EXPLORING THE IMPACT OF CONSUMERS' TRUST IN FOOD AUTHENTICITY ON THEIR PURCHASE INTENTIONS: A CASE OF 'Sen Hue' - A LOCAL LOTUS-GRAIN PRODUCT IN CENTRAL VIETNAM

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ABSTRACT

There has been a significant increase in the global focus on food authenticity, leading people to closely examine the sources and quality of their food. The intricacy of culinary authenticity is shown in a regional lotus-grain product called 'Sen Hue', which suggests that they are from Hue, but in reality, they are obtained from other areas. Applying the Heckit model in the two-step approach for a sample of 426 local consumers, the study explored the drivers of the intention to purchase lotus-grain products. Findings from this study indicate that customers who perceive 'Sen Hue' lotus-grains as genuine and reliable have a stronger inclination to make a purchase, highlighting the importance of authenticity in the food industry. Stringent regulatory frameworks and labeling regulations are essential for preserving customer confidence. Additionally, this study highlights the need for a multi-pronged approach to understanding consumer behavior in this market by addressing safety, authenticity, and color specificity concerns.

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Introduction

There has been a recent global trend of individuals paying closer attention to the origin and authenticity of their food. This trend is particularly evident in Vietnam, where traditional and modern farming techniques intersect, raising significant concerns about food safety and authenticity. According to the World Health Organization's 2023 report, Vietnam averaged 668,673 cases of foodborne illnesses and 21 deaths annually between 2011 and 2016 (WHO, 2023). Thi et al. (2023) documented 184 incidents of food poisoning from unreliable sources, affecting 3,711 people across various food types.

The focus on lotus-grain products in Hue highlights the complexity of food authenticity issues. These products come from various regions of Vietnam, including Thua Thien Hue, Dong Thap, Quang Tri, Quang Binh, and others. Labeling these products as 'Sen Hue' implies their production in Hue, a city well-known for its lotus products, a notion that can be deceptive. Consumers often perceive these products as more authentic and of higher quality, assuming they originate from Hue. The discrepancy between branding and actual origin makes it difficult to verify product authenticity.

Understanding consumers' willingness to buy traced foods and their perceptions of authenticity is crucial for identifying strategies that improve food safety (Nguyen et al., 2018; Wang et al., 2019; Irshad et al., 2020; Mahliza, 2020; Tran, 2021; Užar et al., 2022). Consumers' concerns about the quality and authenticity of the food they consume consistently influence their willingness to pay a premium. According to Nguyen et al. (2019), personal characteristics and green marketing strategies are the key components relevant to consumers' intentions with regard to the planned purchase of organic foods in Vietnam. On the same note, Ngo et al. (2021) also explored the antecedents of consumers' willingness to purchase foods with safety certifications, underscoring the value of certifications in consumers' decision-making processes, especially when it comes to emerging markets such as Vietnam. A consumer is the last chain that determines the authenticity of food products, and this depends on the risk perception, trust, and habits put in place (Dang & Tran, 2020).

Recently, perceived authenticity and trust have been considered important aspects of food products that influence consumers' behavior and their tendency to make a purchase, as has been prescribed by studies like Kim & Baker (2017) and Ellitan (2021). Trust can give a consumer the ability to exercise his or her belief that sustainable, healthy, authentic food items, as well as safe food products, are trustworthy enough for them to make a decision (Kenning, 2008; Uzelac et al., 2022). Thus, the main area in this domain is 'authenticity', which includes characteristics like novelties, that is, being unique, and providing a guarantee of quality, tradition, rarity, divine nature, and purity (Sidali et al., 2021). Previous works have demonstrated the direct link between brand authenticity, consumer trust, and the purchase intentions of organic foods (Assiouras et al., 2015). Various contexts have explored the influence of risk perception and trust on purchase intentions, highlighting the complex interplay between consumer perceptions and behaviors (Lobb et al., 2007; Kanwal, 2021).

