Factors Influencing Chinese Rice Brand Equity: Perceived Value of Yunnan Consumers

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Abstract

The objective of this research is to study major factors influencing the rice's brand equity from the Yunnan (China) consumer's perspective. The research is a quantitative design using constructed survey questionnaires to collect data from 420 respondents who had bought branded rice within the past one year in Yunnan province, China, through the convenience sampling. Stepwise and Hierarchical Regression are employed to identify the factors affecting rice brand equity with perceived value as a mediator variable. The results find that retailer's image, distribution density, product, and promotion factors have a significant positive impact on rice brand equity. When consider by each factor, the results reveal that the retailer's image has the greatest influence on rice brand awareness and distribution density influences the rice brand image. Product has the greatest impact on rice brand perceived quality and rice brand loyalty. Finally, the results confirm that perceived value has a partial mediating effect between the external influencing factors and the four dimensions of rice brand equity.

Keywords: Brand Equity, Chinese Rice, Perceived Value, Rice Brand.

1. Introduction

Rice is a posteriori commodity with hidden characteristics (Dong, Mu, & Hou, 2013). In the case of asymmetric market information, brand, could convey product information for consumers to judge product quality through their purchasing behavior. Lately, rice products have changed from a simple product and price competition into a fierce competition between brands. Rice brand development has become one of the essential factors affecting the competitiveness of enterprises in the rice markets. Currently, China's rice enterprises realize

the importance of brand building. China rice enterprises are typically small and medium size creating more than 10,000 brands in 34 provinces and cities in China including thousands in Heilongjiang province, among these, Wuchang rice enterprises have more than 500 registered trademarks (Zhen, 2018). Only less than 30 percent of rice brands in China could enjoy high popularity and good reputation in the market. On the other hand, due to the less publicity and promotion, China's rice brands have not been able to gain a high degree of recognition and popularity in the market. Most Chinese rice enterprises do not focus on highlighting the product differences. Hence, enhancing brand equity is the key for the rice enterprises who desire to brand development, enhance the market competitiveness, and win the recognition of customers (Shang & Li, 2018).

Consumers' cognition and attitude towards rice will influence the choice of brand and the generation and formation of brand equity. The implementation of marketing activities would enable consumers to have a differentiated response to the brand in terms of cognition, emotion, behavioral intention, etc., which is a key source of rice brand equity (Yu & Zhao, 2003). However, there are few studies on rice brand equity, and on the functional relationship between influencing factors and rice brand equity. Therefore, this study aims to study the main factors influence rice brand equity, and analyze the relationship between the influenced factors and rice brand equity to help Chinese rice enterprises to effectively enhance rice brand equity, increase enterprise brand value, and strengthen their market competitive ability.

2. Literature Review
-Rice Brand Equity
Brand equity is a value added brought by the brand to products and services (Fan, 2000). More and more scholars tend to analyze brand equity from the perspective of consumers, believing that brand equity is a differentiated response of consumers to marketing activities carried out by enterprises while consumers' recognition of brands is an important to form brand equity (Yu & Zhao, 2003). Brand equity from the perspective of consumers is an attitude and view of consumers towards brands, which needs to be measured through multiple dimensions. Aaker (1991), Keller (1993), Yoo and Donthu (2000) find the measurement dimensions of rice brand equity include brand awareness, perceived quality, enterprise's brand image, and brand loyalty. Miller (1999) states that brand awareness is an ability to know a brand name; it is a prerequisite for consumers to have purchase ideas and behaviors. In the rice market where brand becomes an important signal to convey the information of rice products and enterprises to consumers. When they are not familiar with the purchased brand, most people will think that the "well-known" brand provides better products in the market leading to more likely to gain consumers' favor (Hamza, 2011). Therefore, brand awareness is one of the important dimensions of measuring rice brand equity.

Chakraborty (2019) states that perceived quality and the enterprises positioning differentiation are other reasons for consumers to purchase. Under the theory of Cognitive Psychology, when consumers buy products, they will perceive and evaluate brands according to their associative memory network to make their own purchasing decisions (Chakraborty, 2019). Only when consumers have a good perception of the quality; they repeat the purchase and make positive comments. Thus, perceived quality is one of the necessary dimensions to measure rice brand equity. Biel (1992) presents that brand image is a multi-dimensional

concept including the image of enterprises, users, products, or services. Due to the particularity of rice, consumers will develop a corresponding association based on the industry status of rice enterprises, business scale, consumer groups, products or services and other aspects of the brand. They belief that only the good rice enterprises can produce and sell good products. Therefore, corporate brand image is an important dimension of measuring rice brand equity. Finally, attitudinal loyalty refers to consumers' commitment to the same brand, including purchase intention and recommendation intention (Baldinger, 1996). Behavioral loyalty refers to consumers' repeated consumption and purchase of the same brand. Rice enterprises that can effectively increase the value brought by the brands through a series of differentiated marketing, strengthening consumers' willingness, repurchase behavior, and encouraging consumers to form loyal customers to the brand. Hence, brand loyalty is the main dimension of measuring rice brand equity.

