

Research on the Influence of Regional Brand Image of Agricultural Products in Jinan on Consumer Purchase Intentions

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Abstract. This research explores the impact of Jinan agricultural product regional brand image on consumer purchase intentions, emphasizing the mediating role of perceived value. Against the backdrop of globalized markets, regional brand image has become a crucial factor in consumer decision-making. Drawing insights from the "2020 China Regional Agricultural Brand Development Report," which highlights a substantial rise in registered trademarks for agricultural products, the study focuses on Jinan's agricultural sector. The comprehensive framework begins with an introduction elucidating the research's background, significance, objectives, and questions. Employing a questionnaire survey, the methodology targets consumers who have purchased Jinan agricultural products both in physical stores and online platforms, encompassing primary and subsidiary products. It discerns consumers who have purchased the same agricultural product both offline and online. The investigation delves into consumers' awareness of Jinan agricultural product brand image across dimensions: regional, ecological, affordability, and social aspects. It also explores the correlation between these dimensions and consumers' purchasing intentions, uncovering the mediating role of perceived value. Findings highlight the growing significance of regional brand images, extending beyond quality and taste considerations. Consumers prioritize regional identity, ecological friendliness, affordability, and societal image, with perceived value mediating the impact on purchase intentions. In conclusion, the research contributes insights into the nuanced relationship between Jinan agricultural product regional brand image and consumer behavior. The identified dimensions provide a theoretical foundation for regional brand management, guiding strategic marketing decisions and fostering sustainable development in the local agricultural sector. Future research may explore broader sample scopes and delve deeper into nuanced consumer perceptions and preferences.

Keywords: Regional brand image; Jinan agricultural product; Consumer purchase intention

1 Introduction

In the context of global development, the regional brand image of agricultural products has gradually emerged as a pivotal factor influencing consumer purchasing decisions. Against this backdrop, an in-depth exploration into how the regional brand image of agricultural products in Jinan affects consumer purchasing intentions becomes particularly imperative. According to

the "2020 China Regional Agricultural Brand Development Report" ^[1] the number of registered trademarks for agricultural products in China has surged from 600,000 in 2008 to 5 million in 2020. The total registered trademarks have increased from 13% to 25%. Notably, the report highlights the rapid growth of branded agricultural products across all categories on e-commerce platforms, with corresponding increases in business revenue and total transaction numbers. In 2020, the agricultural products of 300 regional public brands selected for inclusion in the Chinese agricultural brand directory recorded over 50 million transactions, reflecting a 25% growth from 2018. The expanding consumer base is evident, with the number of consumers of branded agricultural products reaching 42 million in 2020, marking a 30% increase from 2018. Scholars have adopted various approaches to assess the brand dissemination of agricultural products, constructing indicator systems and providing recommendations based on operational capabilities, brand communication content, and brand exposure^[2]. In the backdrop of rural revitalization, other scholars have studied the construction strategies of poverty-alleviation agricultural product brands ^{[3][4]}. This study aims to explore the impact of the regional brand image of agricultural products in Jinan on consumer purchasing intentions, with the intention of offering theoretical support and practical guidance for enhancing market competitiveness and promoting local economic development.

In recent years, as people's living standards rise and consumer attitudes mature, the demand for agricultural products has transcended basic considerations of taste and quality. Instead, an increasing number of consumers are placing emphasis on the regional brand image of agricultural products, including the reputation of the place of origin, brand awareness, and related cultural elements. Many geographical indication products have emerged, adopting names in the format of "geographical location + product." Besides being widely recognized, these products have become symbols of quality and reliability in the eyes of consumers, leading to elevated brand prices. Regional agricultural products are gradually transitioning towards brand-oriented development. Early scholars identified the influence of the country of origin image effect on consumer product evaluations and purchase desires ^{[5][6]}. Other scholars have highlighted the pervasiveness of perceived value throughout the entire process of consumer purchasing and service usage ^{[7][8]}. Jinan, with its rich history and cultural heritage, holds a unique position in the market for agricultural products. Understanding consumer perceptions and attitudes towards the regional brand image of Jinan's agricultural products is crucial for guiding market demand and increasing market share.

