A Study on The Influencing Factors of Consumers' Purchasing Behavior of Geographical Indication "Shanxi Mature Vinegar" Under The Brand Recognition Perspective

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Abstract− China has its unique and rich food culture tradition. Today, consumers have a higher value demand for groceries. The brand represents the high quality and characteristics of the product, and Shanxi Mature Vinegar is a geographical indication product of Shanxi Province. This study used structural equation modeling to construct the relationship between the brand cognition of "Shanxi Mature Vinegar" and consumers' purchase behavior. From the five dimensions of product value, service value, image value, social value and consumer purchasing behavior. The final results were obtained by posting questionnaires online, using SPSS and AMOS software to analyze data and test hypotheses. Conclusions: Image value has the greatest positive impact on consumer purchasing behavior, followed by product value and social value, and service value has the least impact. This indicates that more attention should be paid to innovation and service value enhancement in market development.

Keywords: Shanxi Mature Vinegar, brand cognition, consumer purchasing behavior, structural equation model

1. INTRODUCTION

Shanxi Mature Vinegar has been developed for thousands of years, from the traditional family workshop to the present enterprise production, the development of vinegar industry has a certain scale. Shanxi is not only the main consumer market of mature vinegar, but also the main production place of vinegar. At present, there are hundreds of vinegar production enterprises of various scales in Shanxi (Wang, P., 2017). The "Notice of Opinions on Promoting the Accelerated Development of Shanxi Vinegar Industry" jointly formulated by Shanxi Provincial Department of Finance, Provincial Economic and Information Commission, Provincial Department of Commerce and Provincial Quality Supervision Bureau gives encouragement policies and preferential policies in marketing, brand certification and scientific research and innovation, which provides policy guarantee for the development of Shanxi vinegar industry and is of great significance to accelerate the leapfrog development of Shanxi vinegar industry and promote the transformation of Shanxi from a large vinegar producing province to a strong vinegar province. It is of great practical significance to accelerate the leapfrog development of vinegar industry in Shanxi Province and promote the transformation of Shanxi from a large vinegar producing province to a strong vinegar province (Sugumaran, V., Xu, Z., & Zhou, H. 2020).

Shanxi Mature Vinegar has a long history, good quality and high market cognition, and has a high customer cognition value, but because the traditional vinegar industry is fragmented and the concentration of the industry is relatively low, therefore, with the rapid development and growth of major domestic famous vinegar brands, Shanxi Mature Vinegar is facing more and more competitors and the competition is getting fierce. Meanwhile, consumers' demand for vinegar in the market is getting more and more picky, showing diversified and changeable characteristics. Brands have adopted various marketing means and measures to attract customers and enhance consumers' purchasing behavior. How Shanxi Mature Vinegar can take countermeasures to adapt to the market competition, better meet the market demand, stabilize the market share and enhance the competitive position becomes an urgent problem to be solved.

Shanxi Mature Vinegar companies have adopted various means of marketing promotion and publicity in order to fight for the market. In order to enhance consumer purchasing behavior and promote consumption.

a. The product variety keeps increasing.
b. Deep cultural heritage.
c. Advantage of product attributes.
d. Wide range of raw material sources.
e. 100 brand-name enterprises.

This study was conducted with general consumers in Shanxi province, and online questionnaires were conducted for the main research questions and analyzed the role of brand perception of Shanxi Mature Vinegar on consumers' purchasing behavior. Despite the blossoming of brand-name enterprises, price pressures under competition are increasingly limiting the survival and development of enterprises. Therefore, it is urgent for Shanxi Mature Vinegar to improve its competitiveness. This study was conducted to study the brand awareness behavior of consumers with Shanxi Mature Vinegar as the research object and to explore the effect of different dimensions of brand perception of Shanxi Mature Vinegar on consumers' purchasing behavior.

