

Chinese Customers' Sensory Evaluation between Chinese Wine and Foreign Wine

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Abstract—Except for the Wine's brands, price, promotion, Customers have different sensory evaluation towards to the Chinese Wine and Foreign wine, which can affect the customers' purchasing decisions. The survey about the consumer's preferences toward the Chinese Wine and foreign wine is implemented. Especially, the important level and customer's satisfaction level about the colour, aroma and taste of wine are analyzed with the customers' preference.

Keywords—Chinese wine; foreign wine; Chinese consumers; Color-aroma; taste

I. INTRODUCTION

A. The wine market in China

According to the studies of the archaeology, the wine has a history of 6000 years^[1]. The wine industry has developed in China from 1978 to 1992. The wine total annual output for that period has reached more than 50 thousand tons, however, varieties, packaging, technology and other relatively backward^[2]. In 1994 with the propaganda of the media, the red wine was in great demand and it caused the shortage of red wine, so the foreign wine traders are poured in China^[3]. From 2002 to now, the annual output of wine increased at an annual rate of 15%-20%. The data show that in 2016, from January to September, the domestic wine productions achieved 81.10 liters and the imported wine quantity reached 48.49 liters, the annual production of imported wines and domestic wines has increased year by year.

B. Wine features of countries

The wines from different countries have different characteristics. France is famous for producing countless high-end wines and its variety of tastes varies greatly, thus, it

has been honored as "grape kingdom"^[4]. Italy wine is characterized by its strong taste and acidity, which is more suitable for Chinese food. Australian wines are characterized by its chocolate and fruit aromas. Spain is dominated by red wine and it also has outstanding white wine and sparkling CAVA. Chinese wine prices are relatively low, to meet the needs of some groups.

C. The choice of Chinese consumer

On the basis of a survey, most Chinese consumers like domestic wine and they usually choose medium and low-end wines^[5]. Analyzing from the view wine's price, 60% Chinese consumers prefer to choose the wine around 100-500 Yuan. From the survey, it showed that when consumers made a decision to purchase wine, they concerned with the wine's taste, price, brand, quality, and the cost performance^[6].

II. METHODOLOGY

At the aim of explore the Chinese customers' sensory evaluation in the purchasing process between Chinese Wine and Foreign wine. According to our statistics, 452 questionnaires are distributed and 400 are valid. Using cross tabulation and chi-square test to analyze the above data in the SPSS software.

III. RESULTS ANALYSIS

A. Consumption related information

The table I is the consumption related information of this survey. As can be seen from the table, most of the respondents often drink wine but rarely buy their own a year. This shows that most of the wine drinkers take wine from others presented. From the data of desire for wine can also be seen in the side of

this phenomenon, most of the respondents like to drink wine, but do not want to buy. Nearly half of the respondents chose to buy wine of 100-299 yuan, which is a middle and low price. This phenomenon may be caused by most of the consumers knowledge of the wine is only partially, and they worried that they cannot identify which is good wine. Therefore, they choose their own acceptable price, to avoid the risk of choosing high-priced wine.

TABLE I. CONSUMPTION RELATED INFORMATION

Desire for wine		Price level(Yuan)	
Dislike, null buy	18.80%	Less than 100	24.60%
Like, null buy	34.70%	100-299	45.4%
Dislike, want-buy	21.50%	300-599	23.5%
Like, want-buy	24.30%	600-999	5.1%
		More than 1000	1.5%
How long drink wine		knowledge about wine	
More than once/week	22.8%	know wine well	1.1%
Once 2 weeks	22.3%	Just know	23.2%
Monthly	20.4%	Partly know	39.6%
Over monthly	10.2%	know a little	26.8%
		don't know	9.3%
Bottles per year		Concerns when purchasing	
Less than 6 bottles	45.1%	Too expensive	29.4%
7-12 bottles	28.3%	Cannot identify	31.2%
13-24 bottles	18.6%	Inconvenient	10.4%
25-48 bottles	5.1%	Unaccustomed taste	18.1%
		Low performance price ratio	10.8%

B. Color-aroma influence the customers purchase choice

For a better explanation to the factors that affect consumer decision to choose the Chinese wine or the foreign wine, the cross tabulation and Chi – square test (TABLE II) were applied for analysis the relationship between importance and satisfaction level by SPSS. The survey shows color-aroma is quite important, not only because the color brings the visual impact, but also due to consumers always do not have the opportunity to taste wine before they buy it.

