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The Influence of Organic Food Purchase Intention on Household Food Waste: Insights from Brazil

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Abstract: An emerging trend among consumers is the pursuit of healthier eating habits while minimizing environmental damage, thus increasing the intention for consumption of organic foods. In this context, this study hypothesizes that household food waste is influenced by organic food purchase intention, which, in turn, is influenced by environmental concern, health consciousness, hedonic shopping, and negatively affected by price. Hence, the objective of this study is to propose and empirically test a theoretical framework with Brazilian consumers. Data from 240 respondents were electronically collected and analyzed through structural equation modeling. The results suggest that environmental concern, price consciousness, and health consciousness significantly influence organic food purchase intention, while hedonic shopping value does not. Furthermore, although organic food purchase intention reduced household food waste, the effect size of this relationship was found to be extremely low, suggesting it to be a poor predictor. This paper contributes to the existing literature on consumer behavior and waste management further by not only examining the relationship between two research streams but also by shedding light on unique aspects of an emerging country.

Keywords: food surplus; green consumers; partial least squares; structural equation modeling; quantitative analysis; sustainable behavior

1. Introduction

The lifestyles and behaviors of the global population have been significantly influenced by climate and environmental changes. Many important economic and social agents have implemented strategies to mitigate environmental impacts or reverse the damages caused by non-sustainable production and distribution practices. A transition process towards a sustainable ecosystem has been observed, with governments, environmentalists, and changes in consumer intentions and behaviors playing key roles [1,2].

The sustainable transition process varies between developed and developing countries due to cultural and structural differences. While developed countries are the leaders of sustainability actions and solutions, emerging countries, such as Brazil, have also made significant efforts to adopt sustainable practices in their supply chains for durable and consumer goods [3].

Strategies and actions to address climate issues and improve environmental performance differ according to the idiosyncrasies of the supply chain and the unique characteristics and challenges of each industrial sector. The agri-food sector, for instance, faces issues

concerning food supply, as highlighted in agribusiness management literature [4]. Similarly, issues related to the origin of food and sanitary standards surrounding its production and consumption have been recurrently studied [5,6].

In this context, organizations and individuals have shown a preference for adopting production models and consumption behaviors that minimize environmental impacts. Individuals who intend to purchase more sustainable products and engage in pro-environmental behavior are commonly referred to as green consumers [7]. It is worth noting that the environmental actions by green consumers extend beyond purchasing or disposal [8], also encompassing issues related to waste reduction [9,10]. Reducing waste in food consumption is thus a strategy aimed at environmental preservation, which precisely aligns with the United Nations' (UN) Sustainable Development Goal (SDG) 12 of reducing food waste by 50% by 2030.

The research entitled "Overview of Organic Consumption in Brazil" [11] provided an analysis of organic consumption patterns among a sample of 1000 individuals in Brazil. The findings reveal that approximately 36% of respondents reported recent consumption of organic food within the past 30 days, while another 10% indicated its consumption within the last 6 months. Notably, numerous participants cited the higher price of organic products, yet they justified this expenditure due to perceived benefits such as pesticide-free production, superior quality, and enhanced cultivation practices. Furthermore, another study [12] highlights Brazil's alignment with the global trend in organic food consumption. Moreover, it elucidates that educational attainment exerts a stronger influence than per capita income on the decision to embrace organic diets. Additionally, variables including age, residential locale, and health consciousness emerged as pivotal factors shaping organic food consumption behaviors.

In this perspective, the production and consumption of organic products may play a significant role in mitigating environmental problems. Apart from addressing immediate environmental concerns, the consumption of organic products is also driven by consumers' pursuit of healthy eating habits that improve their quality of life [13]. Evidence suggests that socio-environmental awareness influences the purchase of organic products [8]. Consequently, environmental and social consciousness emerges as a determining factor in promoting the consumption of food produced without the use of synthetic inputs, such as pesticides and chemical fertilizers, which are seen as detrimental to the balance of ecosystems [14,15].

The existing literature [16] suggests that consumers of organic foods, or green consumers in general, tend to adopt a more holistic attitude towards food consumption and food disposal. In fact, most of the studies [17–22] aim to uncover the antecedents of these factors individually, with a few exceptions [14,23] attempting to establish an association between them. This implies that the current evidence is insufficient for drawing further conclusions regarding a potential causal relationship between attitudes towards organic food consumption and food waste. Hence, this research was designed to answer the following questions: (1) Do environmental concern, price consciousness, hedonic shopping values, and health consciousness serve as significant predictors of organic food purchase intention? (2) Is organic food purchase intention a robust predictor of household food waste?