While there is a vast body of knowledge on consumer behavior and food safety across the world, literature specifically focusing on Vietnamese consumers' trust in the authenticity of food and how this impacts their decision to purchase the food is scarce. Some exceptions include the study by Dang & Tran (2020), which analyzed consumers' willingness to buy traceability pork in animal disease with a view to understanding the roles of food safety concern, risk perception, trust, and habit on purchase intention. However, a gap exists in the literature regarding consumers' intentions to buy traceable food products, considering the historical issues of food authenticity. Filling this gap is important to guide policymakers, the food industry, and consumer awareness activities seeking to strengthen food traceability and consumer trust in Vietnam. Therefore, this study seeks to investigate the interaction between consumers' perceptions of food authenticity, their attitudes toward lotus-grain products, and their purchasing behaviors in Central Vietnam. This study can fill in these gaps and complement the current literature by offering a more detailed view of consumers' attitudes and drivers toward food authenticity and safety in Vietnam. It will also be of importance to policymakers and other industry players to know how to increase the effectiveness of food traceability while increasing consumer confidence, thereby improving food safety and authenticity in the region.

Materials and methods

Data

Recent developments in lotus production and consumption

Lotus is grown in almost all parts of the world, especially in India, China, Japan, South Korea, South Africa, Russia, and the countries of Southeast Asia. In these areas, lotus plants are used as food, medicine, or as flowers. In Europe and America, lotus plants are used mostly as flowers. Nevertheless, there are a few global statistics concerning the areas occupied by cultivated lotuses. Nowadays, in Vietnam, lotus has been considered an emerging product in the food industry sector, along with traditional crops such as peanuts, soy, coffee, rubber, tea, cashew, pepper, etc. The cultivated area of lotus in Vietnam is over 30,000 ha.

The economic potential of lotus lies in its multipurpose usage in medicine, cosmetics, food, and decoration. Some of the parts of the lotus plant useful in remedies and common use include seeds, leaves, buds, and roots, which are commonly used in medicinal herbs, cosmetics, and dietary uses. The lotus seeds, for example, are used in creating processed products such as roasted seeds, lotus seed milk, lotus seed tea, and lotus seed wine. Additionally, there is a potential future market for lotus products, which has gradually gained attention due to the growing concern for natural ingredients and health benefits. This consumer preference caused the demand for lotus seeds, leaves, and other derivatives to increase in the domestic market as well as the international market. The emphasis on lotus-grain products in Hue highlights a significant challenge, given their diverse origins across Vietnam. Adding complexity is the branding approach, notably

the labeling of products as 'Sen Hue', implying production in Hue, a historically significant city in the region. However, this branding strategy can be misleading, potentially distorting consumer perceptions of authenticity and origin. Consumers may mistakenly associate higher credibility and quality with products labeled as 'Sen Hue', assuming they originate from Hue, despite the actual source being elsewhere. This disparity between branding and true origin exacerbates the challenge of ensuring food authenticity and transparency in the lotus-grain product market, emphasizing the necessity for robust strategies.

Data collection

The data for this work were obtained from 426 respondents in Central Vietnam who were administered a semi-structured questionnaire. This survey was designed to capture overall evaluations from consumers regarding their perception, attitude, and practice towards lotus-grain products. As a measure to enhance the validity of the data collected and give more importance to the cultural differences, the questionnaire was pilot-tested before the actual administration of the study. Participants were chosen through quota sampling at the 'Hue Lotus Festival', a national exhibition concerning lotus-associated goods and services and arts that was held in Hue in the Central Region of Vietnam in 2023. This sampling technique is intended to include a wide group of clients with an interest in products containing lotus grain and food authenticity to increase the chance of including a more appropriate sample. To achieve this, the authors adopted simple random sampling, whereby a sample of 426 participants was drawn from the festival attendees.

As for data cleaning, it involves the process of making sure the collected data is accurate, complete, and consistent before transformation into a usable format. After that, the cleaning stage was completed, and the data was reduced to 419 observations, which, in turn, was ready for analysis. This preparation process involved some ordering of the variables, categorization of the variables into factors, and conversion of the data if needed to fit the model. The data were cleansed with quality measures used throughout the process to ensure only accurate information was used in subsequent analyses.

