



# Study on the Influence of Regional Cultural Elements on Purchase Intention of Agricultural Products

Danni Wang<sup>a</sup>, Yuting Liu<sup>b</sup>, Xue Xiang<sup>c</sup>, Huiwen Deng<sup>d</sup>, Wanqing Dong<sup>\*</sup>

Sichuan Agricultural University, Ya'an China

<sup>a</sup>2946388615@qq.com; <sup>b</sup>3473502358@qq.com;  
<sup>c</sup>18696973400@163.com; <sup>d</sup>2697561954@qq.com; <sup>\*</sup>ccnvsqwq@163.com

**Abstract.** Existing research shows that agricultural products with distinctive packaging are more likely to be accepted and recognized by consumers. At present, most of the packaging designs of agricultural products lack regional cultural characteristics, and the expression of regional culture is not obvious. In order to investigate the influence of regional cultural elements on consumers' purchase intention, this study takes perceived authenticity as the mediating variable, divides it into two sub-dimensions: constructive authenticity and existential authenticity, and constructs a mechanism for the influence of regional cultural elements on the purchase intention of consumers of agricultural products. The results of this study show that the packaging of agricultural products with regional cultural elements enhances consumers' perceived authenticity, which in turn increases consumers' purchase intention, and perceived authenticity plays a mediating role between regional cultural elements and consumers' purchase intention. This study provides theoretical guidance for the development of agricultural packaging.

**Keywords:** Packaging of agricultural products; Regional cultural elements; Purchase intention; Perceived authenticity.

## 1 Introduction

As the competition in the agricultural market becomes more fierce, companies are realizing that in addition to continuously improving product quality, agricultural packaging design has also become a key factor in the marketing of agricultural products. Wu (2021)[1] believes that packaging design takes use value and visual value as the main goal, and the effective penetration of regional cultural elements can give packaging personalized artistic value, and meet people's aesthetic needs. The packaging design of agricultural products should not only meet the aesthetic enjoyment of consumers, but also deeply cultivate the "local culture". In summary, whether the integration of traditional regional elements into the packaging of agricultural products will increase the purchase intention of agricultural product consumers on e-commerce platforms, and how the perception of authenticity affects the purchase intention of agricultural product consumers, has become an urgent problem to be studied in this paper.

## 2 Literature Review

### 2.1 Regional Cultural Elements

Yong (2008)[2] Regional culture is a cultural phenomenon that has been accumulated over a long period of time in a certain region and is recognized by people. Graphic elements, as elements without language barrier, can show the designer's thoughts more intuitively and influence people's judgment of the product; text elements have strong artistry, and the use of national text in packaging design not only enhances the visual effect of the picture, but also is an expression of the cultural genes of regional agricultural products[1]. Therefore, this study selects picture and text as the two dimensions of regional cultural elements.

### 2.2 Perceived Authenticity

According to Wang (1999)[3], authenticity is the projection of one's own beliefs, expectations and opinions about an entity, often linked to culture, origins and history; This paper focuses on the dimensions of existential authenticity and constructive authenticity. constructive authenticity refers to the authenticity based on the indisputability of history, trying to reproduce the most trustworthy and persuasive past[4], i.e., authenticity is socially constructed; existential authenticity refers to the psychological state of consumers[5], emphasizing the emotional stimulation between the individual and the subject. At this stage authenticity has been tested in the field of art, cooking, tourism and other fields[6], but it has not yet been sought in the field of regional characteristics of agricultural marketing.

### 2.3 Purchase Intention

Purchase intention is the consumer's interest in purchasing product[7]. In recent years, China's e-commerce industry has been developing continuously, and online display have become an important way to sell agricultural products. At present, China's e-commerce in the study of the consumption context lacks the exploration of regional cultural elements on the purchase willingness of agricultural products, so it becomes the research direction of this paper.

### 3 Research Hypothesis

#### 3.1 Research Model

This paper constructs a model as shown in Fig. 1.

