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Understanding Chinese Consumer Preferences for Cheese Products

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ABSTRACT

Chinese dairy industry is rapidly expanding, especially within the cheese category. Western lifestyle has been accepted by more and more Chinese consumers. The changing palate offers great opportunities for cheese products. The objectives of this study were to find out Chinese consumers preference about the cheese product. A national online consumer usage and attitude survey was conducted (n=1260), the consumers were asked about how they purchase cheese how their attitudes towards cheese product. A descriptive analysis and crosstab were undertaken to find out their opinions about cheese. We find that more and more Chinese consumers have admitted to know more about cheese products, but into the details they have cognitive limitations about the cheese. They are affected by their dining behavior and other food purchase experience. The research result will help the foreign manufacture know about the real attitude of Chinese consumers towards the cheese product.

Keyword

Cheese, Consumers preference, Health claim, Taste, Texture.

Introduction

The global processed cheese market is expected to grow at a compounded annual growth rate (CAGR) of more than 4% from 2016 to 2020, and to grow in Asia-Pacific countries such as China and India owing to the increase in consumer spending [1]. The Chinese retail dairy market totaled US$36.6 billion in 2010, and was expected to grow by 80.3% from 2011 to 2016. This market includes drinking milk, baby milk formula, yogurt, ice cream, coffee whitener, condensed milk, cheese and butter [2]. Ten years ago, cheese was new to Chinese people. At present, various kinds of cheese have become to be important products on dairy shelves in supermarkets [3]. Nowadays, cheese category is a very niche market in China. According to the Chinese cheese market and analysis report of future development strategy in 2018-2024 published by Intelligence Research Group, from 2006 to 2016, the domestic consumption of cheese rate CAGR in China was approximately 18%, and sales CAGR was about 27% [4]. In 2016 alone, China's domestic consumption of cheese reached 69,000 tons, with sales exceeding 4 billion yuan, at an increasing rate of about 14%. From 2010 to 2016, China's cheese import volume CAGR was 28.14%, and the import value CAGR was 25.29%. Huge business opportunities lie in Chinese cheese market. Cheese growth has been driven by a number of factors: rising consumer income, increasing consumer demand for convenient and healthy food, converted original traditional life style, and the influence of fast food on teenagers [5].

However, despite the significantly increased cheese consumption in China, the yearly consumption of cheese per capita in China was only 200 grams. By comparing to other countries, like 26kgs per capita per year for France and 12kgs year for Australia, 2.57kgs for South Korea and 2.26kgs for Japan, we find Chinese number is very low.

To improve the consumption per capita, the knowledge of Chinese consumers' preference in cheese is essential. By reviewing the literatures in this field, little work has been done. More researches focus on the cheese sensory research or Chinese consumers' food consumption behavior, Few of them focus on how Chinese consumers get to know the cheese product and what are the image of cheese product in their minds. Therefore, a comprehensive work in studying on Chinese consumer preferences for cheese and evaluating the potential reasons behind this preference are needed. The aims of the current study are to focus on those relatively high earners with cheese consumption, who are supposed to be the main cheese consumers in China, and to find out how they know the cheese product. In order to understand the cognition and consumption behavior of Chinese consumers on cheese, an imported product, and better grasp the demand of Chinese consumers and the supply status of the market, we conducted an extensive survey among Chinese consumers in 2018.

Materials and Methodology

Research scope

This research presents a detailed analysis of the Chinese consumer market for cheese sold directly to consumers. It outlines Chinese consumers' key understanding and behaviors of purchasing and consuming cheese. The report also discusses Information and insight of their lifestyle and diet habits, consumption frequency, purchase and information channel, favorite cheese formats, as well as favorite cheese taste and texture.

Samples

A national online consumer usage and attitude survey was conducted in September 2018 by China National Cereals, Oils and Foodstuffs Corporation (COFCO) in China, to gather data information in this report. Before taking part in the study, potential Chinese adult participants (age 18+) were first required to complete a screening questionnaire in order to assess their suitability for the study. Combined with our years of research experience, the consumers were selected on the criteria of their monthly income (exceeds 10,000 yuan in Tier 1 cities and 6,000 yuan in Tier 2 cities), and do not work in the food or marketing sectors. Tier 1 cities included Beijing, Shanghai, Guangzhou, and Shenzhen. Tier 2 cities referred to Tianjin, Shijiazhuang, Nanjing, Hangzhou, Chengdu, Chongqing, Lanzhou, Zhuhai, Dongguan, and Foshan. In terms of sampling, we have assigned quotas to geographic regions to match the geographical distribution of Chinese population. The sample size distribution of north China city circle (Beijing, Tianjin, and Shijiazhuang), east China city circle (Shanghai, Nanjing, and Hangzhou), southwest city circle (Chengdu, Chongqing, and Lanzhou) and south China city circle (Guangzhou, Shenzhen, Foshan, and Dongguan) was average, according to general principles of consumer research.