2. LITERATURE REVIEW

2.1 Consumer Purchasing Behavior

Consumer purchasing behavior refers to the formation of personal behavior related to consumer behavior around the purchase of means of production of living goods, involving from the generation of demand motivation to purchase activities, as well as the psychological feeling after the selection of goods. Specifically, it includes the following five stages:

a. Psychological confirmation and demand. The consumer shows inner physiological activity due to the external psychological influence.
b. Collection of information. Consumers obtain information about the product through the influence of other consumers and related media.
c. Evaluation of choice. The consumer makes a preliminary analysis of the information obtained and then makes a choice.
d. Purchase decision. The consumer's final intention to purchase driven by the above stimuli.
e. Post-purchase consumption effect assessment.

In 2012 Simona Romani et al. proposed that consumer purchasing behavior is the behavior that shows tendencies when purchasing a product or service in order to satisfy a personal need, which is multifaceted can be a household or a business, and that purchasing goods is a decision-making process. Consumer purchasing behavior is a dynamic evolutionary process that involves a combination of perceptual, cognitive, and environmental factors (Simona Romani，Silvia Grappi，Daniele Dalli, 2012). Consumer behavior was defined by Anderson & Golden as early as 1984 (Anderson & Golden, 1984). Further research on consumer purchasing behavior was conducted by N Ramya et al. Based on the stimulus-response model, consumer behavior was divided into five components including consumer purchasing behavior: 1. intrinsic or psychological factors 2. social factors 3. cultural factors 4. economic factors 5. personal factors (N Ramya & Dr. SA Mohamed Ali, 2016).

In 1996 Hans Baumgartner , Jan-Benedict E.M. Steenkamp conceptualized two exploratory consumer purchasing behaviors and created scales to be tested in two countries. This led to the knowledge that the consumer's first impression of a product is an important factor in whether or not to make a later purchase (Hans Baumgartner , Jan-Benedict E.M. Steenkamp, 1996).

Elizabeth C. Hirschman examines consumer purchasing behavior through a sociological and psychological lens, combined with subjectivist knowledge, as a way to shallowly introduce causal relationships between types of consumption (Elizabeth C. Hirschman, 1984).

2.2 Brand Recognition

Whether a brand can develop for a long time, and the enterprise's own efforts and consumer brand cognition can not be separated from the relationship. The management of the enterprise itself, the goodness of the product and the degree of brand communication among consumers are closely related, and the general cognition of consumers about the brand should not be ignored as well (Simona Romani, 2012).

In 2005, Nandan, S. proposed that brand image refers to consumer perception, including the set of beliefs consumers have about a brand. Brand identity and brand image are related but different concepts. Both are important components of a strong brand (Nandan, S., 2005). At the same time, brand reputation is also very important. It has been shown that people usually choose to buy products they have heard of and have a good reputation (high cognition). This clearly demonstrates the importance of brand cognition.

And while brand communication contributes to brand cognition, consumers use brand cognition in many contexts as a quality assurance and risk reduction strategy. This involves brands paying equal attention to brand retailers (N Rubio, J Oubiña, N Villaseñor, 2014). Brand cognition is a basic prerequisite for brand loyalty and therefore plays a crucial role in consumers' brand choice and purchase behavior (M Ahearne, & CB Bhattacharya, 2005).

Destinations can invest more in tourism development and seek to ensure the competitiveness of the destination by adapting to the requirements of tourism demand. And destinations with strong and well-known brands will have a better image on the tourism market. Therefore Lorena Bašan Lidija Bagarić Dina Lončarić suggests that the development of recognizable destination brands will strengthen the image of Kvarner destinations (L Bašan, L Bagarić, D Lončarić, 2013).

2.3 Development of Research Hypothesis

Hypothesis 1: Product value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior
Hypothesis 2: Service value of Shanxi Mature Vinegar has a positive effect on consumer purchasing behavior
Hypothesis 3: The image value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior
Hypothesis 4: The social value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior.

2.4 Research Population and Research Sampling Method

The target audience of this study is the general consumers in Shanxi Province, China. According to 2021 statistics, the resident urban population in Shanxi Province has reached as high as 22,074,808 (Shang, J., Wang, Z., Li, L., Chen, Y., & Li, P., 2018). By substituting the known population information into the Taro Yamane formula, the most appropriate sample size for the survey is about 400 respondents. The result of the calculation is exactly in line with the reference standard of "sample size and total number of questionnaire questions is 10:1 (Hair, 2010).