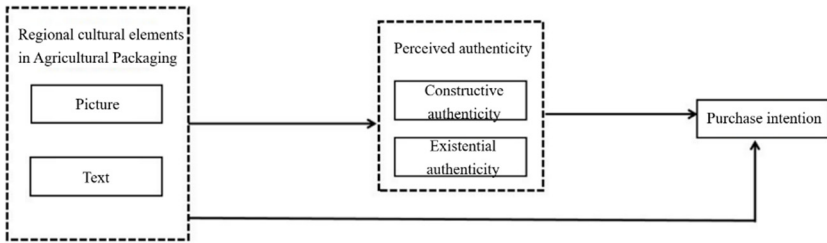


Fig. 1. Research model

#### 3.2 Research Hypothesis

##### (1) *The Relationship Between Regional Cultural Elements and Purchase Intention*

Wang (2005)<sup>[8]</sup> believes that consumers need external clues to help them grasp accurate and comprehensive information to make purchase decisions. The regional cultural elements on the product packaging can be used as external clues to convey information such as product origin to consumers through text, pictures, etc. These regional cultural elements form specific emotional associations with consumers and improve consumers' purchase intention. Therefore, this paper proposes hypothesis 1:

H1: Compared with the absence of regional cultural elements on the packaging of agricultural products, the presence of regional cultural elements on the packaging of agricultural products has a significant positive impact on the purchase intention of consumers on the e-commerce platform.

##### (2) *The Mediating Role of Perceived Authenticity*

The use of regional cultural elements can affect the perceived authenticity of consumers, and the use of these elements in the packaging of agricultural products can convey information such as product origin and production mode to consumers. This kind of information transmission is conducive to improving consumer trust, which is the premise of purchasing behavior. The stronger the perceived authenticity of consumers, the stronger the sense of trust in the product, the higher the willingness to buy. Given that perceived authenticity plays a mediating role in multiple situations, this study makes the following hypothesis 2:

H2: The perceived authenticity plays an intermediary role between the regional cultural elements on the packaging of agricultural products and the purchase intention of consumers on e-commerce platforms.

## 4 Experimental Process

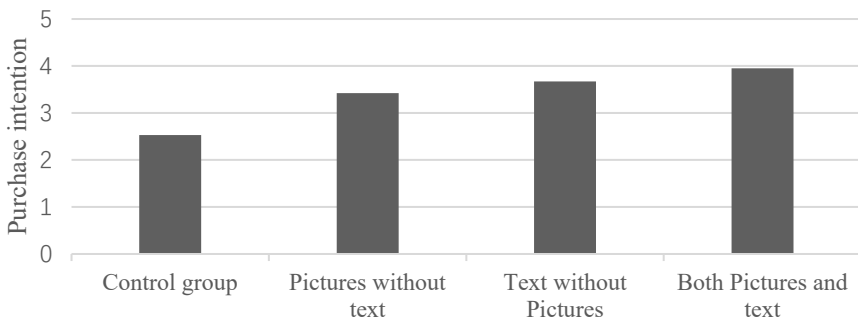
### 4.1 Experimental Design

Single-factor intersubject experimental design was adopted. The stimulus materials of independent variables were selected from Inner Mongolia beef jerky packaging on a well-known e-commerce platform in China, and the independent variables were set into four test scenarios, with packages with no regional characteristics text and pictures as the control group, and the other three test groups were: regional characteristics text and ordinary pictures, ordinary text and regional characteristics pictures, and both regional characteristics text and pictures.

A total of 360 subjects (172 males) aged 18-45 were recruited for the experiment. 90 subjects in each scenario group were randomly assigned to participate in the test without interference when filling out the questionnaire. On the first page of the questionnaire, a description page of regional cultural elements was set up to ensure that all subjects could identify similar regional cultural elements.

### 4.2 Operational Test

One-way ANOVA for purchase intention found that the main effect of regional cultural elements on purchase intention was significant ( $p < 0.001$ ). Multiple post-hoc comparisons showed that there were significant differences between no text and no picture ( $M=2.53, SD=0.97$ ), picture without text ( $M=3.42, SD=0.97$ ), and text without picture ( $M=3.67, SD=0.98$ ) compared with those with text and picture ( $M=3.95, SD=1.05$ ). The results showed that, The text and picture in regional cultural elements have a significant impact on purchase intention. Consumer purchase intention under different testing scenarios as shown in Fig. 2.