The significance of this study manifests in several aspects. Firstly, by gaining an in-depth understanding of consumer perceptions of Jinan's agricultural product regional brand image, it can provide market positioning and development directions for local agriculture, helping agricultural products establish a more robust brand image. Secondly, the research results can aid in formulating rational marketing strategies, enhancing the image and status of Jinan's agricultural products in the minds of consumers, and driving sustainable development in the local agricultural economy. Lastly, from an academic perspective, this study fills a theoretical gap in the research on agricultural product regional brand images, providing new perspectives and references for related academic research.

This study primarily focuses on the regional brand image of agricultural products in Jinan, aiming to deeply understand the impact mechanism of this brand image on consumer purchasing intentions. Through survey analysis, we will explore the level of consumer awareness regarding the brand image of Jinan's agricultural products and its correlation with

their purchasing intentions. Simultaneously, the study will endeavor to uncover potential factors influencing this correlation, offering specific recommendations for the formulation of effective brand promotion and marketing strategies.

In investigating the impact of Jinan's agricultural product regional brand image on consumer purchasing intentions. Therefore, this study will address the following questions:

1. What is the level of consumer awareness regarding the regional brand image of Jinan's agricultural products?
2. To what extent does the regional brand image of Jinan's agricultural products influence consumer purchasing intentions?
3. What are the potential factors influencing this correlation?

By answering these questions, the study aims to provide practical recommendations for the brand construction and market promotion of Jinan's agricultural products.

2 Methods

2.1 Data Collection

This study employs a questionnaire survey to collect sample data, targeting consumers who have experiences in purchasing Jinan agricultural products both in physical stores and through online platforms. The questionnaire clearly defines the scope of Jinan agricultural products, encompassing primary agricultural products and by-products such as tea, fruits, grains, aquatic products, and meat. The eligible respondents are those who have made purchases of the same agricultural product through both offline and online channels. Consumers are required to provide details on the types and brand names of agricultural products they have purchased.

In the questionnaire design, careful consideration was given to the distinctive characteristics of Jinan regional agricultural product brands. The regional brand image of agricultural products was categorized into four dimensions: Regional (formed through long-term development and historical accumulation within a specific geographical area, including natural resources, cultural connotations, production and processing techniques, and brand reputation); Ecological (the primary indicators for identifying the quality of agricultural products, including organic, pollution-free, and high nutritional value); affordable (due to slow progress in brand development, agricultural products under regional brands often leave consumers with the impression of being inexpensive. Price is one of the crucial factors influencing consumer purchasing decisions); and social (regional brands of agricultural products hold social value, and consumers with social attributes often connect the brand image with their personal identity and social recognition).

In the questionnaire, consumers recalled their experiences purchasing agricultural product brands both online and offline, responding to corresponding questions for each of the four dimensions. Additionally, consumers answered questions covering three dimensions: brand awareness, purchase intention, and perceived value. Finally, the questionnaire collected consumers' basic personal information, including gender, age, education level, monthly income, monthly agricultural product consumption expenditure, annual online shopping

expenditure, etc. All variables in this study were measured using a Likert five-point scale (except for control variables), with values ranging from 1 to 5 representing "strongly disagree," "disagree," "neutral," "agree," and "strongly agree," respectively.

The determination of the sample size for this study involved a collaborative effort with an online research company to ensure statistical robustness. A total of 500 questionnaires were strategically distributed to consumers with prior experience in purchasing Jinan agricultural products from both physical stores and online platforms. The inclusion criteria for eligible respondents were defined based on their dual-channel purchasing behavior – having made purchases of the same agricultural product through both offline and online channels. This criterion aimed to capture a diverse range of consumer experiences and perceptions. The successful retrieval of 422 completed surveys resulted in a response rate of 84.4%. After excluding samples with response times less than 100 seconds and those providing information on non-agricultural products or non-agricultural product brands, 354 valid questionnaires were obtained, yielding an effective response rate of 83.8%. This accomplishment meets the basic requirements for both the quantity and quality of the survey.

The demographic characteristics of the respondents from the valid questionnaires indicate a gender distribution of 38.5% males and 61.5% females. Regarding age, the majority of respondents fall within the 21-30 age group, constituting 74% of the sample. In terms of monthly income, nearly half of the respondents earn less than 5000 RMB. Concerning monthly expenditure on agricultural products, 27.8% of consumers spend less than 100 RMB per month, while those spending between 101-200 RMB represent 35.5%. Regarding annual online shopping expenditure, 38.1% of consumers spend between 5001-10000 RMB.

