Study on Industrial Organization of White Liquor Industry in Sichuan Based on SCP Model

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Abstract

This paper based on the SCP model of industrial organization theory. By studying on the situation of industrial organization of the white spirit industry in Sichuan Province, this paper found that Sichuan white liquor industry's market structure is competitive, well-known companies and small enterprises' market conducts are significant different, industrial market performance is better than the national level. But the market concentration remains to be improved, and partial market behavior still needs to be standard. Finally, this paper proposed corresponding countermeasures.

Keywords: White liquor, Industrial organization, SCP model

1. Introduction

1.1 Research background

In 2009, the Sichuan provincial party committee, the provincial government proposed speed up the construction "the Golden triangle of Chinese white liquor, promote the Sichuan liquor core competitiveness" strategy devised, which will construct the Yangtze River upstream white liquor to make the base, argue vigorously to 2012, the Sichuan white liquor will make into a 100 billion industries. The white liquor industry takes Sichuan's pillar industry, has been maintaining high profit ability. In recent years, the white liquor superior leading enterprise's profession status obtained further consolidated, the Sichuan liquor occupied the leading position in the domestic market competition.

At present, there are many scholars use SCP model to carry on the industrial organization analysis such as Gan Chunhui, Dai Rong and Li Surong (2002), Gan Zhuoxia (2009). Highly concerned about the liquor industry groups are primarily securities companies, information consulting firm, relevant industry associations, and the profession person and so on. They conducted the statistical analysis and forecast industry data, and process of brewing liquor. Domestic and international academic communities are concerned about the liquor industry, but less research has focused on liquor brand, culture, liquor industry policies, trends, etc. from the perspective of the whole industry, especially the use of the theory of industrial organization to study the liquor industry. The representative research includes: Wang Dianru, Li Xianshi (2006) analyzed the liquor industry's market structure of the formation, the development trend of China's liquor industry in the future, put forward the strategic development and the liquor business is about to enter the liquor industry, business decision analysis basis. Zhang Juan, Tan Liyong (2007) focused on the Chinese liquor industry's market structure analysis, pointed out that the concentration of the liquor industry is gradually increased, and regional concentration polarization phenomena become increasingly evident. And in the scale of economic analysis, product differentiation and barriers to entry based on the analysis, pointing out that three of the liquor industry trends ——Matthew Effect consumption of liquor brands will still continue, gentrification trend is clearly the product, and the liquor business will pay more attention to the terminal. Chen Yijun's paper (2009) on the basis of analyzing the Chinese liquor industry and the status quo of the industrial structure and introducing the meaning of enterprise clusters, competitive advantage, according to the status quo of Sichuan liquor enterprise clusters, put forward the countermeasures and proposals for the development of Sichuan liquor enterprise clusters. Through data collection, calculation and analysis, Liu Duruo (2009) found that liquor-making industrial concentration in China still remains in backward and unstable status. Xu Fa and Xie Wu (2009) introduce the present state of liquor industry, emphatically analyzed the reasons, and discussed development trends of the liquor industry.

The traditional structure-conduct-performance (SCP) industrial organization model placed great emphasis on the role of market structure. It can provide a clear analysis of complex framework of the market to avoid the structural description, and allow the market structure, market conduct and market performance in terms of categories such as market analysis study.

1.2 Liquor industry development in Sichuan Province

Sichuan is the production ward of the famous white liquor, 6 of 17 famous white liquor brands in the whole country come from Sichuan. Sichuan liquor produced mainly in the southern Sichuan Yibin, Luzhou, and along the western Sichuan region. When industry of white liquor from Sichuan-province is unstable for these several years, it moves ahead in the uproar. Although encountered financial crisis impacts and the influence of policy frequently, whole industry Sichuan liquor from underlying earnings to yield maintained a rapid growth. The output value kept the first position for many years, and the output also maintained the first position since exceed Shandong from 2007.Liquor industry in Sichuan and whole nationwide output and output value in recent years as shown in Table 1.