Statistical analysis

Descriptive and consumer data were analyzed separately and then compositely. Descriptive data were analyzed with SPSS 16.0 for Windows (SPSS Inc., Chicago, IL, USA). In all following analysis, a significance level of a = 0.05 was adopted. Table 1 presents key socio-demographic indicators.

Category	Option	Sample size	Percentage
Gender	Male	474	37.6%
	Female	786	62.4%
Age	24 and below	43	3.4%
	25-29	386	30.6%
	30-34	250	19.8%
	35-40	179	14.2%
	41-44	278	22.1%
Age	45 and above	124	9.8%
Marriage status	Single	90	7.1%
	Married, no kid	66	5.2%
	Married, with baby/ babies	1104	87.6%
Educational level	PhD and above	6	0.5%
	Master	198	15.7%
	Undergraduate	962	76.3%
	College	94	7.5%
	Senior high school and below	0	0.0%
City of living	Beijing	157	12.5%
	Tianjin	86	6.8%
	Shijiazhuang	73	5.8%
	Shanghai	170	13.5%
	Nanjing	75	6.0%
	Hangzhou	72	5.7%
	Chengdu	158	12.5%
	Chongqing	85	6.7%
	Lanzhou	70	5.6%
	Guangzhou	100	7.9%
	Shenzhen	76	6.0%
	Zhuhai	29	2.3%
	Dongguan	52	4.1%
	Foshan	57	4.5%

Table 1: Socio-Demographic Profile of the Sample (n = 1260).

Results and Discussion

Consumption frequency

Young participants among 20 to 29 years old are driving main force of frequent cheese consumption among these consumers. With sample age increasing, the consumption frequency gradually decreases. Of all the participants, 91.2% of them have eaten cheese in the past three months, including cheese products from retail channel and corresponding food from food service channel, such as pizza, hamburger, salad containing cheese, etc. As shown in Table 2, more participants (30.1%) eat cheese at a frequency of 2 to 4 times each week in general than others. Among these participants, young consumers between 20 to 29 years old tend to play a leading role in high frequency of cheese consumption. They have highest ratings in "three meals each day" (4.0%), "1 to 2 times each day" (17.0%), and "5 to 6 times each week" (20.6%) in comparison with the other two age groups, 30 to 39 years old as well as 40 years old and above. In total, 41.6% of 20-29 years old participants eat cheese at least 5 to 6 times during a regular week.

The findings suggested that younger consumers have a higher acceptance of cheese, perhaps due to the reason that they consider food products from foreign countries to have better quality in flavor and taste, milk origin, and purity [6], and that they are open to the new type of food-cheese, pointed by Nicklaus, Boggio, Chabanet, and Issanchou [7], since China is not a traditional cheese eating country.

	20-29	30-39	40 and above	Average
	A	B	C	
Three meals each day	4.0% BC	2.7%	1.1%	2.6%
1 to 2 times each day	17.0%	12.1%	12.9%	14.0%
5 to 6 times each week	20.6%	17.0%	17.2%	18.3%
2 to 4 times each week	24.0%	35.8% AC	30.7%	30.1%
Once a week	21.9%	20.1%	27.7%	23.2%
1 to 3 times each month	10.6%	10.9%	9.6%	10.4%
Less than once a month	1.8%	1.3%	0.8%	1.3%

Table 2: Cheese Consumption Frequency at Different Age Groups.

Young generation has more opportunities to experience Western diets, and to try local ingredients, dishes and cooking styles. In 2017, China's outbound tourism market reached 131 million trips, and outbound tourism spending reached $115.29 billion, with year-on-year growth of 6.9% and 5.0% [8]. Economic growth is the main factor that drives outbound tourism. A total of 52.4% of the total travel force is concentrated in the Bohai rim metropolis circle with Beijing as the center, the Yangtze River delta metropolis circle with Shanghai as the center, the pearl river delta metropolis circle with Guangzhou and Shenzhen as the center, and the Chengdu-Chongqing city cluster in the southwest [8]. More and more post-90s and post-00s, mainly ranging from 18 to 28, are joining the outbound tourism team, accounting for 16% and 13% respectively [9]. Combined with this high consumption frequency of cheese, we can find that, young Chinese consumers perceive consuming cheese as part of their regular diet, instead of hunting for novelty.