-Relationship Between Retailer Image and Rice Brand Equity

Retailers, as the bridge links consumers and products, are the closest contact with consumers. Consumers' perception of products is an important factor affecting consumers' decision on brands. (Wang & Zhang, 2015) and Dodds et. al. (1991) confirmed that the image of sellers has a positive impact on consumers' purchase intention and perceived quality. Yoo, Donthu and Lee (2000), Pettijohn and Mellott (2010) found that retailer's image has effects on brand awareness and brand image. When consumers buy branded rice, they will also weigh the selling brands based on the shopping environment, service attitude, and distribution service of the retail stores. Accordingly, the following research hypotheses are proposed:

H1: Retailer image has an influence on a) rice brand awareness, b) perceived quality of rice brand, c) brand image of rice enterprises, and d) on rice brand loyalty.

-Relationship Between Distribution Density and Rice Brand Equity

Distribution density, as a product sales strategy implemented by enterprises, aims to enable consumers to buy the products and enjoy the corresponding services in different places at anytime and anywhere. So that consumers have more time and opportunities to perceive the brand (Yoo et al., 2000). Li (2010) confirmed that distribution density has a significant positive impact on brand awareness, perceived brand quality, loyalty, and satisfaction. Based on this, the following research hypotheses are proposed:

H2: Distribution density has an influence on a) rice brand awareness, b) perceived quality of rice brand, c) brand image of rice enterprises, and d) brand loyalty.

-Relationships Between Product Factors and Rice Brand Equity

Lu, Li and Huang (2015) believe that when consumers buy an unfamiliar brand, they will identify and evaluate the brand according to the inherent attributes of the product. When consumers buy branded rice, consumers will make their own purchase choices based on the inherent internal attributes of rice (such as the quality of rice, etc.) and external attributes such as the reputation of rice, etc., so as to make corresponding judgments on the brand. Accordingly, the following research hypotheses are proposed:

H3: Product factor has an influence on a) rice brand awareness, b) perceived quality of rice brand, c) brand image of rice enterprises, and d) rice brand loyalty.

-Relationships Between Promotion Factors and Rice Brand Equity

Promotions increase consumers' understanding and cognition of the brand. Different forms of promotional activities have different effects on brand equity. Hu and Zhang (2014) found that in different product life cycles, price discount has both positive and negative effects on brand equity. Zhao and Song (2016) found that price reduction can bring higher customer perceived value and brand loyalty than gifts. In practice, the promotion activities carried out by rice enterprises include price promotion (discount) and non-price promotion (coupons). Based on previous studies, the way of promotion favored by consumers would increase their purchase to a certain extent and affecting consumers' evaluation of the brand. Hence, the following research hypotheses are proposed:

H4: Promotion factor has an influence on a) rice brand awareness, b: perceived quality of rice brand, c) brand image of rice enterprises, and d) on rice brand loyalty.

-Mediating Effect of Perceived Value

As a trade-off between perceived gain and perceived loss (Zeithaml, 1988), perceived value occupies an important position in the whole decision-making and consumption process. Zheng, Hu and Feng (2014) have confirmed the mediating role of perceived value between marketing strategy and brand loyalty. Wang, Wang, and Wang (2019) found that perceived value plays a part of mediating role in the relationship between word of mouth of unfamiliar product and purchase intention. When consumers buy a brand of rice, under the stimulus of external factors, the cost of buying rice will be weighed against the utility of rice, which will further affect consumers' buying attitude and behavior towards the brand of rice. Each consumer is different due to different economy, culture, needs and expectations, even if in the face of the same brand of rice, consumers' perceived value will be quite different. Accordingly, the following research hypotheses are proposed:

H5: Perceived value has a mediating effect between retailer image and each dimension of rice brand equity.

H6: Perceived value has a mediating effect between distribution density and each dimension of rice brand equity.

H7: Perceived value has a mediating effect between product factor and each dimension of rice brand equity.

H8: Perceived value has a mediating effect between promotion factor and each dimension of rice brand equity.