The reliability testing process employs Cronbach's coefficient and the Composite Reliability (CR) coefficient, both utilized to evaluate the internal consistency of relevant scales. For this study, we employed SPSS 22.0 and AMOS 20.0 to compute these coefficients. The results reveal that the Cronbach's coefficients and CR values for each variable surpass 0.7, indicating a high level of internal consistency and fulfilling the essential criteria for research analysis. Concerning validity testing, it encompasses content validity, convergent validity, and discriminant validity. The variables and measurement items in this study are derived from established scales and have been adjusted to reflect the actual situations of consumers purchasing agricultural products, ensuring good content validity. Confirmatory Factor Analysis (CFA) was conducted to assess the validity of the measurement model. The outcomes indicate a well-fitted model, with all fit indices meeting acceptable standards. This confirms the appropriateness of the chosen variables and their measurements in capturing the underlying constructs related to Jinan agricultural product brand image dimensions.

Through the analysis of the influence paths in the questionnaire, the research model of this study has been constructed, as illustrated in Figure 1.

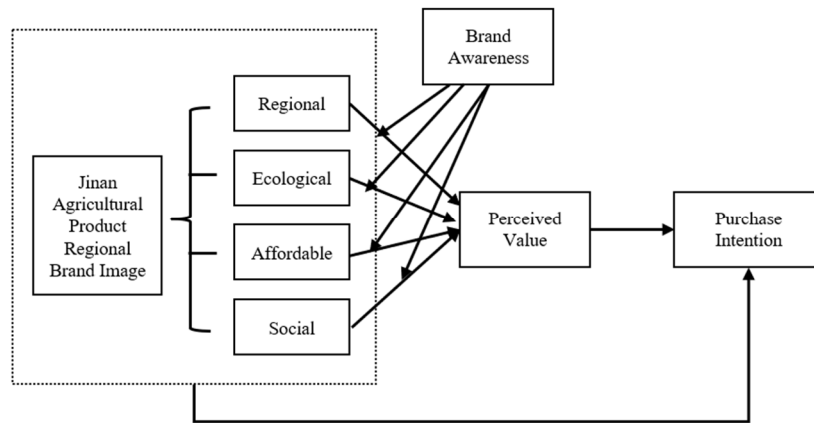


Fig.1. Jinan Agricultural Product Regional Brand Image Research Model

3 Results

Through the principal component analysis of the regional brand image of Jinan agricultural products, the results indicate the following: The loadings of the four factors, namely regional, ecological, affordable, and social, are all greater than 0.7, with a cumulative variance explained of 66.259%. The explanatory power of the factors is robust, aligning with the predetermined number of dimensions in this study; The total variance explained for perceived value is 73.103%, indicating a strong explanatory power of the factor; For brand awareness, the total variance explained is 63.018%, highlighting a robust explanatory power of the factor; The total variance explained for purchase intention is 66.586%, signifying a strong explanatory power of the factor. These findings affirm the robust explanatory capabilities of the identified factors in the respective dimensions, substantiating the validity of the established dimensions in the study.

Subsequently, Confirmatory Factor Analysis (CFA) was employed to validate and assess the effectiveness of the measurement variables by examining fit indices and indicator variables. The standardized factor loadings for the items related to the dimensions of regional, ecological, affordable, and social aspects in the regional brand image of Jinan agricultural products were all above 0.7. The Composite Reliability (CR) values exceeded 0.8, and the Average Variance Extracted (AVE) values were all above 0.5. For perceived value, the standardized factor loadings for each item were above 0.7, with a CR value of 0.89 and an AVE value of 0.65. Similarly, for brand awareness, the standardized factor loadings for each item were above 0.7, with a CR value of 0.875 and an AVE value of 0.588. In the case of purchase intention, the standardized factor loadings for each item were above 0.7, with a CR value of 0.87 and an AVE value of 0.595. These results indicate that the convergent validity of the Jinan agricultural product brand image scale is satisfactory, demonstrating the robustness of the measurement model. The square root of the Average Variance Extracted (AVE) for each of

the seven research variables in this study is greater than the correlation coefficients with other variables, indicating the quantification of discriminant validity for the measurement scale.