Nutrition

These respondents have some awareness of cheese nutrients. The test result (Figure 1), indicates that half (52.8%) of participants believed that cheese is rich in various nutrients. Historically, the majority of Chinese viewed milk as a nutrition supplement, particularly for infants and the elderly [10]. It takes 10 kg of fresh milk to produce 1 kg of cheese, which is equivalent to concentrating the protein and fat in raw milk about 10 times [11]. Dairy proteins are increasingly recognized to have nutritional and functional advantages compared to many other protein sources [12]. Cheese potentially may have many beneficial physiological properties, such as anticariogenic, antihypertensive, and beneficial effect on bone health [13], which is directly linked with rich calcium. The large amount of calcium and phosphorus in cheese contribute to the formation of bones and teeth. A variety of vitamins play an important role in human growth and development, various physiological activities, and tissue repair [14]. Regular consumption of cheese can improve physical endurance and health [3].

Only 41.8% of them claim a high in protein and 33.5% of them claim a high in calcium. About 38.3% of them know cheese as a high in levels of calories. 27.1% of them worry about the fat, 17.9% of them concern about the high content of cholesterol and 15.4% worry about the high trans-fatty acids. Many researches also show that a growing number of consumers are becoming more conscious with the health aspects of their diet [15-17]. There is a sign of rising interest in marketing cheese as a functional food [18]. We can find that the Chinese consumers still know little about the cheese nutrients. But this area is already focused by the manufactures, and we can expect in the near future, as the manufacture give more information into cheese nutrients and new benefits claimed. The knowledge about cheese in Chinese consumers may have an increase.

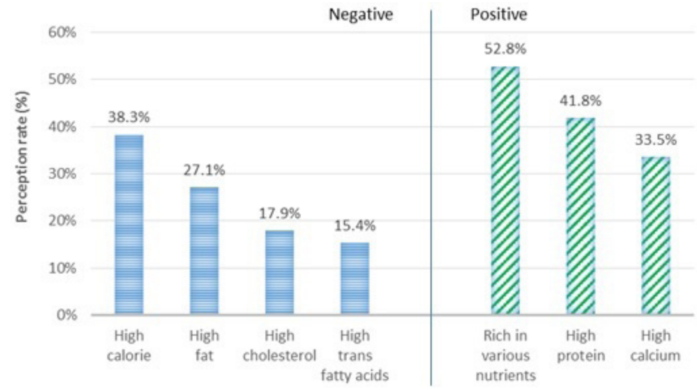

Figure 1: Perception of cheese contents on health with positive and negative factors.

Purchase channel and information channel

A majority of respondents purchased cheese mainly from offline channels, especially in supermarkets (83.5%), as mentioned in Figure 2. The most popular source of knowledge for cheese is sample tasting and shopping guide introduction, which occupies half (49.7%) of all. The growth of bakery stores in China also makes a contribution and 44.4% respondents purchase cheese from these venues. Baking does not only get consumers used to the taste, smell and texture of cheese, but also play the role of lifestyle guide as second important information source to let consumers learn cheese features (48.3%). This also indicates that quite a number of consumers see cooking/baking as one of the most appealing in-home activities.

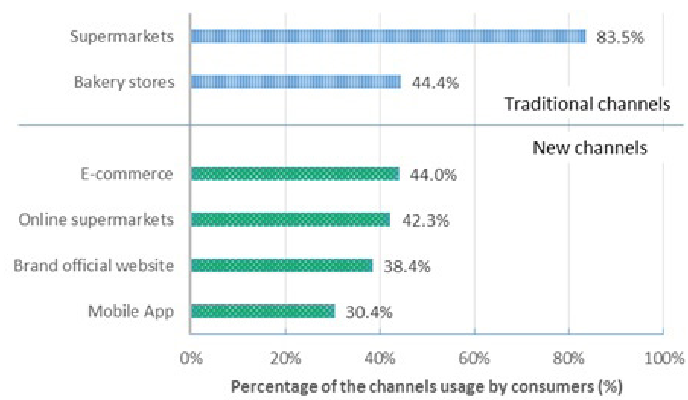

Figure 2: Purchase channel of cheese products by Chinese consumers.