In conclusion, this research selects retailer image, distribution density, product factor and promotion factor as independent variables, and rice brand equity as dependent variables, including: rice brand awareness, rice brand perceived quality, rice enterprise brand image and rice brand loyalty. Based on the research hypothesis proposed above and taking consumer perceived value as a mediating variable, the conceptual framework is constructed as follows (Figure 1)
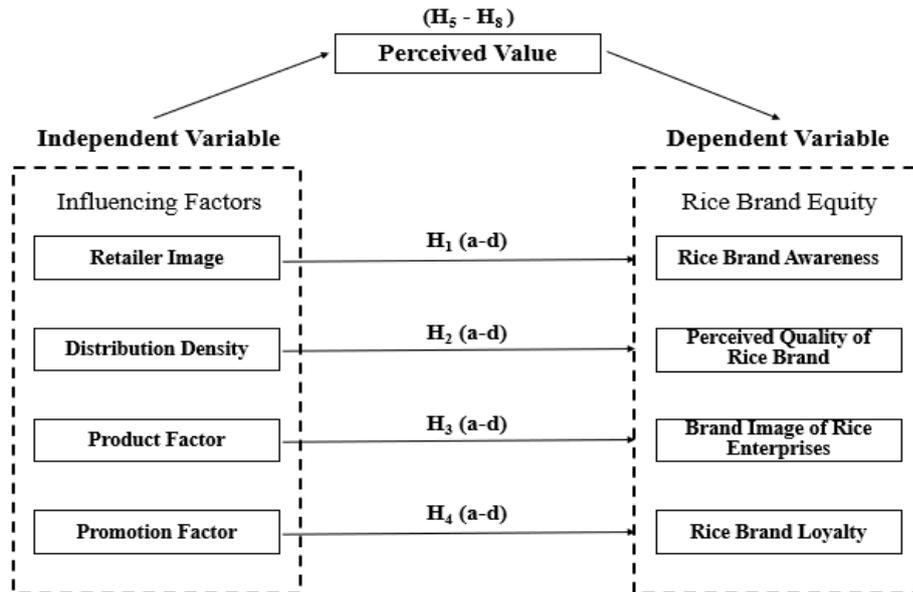
Figure 1: Conceptual Framework

3. Methodology

The research used a constructed survey questionnaire based upon a comprehensive review of related literature to collect the data from the samples. Measurement items and sources of questionnaire are shown in Table 1. The questionnaire consisted of two sections. The first section covered demographic information of respondents such as gender, age, income, shopping experience and frequency of shopping activities. The second section included the measurements to measure the influencing factors and rice brand equity factors identified in the conceptual model. The questionnaire was developed using multiple item method and each item was measured based on a five-point Likert scale ranging from "1=strongly disagree" to "5=strongly agree". In order to measure the constructs, pretested items were adopted from previous literature. The questionnaire was pre-tested using a convenience sample of 30 customers who had bought brand rice in Yunnan province, China. After the pilot test, a self-administered survey was conducted via online in Yunnan. Since this research mainly focuses on consumers who have purchased brand rice within the past one year, a screening item was set in the questionnaire to make sure all respondents have buying experience. Because the size of the target population of this study is difficult to define in actual size, the formula of Cochran (1977) will be chosen for calculating the sample size. With the 95% of confidence level is expected, the actual sample size was 385.

Finally, 492 questionnaires were returned. After removing all the responses with invalid answers and data cleaning, 420 of these were deemed usable. For the purpose of data analysis, Stepwise and Hierarchical Regression are performed to test direct and indirect hypotheses in this study which are the factors affecting rice brand equity with perceived value as a mediator variable. Firstly, we used stepwise to test the direct influence factors of rice brand equity. Stepwise regression is the step-by-step iterative construction of a regression model that involves the selection of independent variables to be used in a final model. It involves adding or removing potential explanatory variables in succession and testing for statistical significance

after each iteration (Vlachopoulou, Ferryman, Zhou & Tong, 2013). After that, we used Hierarchical Regression to test mediating effect of perceived value. The hierarchical regression is a special form of a multiple linear regression analysis in which more variables are added to the model in separate steps. This is often done to statistically "control" for certain variables, to test whether adding variables significantly improves a model's ability to predict the criterion variable and/or to investigate a moderating effect of a variable (Darlington, 1968).

Table 1: Adoption of Questionnaire Measurements

Construct	Scale Items	Source	Cronbach α
Retailer Image	The quality of rice sold in this retail store is reliable	Shen (2010)	0.850
	The service attitude of the staff in this retail store is good		
	The environment of the retail store is comfortable and the rice is well arranged		
	The retail store provides free delivery		
Distribution Density	There are more retail stores selling this brand of rice than other competing brands	(Yoo et al., 2000)	0.866
	This brand of rice is sold in more retail stores than its competitors		
	This brand of rice is sold through as many retail stores as possible		
Product Factor	I value the nutrition and health of rice	(Yoo et al., 2000)	0.856
	I value the taste and flavor of rice		
	I value the reputation of rice brand		
Promotion Factor	I value the cost of rice	(Yoo et al., 2000)	0.837
	I value the price promotion of rice (such as price discount, full reduction activities)		
	I value non-price promotions for rice (such as coupons and gift-giving)		
Perceived Value	The rice price of this brand is reasonable	Zhen (2012)	0.916 0.859
	This brand of rice is economical		
	The price of this brand matches its quality		
	The quality of rice of this brand is better than that of similar products at the same price		
	Buying this brand of rice could help me save time and the cost		
	Compared with competing brands, this brand of rice could help me avoid some unnecessary risks		
Rice Brand Awareness	I could identify this brand among many rice brands	(Yoo et al., 2000)	0.874
	I could think of some characteristics of this rice brand quickly		
	I could quickly recall the name, logo or symbol of the rice brand		