This article is structured as follows. In Section Two, a theoretical model is presented, and the research hypotheses are formulated. Next, the description of the methodological design adopted to achieve the study's main objective is presented in the Section Three. In Section Four, the results are presented and discussed, while Section Five provides concluding remarks, identifies key theoretical and practical implications, and highlights research limitations and suggestions for future studies.

2. Literature Review and Development of Hypotheses

Sustainability is built upon economic, social, and environmental principles, commonly known as the triple bottom line approach [24]. This approach urges organizations to assess their performance using a multidimensional perspective that combines traditional financial

indicators, such as profit, return on investment, and so forth, with environmental and social aspects. Following this rationale, the UN proposed the 2030 agenda with the SDGs.

Within the SDG 12, food waste and loss reduction are of paramount importance due to their significant social, economic, and environmental impacts [25]. As ambitious as it may sound, the UN's SDG 12 seeks to achieve a reduction of food waste per capita by 50% until 2030, despite the challenges of implementing measures to minimize household food waste [26]. Household food waste often arises as an unintended consequence of competing goals regarding how consumers buy, store, prepare, and handle their food and leftovers [27]. One can emphasize that food waste represents an increasing social, economic, and environmental concern, regardless of the economic context [25].

This article examines the direct influence of four predictors of organic food purchase intention, and subsequently tests its impact on food waste in Brazilian households (Figure 1).
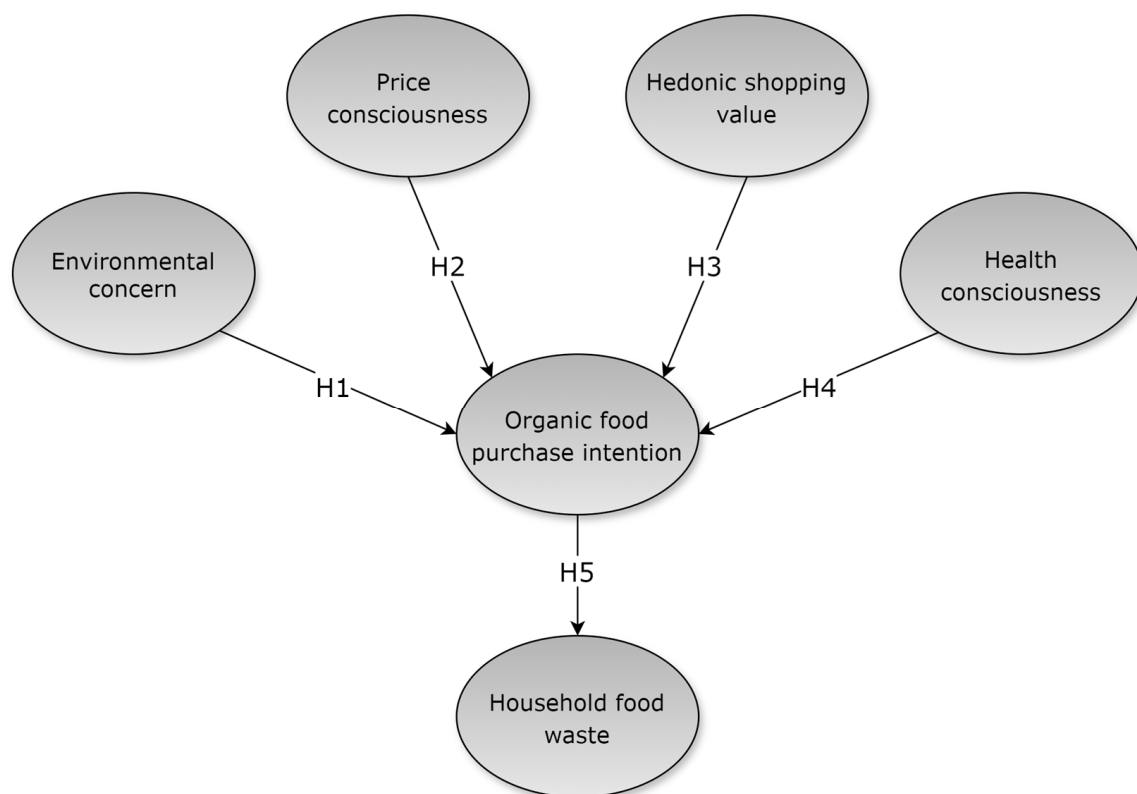
Figure 1. Proposed conceptual model.