The recipe-sharing online communities (eg Xiachufang, Douguo) have also contributed to this trend, which is in line with the data that 47.1% respondents learn more about cheese through food-related media. Most of the cheese experience for Chinese consumers is still relying on the offline experience, but online community is quite a new way to spread the information for cheese product.

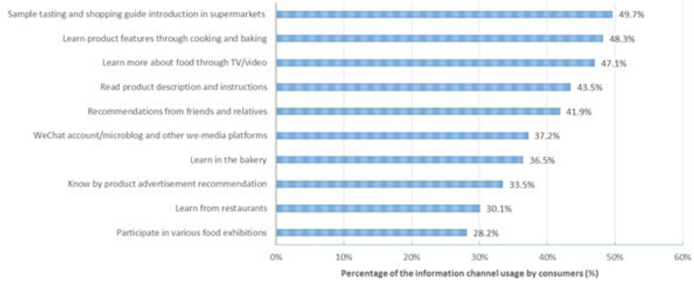

Figure 3: Information channel to learn about cheese by Chinese consumer.

Cheese formats

When asked about favorite cheese formats, cheesecake is embraced by 72.6% of respondents at all age, followed by sliced cheese (69.0%), usually applied in pasta, pizza, and burger, as cheese-flavored dairy products (65.8%). It is not surprising that women show more interest towards cheese cakes than men do – 74.8% of women "had bought cheesecake" versus 69.0% of men.

Sliced cheese has been growing rapidly in the past two years, thanks to the simple and convenient ways of consumption, such as an ingredient in sandwiches, and as an efficient solution for fast-paced urban life. Back in 2014, usage frequency of sliced cheese ranked below mini portions of cheese, cream cheese and block cheese [19], but it increased by 32% in 2015, as the best performer in the cheese category [20]. Undoubtedly, the increased consumption of cheese is attributable in large part to the convenient forms of presenting cheese to the consumers [21]. Through this result we can find that Chinese consumers still prefer the cheese product format in a more convenient way.

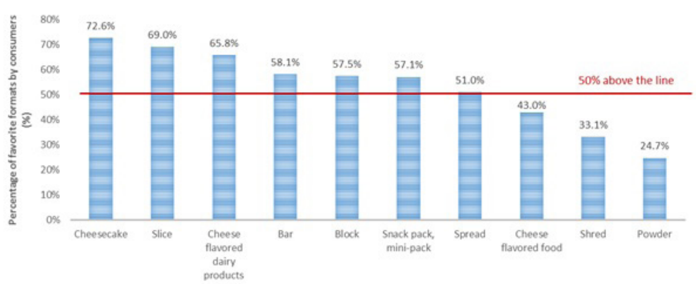

Figure 4: Favorite cheese formats and preference by Chinese consumer.

Ways of eating cheese

There appears to be more consumers who are used to eating cheese in sandwiches and hamburgers, pizza, or salad outside home, instead of eating cheese directly with food or wine traditionally in western ways [22]. As indicated in Table 4, about half of participants were fond of consuming cheese-made food, such as hamburgers or sandwiches (53.1%).

This is consistent with Mintel's finding, in the report of cheese in 2016 that 41% of surveyed consumers with higher household incomes see dining out as one of their main sources of cheese-related knowledge. Ranging from 38.4% to 44.0% of respondents made food with cheese inside like salad, pizza, pasta, cake, burgers or sandwiches. However, back in 2009, quite a large number of consumers only knew the terms of cheese, but they lacked of knowledge about the consuming ways and nutritional value of cheese, and most cheese consumption was still passive consumption [3]. Modern consumers are in great need of time-saving in their stressful fast-paced urban life. The rising trend of dining out or hanging out in western restaurants, pizza houses, as well as fast food chains, have contributed in popularizing and getting consumers familiar with the ways of eating cheese. The turnover of western food and beverage in 2018 increased by 10.09% compared with 2017 [23]. The cheese market in China will experience further growth thanks to Western diet dedication to cultivating Chinese consumers' interest in cheese. Cooking/baking fans are catching up by blending cheese into their kitchen routines.

	Ways	Percentage
Dining out	Eat hamburger/sandwich	53.1%
	Eat pizza	48.7%
	Eat salad	47.1%
Making at home	Make hamburger/sandwich with cheese	44.0%
	Make cake with cheese	41.7%
	Make pasta with cheese	39.6%
	Make pizza with cheese	39.0%
	Mae salad with cheese	38.4%
Direct eating	With fruits	39.3%
	As snacks	38.6%
	With meat	28.2%
	With wine or alcoholic drinks	26.3%

Table 4: Ways of consuming cheese by Chinese consumers.

