An Empirical Study on Influencing factor of consumer's Purchasing Intention of Camellia Oil in Qingyuan City

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Abstract: Based on the consumer behavior theory, as well as the survey data of 160 consumers in Qingyuan city, this paper makes an empirical analysis on the factors influencing consumer's purchasing intention of camellia oil by using binary logistic model. The research shows that the gender, education level, whether to pay attention to health information and whether to understand the taste of camellia oil and the camellia oil itself are the main factors which affect consumer's purchasing intention of camellia oil. Based on the results of empirical analysis, this paper puts forward relevant countermeasures and suggestions to improve consumer's willingness to buy camellia oil.

Camellia oil is a unique traditional edible vegetable oil in southern China. With the continuous improvement of people's living standards and the rapid development of food processing industry, people's choice of edible oil shows diversified characteristics compared with the past. The National camellia oil Industry Development Plan (2009-2020) clearly states that the national camellia oil output will reach 2.5 million tons by 2020. The Central Document No.1 in 2019 proposes to actively develop woody oil. Various development strategies and plans issued in recent years have enhanced the supply capacity of camellia oil, but the demand in the camellia oil market has a significant impact on the willingness to supply camellia oil. At present, the market demand for oil crops in China has great potential, and the consumption of camellia oil will alleviate the problem of China's excessive dependence on imports in the field of traditional edible oil to a certain extent. Therefore, studying consumer's purchasing behavior and consumption characteristics of camellia oil has an important practical significance for promoting the development of China's camellia oil market. Currently, the research on consumer's purchasing behavior of camellia oil in China is mainly focused on a certain region, and the Influencing factor of purchasing willingness of camellia oil in different regions will show certain differences [1,2,3,4,5]. Qingyuan City is a major tea-oil planting city in Guangdong Province. Thus, studying the Influencing factor of consumer's tea-oil purchasing behavior in Qingyuan City is better to understand consumer's tea-oil purchasing behavior in tea-oil producing areas.

1. Theoretical Basis and Data Sources

Consumer behavior was separated from marketing as an independent discipline in the 1950s and 1960s and developed continuously [6]. Consumer behavior is to maximize the degree of satisfaction by purchasing different combinations of commodities under known preferences and limited income levels. According to the theory of consumer behavior, this research studies the factors that affect the consumption behavior of camellia oil consumers in Qingyuan city from the microscopic variables of consumer personal characteristics and consumer cognitive attitudes. This study adopts questionnaire survey and field interview. The survey was conducted from July to August 2019. The survey was conducted in Qingcheng District, Qingxin District, Yangshan County and Liannan Yao Autonomous County of Qingyuan City, which are the high population places. A total of 160 questionnaires were distributed and 125 valid questionnaires were recovered, with an effective rate of 78.125%.

2. Sample Basic Characteristics

According to the basic personal characteristics of the respondents (Table 1), the proportion of men and women is relatively balanced, with 46.40% of men and 53.60% of women. In terms of age composition, young and middle-aged people predominate, but the younger population and elder population are less. In terms of marriage proportion, 50.40% are married and 49.60% are unmarried. Judging from the educational level, the interviewee's educational level is generally higher, mainly college or above. The interviewees whose personal monthly income is more than 3,000 yuan account for 60.80% of the total interviewees, indicating that most interviewees have actual and potential camellia oil consumption capacity. The survey on the health status of the interviewees showed that 80.00% believed that they were healthy or above, indicating that the interviewees were in good health. In the survey on whether or not to pay attention to health-friendly information at ordinary times, 1.60% do not pay attention to health-friendly information at ordinary times, 27.20% pay attention occasionally, 24.80% pay attention generally, 34.40% pay more attention, and 12.00% pay very much attention, which indicates that the interviewees will generally pay attention to and understand health-friendly information to some extent. The survey found that the top four ways respondents usually know health information are: internet; television; radio; friends; relatives; newspapers and magazines.

Table 1 Basic Personal Characteristics of Respondents

Personal basic characteristics	Category	Number (person)	Proportion (%)
Gender	male	58	46.40
	female	67	53.60
Age	20 and under	14	11.20
	21~30 years old	56	44.80
	31~40 years old	30	24.00
	41~50 years old	23	18.40
	51 and above	2	1.60
Marriage	Married	63	50.40
	Unmarried	62	49.60
Degree of education	Primary and below	7	5.60
	Junior high school	24	19.20
	High school	18	14.40
	College or above	76	60.80
Personal monthly income	Under 2000 yuan	33	26.40
	2000~3000 yuan	16	12.80
	3,000 ~ 4,000 yuan	26	20.80
	4000~6000 yuan	21	16.80
	More than 6000 yuan	29	23.20
Health status	Poor	2	1.60
	General	23	18.40
	Health	74	59.20
	Very healthy	26	20.80
Do you usually pay attention to information beneficial to your health?	Not concerned	2	1.60
	Occasionally	34	27.20
	General	31	24.80
	compare	43	34.40
	Very	15	12.00
Channels for understanding health information at ordinary times	Television, radio	79	19.41
	Newspapers, magazines	49	12.04
	Network	102	25.06
	Marking instructions on	31	7.62
	Government department	30	7.37
	Advertisements and	19	4.67
	Public transport	21	5.16
	Introduction of friends and	51	12.53
	Other	25	6.14