2.5 Questionnaire Design

Through comprehensive analysis of the information of related literature and according to the current situation of Shanxi Mature Vinegar marketing, the questionnaire is organized based on the analysis and summary of literature. The content of the questionnaire mainly includes three basic parts: the first basic part is the respondents' personal basic information, mainly for the respondents' personal gender, age and so on. The second part of the questionnaire is mainly to analyze the respondents' preferences on the ranking of the main brands of Shanxi Mature Vinegar for purchase. The third measurement index part is to analyze the different attitudes and specific views of consumers on the use of Shanxi Mature Vinegar, and the 5-point Likert scale representative was used to measure the scores of different dimensions respectively, and the meanings of the five scores of each index after measurement were expressed.

2.6 Research Variables

After fully summarizing and drawing on the customer value related research theories of other experts and scholars, this paper deeply investigates the important influence of brand perception of Shanxi Mature Vinegar on consumers' purchasing behavior.

Table 1. Variable Descriptions

No.	Dimensions	Influencing factors	Definition of latent variables
(1)	Consumer purchasing behavior (CPB)	Preferred Shanxi Mature Vinegar	Customers' willingness to use Shanxi Mature Vinegar brand and to refer Shanxi Mature Vinegar to others
		Share the taste experience	
		Regular consumption	
		Customer Loyalty	
(2)	Product value (PV)	Flavor experience	Compared with other vinegar brands, the taste experience of Shanxi Mature Vinegar is better
		Taste of color and luster	Compared with other vinegar brands, Shanxi Mature Vinegar has better color and luster feeling
		Outstanding aroma	The aroma of Shanxi Mature Vinegar is more prominent than other vinegar brands
		Other functions	Compared with other vinegar brands, Shanxi Mature Vinegar has more other functions (such as health)
(3)	Service value (SV)	Market coverage	Shanxi Mature Vinegar brand has wide market coverage
		Sales channels	There are many sales channels for Shanxi Mature Vinegar brand, which can be purchased by large and small supermarkets, online and offline
		After-sales service	Shanxi Mature Vinegar brand has perfect after-sale service when quality or other problems occur
		Clear marking	Shanxi Mature Vinegar brand products are clearly marked with raw materials and execution standards
(4)	Image value (IV)	The brand is deeply popular	The brand image of Shanxi Mature Vinegar is deeply rooted in people's hearts
		The packaging is beautiful and generous	Shanxi Mature Vinegar brand packaging is beautiful and generous
		The first-class production	The quality of Shanxi Mature Vinegar brand is more

		process with quality assurance	guaranteed
			The brewing technology of Shanxi Mature Vinegar brand is first-class
(5)	Social Value (Sv)	Meet the diet habit	First-class brewing technology of Shanxi Mature Vinegar brand
		Promote industry development	Shanxi Mature Vinegar brand development can drive industrial development (such as vinegar culture industrial park)
		Promote local employment	Shanxi Mature Vinegar brand development can drive local population employment
		Promote traditional culture	Shanxi Mature Vinegar brand follows the ancient brewing method and carries forward the excellent traditional culture

3. RESEARCH METHODOLOGY

This research study mainly based on the previous research results and the actual situation of the production of "Shanxi Mature Vinegar" according to the geographical indication, and designed a questionnaire to collect data to conduct an empirical data analysis study on the influence of brand perception on the purchase behavior of Shanxi Mature Vinegar. The specific research methods are as follows.

The study was conducted using questionnaires, and the designed questionnaires were distributed through the online method (Questionnaire Star) to collect the data needed for the empirical study. After analyzing and determining the basic theoretical structure of the research topic, the scale of the thesis was given based on the previous research and practical experience.

3.1 Data Statistics Analysis

After obtaining the original data through questionnaires, this study used SPSS software to conduct descriptive statistics and reliability analysis on the data. At the same time, structural equation modeling was used to conduct validation factor analysis and causality study on the data information. The analysis was conducted with the help of Amos, a common software for structural equation modeling, and the interrelationship among the variables was studied from the empirical point of view so as to test the research hypotheses proposed in this paper. (R. Y. Liu, Parelius, & Singh, 1999).