Perceived Quality of Rice Brand	This brand of rice is of good quality	(Yoo et al., 2000)	0.874
	The quality of this brand is consistently high		
	The quality of this rice brand represents the high standard in the rice industry		
Brand Image of Rice Enterprises	The company that produces and operates this brand of rice has a high technical strength	Cui and Zhang (2012)	0.874
	The company that produces and operates this brand of rice has a large scale of operation		
	The company that produces and operates this brand of rice has a high status in the industry		
	The company that produces and operates this brand of rice has a good social reputation		
Rice Brand Loyalty	This rice brand is my first choice when buying	(Yoo et al., 2000)	0.864
	As long as the store has this brand of rice, I will not buy other similar products		
	I will continue to buy this brand of rice		
	I will recommend this brand of rice to my relatives and friends		

4. Results

-Reliability and Validity Analysis

It can be seen from Table 1 that the coefficient value Alpha of each scale is 0.850, 0.866, 0.856, 0.837 and 0.916 respectively for retailer image, distribution density, product factor, promotion factor and perceived value. The coefficient Alpha of rice brand awareness, rice brand perceived quality, rice enterprise brand image and rice brand loyalty are 0.859, 0.874, 0.874 and 0.864 respectively, and the coefficient of each dimension of the overall scale of influencing factors and rice brand equity was 0.944, which are all greater than 0.7, indicating that the scale has high reliability (Zhang, 2011). Through factor analysis of influencing factors and components of rice brand equity, the KMO of influencing factors and each dimension of rice brand equity were 0.904 and 0.901, respectively, with a significance of 0.000. The explanatory rates of factor variance extracted with eigenvalues greater than 1 were 73.835% and 75.049%, respectively, which were consistent with the dimension division in the original scale. In addition, the factor loading coefficient after rotation of the influencing factors and rice brand equity in each dimension is greater than 0.7, indicating that the scale has a high validity.

-Descriptive Analysis

The results found that majority of the respondents who bought branded rice were females (55.0%), age group is between 36 and 55 years old, are enterprises' employees with bachelor's degrees. Their monthly family income is between 5,001RMB and 8,000RMB (30.6%). From the results, the brand rice consumers have the high education and high incomes. The results also reveal that 71.2 percent of them made purchase via offline channels. This indicates that due to the particularity of rice, consumers are more willing to buy tangible products with guaranteed quality in offline channels. Wuchang rice series ranked the first place (37.3%),

followed by Golden Arowana (17.2%), Beidahuang (14.0%), and Fook Lam Moon (10.0%) indicating that respondent Yunnan rice consumers tend to buy rice with high brand awareness.

-Hypothesis Tests

Table 2 presents the results from analysis of variance (ANOVA) of influence factors on rice brand equity that the relationships between rice brand awareness, perceived quality of rice brand, the brand image of rice enterprises, and rice brand loyalty are at significant level 0.000, indicating that each model has significance. The Table 3 shows the stepwise regression analysis of direct influence factors of rice brand equity. The predictors variance inflation factor (VIF) was not more than 5, indicating no multicollinearity. In Table 3, we found that under the significance level of 0.000, the retailer image (β= 0.254, p< 0.001), distribution density (β = 0.127, p< 0.001), product factor (β = 0.263, p< 0.001), promotion factor (β = 0.189, p< 0.001) significantly influence on rice brand awareness, which suggests that retailers image, distribution density, product, promotion these four variables have positive influence on brand awareness for rice, supporting hypothesis H1a, H2a, H3a, H4a. With regard to perceived quality of rice brand, under the significance level of 0.000, the retailer image (β= 0.198, p < 0.001), distribution density (β = 0.199, p < 0.001), product factor (β = 0.344, p< 0.001), promotion factor (β = 0.148, p < 0.001) significantly influence on rice brand awareness, which suggests that retailers image, distribution density, product, promotion all have positive influence on perceived quality of rice brand.