Analytical methods

When analyzing the factors that affect the intention to purchase lotus-grain products among clients seeking to buy authentic food, the Heckit model can help to minimize selection bias, as suggested by Van de Ven and Van Praag (1981). This model is indispensable for avoiding selection bias in analyzing the decision to buy lotus-grain products, a dependent variable that is meaningful only to consumers concerned with the authenticity of food. Components like perceived risk, available information, perceived product quality, and geographic specificity play a significant role in explaining this relationship (Vo & Nguyen, 2015; Benni et al., 2019).

The Heckit model correctly handles the selection effect by initially estimating the probability of selection (belief in food authenticity) via a probit or logit model. It

then estimates the intention to purchase lotus-grain products for these individuals using either a linear regression or a probit model following selection. Applying the Heckit model in the two-step approach, therefore, helps to reduce the bias resulting from sample selection and improve the quality of the information collected regarding consumers' attitudes towards lotus-grain products. Analyzing these processes is critical for marketing and political decision-makers who aim to support real food products and satisfy consumers. Let us, for example, use the following:

- y_j^* as the latent variable representing the intention to purchase lotus-grain products.
- y_j^{probit} as the observed binary outcome variable (1 if $y_j^* > 0$, 0 otherwise).
- y_j^{select} as the observed binary selection variable (1 if $z_j\ \gamma + u_{2j} > 0$, 0 otherwise).

The equations are as follows:

(i). Latent equation: This equation models the relationship between the latent variable (in this case, intention to purchase lotus-grain products, yes=1) and the explanatory variables x_j .

$$y_j^* = x_j\ \beta + u_{1j} \qquad \textit{(Equation 1)}$$

(ii). Probit equation:

$$y_j^{probit} = (y_j^* > 0) \qquad \textit{(Equation 2)}$$

(iii). Selection equation: This equation models the relationship between the selection variable (belief in food authenticity or self-evaluation of origin of lotus-grain products with yes=1 indicating product form Hue) and the explanatory variables z_j .

$$y_j^{select} = (z_j\ \gamma + u_{2j} > 0) \qquad \textit{(Equation 3)}$$

Where: x_j is a vector of explanatory variables for the latent equation; is a vector of explanatory variables for the selection equation; the coefficients to estimate are β for the latent equation and γ for the selection equation.

The log likelihood is:

where *S* is the set of observations for which y_i is observed, $\Phi_2(.)$ is the cumulative

$$\ln L = \sum_{j \in S} w_j \ln \left\{ \Phi_2 \left(x_j \beta + \text{offset}_j^{\beta}, z_j \gamma + \text{offset}_j^{\gamma}, \rho \right) \right\}$$
$$+ \sum_{j \in S} w_j \ln \left\{ \Phi_2 \left(-x_j \beta + \text{offset}_j^{\beta}, z_j \gamma + \text{offset}_j^{\gamma}, -\rho \right) \right\}$$
$$+ \sum_{j \notin S} w_j \ln \left\{ 1 - \Phi \left(z_j \gamma + \text{offset}_j^{\gamma} \right) \right\}$$

bivariate normal distribution function, *Φ(.)* is the standard cumulative normal. In Stata, this study specified the Heckit model using the heckprobit command, specifying the selection equation and the outcome equation, along with their respective explanatory variables. This allows for estimation of both the selection process and the outcome of interest simultaneously, addressing potential selection bias using the maximum likelihood approach.

In this study, consumer trust in food authenticity is operationalized through several key variables, including consumers' perceptions of the trustworthiness of lotus-grain authenticity (participants were asked the degree of importance concerning trustworthiness of lotus-grains (scale of 1 not important to 5 very important); trust in the authenticity of lotus-grains: scale of 1 = very little trust to 5 = very high level of trust. As Macready et al. (2020) pointed out, this study has identified those two aforementioned variables for this study as our primary independent variables. These variables could be summed up to indicate people's perceptions, beliefs, and fears as producers and consumers when it comes to lotus-grain products. Authenticity perception refers to the ability of a consumer to rate products based on their personal understanding of the reliability of the particular products. Food authenticity and acceptability are therefore consumers' faith and assurance in the genuineness and reliance of foods from producers, distributors, processors, and retailers. Risk perceptions relate to consumer perceptions of the various possible risks and volatilities of consuming lotus-grain products, including pollution, contamination, or misrepresentation. Understanding these factors enables the study to identify potential impacts on consumer behavior and intentions to purchase lotus-grain products, providing a foundation for promoting food safety among consumers.