TABLE II. CROSS TABULATION AND CHI-SQUARE TEST FOR “CONSUMERS CHOOSE CHINESE WINE OR FOREIGN WINE” AND “THE IMPORTANT LEVEL OF THE COLOUR-AROMA OF WINES”

	Level 1	Level 2	Level 3	Level 4	Level 5	Total
Chinese wine %	0.5%	4.5%	31.2%	42.1%	21.8%	100.0%
Foreign wine %	3.7%	2.4%	18.3%	40.2%	35.4%	100.0%
total%	2.2%	3.3%	24.2%	40.9%	29.4%	100.0%
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	93.649 ^a	8	.000			

a 5cells(33.3%)have expected count less than 5. The minimum expected count is 0.02

Color-aroma’s important degree is divided into 5 extents in TABLE II, from very important (level 5) to very unimportant (level 1). According to questionnaire, 21.8% of Consumers Who Selected the Chinese wine (CSC) considered colour-aroma is very important, where Consumer Who Selected Foreign Wine (CSF) occupied 35.4%, meanwhile CSF (3.7%) takes up 7 times than CSC (0.5%) in very unimportant. From very important and very unimportant, data indicates that CSF has a stronger personal opinion, higher expectations of wine and richer expected factors than CSC. The Chi-square test

indicates that the color-aroma can significantly affect the consumer purchase.

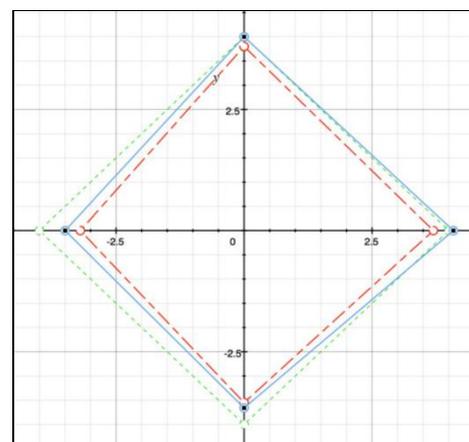
C. Taste influences the customers Purchase choice

Except for color-aroma, taste is also a vital factor that affects purchase. According to the TABLE III, it can be seen that from the viewpoint of consumers, the importance of foreign wine taste was significantly greater than the Chinese wine, respectively, 41.1% and 26.2%. Instead, the most significant data of CSC is no attitude (level 3), which is 41.6%, indicating most of CSC have no strong personal opinion to Chinese wine. However, whether prefers the foreign wine consumers or Chinese wine consumers, few consumers (both below 5%) completely neglect the taste of wines. So, comparing with the Chinese wine, the customers who prefer to the foreign wine are more value the taste. Chi-square test suggests that the importance of taste has strong relativity with the customer prefer domestic wine or imported wine to explore how taste influences the customers’ purchase figure (Fig. 1) is made to illustrate consumers’ consideration towards Chinese wine and Foreign wine.