Thus, H1b, H2b, H3b and H4b were supported. Concerning the brand image of rice enterprises, we find that the retailer image (β= 0.254, p < 0.001), distribution density (β = 0.127, p < 0.001), product factor (β = 0.263, p< 0.001) have a positive influence on the brand image of rice enterprises, which means that H1c, H2c, H3c were fully supported. However, the promotion factor had no effect on the brand image of rice enterprises, which means that H4c was rejected. In terms of rice brand loyalty, the results assert that the retailer image (β= 0.254, p < 0.001), product factor (β = 0.263, p< 0.001) and promotion factor (β = 0.148, p < 0.001) had a significant positive effect on rice brand loyalty. Hence, H1d, H3d and H4d were supported. However, when H2d is examined, it is not found that distribution density had any impact on rice brand loyalty. Thus, H2d was rejected.

Table 2: Analysis of Variance (ANOVA) of Direct Influence Factors of Rice Brand Equity

Model	Sum of Squares	df	Mean Square	F	Sig.
Rice Brand Awareness	171.737	4	42.934	86.928	0.000[***]
Perceived Quality of Rice Brand	177.022	4	44.255	109.598	0.000[***]
Brand Image of Rice Enterprises	109.252	3	36.417	88.476	0.000[***]
Rice Brand Loyalty	98.546	3	32.849	65.938	0.000[***]

*p<0.05, **p<0.01, ***p<0.001

Table 3: Stepwise Regression Analysis of Direct Influence Factors of Rice Brand Equity

Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.	VIF
		B	Std. Error	Beta			
Rice Brand Awareness	(Constant)	0.498	0.171		2.915	0.004	1.602
	Retailer Image	0.265	0.037	0.254	7.145	0.000***	1.407
	Product Factor	0.264	0.035	0.263	7.617	0.000***	1.268
	Promotion Factor	0.183	0.034	0.189	5.455	0.141	1.277
	Distribution Density	0.127	0.036	0.127	3.569	0.000***	1.367
Perceived Quality of Rice Brand	(Constant)	0.704	0.154		4.557	0.000	1.302
	Product Factor	0.327	0.031	0.344	10.416	0.000***	1.263
	Distribution Density	0.187	0.032	0.199	5.837	0.000***	1.274
	Retailer Image	0.195	0.033	0.198	5.835	0.000***	1.359
	Promotion Factor	0.136	0.030	0.148	4.467	0.000***	1.097
Brand Image of Rice Enterprises	(Constant)	1.716	0.150		11.432	0.000	1.258
	Distribution Density	0.398	0.032	0.455	12.572	0.000***	1.326
	Retailer Image	0.099	0.033	0.108	2.949	0.003**	1.407
	Product Factor	0.068	0.031	0.077	2.179	0.030*	1.147
Rice Brand Loyalty	(Constant)	1.641	0.165		9.927	0.000	1.302
	Product Factor	0.371	0.035	0.397	10.730	0.000***	1.111
	Retailer Image	0.109	0.036	0.113	3.059	0.002**	1.073
	Promotion Factor	0.073	0.033	0.081	2.209	0.028*	1.251

*p<0.05, **p<0.01, ***p<0.001

-Mediating Effect Testing of Perceived Value
In Table 4, when retailer image, distribution density, product factor and promotion factor are added into the model, the F value is 106.177 and significant. The regression coefficients of the independent variables were 0.279, 0.116, 0.238 and 0.163 respectively, which were all significant, indicating that the influencing factors had a significant impact on the perceived value. Therefore, the mediating effect test of perceived value can be conducted.

Table 4: Regression Analysis Results of Direct Influence Factors and Perceived Value

Variable	Model 1		
Independent Variable	Beta	t	p
Retailer Image	0.279	8.760	0.000***
Distribution Density	0.116	3.799	0.000***
Product	0.238	7.960	0.000***
Promotion	0.163	5.638	0.000***
R^2	0.392		
Adjusted R^2	0.388		
ΔR^2	0.392		
F	106.177		
Dependent Variable: Perceived Value			

*p<0.05, **p<0.01, ***p<0.001

-Test the Mediating Effect of Perceived Value on Influencing Factors and Rice Brand Awareness

From Table 5 in Model 1, F value is 37.963 and significant, indicating that the model is statistically significant. Adjusted R^2 was 0.100, indicating that the control variable could explain the 10.0% variation of rice brand awareness except the effect of data volume. In Model 2, ΔR^2 is 0.261, indicating that after excluding the control variables, retailer image, distribution density, product factor and promotion factor have a total explanatory of 26.1%, reaching the significance (F =67.527, $p < 0.01$). Their regression coefficients were 0.245, 0.112, 0.244 and 0.171 respectively, which showed significant influence on them, indicating a positive correlation with the dependent variable.