Scaled enterprises in Sichuan liquor achieved high-speed increased in the promotion of “Golden triangle of Chinese white liquor” strategy. From January-May 2010, 85.35 million liters of liquor produced in Sichuan Province, increased by 52.7%; it sales revenue is 44.21 billion Yuan, up by 48.8% and achieve a total profit of 5.87 billion yuan, up by 32.2%; Sichuan liquor industry’s production, sales revenue and profits rank first in the country, account for 25.2%, 40.8% and 37.4% of the whole nation respectively.

Liquor industry revenue growth rate is higher than the rate of production growth; the well-known liquor companies hold most of the profits. The production and profit structure of liquor products show pyramid and the inverted pyramid respectively; High-end liquor’s output possessed 20%, but has contributed more than half of the profits of the industry. Under the guidance of traditional industry giants such as Wuliangye, Luzhou Laojiao and Jannanchun, the whole liquor industry shows the characteristics of market expansion, the product structure moves down, and high-end brand differentiation.

2. Analysis of Sichuan liquor industry market structure

This study analyses Sichuan liquor industry market structure from two aspects: market concentration, enter and exit barriers.

2.1 Market Concentration Rate

2.1.1 Market concentration rate index selection and criteria

In economics, market concentration is a function of the number of firms and their respective shares of the total production (alternatively, total capacity or total reserves) in a market. Market concentration is considered the primary factor in the market structure study because it is closely related with the monopoly.

This paper uses Concentration Ratio to evaluate the liquor industry's market concentration. Concentration ratio is measures of the total output that is produced in an industry by a given number of firms in the industry.

Concentration ratios are measures of the total output that is produced in an industry by a given number of firms in the industry. The most common concentration ratios are the CR4 and the CR8, which means the 4 and the 8 largest firms. The formula is:

$$CR_n = \sum_{i=1}^{n} X_i / \sum_{i=1}^{N} X_i$$

Among them, CR_n ——the concentration ratio of the industry of the top n firms; X_i ——the No. i enterprise’ numerical value of yield, value and sales data; n——top n enterprise; N——total number of enterprises within the industry.

In general, the higher degree of CR_n indicates the higher degree of monopoly in the industry. That is to say the higher degree of concentration ratio means the greater of the market dominance.

2.1.2 Market concentration analysis of Sichuan liquor industry

In 2009, liquor enterprises of scale management in Sichuan acquired sales revenue 79.59 billion yuan. According to corporate annual reports, the top four companies in the main business income of Sichuan liquor industry are: Wuliangye Group Co., Ltd., 10.01 billion yuan; Luzhoulaojiao Group Co., Ltd., 4.37 billion yuan; Langjiu Group Co., Ltd., 3.5 billion yuan; Jiannanchun company 2.8 billion yuan. Computing Sichuan province the white spirit industry CR_4 is:

$$CR_4 = (100.05 + 42.17 + 35 + 28) / 795.89 = 27.01\%$$

In the same year of scaled enterprises realized sales of 185.81 billion yuan of liquor. According to corporate annual reports, the top four companies in the main business income of nationwide liquor industry are: Wuliangye Group Co., Ltd., 10.01 billion yuan; Guizhou Moutai Distillery Co., Ltd., 9.67 billion yuan; Luzhoulaojiao

Group Co., Ltd., 4.37 billion yuan; Jiangsu Yanghe Distillery Co., Ltd., 4 billion yuan. Computing the nationwide white spirit industry CR_4 is:

$$CR_4 = (100.05 + 96.7 + 42.17 + 39.5) / 1858.1 = 14.98\%$$

It can be seen from the analysis that Sichuan liquor industry concentration rate is low. According to Bain's classification of market structure, Sichuan's market structure is competitive. But compared to the nationwide liquor industry, liquor industry's market concentration in Sichuan is still high.