Data Source: Survey and Research

3. Research about Influencing factor of consumer's purchasing intention of camellia oil

3.1 Model Construction and Variable Description

3.1.1 Model Construction

Consumer’s willingness to buy camellia oil has only two results: willing to buy or unwilling to buy. This study uses binary Logistic regression model for empirical analysis. Among the dependent variables of whether consumers are willing to buy camellia oil, wiling to buy is defined as Y=1; and unwilling to buy is defined as Y=0. The basic form of the model is as follows: $Logit(P) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \bullet\bullet\bullet + \beta_n X_n + \varepsilon$

P represents the probability that Y=1 occurs; β0 is a constant term;β1, β2, ...βn are the parameters of the respective variables; X1, X2, Xn are independent variables; ε is a random error term.

3.1.2 Variable Description

The dependent variable in the model is camellia oil purchasing intention y, and the independent variable is each variable X1~X13 composed of consumer's personal characteristics and consumer's cognitive attitude. The definition and values of each variable are shown in table 2.

Table 2 Variable Definition and Expected Impact Direction

Variable code	Variable name	Variable definition and description	Expected impact direction
Y	purchasing intention of camellia oil	Willingness =1;Unwilling =0	/
X1	Gender	Male =1;Female =2	+
X2	Age	20 years old and below = 1;21 ~30 = 2;31~40 years old = 3;41~50 years old = 4;51 years old and above =5	+
X3	Marital status	Unmarried =1;Married =2	+
X4	Degree of education	Primary and below =1;Junior high school =2;High school and technical secondary school = 3;College or above =4	+
X5	Personal monthly income	2000 yuan and below = 1;2000~3000 yuan = 2;3000~4000 yuan = 3;4000~6000 yuan = 4;6,000 yuan and above =5	+
X6	Health status	Poor =1;General =2;Health =3, very healthy =4	+
X7	Are you concerned about information that is good for your health?	No attention =1;Occasionally =2;General =3;Comparison =4, very =5	+
X8	Do you know about camellia oil	Don't know =1;Not too familiar with =2;Understanding =3	+
X9	camellia oil quality	Poor =1;Equivalent =2;Better =3	+
X10	camellia oil price	Lower =1;Equivalent =2;Higher =3	-
X11	Nutritional and Health Functions of camellia oil	Smaller =1;Equivalent =2;Larger =3	+
X12	Consumption Rate of camellia oil	Slow =1;Equivalent =2;Faster =3	-
X13	Taste of camellia oil	Poor =1;General =2;Better =3	+

3.2 Model Estimation Results and Analysis

SPSS22.0 statistical software was used to carry out binary Logistic model regression on 125

valid sample data. The regression results are shown in Table 3. The regression results of the model show that gender (X1), education level (X4), whether to pay attention to health-friendly information (X7), whether to understand camellia oil (X8) and taste of camellia oil (X13) are the main factors influencing consumers to buy camellia oil.

Table 3 Logistic Model Regression Results

independent variable	B	S.E.	Wald	df	Sig.	Exp（B）
X1	1.933	0.690	7.845	1	0.005	6.909
X2	0.141	0.500	0.079	1	0.779	1.151
X3	0.376	1.047	0.129	1	0.719	1.457
X4	1.038	0.437	5.629	1	0.018	2.823
X5	0.192	0.240	0.639	1	0.424	1.211
X6	-0.598	0.558	1.149	1	0.284	0.550
X7	0.903	0.357	6.420	1	0.011	2.468
X8	1.553	0.693	5.013	1	0.025	4.724
X9	0.768	0.704	1.188	1	0.276	2.155
X10	0.693	0.516	1.806	1	0.179	2.000
X11	0.156	0.579	0.072	1	0.788	1.168
X12	0.201	0.489	0.169	1	0.681	1.223
X13	2.496	0.939	7.073	1	0.008	12.137
β0	-17.303	4.188	17.067	1	0.000	0.000

3.2.1 Gender

The coefficient B of sex is 1.933, with positive direction. Wald statistic is 7.845; Sig. value is 0.005, which indicating that gender has a significant positive impact on consumer's willingness to consume camellia oil, which is consistent with the expected impact direction hypothesis. This is because in Chinese families at this stage, most women are the main persons in charge of the family's diet and daily life, which makes women spend more time and energy on food purchasing than men, thus having more opportunities to contact with relevant information of camellia oil than men, and making women more willing to buy camellia oil than men.

