotra (2020) asserts that these findings indicate nomological validity in the data sets. Furthermore, no correlation coefficient reported a score greater than 0.90, suggesting no multicollinearity. As such, proceeding with the multiple regression analysis was deemed safe. The preceding section outlines the path analysis using multiple regression statistics.

Multiple regression analysis

A multiple regression analysis was conducted to determine the predictability of the independent factors of organic food knowledge, organic food attitudes, health consciousness, and perceived behavior control on male and female purchase intentions. The regression analysis of both data sets can be found in Tables 4 and 5, respectively.

Table 4. Multiple linear regression analysis, Male sample (Authors' work)

Dependent Variable: Purchase Intention	**Standardized Beta**	**t-value**	**p-value**	**Collinearity statistics**	
Independent variables: male sample				**Tol.**	**VIF**
Organic food knowledge	0.276	4.537	0.000*	0.402	2.485
Organic food attitudes	0.371	6.211	0.000*	0.433	2.308
Health Consciousness	0.092	1.604	0.110	0.474	2.108
Perceived behavior control	0.188	3.698	0.000*	0.598	1.674
Adjusted R^2 = 0.640 *Significant at the 0.05 level (2-tailed) Note: Tol. = Tolerance value, VIF= Variance inflation					

The results of the male data set, as presented in Table 4, show that Generation Y males' purchase intentions are significantly positively influenced by organic food knowledge (ß = 0.276, p = 0.000<0.05), organic food attitudes (ß = 0.371, p = 0.000<0.05) and perceived behavior control (ß = 0.188, p = 0.000<0.05). The largest predictor was that of organic food attitudes towards purchase intention, which is aligned with prior literature (Fatha & Ayoubi, 2023; Hoyo-Vallejo *et al*., 2023; Gundala *et al*., 2022). As such, hypotheses $H1_a$,2_a, and $H4_a$ can be concluded as they were significant at the p = 0.000 level. Surprisingly, health consciousness did not significantly predict male Generation Y purchase intentions (ß = 0.092, p = 0.110<0.05) for organic food products. Consequently, $H3_a$ was rejected based on p = 0.110<0.05. The independent variables explained 64 percent of the male sample's purchase intentions variance. The regression model returned acceptable tolerance (tol>0.1) and VIF values VIF<10). Table 5 below shows the results for the female sample.

Table 5. Multiple linear regression analysis, Female sample (Authors' work)

Dependent Variable: Purchase Intention	**Standardized Beta**	**t-value**	**p-value**	**Collinearity statistics**	
Independent variables: female sample				**Tol.**	**VIF**
Organic food knowledge	0.128	2.035	0.043*	0.453	2.210
Organic food attitudes	0.326	5.683	0.000*	0.541	1.848
Health Consciousness	0.251	4.354	0.000*	0.536	1.86
Perceived behavior control	0.235	4.789	0.000*	0.742	1.348
Adjusted R^2 = 0.569 *Significant at the 0.05 level (2-tailed) Note: Tol. = Tolerance value, VIF= Variance inflation					

The results of the female data set, as presented in Table 5, show that Generation Y females' purchase intentions are significantly positively influenced by organic food knowledge (ß = 0.128, p = 0.043<0.05), organic food attitudes (ß = 0.326, p = 0.000<0.05), health consciousness (ß = 0.251, p = 0.000<0.05) and perceived behavior control (ß = 0.235, p = 0.000<0.05). As was the case in the male sample, the most significant predictor was organic food attitudes towards purchase intention (ß = 0.326, p = 0.000<0.05), which is aligned with prior literature (Fatha & Ayoubi, 2023; Hoyo-Vallejo *et al*., 2023; Gundala *et al*., 2022). However, health consciousness significantly predicted female Generation Y purchase intentions for organic food products. As such, hypotheses $H1_b$, 2_b, 3_b, and $H4_b$ may all be concluded based on the significantly returned values (p = 000<0.05). The four independent variables explained 57 percent of the variance in purchase intentions. The regression model returned acceptable tolerance (tol<0.1) and VIF values (VIF>10).

Managerial implications

The gender gap in marketing persists among today's youth regarding environmental topics, such as organic food purchases. The results from this study showcase these differences to any potential South African marketers looking to penetrate the organic food market industry.

The main finding of this study relates to the lack of health awareness amongst male Generation Y consumers. Marketers must employ insightful, informative campaigns aimed at male consumers to raise awareness of organic food products and shift perceptions. Typical marketing campaigns can highlight to male Generation Y consumers that organic food products are made free from harmful pesticides and chemicals, which could increase life expectancy. Furthermore, campaigns can target male fitness enthusiasts to promote organic food products, which naturally boost physical performance.

Overall, taking both genders into account, the emphasis of marketing campaigns should continue to target the Generation Y cohort by showcasing the health benefits that organic food products retain. This cohort continues to be highly cognisant of environmental issues, so they are highly prone to purchasing organic food products. It is noteworthy to market organic food equally to both genders as prior efforts have been geared more towards female consumers.

Conclusion

Environmental issues have undoubtedly changed how consumers make everyday purchase decisions. The Generation Y cohort has followed suit, with their purchase decisions influenced by a need to protect the environment and personal health goals.

This study found that both male and female South African Generation Y consumers have positive attitudes and are knowledgeable regarding organic food products. Furthermore, they perceive buying organic products as attainable. Despite males seemingly not caring for their personal health issues as their counterparts do, the majority of perceptions were similar. These results bode well for adopting organic food products in South Africa. Nonetheless, gender still plays a role in environmental issues, and it is vital to investigate such matters. This sentiment is especially true, as Generation Y consumers differ from their predecessors in their thinking and behavior. Moreover, this cohort is currently an economic powerhouse capable of changing the ecological environment's future with its purchase decisions. Furthermore, understanding the cohort's organic food purchase intentions can significantly improve environmental conditions.

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