2.2 Enter and exit barriers

In the market mechanism analysis, enter and exit barriers are as important as market concentration. The market barrier divides into enter barrier and exit barrier.

2.2.1 The analysis of enter barriers of Sichuan liquor industry

Sichuan liquor industry entry barriers include: natural resources barriers, technical barriers, national policy barriers.

(1) Natural resources barriers

Although the unique natural environment is an indispensable condition for making white wines, due to the overall environment in Sichuan appropriate, natural resources for formation of Sichuan in liquor industry barriers is extremely low.

(2) Technical barriers

The famous liquor enterprises in Sichuan all have a mature wine technology to potential entrants to form high technical barriers. Because of the white liquor is a traditional industry and production process is simple, there are basic non-technical barriers exist for the low-end liquor enterprises.

(3) National policy barriers

White liquor industry in China is always a restricted industry, national policy barriers is high.

2.2.2 The analysis of exit barriers of Sichuan liquor industry

Sichuan liquor industry entry barriers include: asset specificity and sunk costs barriers, government and the social constraints barriers.

(1) Asset specificity and sunk costs barriers

If the specific asset is stronger, the sunk cost is higher, and then the exit barrier is higher. Well-known brand of proprietary high liquor companies, enterprises need to maintain the high input, high exit barriers. Because the small liquor companies devoted to this area are low, its exit barrier is low.

(2) Government and the social constraints barriers

Liquor industry is a pillar industry in Sichuan Province. Local governments would prevent well-known liquor companies withdraw on consideration of economic and social issues. Well-known liquor companies with high exit barriers.

2.2.3 Brief summary

Through the above analysis we can see the market barriers of the well-known enterprises are quite different with the small and medium enterprises in Sichuan liquor industry. Overall well-known liquor companies market barriers high and low barriers to small and medium enterprise market liquor: Shown in table 2.

3. The analysis of Sichuan liquor industry market conduct

Market conduct is the enterprise` strategic measure in order to adapt to the market, to maximize profits and take up the market share. Sichuan liquor industry reflects the current highly competitive and less collaborative market behavior. This study will discuss the market conduct in Sichuan liquor industry from two aspects: the price conduct and the non-price conduct.

3.1 Price conduct

The price conducts of the white liquor enterprise follow two principles: first, to attract the most customers in the segment market; second, to maximize profit. The price conduct of well-known liquor enterprises Sichuan was not the same with the small liquor enterprises.

Sichuan well-known liquor enterprises adopt a strategic pricing conduct. Based on steady climb in the brand value, to increase product price continuously to ensure the rapid growth of corporate profits; in turn, continue to maintain and increase the cost of product marketing. Through a virtuous cycle "high input - high (brand) value - High (Product) Price - high profits - high investment", to prevent other enterprises to enter the market segments of the enterprise products.

Consumers are price-sensitive to the homogeneous low-end liquor products. In order to win the market competition, Small and medium liquor enterprises in Sichuan tend to occupy more market share with low prices.

3.2 Non-price conduct

Non-price conduct seeks to expand the company's service differentiation, to expand market share, to build entry barriers, and to gain more profit.

3.2.1 Advertisement conduct

In order to firmly establish the position in the industry, Sichuan liquor business has always been inclined to choose high-impact and high value-added mainstream media to promote the rapid growth of brand value.

For example, total bid prices of Wuliangye group spent as high as 405 million yuan at CCTV advertised bidding meeting in 2011. The Sichuan white liquor industry advertising cost is high, as shown in Figure 1.

3.2.2 Counterfeiting conduct

There are many middle and low liquor manufacturers in Sichuan and the competition between them is fierce. By taking market strategies such as make the defective products as fine qualities, or counterfeit the famous product, a certain manufacturer disturb the liquor market. This behavior not only harms the consumers` profit and the mental or physical health, but also harms the benefit of the liquor industry and brand reputation in Sichuan. It resulted in bad influence of the liquor industry in Sichuan.