TABLE III. CROSS TABULATION AND CHI-SQUARE TEST FOR “CONSUMERS USUALLY CHOOSE CHINESE WINE OR FOREIGN WINE” AND “THE IMPORTANT LEVEL OF THE TASTE OF WINES”

	Level 1	Level 2	Level 3	Level 4	Level 5	Total
Chinese wine %	0.5%	3.0%	41.6%	28.7%	26.2%	100.0%
Foreign wine %	1.2%	3.6%	21.4%	32.7%	41.1%	100.0%
Total%	0.9%	3.3%	30.3%	31.0%	34.5%	100.0%
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	24.575 ^a	8	.002			

a 7cells(46.7%)have expected count less than 5. The minimum expected count is 0.02



Up vertical axis:Importance level of color-aroma
Down vertical axis: Satisfaction level of color-aroma
Left abscissa axis: Satisfaction level of taste
Right abscissa axis: Importance level of taste
---Consumer select Chinese
—Consumer select Foreign

Fig. 1. The mean of taste and color-aroma of wines

Fig. 1 set value 4 as the vertex to compare Chinese wine (red) and Foreign wine (blue), it illustrates that foreign wine always take more weight (approximately 0.2) than Chinese wine which means consumer always require more characters on foreign wine than Chinese wine. However, the taste factor of CSF on horizontal line, consumer gives 4.089 to important but only give 3.472 to satisfaction, derive that consumers are

not that satisfy the taste of their choice, so the merchant can do more effort on the taste of foreign wine. Chi-square test in TABLE IV shows strong relativity between taste satisfaction level and choose Chinese/Foreign wine.

TABLE IV. CHI-SQUARE TEST FOR "CONSUMERS USUALLY CHOOSE CHINESE WINE OR FOREIGN WINE"

		Importance/satisfaction level to color-aroma	Importance/satisfaction level to taste
Willing to buy Chinese/foreign wine	Pearson correlation	0.000/0.075	0.000/0.011

D. Consumer characteristics impact on buying HRW

Chinese customers' performance towards Chinese wine or foreign wine and their sensory evaluations about wine are influenced by some factors, such as education, income, country of origin, price, and purchase frequency. In order to explore their relationships, the results of the Pearson correlation test are showed in the TABLE V. Initially, from the result table we can find that the customers willing to buy Chinese wine or foreign wine is significantly impacted by their education level, purchase frequency and the price of wines. What needs illustrating is that high-education level consumers prefer to purchase foreign wine than Chinese wine. Besides, foreign wine is described as premium wine in the most consumers mind. Secondly, what can be saw clearly that all the factors (consumers' education level, income, purchase frequency and wine's country of origin and price) have a significant influence in the important and satisfactory level to wine' colour-aroma of consumers. Wine's colour and aroma are a pre-purchase search of consumers, which determines whether they willing to purchase the wine and it is influenced by the consumers' inner factors and external factors. Thirdly, different from the colour-aroma, importance and satisfaction level to taste only has a significant correlation with the country of origin and the importance level of taste also has can be significantly affected by consumers purchase frequency. It should be pointed out that consumers taste evaluation is a post-purchase behavior, and the better taste evaluation lead to more frequently purchasing behavior. In addition, wines' origin country impacts consumers drinking experience.

TABLE V. THE RESULTS OF PEARSON CORRELATION TEST

	Willing to buy Chinese or foreign wine	Importance/satisfaction level to colour-aroma	Importance/satisfaction level to taste
Education	Pearson correlation	0.001	0.001/0.000
Income	Pearson correlation	0.094	0.000/0.000
Country of origin	Pearson correlation	0.027	0.000/0.000
Price	Pearson correlation	0.000	0.000/0.000
Purchase frequency	Pearson correlation	0.045	0.000/0.112

IV. CONCLUSION

Most consumers in China generally have three purposes to purchase wine: for collect, for beauty and for status. Colour-aroma and taste were illustrating effect consumer deeply. Consumers who select the Chinese wine spend less concern on colour and aroma meanwhile shows lower satisfaction and expectation. Consumers who select foreign wines consider colour-aroma are more important than Chinese wine and show higher satisfaction. For the taste factor, the customers who prefer to the foreign wine treasure the taste, has higher satisfaction than who prefer Chinese wine. Almost all foreign wine-preferred consumers consider taste is a vital factor

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