In Model 3, the mediating variable of perceived value is added, and the corresponding F value of the model is significant, which makes the model meaningful. ΔR^2 was 0.076 ($p < 0.01$), indicating a 7.6% increase in overall explanatory variation compared to the Model 2. When the perceptive value is added, the coefficients of the four independent variables decrease from 0.245, 0.112, 0.244 and 0.171 to 0.138, 0.070, 0.154 and 0.109, respectively. The influence coefficient of perceptive value on the dependent variable is 0.399, and the coefficients corresponding to the above variables are all significant. It indicates that after the addition of perceptive value, the independent variable's influence on the dependent variable is weakened, that is, the perceptive value plays a partial mediating role between the retailer image, distribution density, product factor, promotion factor and the brand awareness of rice. Hence, H5 is accepted.

Table 5: Hierarchical Regression Analysis Results of Perceived Value and Rice Brand Awareness

Variable	Model 1			Model 2			Model 3		
Control	Beta	t	p	Beta	t	p	Beta	t	p
age	.222	8.258	.000***	.095	3.957	.000***	.069	3.055	.002**
education	.089	2.600	.010*	.057	1.975	.049*	.053	1.963	.050*
Independent									
Retailer Image				.245	6.640	.000***	.138	3.788	.000***
Distribution Density				.112	3.167	.002**	.070	2.098	.036*
Product				.244	7.074	.000***	.154	4.560	.000***
Promotion				.171	5.145	.000***	.109	3.413	.001**
Mediator									
Perceived Value							.399	9.450	.000***
R^2	.103			.364			.441		
Adjusted R^2	.100			.359			.435		
ΔR^2	.103			.261			.076		
F	37.963			62.767			73.791		
ΔF	37.963			67.527			89.312		
Dependent Variable: Rice Brand Awareness									

*p<0.05, **p<0.01, ***p<0.001

-Mediating Effect of Perceived Value on Influencing Factors and Perceived Quality of Rice Brand

From Table 6 in Model 1, F value is 158.992 and significant, indicating that the model is statistically significant. Adjusted R^2 was 0.323, indicating that the control variable could explain the 32.3% variation of rice brand awareness except the effect of data volume. In Model 2, ΔR^2 is 0.222, indicating that after excluding the control variables, retailer image, distribution density, product factor and promotion factor have a total explanatory of 22.2%, reaching the significance (F =80.723, p < 0.01). Their regression coefficients were 0.145, 0.136, 0.277, 0.105, respectively, which showed significant influence on them, indicating a positive correlation with the dependent variable.

In Model 3, the mediating variable of perceived value is added, and the corresponding F value of the model is significant, which makes the model meaningful. ΔR^2 was 0.040 (p < 0.01), indicating a 4.0% increase in overall explanatory variation compared to the Model 2. When the perceptive value is added, the coefficients of the four independent variables decrease from 0.145, 0.136, 0.277 and 0.105 to 0.072, 0.107, 0.215 and 0.062, respectively. The influence coefficient of perceptive value on the dependent variable is 0.274, and the coefficients corresponding to the above variables are all significant. It indicates that after the addition of

perceptive value, the independent variable's influence on the dependent variable is weakened, that is, the perceptive value plays a partial mediating role between the retailer image, distribution density, product factor, promotion factor and perceived quality of rice brand. Hence, H6 is accepted.

Table 6: Hierarchical Regression Analysis Results of Perceived Value and Perceived Quality of Rice Brand

Variable	Model 1			Model 2			Model 3		
Control	Beta	t	p	Beta	t	p	Beta	t	p
age	.389	17.707	.000***	.279	14.610	.000***	.262	14.230	.000***
education	.048	1.726	.085	.023	0.983	.326	.020	0.910	.363
Independent									
Retailer Image				.145	4.947	.000***	.072	2.437	.015*
Distribution Density				.136	4.829	.000***	.107	3.956	.000***
Product				.277	10.046	.000***	.215	7.830	.000***
Promotion				.105	3.966	.000***	.062	2.411	.016*
Mediator							.		
Perceived Value							.274	8.006	.000***
R^2	.325			.547			.588		
Adjusted R^2	.323			.543			.583		
ΔR^2	.325			.222			.040		
F	158.992			132.380			133.521		
ΔF	158.992			80.723			64.092		
Dependent Variable: Perceived Quality of Rice Brand									

*p<0.05, **p<0.01, ***p<0.001

-Effect of Perceived Value on Influencing Factors and The Brand Image of Rice Enterprises
From Table 7 in Model 1, F value is 28.246 and significant, indicating that the model is statistically significant. Adjusted R^2 was 0.076, indicating that the control variable could explain the 7.6% variation of rice brand awareness except the effect of data volume. In Model 2, ΔR^2 is 0.228, indicating that after excluding the control variables, retailer image, distribution density, product factor and promotion factor have a total explanatory of 22.8%, reaching the significance (F =54.023, p < 0.01). Their regression coefficients were 0.074, 0.370, 0.041, 0.045, respectively, which showed only retailer image and distribution density had significant influence on rice brand image, indicating that retailer image and distribution density were positively correlated with the dependent variable. In Model 3, the mediating variable of perceived value is added, and the corresponding F value of the model is significant, which makes the model meaningful. ΔR^2 was 0.111 (p < 0.01), indicating a 4.0% increase in overall explanatory variation compared to the Model 2. When the perceptive value is added, the coefficients of the four independent variables decrease from 0.074, 0.370, 0.041 and 0.045 to -