4. The analysis of Sichuan liquor industry market performance

This research investigates the liquor industry's market performance from the profits, taxes and number of employees of the industry.

4.1 The profits of the industry

Profit is the contribution of enterprises to shareholders. From the total profits of view, profits of Sichuan liquor industry before 2004 is relatively stable and increasing year by year after 2005. However, Figure 2 shows the growth rate of Sichuan liquor industry profits lower than the national growth rate.

4.2 Industry tax

Tax is the enterprise contribution to the country. From the amount industry tax point of view, the overall tax revenue in Sichuan liquor industry is on the rise. It can be seen from Figure 3, Sichuan liquor industry accounting for more than a quarter of nationwide total tax revenue of liquor.

4.3 The number of employees

Social welfare is the industry's contribution to society. Industry provides jobs for the community to a certain extent reflects the effects of the social welfare industry. In recent years, Sichuan liquor industry is on the rise, as shown in Figure 4.

As can be seen from the above analysis, Sichuan liquor industry profits is high, paid much tax revenue and provide a lot of jobs. So Sichuan liquor industry market performance is well.

5. Conclusions and suggestions

5.1 Conclusions

5.1.1 Sichuan liquor industry organizations is higher than the national level of market performance

From the whole industry’s performance we can see that White liquor industry of Sichuan is good, and organizes competitive power is higher than the national average standard. This is related to Sichuan liquor industry’s market structure and conduct, Sichuan itself has comparative advantage in liquor making, as well as the existence of local government supports.

5.1.2 Sichuan liquor industry has competitive market structure; industry concentration needs to be improved

While the Sichuan liquor market concentration higher than the national level, it is still a competitive market structure. Low-end liquor industry in Sichuan has low entry barriers result in plenty of low-end liquor business and low quality of products, which determine the fierce competition of the market. Sichuan liquor industry market concentration needs to be further improved.

5.1.3 Market conduct between well-known, small and medium liquor enterprise in Sichuan is significantly different

Sichuan liquor market conduct is highly competitive. The enterprise take various price and non-price competition according to their own situation to attract consumers, and expand market share. Well-known liquor companies and small and medium enterprises was obviously different in the conduct. Well-known enterprises attach importance to brand building; brands dominate the market through the pursuit of efficiency. The small and medium enterprises expand market share by taking price competition, or conducting bad market behavior.

5.2 Suggestions

5.2.1 Adhere to existing policy; further improve the liquor industry market concentration

The government should adhere to the policy which support the superior and limit poor industrial in the liquor industry. The policy should encourage the production of high-grade liquor products, limit small-scale, low level of enterprises, and promote the enterprise product structure adjustment. Overmuch low-grade liquor production enterprise should be eliminated in order to make market share gradually concentrate to larger scale, excellent brand enterprises, improving liquor industry market concentration. At the same time, the policy tends to guide the Sichuan liquor industry market structure of monopolistic competition, then oligopoly. Manufacturers should focus on the national wine market at the same time, the majority of small wineries conversion or bankruptcy will be out of the market.

5.2.2 Regulate liquor market conduct

Through the confinement of industry associations, the government should curb Sichuan liquor industry's malignant competition behavior, and to increase efforts to crack down on counterfeiting. Regulate market conduct in Sichuan liquor industry, and earnestly safeguard the legitimate production and operation environment in development. Forward to the oligopoly market structure of liquor market, in order to get excess profits, firms may collusion, conspiracy and raise prices, reduce competition, the government should speed up the anti-monopoly legislation and unfair competition policies.

5.2.3 Promote the liquor industry integration resources, and enhance industrial market performance

Promoting Sichuan well-known liquor companies reorganize assets and the optimal allocation of production factors, to make the existing liquor making resources concentrated on large enterprises to play a leading role in the professional system. To encourage existing small and medium enterprise resource integration liquor guides the adjustment of business structure. To promote the overall market performance liquor industry in Sichuan Province ultimately.