Environmental concern refers to an individual's level of interest and engagement with environmental issues. Individuals who are environmentally concerned are more likely to take actions for environmental protection [28,29]. The growing awareness of the fine balance between nature and human life has led to an increased emphasis on environmental concerns in recent years. Consequently, many researchers have used the construct of environmental concern as a predictor of various behavioral intentions [30]. Thus, environmental concern plays a key role in determining the intention to purchase organic products since such purchases are considered pro-environmental behaviors [31]. Based on these arguments, the following hypothesis is proposed:

Hypothesis 1 (H1). *Environmental concern has a positive effect on organic food purchase intention.*

Price consciousness is defined as "the degree to which the consumer focuses exclusively on paying low prices" [32]. Price-conscious consumers tend to reject buying a product if its selling price exceeds what they consider acceptable [33]. Price is a crucial

factor influencing consumers' purchasing decisions as it conveys the value and quality of a product or service [34]. Therefore, when the perceived value of a certain product is high, customers may pay more for it. This phenomenon is likely to occur when the product offers some kind of differentiation, such as organic food [35]. At the same time, high prices have also been identified as a significant barrier to the purchase and consumption of organic food [36]. Therefore, the following can be hypothesized:

Hypothesis 2 (H2). *Price consciousness has a negative effect on organic food purchase intention.*

Hedonic shopping value can be defined as the overall assessment of experiential benefits and sacrifices associated with shopping [37]. It considers subjective and individualistic values, rather than solely rational and objective aspects, as proposed by the utilitarian approach [38]. Hedonic shopping value helps explain to a certain extent why consumers make purchase decisions based on value perception rather than just price. It also helps explain why some consumers are willing to pay a premium price for organic products. Thus, the feeling of happiness and excitement experienced by consumers when choosing food that brings personal and environmental benefits [39] by avoiding the use of chemical inputs [40] tends to influence their intention to purchase organic food. This leads to the following hypothesis:

Hypothesis 3 (H3). *Hedonic shopping value has a positive effect on organic food purchase intention.*

Health consciousness is another predictor of food purchase intention, particularly regarding organic food [41]. Empirical evidence suggests that green consumers [42] have a higher propensity to adopt healthier eating habits [5] and stricter positions regarding food safety [43]. One can also suggest that such consumers have become increasingly averse to the use of pesticides, antibiotics, transgenic products, and other types of technologies [15]. Hence, the following hypothesis is proposed:

Hypothesis 4 (H4). *Health consciousness has a positive effect on organic food purchase intention.*

According to what was previously mentioned, organic food consumers have a higher propensity to adopt sustainable [44] and responsible consumption practices [45]. As already exposed, such practices are motivated not only by the adoption of healthier eating habits but also by the concern for animal well-being and environmental issues [5]. When compared to ordinary consumers, green consumers also tend to adopt an eco-friendly lifestyle [8]. Hence, if organic food purchase intention is considered a potential conscious or unconscious action of sustainable food consumption [46], it could contribute to reducing food wastage in households. Thus, it is possible to propose the following hypothesis:

Hypothesis 5 (H5). *Organic food purchase intention has a negative effect on household food waste.*

3. Methodological Design

This study employs a survey research design with a confirmatory quantitative approach. The partial least squares structural equation modeling (PLS-SEM) technique was used to test the hypotheses, evaluate the internal consistency and reliability, as well as estimate the path coefficients of the model. PLS-SEM is a well-known technique to examine directional relations in complex models. It is worth noting that PLS-SEM assumptions are less restrictive in terms of data distribution, sample size, and scales of measurement, which leads to fewer estimation problems [47].

An online self-evaluation survey was conducted in March 2023. The survey questionnaire was hosted on the SurveyMonkey® platform and distributed through paid advertisements on social media platforms, more precisely Facebook and Instagram, to ensure a diverse range of participants from different regions of Brazil. The initial section of the

questionnaire introduced the study goals and presented the informed consent form. Subsequently, participants responded to a question regarding their consumption of organic food, followed by a definition of organic food. To test the research hypotheses, validated scales from previous studies were adopted (see Appendix A). The items were chosen considering the Brazilian context, culture, and language. All items were measured as perceptions on a 7-point Likert scale, from "1 = strongly disagree" to "7 = strongly agree".

The sample size required for this research design was estimated using the G*power calculator [48]. The minimum required sample size was 129 respondents, considering an effect size (f^2) of 0.15, a confidence level of 95%, and four latent variables. Overall, 240 answers were collected. An overview of the respondents' profiles and the descriptive statistics are displayed in Table 1.