**Fig. 2.** Consumer purchase intention under different testing scenarios

## 5 Findings

### 5.1 Descriptive Statistical Analysis

A total of 360 participants were involved in this study, and 320 valid questionnaires were collected. The ratio of men and women is close to 1:1, and from the overall distribution of the sample, the respondents in this study are mainly 18–45 years old with consumption power, with regional agricultural product purchase experience, consumption potential is large, and has good representativeness.

### 5.2 Reliability and Validity Analysis

In terms of reliability, the Cronbach Alpha coefficient for the main section of the questionnaire was 0.925 ( $\alpha > 0.8$ ), indicating good overall reliability of the scale. Cronbach Alpha coefficients for constructive authenticity, existential authenticity and purchase intention were 0.921, 0.919 and 0.917, respectively, all of which were greater than 0.8, indicating good reliability, the overall KMO value was 0.911 ( $KMO > 0.8$ ), indicating that the scale had good validity. Using SPSS for varimax rotation, the variance explanation rate of the largest factor was 48.912% (less than 50%), and the cumulative variance explanation rate of the first three factors was 75.953% (greater than 50%). The factor analysis results were good. At the same time, the factor load of each measurement item is higher than 0.6, and the structural validity of the measurement scale in this study is relatively good.

### 5.3 Hypothesis Testing

#### 5.3.1 Influence of Regional Cultural Elements on Consumers' Purchase Intention

This study uses one-way Anova to explore the differences among the four scenarios. The results show that regional cultural elements have a significant impact on consumers' purchase intention ( $F = 30.735$ ,  $p < 0.001$ ). Secondly, comparisons were made between different scenarios, and the results were shown in **Table 1**. Compared with the scenario with no picture and no text, the three scenarios: picture without text, text without picture and picture with text all had a significant difference of 0.000 ( $p < 0.05$ ), so different types of regional cultural elements will significantly positively affect the purchase intention of consumers, assuming that H1 are supported.

**Table 1.** Post-hoc comparison of regional cultural elements on purchase intention

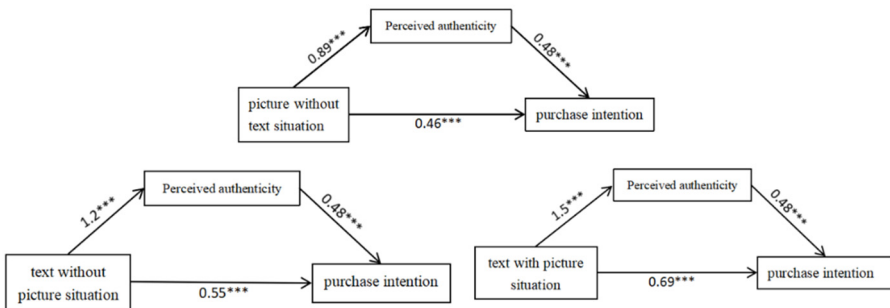
	(I) Scenario coding	(J) Scenario coding	Mean difference (I-J)	Standard error	Sig.	95% confidence interval	
						Lower bound	Upper limit
LSD	No picture no text	Picture without text	- .8925 *	.15674	.000	-1.2009	-.5841
		Text without picture	-1.1400 *	.15674	.000	-1.4484	-.8316
		With picture with text	-1.4200 *	.15674	.000	-1.7284	-1.1116

\*.mean difference is more significant on the .05 scale.

**5.3.2 The Mediating Role of Perceived Authenticity Between Regional Cultural Symbols and Consumers' Purchase Intention**

This study uses Model4 in the SPSS macro Process to test the mediating effect. In the mediation effect analysis model of this study, situations of different regional cultural elements were coded as dummy variables, and the perceived authenticity of intermediary variables and the purchase intention of dependent variables were continuous variables.