0.039, 0.325, -0.054 and -0.020 respectively. The influence coefficient of perceptive value on the dependent variable is 0.421, and only the coefficient corresponding to distribution density and perceived value is significant. It indicates that after the addition of perceptive value, the influence of distribution density on the dependent variable is weakened, that is, the perceptive value plays a partial mediating role between the distribution density and the brand image of rice enterprises. Hence, H7 is accepted.

Table 7: Hierarchical Regression Analysis Results of Perceived Value and Brand Image of Rice Enterprises

Variable	Model 1			Model 2			Model 3		
Control	Beta	t	p	Beta	t	p	Beta	t	p
age	.178	7.464	.000***	.085	3.890	.000***	.058	2.875	.004**
education	.022	0.719	.472	.017	0.659	.510	.013	0.552	.581
Independent									
Retailer Image				.074	2.195	.029*	-.039	-1.194	.233
Distribution Density				.370	11.430	.000***	.325	10.879	.000***
Product				.041	1.306	.192	-.054	-1.787	.074
Promotion				.045	1.495	.135	.020	-0.709	.479
Mediator							.		
Perceived Value							.421	11.169	.000***
R^2	.079			.307			.418		
Adjusted R^2	.076			.300			.411		
ΔR^2	.079			.228			.111		
F	28.246			48.452			67.173		
ΔF	28.246			54.023			124.744		
Dependent Variable: Brand Image of Rice Enterprises									

*p<0.05, **p<0.01, ***p<0.001

-Effect of Perceived Value on Influencing Factors and Rice Brand Loyalty
From Table 8 in Model 1, F value is 39.400 and significant, indicating that the model is statistically significant. Adjusted R^2 was 0.104 indicating that the control variable could explain the 10.4% variation of rice brand awareness except the effect of data volume. In Model 2, ΔR^2 is 0.165, indicating that after excluding the control variables, retailer image, distribution density, product factor and promotion factor have a total explanatory of 16.5%, reaching the significance (F =37.078, p < 0.01). Their regression coefficients were 0.071, 0.024, 0.339, 0.048, respectively, which displayed only product factor has significant influence on brand loyalty, indicating that product factor is positively correlated with dependent variables. In Model 3, the mediating variable of perceived value is added, and the corresponding F value of the model is significant, which makes the model meaningful. ΔR^2 was 0.104 (p < 0.01), indicating a 10.4% increase in overall explanatory variation compared to the Model 2. When the perceptive value is added, the coefficients of the four independent variables decrease

from0.071, 0.024, 0.339, and 0.048 to -0.045, -0.021, 0.241 and -0.020, respectively. The influence coefficient of perceptive value on the dependent variable is 0.432, and only the coefficient corresponding to product factor and perceived value is significant. It indicates that after the addition of perceptive value, the degree of influence of product factor on the dependent variable is weakened. In other words, perceptive value plays a partial mediating role between product factors and rice brand loyalty. Hence, H8 is accepted.

Table 8: Hierarchical Regression Analysis Results of Perceived Value and Rice Brand Loyalty

Variable	Model 1			Model 2			Model 3		
Control	Beta	t	p	Beta	t	p	Beta	t	p
age	.202	8.133	.000***	.123	5.157	.000***	.095	4.277	.000***
education	.107	3.381	.001**	.083	2.878	.004**	.078	2.950	.003**
Independent									
Retailer Image				.071	1.934	.054	-.045	-1.260	.208
Distribution Density				.024*	0.685	.493	-.021	-0.644	.520
Product				.339	9.871	.000***	.241	7.270	.000***
Promotion				.048*	1.449	.148	-.020	-0.625	.532
Mediator							.		
Perceived Value							.432	10.447	.000***
R^2	.107			.271			.375		
Adjusted R^2	.104			.264			.368		
ΔR^2	.107			.165			.104		
F	39.400			40.719			56.240		
ΔF	39.400			37.078			109.149		
Dependent Variable: Rice Brand Loyalty									

*p<0.05, **p<0.01, ***p<0.001

5. Discussion and Conclusions

Through empirical analysis, the research hypothesis and research model of influencing factors of rice brand equity are tested and verified. According to the results of stepwise regression analysis, retailer image, distribution density, product factors and promotion factors have different direct influences on each dimension of rice brand equity. First, retailer's image has significant positive influence on brand awareness, perceived quality, brand image of rice enterprise and rice brand loyalty. That is, the better the retailer image is, the higher the four-dimensional evaluation of rice brand equity is. This shows that retailers, as sales channels of rice, are the closest contact with consumers. Rice enterprises cooperate with the retailers with good image, such as good reputation, good service attitude, etc., this would help to obtain consumers' recognition and perception of the rice brand and the improvement of rice brand equity.