Table 1. Socio-demographic characteristics of the study participants (n = 240).

Characteristic	Answer Option	Frequency	Percentage (%)
	Male	44	18.3
Gender	Female	193	80.4
	Other	1	0.4
	Prefer not to answer	2	0.8
	18–25	15	6.3
	26–35	12	5
Age	36–45	24	10
	46–55	42	17.5
	56–65	96	40
	66+	51	21.3
	Incomplete middle school	5	2.1
	Complete middle school	1	0.4
	Incomplete high school	3	1.3
Educational level	Complete high school	41	17.1
	Incomplete higher education	29	12.1
	Complete higher education	69	28.7
	Post-graduation	92	38.3
	Up to 1 minimum wage (up to R$1100.00)	13	5.4
	1 to 3 minimum wages (R$1100.01 to R$3300.00)	63	26.3
Monthly average household income	3 to 6 minimum wages (R$3300.01 to R$6600.00)	49	20.4
	6 to 9 minimum wages (R$6600.01 to R$9900.00)	34	14.2
	More than 9 minimum wages (more than R$9900.01)	30	12.5
	Prefer not to answer	26	10.8
	1	57	23.8
	2	85	35.4
Number of household members	3	48	20
	4	26	15
	5 +	14	5.8

The study sample is predominantly comprised of female individuals (80.4%). The most representative age group is individuals aged 66 years and older (40%), followed by those between 46 and 55 years old (17.5%). Regarding education degree, the majority hold a postgraduate degree (38.3%), while a significant portion completed undergraduate studies (28.7%). Concerning average monthly household income, there is a considerable variation, but the largest proportion of participants earn between 1 and 3 minimum wages (26.3%). The distribution of family size is balanced. It is imperative to consider the impact of these socio-economic characteristics on the outcomes of the study. For instance, the prevalence of women and older individuals with high educational attainment may have some impact on the results. These nuances must be taken into account to ensure a comprehensive and contextualized interpretation of the data.

4. Analyses and Results

4.1. Evaluation of the Measurement Model

First, the instrument's internal consistency was assessed using the following two criteria: Cronbach's alpha and composite reliability. Cronbach's alpha values between 0.6 and 0.7 are considered acceptable, while composite reliability values between 0.7 and 0.9 are considered good [49]. Values close to one are desirable as they indicate that all items from the latent variable measure the same phenomenon [47]. In this study, Cronbach's alpha values ranged from 0.713 to 0.923, while composite reliability values ranged from 0.808 to 0.943 (see Table 2). It is important to highlight that items AMB1, AMB5, and SAU4 were dropped due to low factor loadings, which negatively affected Cronbach's alpha, composite reliability, and average variance extracted (AVE) values.

Table 2. Construct reliability and convergent validity.

Construct	Items *	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Environmental concern	AMB2	0.644	0.713	0.808	0.513
	AMB3	0.747			
	AMB4	0.766			
	AMB6	0.703			
Price consciousness	PRE1	0.928	0.846	0.876	0.645
	PRE2	0.900			
	PRE3	0.608			
	PRE4	0.736			
Hedonic shopping value	PRA1	0.789	0.881	0.913	0.681
	PRA2	0.602			
	PRA3	0.898			
	PRA4	0.919			
	PRA5	0.876			
Health consciousness	SAU1	0.874	0.864	0.908	0.712
	SAU2	0.880			
	SAU3	0.826			
	SAU5	0.792			
Organic food purchase intention	ORG1	0.910	0.923	0.942	0.764
	ORG2	0.889			
	ORG3	0.891			
	ORG4	0.797			
	ORG5	0.879			
Household food waste	DAL1	0.734	0.811	0.876	0.638
	DAL2	0.835			
	DAL3	0.817			
	DAL4	0.806			

* AMB = environmental concern. PRE = price consciousness. PRA = pleasure in purchasing. SAU = health consciousness. ORG = organic food purchase intention. DAL = food waste in households.

Second, construct validity, which refers to the extent to which items are explained by the underlying construct [50], was assessed. Convergent and discriminant validity analyses were conducted for this purpose. Convergent validity was evaluated by examining outer loadings and AVE values. Outer loadings should exceed 0.7, and AVE values should be above 0.5 [47]. Items with outer loadings between 0.4 and 0.7 may be dropped if their exclusion improves composite reliability or AVE. Although items PRE3 and PRA2 (see Table 2) presented outer loadings below 0.7, they were retained since their exclusion did not significantly affect AVE values. Overall, outer loading and AVE values were satisfactory, as they fell within the desired parameters.