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Table 1. 2001-2008 Sichuan and whole nationwide liquor industry output and output value statistics

Year	Output (ten thousand tons)		Proportion	Output value (billion yuan)		Proportion
	Sichuan	Nationwide		Sichuan	Nationwide	
2001	54.92	402.94	13.63%	17.65	108.90	16.21%
2002	47.20	324.72	14.54%	20.17	116.28	17.35%
2003	51.90	305.64	16.98%	22.10	127.80	17.30%
2004	49.76	303.71	16.38%	19.67	136.31	14.43%
2005	58.66	335.99	17.46%	31.42	171.81	18.29%
2006	67.15	404.08	16.62%	38.89	208.56	18.65%
2007	86.35	491.70	17.56%	52.13	261.22	19.96%
2008	110.85	570.92	19.42%	63.42	318.12	19.94%

Source: Macro China Industries Data Base

Table 2. The situation in Sichuan liquor industry market barriers

		Degree	
		well-known enterprises	small and medium enterprises
Enter barriers	Natural resources barriers	Low	Low
	Technical barriers	Very high	Low
	National policy barriers	High	High
Exit barriers	Asset specificity and sunk costs barriers	High	Low
	Government and the social constraints barriers	High	Low

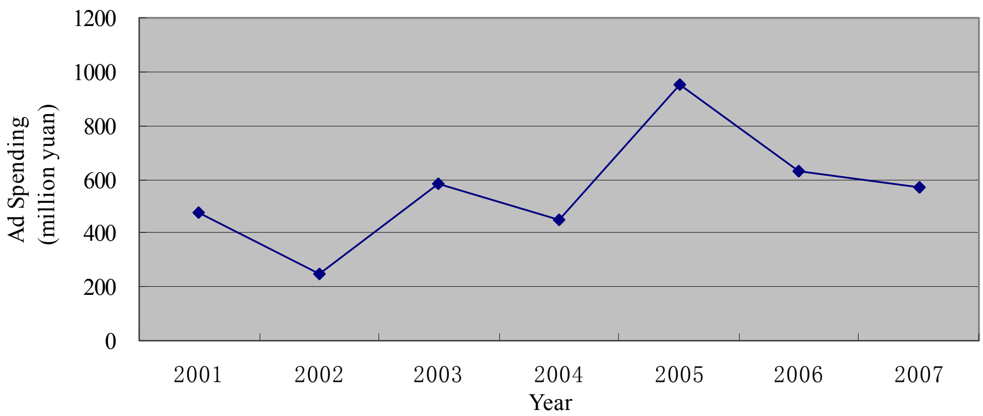

Figure 1. 2001-2007 liquor industry and spending in Sichuan Province

Source: Macro China Industries Data Base

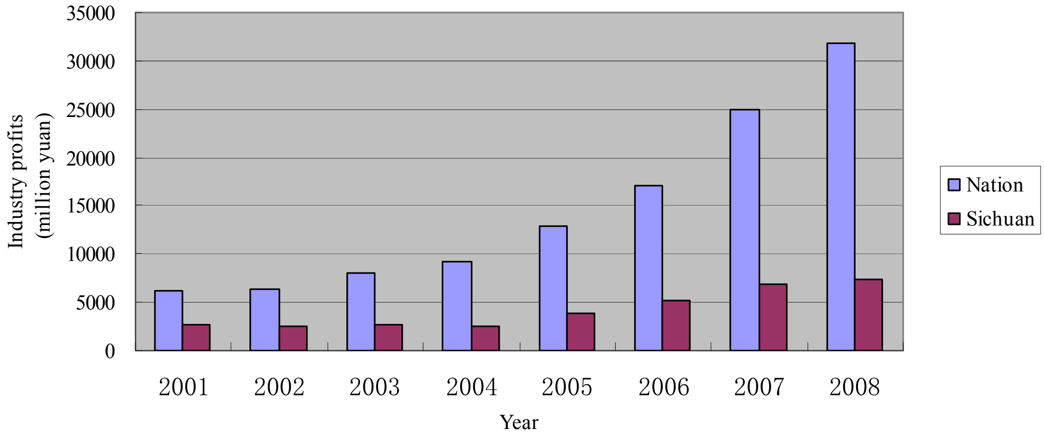

Figure 2. 2001-2008 National and Sichuan liquor industry profits

Source: Macro China Industries Data Base

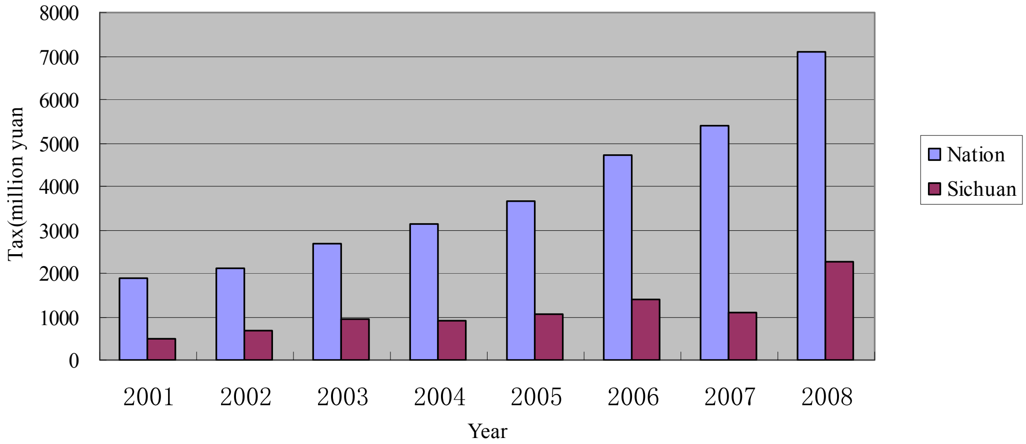

Figure 3. 2001-2008 National and Sichuan liquor industry tax

Source: Macro China Industries Data Base

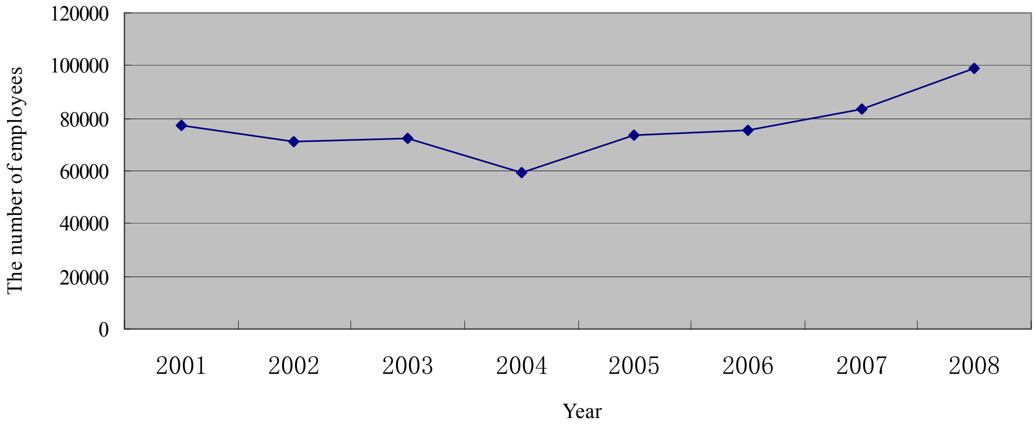

Figure 4. 2001-2008 the number of employees in Sichuan liquor industry

Source: Macro China Industries Data Base