Secondly, distribution density had a significant positive effect on brand awareness, perceived quality of rice brand and brand image of rice enterprises. It indicates that the stronger the distribution density of rice brand, the better the brand awareness, perceived quality of rice brand and brand image of rice enterprises. Distribution density, as a sales strategy implemented by enterprises, is an important way and means to increase consumer choice. Enterprises producing and operating rice brands can strengthen the distribution density of products, so that consumers could choose and buy at any time and any place, so as to enhance the popularity and perception of rice brands, and promote the promotion of rice brand equity.

Thirdly, product factor also has significant positive influence on rice brand awareness, rice brand perceived quality, rice enterprise brand image and rice brand loyalty. That is, the better the products sold by enterprises producing and operating rice brands, the easier it is to improve rice brand awareness and corporate brand image, enhance perceived quality and brand loyalty. Only when consumers have a good understanding of the rice product and related factors, they will make positive judgments and evaluations on the brand leading to the improvement of rice brand equity.

Fourthly, promotion factor had a significant positive influence on the brand awareness, perceived quality, and brand loyalty of rice as well. Production and rice brand enterprises may through the formulation reasonable sales price and specific price promotion strategy to stimulate consumers to purchase high quality products with good price, which is conducive to increase consumers' perception of rice brand quality, promote the increase of brand awareness and loyalty, thus promoting the ascension of rice brand equity. In addition, according to the results of hierarchical regression analysis, perceived value has a partial mediating effect on retailer image, distribution density, product factors, promotion factors and rice brand equity. First, retailer image, distribution density, product and promotion could further affect the brand awareness and perceived quality of rice by influencing the perceived value. This display that, in the process of influencing the perceived value, rice enterprises can promote consumers' cognition of the brand through marketing activities in product, price, channel, promotion and other aspects.

After consumers' inner judgment and weighing, the popularity and perceived quality of rice brand will be virtually improved and increased. Besides, distribution density could further affect the brand image of rice enterprises by affecting the perceived value, which means that in the process of influencing the perceived value, enterprises producing and operating rice brands can expand the customer group area of rice by strengthening the distribution density of products, which is conducive to reducing the cost of consumers' inner perception of time and energy, so as to deepen the good impression of rice enterprises. Finally, product factor also further influences the brand loyalty of rice by affecting the perceived value. In the process of influencing perceived value, enterprises that produce and manage rice brands can ensure product quality and enable consumers to buy healthy rice with high nutrition and quality, which will help increase consumers' satisfaction and thus enhance their loyalty to rice brands.

-Implication

The results from this study carry several theoretical and practical implications. In terms of theoretical contribution, it is conductive to enriching the theoretical system of rice brand equity. The study also offers valuable practical insights for the rice brand managers and marketers.

First, the results reveal that retailer image, distribution density, product, and promotion have a significant positive influence on rice brand equity at different degrees. The results also show a partial mediating effect between the four influencing factors and the rice brand equity. To achieve the effective enhancement of brand equity, the Chinese rice enterprises need to consider consumers' preferred marketing activities and consumers' inner differentiated that response to it. Therefore, the enterprises should take consumer's demand and preferences as the core by observing the consumers' behavior characteristics when buying branded rice using in development of marketing strategies in line with the consumers' inner cognition. The enterprises also are required to target their consumer groups accurately and provide efficient products and services for the groups to ensure brand satisfaction and loyalty.

Furthermore, the rice enterprises should strengthen their communication with their target consumers through regular visit and market survey, understanding their demands based on preferences to make the differentiation of products and sales plan to satisfy the interests of the consumers and to increase the perceptions of quality of rice brands. Finally, rice enterprises should also strengthen the brand of rice publicity and promotion through sales personnel, price, and non-price promotions such as discounts, coupons, and complimentary add-ons, charity, and other social public welfare activities.

-Limitation and Future Study
There are some research limitations in this study. First, influencing factors could be increased and changed. The influencing factors of rice brand equity selected in this research mainly include external factors such as retailer image, distribution density, product factor, promotion factor and perceived value. In the future, more factors, such as tangible display, customer participation and service attitude, should be included to influence rice brand equity. In addition, moderator factors such as source of origin can also be considered as the moderator variables of rice brand equity. Finally, the rice brand equity studied in this paper is a macroscopic scope without specifying a specific brand or enterprise. In future studies, the research could focus on the enterprises or local brands comparing to international brands.

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