3.2.2 Education level

The B coefficient of educational level is 1.038, and the direction is positive. Wald statistic is 5.629; Sig. value is 0.018, indicating that education level has a significant positive impact on consumer's willingness to consume camellia oil, which is consistent with the expected impact direction hypothesis. This may be because the higher the education level, the stronger the ability to grasp relevant information about camellia oil and the more acceptable the consumption of camellia oil, thus the stronger the willingness to purchase camellia oil.

3.2.3 Paying attention to information beneficial to your health and know about camellia oil or not

Whether to pay attention to the B coefficient value of health information is 0.903, and the direction is positive; Wald statistic is 6.420; Sig. value is 0.011, indicating whether attention to health-friendly information has a significant positive impact on consumer's willingness to consume camellia oil, which is consistent with the expected impact direction hypothesis. Do you know that the coefficient b of camellia oil is 1.553 and the direction is positive. Wald statistic is 5.013; Sig. value is 0.025, which indicates whether the understanding of camellia oil has a significant positive impact on consumer's willingness to consume camellia oil, which is consistent with the assumption of expected impact direction. On the whole, the more attention is paid to information beneficial to

health, the more channels to contact camellia oil.The more you know about camellia oil, the more you will understand its nutritional effects, the more sufficient information you will get about camellia oil, and the stronger your willingness to buy camellia oil.

3.2.4 Taste of camellia oil

The coefficient B of camellia oil taste is 2.496, and the direction is positive.Wald statistic is 7.073; Sig. value is 0.008, indicating that the degree of recognition of camellia oil taste has a significant positive effect on consumer's willingness to consume camellia oil, which is consistent with the assumption of expected impact direction. This is related to consumer's consumption preference in economics. Consumers who think that camellia oil tastes better will prefer to buy camellia oil in daily edible oil consumption, which reflects consumer' s personal needs, interests and consumption preferences for specific edible oil products. Qingyuan City has a long history of camellia oil cultivation. The processed camellia oil has a certain consumption history in Qingyuan area. Some Qingyuan residents have formed certain consumption preferences and habits for camellia oil. Therefore, in the daily consumption of edible oil, consumers who think camellia oil tastes better will be more willing to buy camellia oil.

4. Countermeasures and Suggestions

4.1 Implement differentiated development strategy

Empirical analysis results show that women are more willing to buy camellia oil than men. The higher education level, the stronger the willingness to buy camellia oil. The residents who think that the better the taste of camellia oil is, the more willing they are to buy camellia oil, which shows that different groups have different consumption wishes for camellia oil. Therefore, enterprises should conduct market research on camellia oil consumption, subdivide and position the camellia oil consumption market according to the personal characteristics of consumers such as gender, education level, taste preference, and so on, and make differential pricing for different camellia oil products to meet the consumption needs of different groups.

4.2 Increase publicity efforts on camellia oil products

Whether to pay attention to health information and whether to understand that camellia oil has a significant positive effect on consumer's willingness to buy camellia oil. This shows that the access and ability of camellia oil related information play an important role in consumer's camellia oil purchase decisions. On the one hand, the government should make use of public network platforms, local radio and television channels, various commercial magazines, newspapers and other media to increase publicity and reporting on the nutritional effect and real-time price of camellia oil, so that consumers can contact and understand camellia oil from all aspects. On the other hand, camellia oil enterprises should be encouraged to actively publicize their camellia oil products and formulate policies to give certain subsidies. At the same time, camellia oil enterprises should be guided to establish correct marketing awareness to help consumers reduce information asymmetry in the camellia oil market, thus improving consumer's willingness to buy camellia oil.

4.3 Strengthening brand building and improving product awareness

The survey found that there is no uniform brand of camellia oil products in the market at present, and most consumers have insufficient knowledge of camellia oil products.The government should establish a unified camellia oil brand certification system and certification agencies, formulate unified certification standards and procedures, make the relevant standards of camellia oil products consistent with or close to the national standards and international standards, and timely revise and upgrade the brand standards according to consumer market demand and product technology, so that camellia oil products that pass the brand certification can form valuable brands and maintain their brand dominance. At the same time, the brand certification system and the judicial system should coordinate with each other. It is strictly prohibited for substandard camellia oil products to enter the consumer market, maintaining market order and fair competition.

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