For a robust analysis regarding the relationship between perceived authenticity and purchase intentions of lotus grains in the lotus-grain product market, the control variables are indeed crucial in the investigation. According to the previous studies, demographic variables including age, gender, and income are included in the current study, as these features will impact the consumer's attitude and behavioral intention when consuming lotus products (Fritz et al., 2017; Halwani, 2020). Attitudes as consumption preferences refer to the perception customers have in matters to do with food origin, price, quality, branding, safety, availability, and certification and are deemed to provide an understanding of habitual and routine customer behaviors (Zniva & Weitzl, 2016; Chousou & Mattas, 2019). Furthermore, the knowledge of the consumer is an important

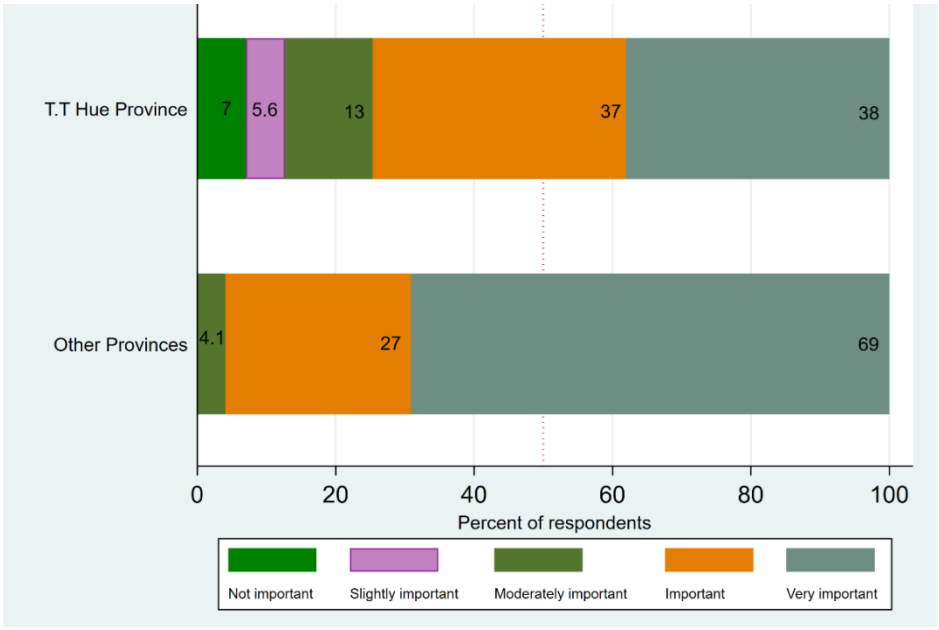
factor, as consumers may be informed, and thus their perception of the lotus products may be altered. Thus, by including the aforementioned control variables, it will be possible to describe in detail the causal relationships between consumer fear of food authenticity and other factors that influence consumer choice in the lotus-grain product market. This has the advantage of making it easier to understand the factors that inspire consumers to have the intention of buying these products, and such information is useful to the stakeholders of the industry and policymakers who may find interesting the premise of private voluntary regulation.

Results

Descriptive analysis

This section provided valuable descriptive statistics about consumer preferences for lotus-grain products, broken down by location (Thua Thien Hue vs. other provinces) and overall sample. The perception of trustworthiness of lotus-grain authenticity appeared to be higher in other provinces compared to Thua Thien Hue province (Figure 1). For other provinces, the average score was 4.5 on a scale of 1 (not important) to 5 (very important). This suggested that consumers in other provinces placed a high value on the trustworthiness of lotus-grain authenticity when visiting Hue and bought lotus products as souvenirs. For consumers located in Hue, the average score was 3.88. This was lower than in other provinces, indicating that consumers from Hue might be slightly less trusting of lotus-grain authenticity.