Finally, discriminant validity was assessed through Fornell–Larcker's criterion, cross-loadings, and the heterotrait–monotrait ratio (HTMT). According to Fornell and Larcker's criterion, the square root of the AVE of each latent variable should be higher than the

correlations involving the latent variables. As shown in Table 3, discriminant validity was also confirmed by Fornell and Larcker's criterion.

Table 3. Fornell and Larcker's criterion.

	Construct	1	2	3	4	5	6
1	Price consciousness	0.803					
2	Health consciousness	0.226	0.844				
3	Household food waste	−0.025	−0.130	0.799			
4	Purchase intention	−0.158	0.252	−0.160	0.874		
5	Hedonic shopping value	0.124	0.175	−0.005	0.115	0.825	
6	Environmental concern	0.121	0.298	−0.093	0.272	−0.006	0.716

Note: The highlighted values represent the square root of the AVE.

The second criterion to establish discriminant validity is to assess the cross-loadings of each latent variable in its respective column. The outer loading of each item should be higher than its construct when compared to the loading of other constructs. Table 4 shows that all items had higher outer loadings in their constructs, which means that there were no discriminant validity problems.

Table 4. Cross-loadings analysis.

	Construct	Items	1	2	3	4	5	6
1	Environmental concern	AMB2	0.644	0.006	0.096	−0.048	0.066	0.117
		AMB3	0.747	−0.15	0.270	0.071	0.074	0.223
		AMB4	0.766	0.001	0.172	−0.025	0.194	0.274
		AMB6	0.703	−0.048	0.167	−0.08	0.014	0.205
2	Household food waste	DAL1	−0.088	0.734	−0.142	−0.023	−0.043	−0.078
		DAL2	−0.095	0.835	−0.133	0.032	−0.049	−0.046
		DAL3	−0.081	0.817	−0.111	0.009	0.058	−0.115
		DAL4	−0.027	0.806	−0.119	−0.035	−0.033	−0.185
3	Organic food purchase intention	ORG1	0.266	−0.115	0.910	0.105	−0.166	0.207
		ORG2	0.252	−0.146	0.889	0.079	−0.091	0.309
		ORG3	0.253	−0.104	0.891	0.12	−0.106	0.288
		ORG4	0.185	−0.178	0.797	0.075	−0.148	0.093
		ORG5	0.225	−0.169	0.879	0.121	−0.182	0.178
4	Hedonic shopping values	PRA1	0.042	−0.101	0.063	0.789	0.157	0.199
		PRA2	−0.066	0.171	0.041	0.602	0.052	0.084
		PRA3	0.008	−0.021	0.130	0.898	0.059	0.215
		PRA4	−0.036	−0.001	0.115	0.919	0.141	0.121
		PRA5	0.013	0.002	0.081	0.876	0.121	0.082
5	Price consciousness	PRE1	0.119	0.007	−0.180	0.095	0.928	0.163
		PRE2	0.099	−0.015	−0.134	0.122	0.9	0.215
		PRE3	0.047	−0.156	−0.025	0.15	0.608	0.295
		PRE5	0.105	−0.073	−0.056	0.101	0.736	0.221
6	Health consciousness	SAU1	0.254	−0.099	0.214	0.172	0.256	0.874
		SAU2	0.276	−0.087	0.194	0.158	0.169	0.88
		SAU3	0.283	−0.135	0.211	0.143	0.182	0.826
		SAU5	0.198	−0.113	0.228	0.119	0.153	0.792

The literature recommends the use of HTMT to also check for discriminant validity. Table 5 shows that all HTMT values were lower than the suggested cutoff point of 0.9, therefore confirming the inexistence of discriminant validity issues.

Table 5. Heterotrait–monotrait ratio (HTMT) values.

	Construct	1	2	3	4	5	6
1	Price consciousness						
2	Health consciousness	0.315					
3	Household food waste	0.118	0.158				
4	Purchase intention	0.136	0.274	0.186			
5	Hedonic shopping values	0.168	0.195	0.103	0.12		
6	Environmental concern	0.155	0.357	0.108	0.294	0.112	

4.2. Structural Model Assessment

The structural model was evaluated by analysing various factors, including the variance inflation factor (VIF), significance of path coefficients (β), coefficient of determination (R^2), and predictive relevance (Q^2). VIF values (Table 6) for all indicators were below the cutoff point of five [47], indicating no collinearity issues in the model.

Table 6. Variance inflation factor (VIF) values.