We conducted model estimation and analysis using AMOS 20.0 software, and the results of the standardized path coefficients are presented in Table 1. We draw the following conclusions: Regional, ecological, affordability, and social dimensions all have a significant positive impact on purchase intention. Additionally, regional, ecological, affordability, and social dimensions all exhibit a significant positive influence on perceived value. Furthermore, perceived value significantly contributes to a positive impact on purchase intention.

Table 1. Standardized Path Analysis of Jinan agricultural product regional brand image

Hypothesized Path	Std.	Standard Error	C.R.	P-value
Perceived value ← Regional	0.15	0.064	2.56	0.001
Perceived value ← Ecological	0.23	0.08	3.225	**p<0.001
Perceived value ← Affordable	0.17	0.047	2.377	0.02
Perceived value ← Social	0.203	0.07	3.136	**p<0.001
Purchase Intention ← Regional	0.186	0.055	3.073	**p<0.001
Purchase Intention ← Ecological	0.172	0.069	2.462	0.138
Purchase Intention ← Affordable	0.156	0.063	2.333	0.008
Purchase Intention ← Social	0.129	0.052	1.960	0.012
Purchase Intention ← Perceived value	0.396	0.051	4.898	**p<0.001

Note: **p<0.001

4 Conclusions

This study aimed to delve into the impact of Jinan agricultural product regional brand image on consumer purchase intention, while exploring the mediating role of perceived value. As outlined in the introduction, we clarified the background, significance, and main objectives of the research, posing corresponding questions. Employing questionnaire surveys and employing statistical tools such as principal component analysis and confirmatory factor analysis in the research methodology ensured the scientific rigor and reliability of our findings. The results, obtained through standardized path analysis, illuminated the intricate relationships between regional, ecological, affordability, and social dimensions and their effects on consumer purchase intention, with perceived value serving as a crucial intermediary.

Firstly, our findings indicate that regional, ecological, affordability, and social dimensions significantly and positively influence purchase intention, particularly inducing favorable effects. This aligns with our preliminary understanding of Jinan agricultural products, emphasizing the importance of consumer identification with the product's geographic origin, ecological friendliness, affordability, and societal image in shaping purchase intentions. This underscores the pivotal role of regional brand image in the agricultural product market, extending beyond product quality and taste to encompass a multi-dimensional brand perception.

Secondly, perceived value emerges as a key mediator between regional brand image and purchase intention. The study reveals that dimensions like regional, ecological, affordability, and social aspects positively influence consumer purchase intention by enhancing their

perceived value of the products. Perceived value functions as an information conduit and processor during the decision-making process, providing consumers with a basis and confidence when purchasing agricultural products. Hence, brand image shaping is not merely an external showcase but also an establishment of value identification in consumers' minds, subsequently transmitted to purchase intentions through perceived value.

Lastly, through structural equation model analysis, we validated our research hypotheses and drew conclusive insights. The significant positive impacts of regional, ecological, affordability, and social dimensions in Jinan agricultural product regional brand image deepen our understanding. The clearer delineation of the mediating role of perceived value emphasizes the crucial factors consumers consider during decision-making. This study offers valuable insights for the management of Jinan agricultural product regional brand image and provides a theoretical foundation for the formulation and implementation of brand strategies..

While this study has made valuable findings regarding the influence of Jinan agricultural product regional brand image on purchase intention, with the mediating role of perceived value, several avenues for future research warrant exploration. Expanding the sample scope to encompass a broader range of consumer demographics and a more extensive array of agricultural product categories would enhance the external validity of the study. Further delving into the nuances of perceived value, understanding the trade-offs and preferences consumers have regarding different dimensions, could better guide brand image construction. Additionally, introducing factors such as consumer perceptions of brand narratives and social media communication could provide a more comprehensive understanding of brand cognition.

Despite the progress made in methods and results, this study exhibits certain limitations that need acknowledgment and clarification. Firstly, the use of questionnaire surveys as a data collection method may be subject to subjective biases, introducing a degree of information bias. Secondly, the focus on Jinan agricultural products may limit the generalizability of the results to other regions and agricultural products. Furthermore, the measurement of perceived value still possesses some subjectivity, and future research could consider integrating more objective indicators.

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