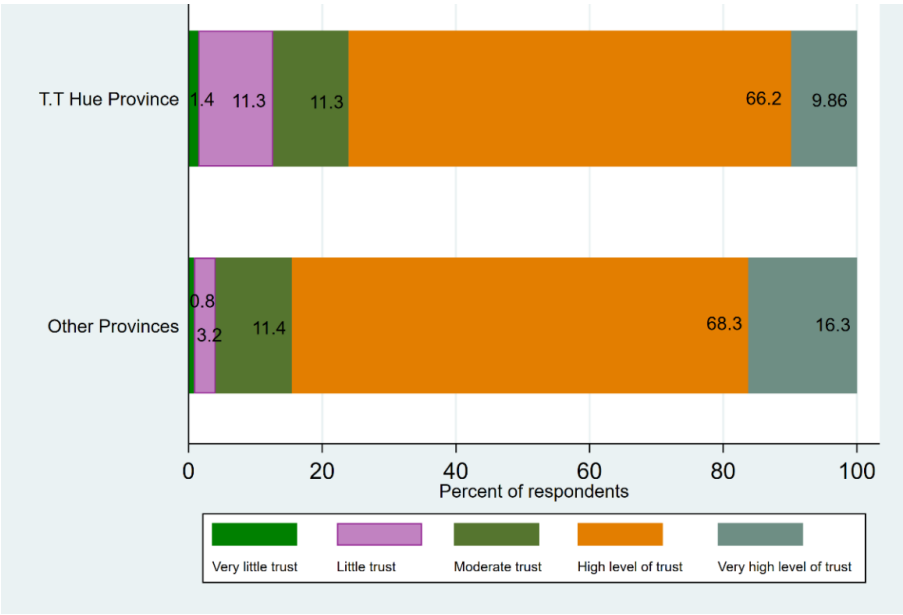
Figure 1.Perception on trustworthiness of lotus-grains authenticity



Source: Authors' calculations

Figure 2 demonstrated that consumers, on average, had a moderate to high degree of confidence in the lotus grains being genuine, although this varied across regions to some extent. Looking at the overall scale, the mean score for all respondents on the trust aspect was 3.7 on a scale of 1 to 5. This went a little above the scale, suggesting an overall confidence in the authenticity of lotus grain. As for the trust level of consumers from other provinces, they had a higher trust in lotus grain authenticity, with an average score of 4.25. This implied that they had more confidence in the product than the people in Hue. In addition, the consumers in Hue had relatively less trust, as they had given an average score of 3.71. This could be due to a variety of factors. Locals in Hue might be more familiar with the local production of lotus grain; they might be more sensitive to problems and therefore skeptical of authenticity. Furthermore, various locally established brands in Hue City could make consumers pay less attention to such overall indicators of authenticity and rely more on familiar brands instead.

Figure 2. Trust in authenticity of lotus-grains



Source: Authors' calculations

Table 1 below summarized some of the findings as a snapshot of consumer perception and behavior regarding lotus-grain products. In general, the results showed a relatively high level of trust in authenticity, along with moderate concern for threats. In fact, the results revealed that lotus-grain products had high consumer-perceived credibility, with a score of around 4 on average, with 1 being the least and 5 being the most. This meant that consumers understood that these products were authentic and did not contain any added chemicals. Consequently, the mean of trust in food authenticity was 4, which indicated that consumers were confident that the product was genuine. Notably, the level of trust was somewhat poorer in Hue City (3.7) in comparison with other provinces (4.25). This meant that even customers within the surrounding areas

of the market had some level of concern as to whether the things they bought were original or fake. This implied that appropriate measures to increase confidence in lotus-grain products should be implemented, especially in the local markets. It also included other consumer demographics such as gender, age range, and monthly income of those who purchased lotus-grain products. In product evaluation, other ratings, which gave an insight into the overall consumer preference for attributes such as color, taste, size, shape, and cooking characteristics, were obtained in the range of 0.25 to 1.