Taste and texture

Sensory attributes (flavor and texture) are critical to the identity of cheese and consumer acceptance [24,25]. Therefore, to identify the favorable flavor and texture characteristics that drive Chinese consumer preference for cheese is crucial. In this research, 48.1% participants would like cheese to be in line with Chinese taste and preferences, which means that Chinese consumers do not enjoy the sour and thick taste of cheese. On the basis of overall liking of cheeses, milk-like and yoghurt-like sensory attributes, such as "milky" flavors, as well as "slimy" and "moist" textures are the favorable characteristics of cheese for most Chinese consumers [6]. This is consistent with the actual data result (Figure 5) that 60.0% of surveyed consumers prefer milky cheese, 48% of soft texture, and 41.6% of sweet taste, less sour, salty, and hard.

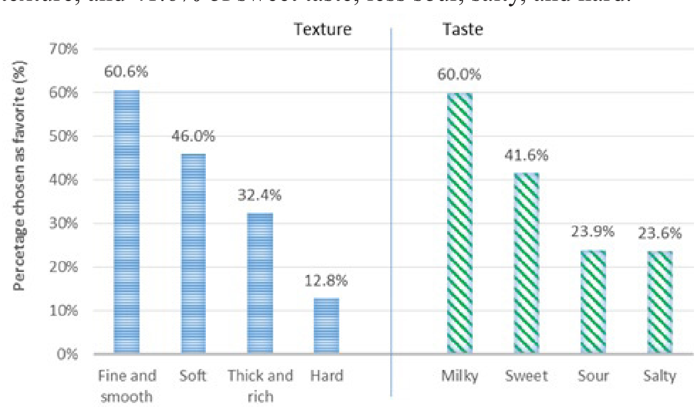

Figure 5: Favorite taste and texture for cheese consumption by Chinese consumers.

In many cases similar terms have been used to describe dominant characteristics of different cheese types, suggesting that it could be possible to develop and standardize a terminology that can be used universally and for all cheese types. As described in the research of Adhikari et al. [26], smoked Swiss, Cheddar, and Gouda cheese share universal sensory descriptive attributes that are smoky, salty, bitter, acidic, sharp, and hard, instead of milky, soft and sweet. Popular types of natural cheeses include unripen (e. g., cottage cheese, cream cheese), soft (e. g., Brie, Camembert), semi-hard (e. g., Brick, Muenster, Roquefort, Stilton), hard (e. g., Colby, Cheddar), blue veined (e. g., Blue, Gorgonzola), cooked hard cheeses (e. g., Swiss, Parmesan), and pasta filata (stretched curd, e. g., Mozzarella, Provolone). The taste of natural cheese is hard for Chinese people to accept [11]. In another research report, it also concluded that Chinese consumers could not readily accept 'bitter', and 'salty' flavors and firmness' texture in cheese [6]. Another reason that processed cheese is more popular is that they can be manufactured to possess other advantages when compared to natural cheese, for instance increased meltability, longer shelf-life stability, high diversity, and reduced refrigeration requirements, which makes it a suitable and reliable product for the hospitality, bakery and fast food sectors [27].

Conclusion

Nowadays the Cheese consumption in China is relatively low. But in recent years, cheese sales volume in this country presents the steady growth trend, and the future promotion space is supposed to be huge. On one hand, the past two decades have seen a rapid increase in consumer income as well as exposure to western culture [10]; Chinese consumers have learned more about the category through their exposure to Western lifestyle, and get to know the cheese products from more and more occasions. Purchasing experience and dining experience make them know more about cheese. They purchased cheese mainly from offline channels, especially in supermarkets, and learned about cheese from sample tasting and shopping guide introduction. They also have some cognition in cheese contents that half of them stated cheese rich in various nutrients. But on another hand, they have built a Chinese image about the cheese product. They believe the cheese flavor should be milky and the texture should be soft. This is an image the manufacture should pay attention to and this has represented a very Chinese understanding about the cheese product in China. And starting from Bakery stores, many channels are trying to build a premium image of cheese. So Dairy manufacturers could optimize the taste and texture of cheese, to better meet Chinese consumers' needs. This urges key cheese brand players to be bolder in product innovations, as long as there will be a wider and deeper communication of natural cheese's taste and flavor be made and more Western cheese consumption education for Chinese consumers.

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