	Constructs	1	2	3	4	5	6
1	Price consciousness				1.066		
2	Health consciousness				1.175		
3	Household food waste						
4	Purchase intention			1			
5	Hedonic shopping value				1.044		
6	Environmental concern				1.106		

After evaluating the VIF values, path coefficients were calculated using the bootstrapping procedure with 5000 samples (Table 7) in order to address the hypotheses. Ranging from −1 to +1, the path coefficients represent the standardized regression weights between constructs in the structural model [47].

Table 7. Parameters from the hypothesis tests.

Hypotheses	Pathways	β	Sample Mean (M)	SD	t-Value	*p*-Value	Decision
H1	AMB → ORG	0.238	0.245	0.067	3.558	0.000	Supported
H2	PRE → ORG	−0.249	−0.238	0.093	2.678	0.008	Supported
H3	PRA → ORG	0.109	0.114	0.079	1.381	0.168	Not supported
H4	SAU → ORG	0.219	0.204	0.060	3.622	0.000	Supported
H5	ORG → DAL	−0.160	−0.189	0.083	1.921	0.055	Supported

AMB = environmental concern. PRE = price consciousness. PRA = hedonic shopping value. SAU = health consciousness. ORG = organic food purchase intention. DAL = household food waste. β = path coefficient. SD = standard deviation.

As shown in Table 7, AMB had a positive and significant effect on ORG (β = 0.238, t-value = 3.558, *p*-value = 0.000), supporting H1. PRE had a negative and significant effect on ORG (β = −0.249, t-value = 2.678, *p*-value = 0.000), supporting H2. PRA had a positive but not significant effect on ORG (β = 0.109, t-value = 1.381, *p*-value = 0.168), leading to the rejection of H3. SAU had a positive and significant effect on ORG (β = 0.204, t-value = 3.622, *p*-value = 0.000), supporting H4. Finally, ORG had a negative and partially significant effect on DAL (β = −0.189, t-value = 1.921, *p*-value = 0.055), supporting H5.

After checking for statistical significance of all β, the R^2 and Q^2 values were evaluated. The R^2 values for organic food purchase intention and household food waste were 0.172 and 0.026, respectively. This indicates that the constructs of environmental concern, price consciousness, hedonic shopping values, and health consciousness explained 17.2% of the variance in organic food purchase intention, while organic food purchase intention

explained only 2.6% of the variance of household food waste behavior. These findings suggest the weak predictive power of the predictors [47].

To further evaluate the R^2 values, Stone–Geisser's Q^2 was calculated [51]. The blind-folding procedure yielded Q^2 values of 0.121 and 0.006 for organic food purchase intention and household food waste behavior, respectively. Since the values were higher than zero, one can assume that the predictive effects of the model were significant. Figure 2 illustrates the conceptual model with its respective significance levels and R^2 values.
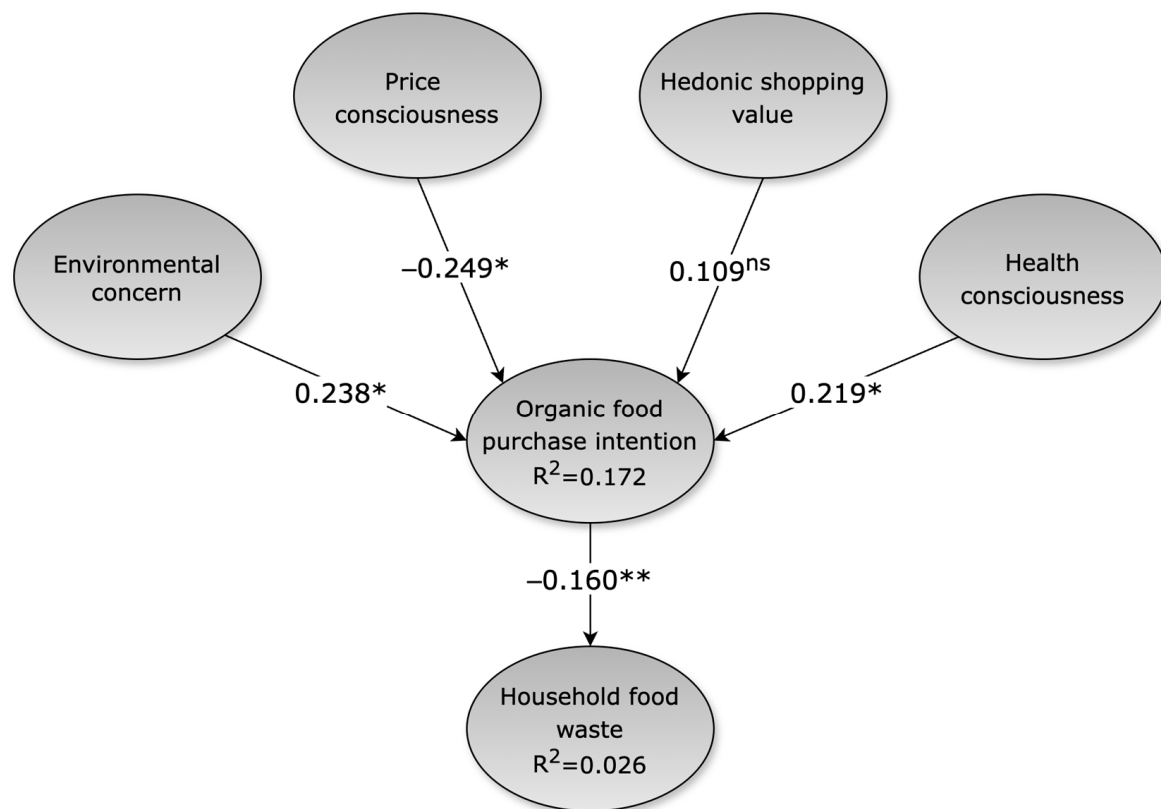
Figure 2. Results of the structural model analysis. Notes: * *p*-value < 0.05; ** *p*-value = 0.055 (partially significant); ns = not significant.