Table 1. Descriptive statistics

Variables	Other provinces		Hue		Full sample	
	Mean	SD	Mean	SD	Mean	SD
Probit model: Intention to purchase *(yes=1)*	0.75	0.5	0.954	0.211	0.943	0.232
Explanatory variables						
Perception on trustworthiness of lotus-grains authenticity *(scale: 1 not important-5 very important)*	4.5	0.577	3.877	1.20	4.38	0.905
Trust in authenticity of lotus-grains *(scale: 1 = very little trust to 5 = very high level of trust)*	4.25	0.5	3.70	0.843	3.87	0.761
Control variables						
Gender *(male=1)*	0.25	0.5	0.477	0.503	0.361	0.481
Age *(group 1. <20….4.>60 years)*	2.50	1.29	2.27	0.893	2.42	0.874
Monthly income *(Mill.VND per month, in log)*	16.11	0	16.27	0.73	15.85	0.771
Overall perception of food origin *(scale: 1 not important-5 very important)*	4.30	0.765	4.48	0.78	4.40	0.815
Overall perception of food price *(scale: 1 not important-5 very important)*	3.78	0.736	3.74	1.03	3.76	0.934
Overall perception of food quality *(scale: 1 not important-5 very important)*	4.56	0.657	4.72	0.561	4.65	0.609
Overall perception of food branding *(scale: 1 not important-5 very important)*	3.90	0.781	3.94	0.958	3.93	0.894
Overall Perception of food safety *(scale: 1 not important-5 very important)*	4.4	0.721	4.797	0.442	4.66	0.591
Overall perception of food availability *(scale: 1 not important-5 very important)*	3.78	0.796	4.26	0.808	4.09	0.839
Overall perception of food certification *(scale: 1 not important-5 very important)*	4.10	0.864	3.95	1.036	4.01	0.972
Selection model						
Self-evaluation of origin of lotus-grain products *(yes=1 product from Hue)*	0.980	0.020	0.831	0.378	0.839	0.369
Self-evaluation on color *(right answer=1)*	0.75	0.5	0.625	0.488	0.49	0.501
Self-evaluation on taste *(right answer=1)*	0.25	0.5	0.703	0.46	0.632	0.483
Self-evaluation on size *(right answer =1)*	0	0	0.246	0.434	0.211	0.409
Self-evaluation on shape *(right answer=1)*	0.5	0.577	0.215	0.414	0.247	0.433
Self-evaluation on cook appearances *(right answer =1)*	0.5	0.577	0.492	0.504	0.531	0.5
Location dummy *(Hue=1)*	0	1	1	0	0.634	0.482

Source: Authors' calculations

The dependent variable for the Probit equation represented the latent variable of the intention to purchase lotus-grain products. Overall, consumers showed a high intention to buy lotus-grain products, specifically 'Sen Hue,' with an average of 94.3% intending to purchase. Consumers from other provinces such as Quang Binh, Quang Tri, Da Nang, Ha Noi, Ho Chi Minh City, Khanh Hoa, Thanh Hoa, and Quang Nam showed a lower intention to purchase (75%) as souvenirs. The dependent variable for the selection equation represented the consumer's self-evaluation of the origin of lotus-grain products based on users' consumption experience of 'Sen Hue' products. About 83.9% of respondents correctly identified the characteristics of 'Sen Hue' products, which included five different features: color, taste, size, shape, and cooked appearance.

Results

From Table 2, this study learned more about consumer behavior toward 'Sen Hue' lotus-grain products as distinct brands or types by using the Heckit model to determine the attitude and intention to buy their products, especially for those who were concerned about food authenticity. As expected, both the explanatory variables—perception of authenticity and trust in authenticity—had positive and significant coefficients; hence, these factors influenced purchase intention towards 'Sen Hue' lotus grains. When consumers had a higher degree of perceived authenticity, they had a greater intention to buy lotus-grain products. Moreover, there was a greater willingness to purchase the 'Sen Hue' lotus grains specifically for consumers whose confidence in the product was genuine and trustworthy. This finding supported the emerging concept of authenticity in the food market. Customers were becoming more selective in their purchase decisions, looking for products they considered authentic and conveying honest messages about the product. If the 'Sen Hue' lotus grains were able to establish themselves, it would give them a competitive edge as genuine ones. Thus, this study confirms the significant moderating role of perceived authenticity and trust in shaping consumers' purchase intentions toward regional specialty foods, using 'Sen Hue' lotus-grain products as a case study. This link is particularly novel in the context of an emerging market like Vietnam, where few studies have explored authenticity as a measurable construct in consumer behavior models.