As can be seen from **Table 2**, the mediating effect was based on the no picture and no text situation, and the mediating effect of perceived authenticity on purchase intention in the situation with picture and no text was 0.4295, The 95% Bootstrap confidence interval [0.2696, 0.6150]; The mediating effect of perceived authenticity on purchase intention in the situation with text and no picture was 0.5861, and 95% Bootstrap confidence interval [0.3893, 0.7905]; The mediating effect of perceived authenticity on purchase intention in the situation with picture and text was 0.7301, and the 95% Bootstrap confidence interval [0.5144, 0.9377], this three scenarios did not include "0", indicating that the mediating effect was significant. This result shows that perceived authenticity plays a mediating role between regional cultural elements and consumers' purchase intention, and the hypothesis H2 are supported. As shown in **Fig. 3**.



**Fig. 3.** Results of mediating analysis  
 Note: \*\*\*p<0.001, \*\*p<0.01, \*p<0.05

**Table 2.** PEOCESS analysis of the mediating effect of perceived authenticity on purchase intention

Mediating effect Path	Effect	SE	95%CI	
			low	high
Using no picture no text as a reference:				
No text with picture -> Perceived authenticity -> Purchase intention	0.4295 <sup>a</sup>	0.0876	0.2696	0.6150
No text with picture -> Purchase intention	0.4630 <sup>a</sup>	0.1550	0.1580	0.7681
Text without picture -> Perceived authenticity -> Purchase intention	0.5861 <sup>a</sup>	0.1021	0.3893	0.7905
Text without picture -> Purchase intention	0.5539 <sup>a</sup>	0.1637	0.2318	0.8760

Picture with text -> Perceived authenticity	0.7301 <sup>a</sup>	0.1073	0.5144	0.9377
-> Purchase intention				
Picture with text -> Purchase intention	0.6899 <sup>a</sup>	0.1735	0.3486	1.0312

Note: a stands for significant intermediation effect

## 6 Research Conclusions and Suggestions

This paper draws the following conclusions: First, compared with no regional cultural elements on the packaging of agricultural products, regional cultural elements on the packaging of agricultural products have a significant positive impact on consumers' purchase intention, and consumers have a higher purchase intention on agricultural products with regional cultural elements on the packaging. Secondly, perceived authenticity plays an intermediary role between regional cultural elements and consumers' purchase intention. Therefore, the regional cultural elements on the packaging of agricultural products can arouse consumers' perceived authenticity, and then improve their purchase intention of agricultural products packaged with regional characteristics. Packaging designers should dig deeply into the representative regional text and pictures applied to the packaging of agricultural products.

## Reference

1. Wu, R.L. (2021) The penetration of regional cultural elements in packaging design. *Packaging engineering*, 12: 289-291+297. doi:10.19554/j.cnki.1001-3563.2021.12.041.
2. Yong, J.C. (2008) Regional culture research and its times value. *Journal of Ningxia University (Humanities and Social Sciences Edition)*, 03: 52-57. doi:10.3969/j.issn.1001-5744.2008.03.012
3. Wang, N. (1999) Rethinking authenticity in tourism experience. *Annals of Tourism Research*, 26(2): 0-370. doi:10.1016/s0160-7383(98)00103-0
4. Cho, M.H. (2012) A study of authenticity in traditional korean folk villages. *International Journal of Hospitality Tourism Administration*, 13(2): 145-171. doi:10.1080/15256480903200239
5. Lin, Y.C. (2017) The willingness of heritage tourists to pay for perceived authenticity in Pingxi, Taiwan. *J. Current Issues in Tourism*, 20(10):1044-1069.
6. Li, X., Niu, Y., Xu, J. (2023) Factors Affecting Purchase Intention of Hanfu: Considering Product Identification, Cultural Motivation, and Perceived Authenticity. *J. Behavioral Sciences*, 13(8): doi:10.3390/BS13080689
7. Ariffin, K.S., Mohan T., Goh Y. (2018) Influence of consumers' perceived risk on consumers' online purchase intention. *J. Journal of Research in Interactive Marketing*, 12(3):309-327. doi:10.1108/JRIM-11-2017-0100
8. Wang, L.F. (2005) The influence of product external cues on consumers' purchase intention under information asymmetry. *J. The consumer economy*, 21(01): 41-42.

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