3.2 Conceptual Framework and Model Construction

By referring to the relevant theoretical articles, the research hypothesis about this paper was proposed, and the theoretical research hypothesis was explained and elaborated. Based on the Howard-Sheath model, the relationship between the brand perception of Shanxi Mature Vinegar and consumer's purchasing behavior was studied by focusing on four dimensions such as people's perception of Shanxi Mature Vinegar brand, which leads to consumer's purchasing behavior. The framework of this study:
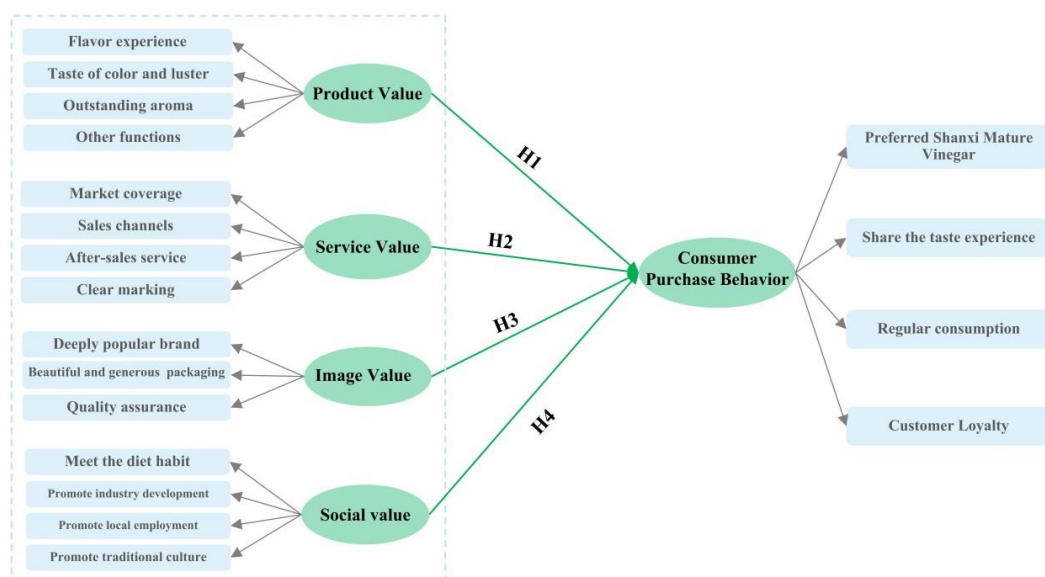

Figure 1. Conceptual Framework of This Research

4. DATA ANALYSIS RESULTS

4.1 Results of the empirical analysis of consumers of Shanxi mature vinegar

The main content of this research is to study the influence of brand perception of geographical indication "Shanxi Mature Vinegar" on consumers' purchasing behavior, and finally four hundred valid questionnaires were collected online.

4.2 Descriptive statistical analysis

Descriptive statistical analysis of basic consumer information, specific data description of the basic situation of the survey respondents. Statistical analysis and comprehensive analysis of statistical results, such as gender, age, education level of each customer, etc.

Table 2. Statistical Analysis of Basic Information of Survey Respondents

Categories	Frequency	Percent	Cumulative Percent
Gender			
Male	208	52%	52%
Female	192	48%	100.00%
Age			
Under 18 years old	67	16.75%	16.75%
18-25 years old	94	23.5%	40.25%
26-40 years old	126	31.5%	71.75%
41-60 years old	56	14%	85.75%
Over 60 years old	57	14.25%	100.00%
Education			
High school degree or below	66	16.5%	16.5%
College degree	111	27.75%	44.25%
Undergraduate	149	37.25%	81.5%
Master/PhD degree	74	18.5%	100%
Occupation			
Students	79	19.75%	19.75%
Corporate Employees	75	18.75%	38.5%
Public officials/government employees	69	17.25%	55.75%
Freelancers	81	20.25%	76%
Businessman	52	13%	89%
Others	44	11%	100%
Total	400	100.0%	

Data source: According to the analysis of the survey questionnaire

Table 3. Statistical Analysis of Survey Respondents on The Purchase of Shanxi Mature Vinegar Brands

What Brands of Shanxi Mature Vinegar Do You Like to Buy?