Table 2. Factors influencing the intention to purchase 'Sen Hue' lotus-grains products

Variables	Coefficient	Std.	P>z
Probit model: Intention to purchase			
Perception on trustworthiness of lotus-grains authenticity	1.569**	0.756	0.038
Trust in authenticity of lotus-grains	1.147***	0.324	0.000
Gender	-0.356*	0.211	0.092
Age	1.334***	0.171	0.000
Monthly income	0.022	0.119	0.851
Overall perception of food origin	1.059***	0.373	0.005
Overall perception of food price	0.849***	0.048	0.000
Overall perception of food quality	-0.165	0.345	0.633
Overall perception of food branding	0.422	0.654	0.519

Variables	Coefficient	Std.	P>z
Overall Perception of food safety	0.830***	0.026	0.000
Overall perception of food availability	-1.838***	0.148	0.000
Overall perception of food certification	-2.468***	0.195	0.000
Selection model			
Self-evaluation on lotus-grains color	-0.432***	0.115	0.000
Self-evaluation on lotus-grains taste	0.066	0.352	0.851
Self-evaluation on lotus-grains size	0.085	0.197	0.667
Self-evaluation on lotus-grains shape	-0.101	0.167	0.548
Self-evaluation on lotus-grains cooked appearances	-0.098	0.260	0.707
Location dummy	-0.780***	0.044	0.000
Constant	1.201***	0.377	0.001

*Note: *** p<0.01, ** p<0.05, * p<0.1; Source:* Authors' calculations

This was in line with several previous studies that noted that trust and authenticity had an influence on purchase intention. Wang et al. (2019) also pointed out that trust represented a significant factor affecting purchasing behavior, which was why this attribute had a positive impact on the intention to purchase. In the same way, Hooge et al. (2022) also highlighted how authenticity, such as the notion that products were natural, locally produced, and seen as reliable, affected consumers' perceptions and purchase intentions. Additionally, Masri et al. (2020) and Refi et al. (2021) also supported the notion of the influence of trust in determining purchase intention, which again agreed with the argument that trust was a major factor in the decision-making of consumers in their purchase behavior. Moreover, this research demonstrated that the concept of authenticity played a role in the decision to purchase an item through trust as a mediating variable. Matthews et al. (2020) extended their argument that authenticity had evident effects on trust, thus increasing purchase intentions. Wijerathna & Wijesundara (2022) yielded an important link between perceived authenticity and purchasing intention: moderation by trust. To sum it up, it was imperative to state that the relationship between authenticity, trust, and purchase intentions was one of the vital aspects that defined consumers' behavior. Consumers who had some appreciation for real and credible products were more likely to have every intention of buying them on the market. If businesses wanted to improve consumer purchase intentions, they had to maintain authenticity in their operations.

Discussions

Findings from the study showed that trust positively impacted consumer behavior, increasing the willingness to purchase products or services (Nguyen et al., 2019; Wang et al., 2019; Irshad et al., 2020; Mahliza, 2020; Uzelac et al., 2022). Various factors, including brand image, perceived quality, and source trustworthiness (Lien et al., 2015), as well as customer trust, interpersonal trust, and source trustworthiness (Büttner & Göritz, 2008), could establish trust. Trust could act as a mediator, indirectly influencing purchase intention by reducing perceived risk and enhancing confidence in the product or service (Nursyirwan, 2021; Užar et al., 2022).

Another interesting finding was the positive and significant coefficient for consumers' age. This suggested that older individuals were more likely to intend to purchase lotus-grain products compared to younger consumers. The study could have further explored the reasons behind this age-related difference, which could potentially relate to health consciousness or familiarity with traditional ingredients. However, within the observed range, income appeared to have no statistically relevant impact on purchase intention. This suggested that lotus-grain products might have held appeal across different income brackets. The positive and significant coefficient for "age" in consumer preferences for 'Sen Hue' lotus grains suggested that older consumers might have had a stronger inclination towards purchasing this product. This inclination could have been attributed to the influence of traditional foods and local specialties on older generations (Zniva & Weitzl, 2016). Studies showed that consumer behavior changed significantly over the life cycle, indicating that age played a crucial role in shaping preferences and purchasing decisions (Gourinchas & Parker, 2002; Uzelac et al., 2022). Furthermore, the analysis of consumer motivations across different age groups revealed insights into the underlying factors that drove consumption behavior. Older adults, in particular, had distinct motivations and preferences that were influenced by their life experiences and generational values (Halwani, 2020). Understanding the nuances in consumer behavior among various age groups was essential for businesses to tailor their marketing strategies effectively and cater to the diverse needs of different demographic segments, such as targeting elder consumers for 'Sen Hue' products in our case.