5. Discussion and Conclusions

This research aimed to investigate to what extent environmental concern, price consciousness, hedonic shopping value, and health consciousness influence organic food purchase intention and whether the latter impacts household food waste.

The results suggest that environmental concern exerts a positive influence factor on organic food [31] purchase intention (H1). This finding may indicate that organic food purchase is mainly performed by individuals who show pro-environment behavior. This result also corroborates a study conducted in Italy, indicating that participants wished they could make more conscious choices when purchasing organic products to alleviate their concerns and shop according to their life values [52]. Another study carried out in Hungary inferred that consumers of organic foods are more likely to be environmentally conscious, as they are more aware of the environmental impact of their food choices [16]. It was also possible to support the hypothesis that price consciousness has a direct and negative effect on organic food purchase intention (H2). As shown in a previous study [36], price is a restrictive factor in the purchase of this sort of food. A study conducted in China [53] showed that 79% of surveyed Chinese consumers considered the prices of organic food expensive or extremely expensive. On the other hand, price-sensitive consumers may consider the food value the main counterpart of their purchase decision [54]. It is important to highlight that the findings concerning H2 may have an intimate influence on the findings

regarding H3, since high prices of organic food may also limit consumers' hedonic shopping experience. In emerging countries, such as Brazil, this characteristic is even more evident, once the purchasing power is smaller than in developed countries. However, it is worth noting that the consumption of organic food in Brazil has been increasing in the last years [11], despite historic logistical challenges, a rise in food prices due to the COVID-19 pandemic, and restricted consumer income.

The results are in line with recent research [41] regarding health consciousness, providing support for the hypothesis that health concerns positively impact the intention to purchase organic food (H4). This implies that those who strive for a healthier lifestyle also seek healthier food options [15,43]. According to recent marketing research carried out in Brazil [11], improving health is the primary driving force for Brazilian consumers who choose to consume organic food. Lastly, it was found that organic food purchase intention exerts a negative impact on household food waste (H5). This result resembles previous findings that imply the existence of associations among several green practices [5,8,44], such as sustainable food consumption and sustainable food disposal. However, when interpreting the whole regression, this study advances the general understanding by revealing that the explained variance of household food waste solely by organic food purchase intention is negligible, suggesting its inadequacy as a predictor. This finding undermines the notion that organic food purchase intention alone substantially explains household food waste. This suggests that further investigation of different predictors is warranted.

5.1. Practical Implications

This research provides important practical implications for public and private decision-making. Firstly, this research sheds light on each analyzed predictor of organic food purchase intention. Once the positive and significant influence of environmental concern on organic food purchase intention is confirmed, specific environmental awareness strategies can be developed and proposed for consumers in general. These strategies may involve educational campaigns that emphasize the importance of environmental preservation and the negative consequences of human intervention in nature. The stronger an individual's concern for the environment, the more likely they are to have an intention to purchase organic food. Similarly, actions aimed at promoting health consciousness also have a positive impact on organic food purchase intention. Thus, a greater commitment to a healthier lifestyle strengthens the intention to purchase organic food. It is important to note that a high commitment to a healthy lifestyle not only influences organic food purchase intention but also generates long-term physical and mental benefits [55]. The findings of this research also indicate that the price of organic products has an impact on organic food purchase intention. This suggests the need to establish mechanisms for managing and coordinating an efficient supply chain to ensure the production of organic food at attractive and fair prices. Lastly, consumers with a higher intention to purchase organic food tend to reduce household food waste. However, the effect size between these two constructs is relatively small. Given that few studies have explored the relationship between the intention to purchase organic food and food waste, the results of this study contribute to expanding the discussion on sustainable food production and consumption practices. Furthermore, this study provides empirical evidence on the behavior of organic food consumers and their potential impact on sustainable actions, particularly regarding household food waste, which is aligned with the UN's SDGs.