Categories	Frequency	Percent	Cumulative Percent
Ninghuafu Vinegar	87	21.75%	21.75%
Shuita Vinegar	66	16.5%	38.25%
Dong Hu Vinegar	85	21.25%	59.5%
Lai Fu Vinegar	60	15%	74.5%
Zi Lin Fermented Vinegar	102	25.5%	100%
Total	400	100.0%	

Data source: According to the analysis of the survey questionnaire

As shown in Table 3, the survey respondents' consumption proportion of each brand of Shanxi mature vinegar is different. It can be basically reflected with the previous situation of the popularity share of famous Shanxi vinegar, in which the consumption share of Zi Lin Fermented Vinegar brand was first, which was as high as 25.5%, followed by Ninghuafu Vinegar brand, which accounted for 21.75%. It shows that consumers pay more attention to the old brand products with good reputation and historical heritage when purchase Shanxi mature vinegar.

4.3. Findings of empirical analysis of Shanxi Mature Vinegar

The article took Shanxi Mature vinegar consumers as the object of empirical research and conducted an empirical study on a total of five dimensions: product value, image value, service value, social value and consumer purchasing behavior. The collected questionnaire data were statistically analyzed with SPSS24.0, structural analysis and modeling of equation model were conducted with AMOS22, and the data were tested for reliability. Based on the analysis of the previous section, this test was summarized and is shown in Table 4.

Table 4. Test Results of Research Hypothesis

Hypothesis test	Variable Relationships	Results
H1	The product value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior	Support
H2	The service value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior	Support
H3	The image value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior	Support
H4	The social value of Shanxi Mature Vinegar has a positive effect on consumers' purchasing behavior	Support

In general, the overall findings are in line with the existing theoretical support. Through the literature review of relevant studies by previous researchers and the multi-faceted analysis of collected questionnaire data, the authors found that different brand perceptions of geographical indication Shanxi Mature Vinegar have different degrees of influence on consumers' purchasing behavior, which was again authenticated by data analysis. Here again, the authors were surprised to find that all the four brand perception dimensions of Shanxi Mature Vinegar play a positive role on consumers' purchasing behavior. All the hypothesis of this study were proved to be valid and effective.

5. CONCLUSION

Based on the preliminary results, we propose more scientific and effective suggestions to help the local industries producing geographical indications in Shanxi province to develop with high quality. In the path analysis of the overall standardized model, each dimension has a very significant positive path coefficient effect on consumer purchasing behavior. The product value in this study has a positive effect on consumer purchasing behavior. The impact regression coefficient is 0.273 with a p-value of 0.000. In economics, value is the direct factor that drives consumers to purchase a product, and consumer purchasing behavior is primarily driven by the products' value(Zheng, W., 2022). Service value has a positive effect on consumer purchasing behavior. The impact regression coefficient was 0.115 with a p-value of 0.049. Practical services can provide a vehicle for consumption(Alzoubi, A., 2022) . Image value has a positive effect on consumer purchasing behavior. The impact regression coefficient was 0.276 with a p- value of 0.000. There is a positive and significant relationship between brand image (BRI) and purchase intention.Practical services can provide a vehicle for consumption (Ma, Y., & Liu, C., 2022). Social values have a positive effect on consumer purchasing behavior. The regression coefficient of influence is 0.194 with a p-value of 0.002. Good social values will make consumers feel the urge to spend. Usually consumers get a period of inspiration before purchase something, which is seen as a positive effect of social values on consumer purchasing behavior (MChakraborty, D., Kayal, G., Mehta, P., Nunkoo, R., & Rana, N. P., 2022). The product value, service value, image value and social value of "Shanxi Mature Vinegar" GI brand perception have positive influence on consumers' purchasing behavior, but the degree of influence varies from large to small. The influence analysis on the degree of consumer's purchasing behavior, the image value has the greatest effect on consumer's purchasing behavior, the product value is the second, the social value is the third and the service value is the fourth.

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