Furthermore, the positive and significant coefficient for "overall perception of food origin" suggested that valuing the origin of food played a role in the purchase decision for 'Sen Hue' lotus grains. This aligned with the focus on authenticity; consumers who prioritized origin might have been drawn to 'Sen Hue' if it signified a specific geographical location and its associated production methods. This reinforced the importance of transparency and clear origin information for lotus-grain producers. The positive and significant coefficient for "overall perception of price" was an intriguing finding. It suggested that for 'Sen Hue' lotus grains, a higher perceived price might have been associated with better quality. This aligned with the "you get what you pay for" mentality observed in some consumer segments. Consumers might have been willing to pay a premium for 'Sen Hue' if they believed it translated to superior quality and justified the brand's positioning. However, the insignificant coefficient for "perceived quality" on its own was intriguing. This might have indicated that price alone was not a sufficient indicator of quality for consumers, and other factors like brand reputation or safety certifications could have come into play. Both safety (positive and significant) and certification (negative and significant) had a strong influence on purchase intention. This highlighted the paramount importance of prioritizing safety in the production and processing of lotus-grain products. Consumers were more likely to be drawn to products perceived as safe and might have been discouraged by a lack of certification, which could have indicated potential concerns about hygiene or quality control. Neither branding nor product availability had a statistically significant impact on purchase

intention. However, this did not necessarily mean they were unimportant. This could have been because the brand hadn't yet established a strong association with quality in the minds of consumers.

Interestingly, the study used a new variable, "location dummy," indicating whether consumers came from Hue versus other provinces. The positive and significant coefficient suggested that, compared to consumers outside Hue City, those in Hue were more likely to prioritize 'Sen Hue' lotus grains. This could have been due to several reasons: Hue residents might have been well-acquainted with other local lotus grain options they perceived as equally authentic and high-quality. This could have led them to explore alternatives beyond "Sen Hue." As 'Sen Hue' lotus grains might have been priced at a premium compared to other local options, Hue residents, potentially more price-sensitive, might have opted for familiar, well-established local brands offering similar quality at a lower price. Thus, the geographic contrast in trust levels and authenticity perceptions between local consumers in Hue and those from other provinces - revealing counterintuitive patterns where non-local consumers exhibit higher trust in the product's authenticity than local consumers. This challenges assumptions in the regional branding literature and opens avenues for future place-based marketing strategies.

Conclusions

This study provides new insights into the role of consumer trust and perceived authenticity in shaping the purchase intentions for regional specialty products, using 'Sen Hue' lotus-grain products in Vietnam as a case study. Our findings confirm that both trust in authenticity and perception of authenticity significantly influence purchasing behavior, especially among consumers concerned with food origin, safety, and traceability. These results highlight the rising importance of authenticity signals in emerging food markets and the need to reassess how branding strategies impact consumer perception and decision-making.

Theoretically, the findings contribute to authenticity and trust literature by showing how these constructs jointly affect purchase intention. Managerially, the results underscore the importance of transparent labeling, certification, and branding tied to geographic origin. Firms and policymakers should promote authenticity cues to enhance consumer confidence and product competitiveness. Nevertheless, the study has limitations. First, the data were collected cross-sectionally from consumers attending a specific regional event, which may limit the generalizability of findings. Second, while the Heckit model helps address selection bias, the model assumes linearity and normal distribution, which may not fully capture complex consumer behavior. Finally, the study focused on only two trust-related constructs, while other psychological or contextual factors (e.g., social norms, cultural attachment, or past experiences) might also influence purchase intentions. For future research, longitudinal studies could help capture changes in consumer trust and authenticity perception over time, especially as certification systems evolve. Expanding the research to include more study sites

would also enhance generalizability. By addressing these limitations and using a more comprehensive approach, future research can paint a finer picture of consumer behavior in the dynamic market for lotus-based products.

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Conflict of interests

The authors declare no conflict of interest.

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