5.2. Theoretical Implications

As one of the world's largest food producers, Brazil still faces significant challenges in several food chains due to the lack of several tangible and intangible strategic resources. As cleaner production and consumption practices gain importance, the demand for organic food has been steadily increasing. This study fulfilled a major theoretical gap by examining the relationship between organic food purchase intention with household food waste. While this topic has been studied in developed countries, research focusing on underdeveloped or

emerging nations is still scant. This study provides valuable theoretical insights regarding the determinants of organic food purchase intention. On the other hand, the positive but small predictive power of organic food purchase intention on food waste suggests that the addition of other variables could increase the explained variance of this relationship. This implies that further theoretical and empirical evidence to understand the relationship between green consumers' shopping behavior and household food waste is still needed. Lastly, another important theoretical implication of this study concerns the adaptation of scales to the Brazilian context. Despite being somewhat neglected by previous researchers, the research team dedicated significant effort to meeting high methodological standards and ensuring robust internal and external evidence.

5.3. Limitations and Further Research

This research has three main limitations. The first one concerns potential bias caused by the data collection method adopted. As with any online survey, this research reached only individuals who had access to an Internet connection and electronic devices. The second one refers to the asymmetric sample, which consisted mostly of highly educated females. For instance, by achieving a specific public, the findings may not be generalized to Brazil and other regions with different cultures. Another major limitation is associated with the lack of statistical power to test all hypotheses. With the *p*-value of the relationship between organic food purchase intention and food waste being close to the expected theoretical parameter (*p*-value = 0.055), a slightly larger sample size could have resolved this issue. Moreover, it is recommended that future research endeavors to collect a more diverse sample [56] to precisely capture the demographic heterogeneity of the country. Additionally, improving the stratification of the sample would facilitate the examination of potential differences among regions. Therefore, caution must be exercised in generalizing the findings. Lastly, researchers could replicate the proposed model in a different context or even expand it by adding variables associated with pro-environmental behavior as predictors to increase the determination coefficient of the dependent variables.

Appendix A. Measurement of Constructs

Construct	Item	Description
Environmental concern—Adapted from [57]	AMB1	I am concerned about the condition of the environment
	AMB2	Humans are ruining the environment
	AMB3	I would give up some economic good for a cleaner environment
	AMB4	The condition of the natural environment is getting worse every year
	AMB5	I am concerned about natural resource shortages in the future
	AMB6	We all need to change our behavior to protect the natural environment

Construct	Item	Description
Price consciousness—Adapted from [41]	PRE1	I try to buy food items that are on sale
	PRE2	I pay attention to good deals
	PRE3	I remember the prices I have paid before
	PRE4	I compare food prices from different brands
Hedonic shopping value—Adapted from [41,58]	PRA1	A shopping trip is truly a joy
	PRA2	I usually continue to shop not because I have to, but because I want to
	PRA3	Compared to other things I could do, the time I spend shopping is truly enjoyable
	PRA4	Shopping is a very pleasant way to spend time
	PRA5	Shopping is a real distraction for me
Health consciousness—Adapted from [41]	SAU1	I care a lot about my health
	SAU2	I am very self-conscious about my health
	SAU3	I am alert to changes in my health
	SAU4	I take responsibility for the state of my health
	SAU5	I am aware of the state of my health as I go through the day
Organic food purchase intention—Adapted from [41]	ORG1	I will purchase organic food for personal use
	ORG2	I am willing to purchase organic food for personal use
	ORG3	I will make an effort to purchase organic food
	ORG4	I have purchased organic food over the past six months
	ORG5	I have been purchasing organic food on a regular basis
Household food waste—Adapted from [59]	DAL1	Food left over on a plate after a meal
	DAL2	Cooked food beyond your needs
	DAL3	Saved food and eventually not used
	DAL4	Opened products (cans, sauces, etc.) and have not been used

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