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DEMAND ANALYSIS FOR TEA IN CHINA

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I. INTRODUCTION

1. For the Eighteenth Session of the Intergovernmental Group on Tea, the Secretariat wanted to deviate from the standard market profiling presented in the previous sessions and move towards an in-depth demand analysis that would provide detailed factors driving demand in tea market places. The Secretariat wishes to underline the fact that obtaining household consumption expenditure surveys proved not only extremely expensive, but also recent surveys, less than five years old, were almost impossible to obtain.

2. This document presents a summary of the results of an in-depth demand analysis of the tea market in China, which was commissioned from the Ministry of Agriculture, and was still being finalized when this summary was prepared. The details of the quantitative analysis will be completed by end March and will be tabled as a CRS document at the Session. The study also included two sample surveys of consumer preferences and consumption patterns that may be of interest in considering the factors driving demand for tea in China.

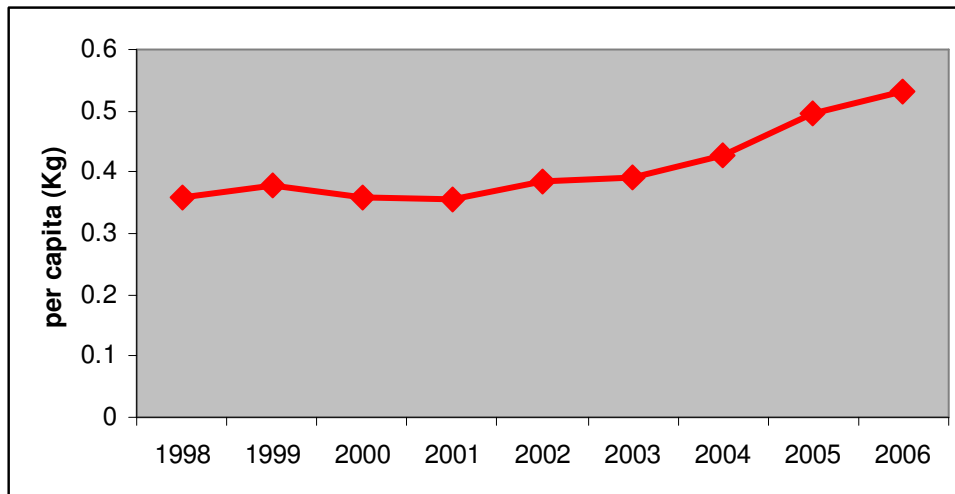
II. DOMESTIC CONSUMPTION OF TEA IN CHINA

3. The rapid economic growth in China since the late 1990s has brought structural changes in the agricultural and food sector in particular. Real annual average per capita GDP growth rate was just under 9 percent between 1998 and 2007. In 2007, China stood as the second-largest economy in the world after the United States, with a GDP of US\$7 trillion, measured on purchasing power parity (PPP) basis. Yet, on a per capita basis, the country is still listed amongst the lower middle-income country groups. The most important change in consumption pattern which reflects the rapid economic gains, has been the shift towards meat, dairy, and fruits and vegetables products.

4. The Government of China has long recognized the importance of the tea industry as a source of export earnings, job creation, and income generation for rural populations. A whole host of policy incentives have led to a proliferation of tea gardens and tea related investments. Incentives include, subsidized production cost and elimination of production tax. Provincial states also provided some support to the tea industry to upgrade existing tea gardens and the construction of processing factories. In general, the tea sector has benefited from the changes in macroeconomic policies of the 1980s, which stimulated export oriented industries. These changes coincided with the release of research results of green tea consumption, which led to an expansion in overall demand for green tea products.

5. Tea plays an important part in the people's daily consumption. However, compared with other large tea consuming countries, per capita tea consumption in China remains low (figure 1). In 2006, the per capita tea consumption was 0.53 kg, compared to the Russian Federation which had a per capita tea consumption level of 1.26 kg and for the United Kingdom it was 2.20 kg. Therefore, a great potential exists for further expansion.

6. China is a traditional tea consuming country. With the rapid development and growth of its economy, consumption volumes of tea have risen significantly. Domestic consumption rose from about 196 000 tonnes in 1980 to nearly 776 000 tonnes in 2006. The annual consumption growth rate between 2002 and 2006 was 19 percent, while per capita consumption volume rose from 0.2 kg in 1980 to about 0.53 kg in 2006.

Chart 1. Per capita tea consumption in China

7. Tea consumption in China also reflects regional differences in terms of consumption patterns and preferences. Tibet has the largest per capita tea consumption, followed by Taiwan, Province of China, and Guangdong. Consumers in Taiwan and Chaozhou have a preference for oolong tea, and quantities used are relatively more than other types of teas, because of the brewing method. Large cities like Beijing and Shanghai have fairly high tea consumption volume. This is related to the high income level and well developed trade in these cities.

Table 1 Top Tea Consuming Provinces and Municipalities in China in 2000

Unit: kg per person

Region	Annual per capita consumption (kg)	Region	Annual per capita consumption (kg)
Tibet	3.75	Guangzhou	1.66
Beijing	0.70	Shanghai	0.60
Taiwan	2.00	Chaozhou area	1.60
Guangdong	0.6	Hong Kong	1.28

8. Generally speaking, provinces and autonomous regions with ethnic minorities, such as Inner Mongolia, Ningxia, Gansu, Qinghai, Xinjiang, Yunnan and Tibet, have a higher consumption level than provinces or municipalities where the Han ethnic group is the predominant group. The per capita tea consumption in main tea producing provinces like Fujian, Zhejiang, Anhui, Hunan and Guangdong is often several times that of other regional areas. Urban consumption levels are often higher than those of rural areas.

9. Green tea is the most consumed variety in China. The proportion of green tea in total tea consumption grew from 66 percent in 1980 to 73.3 percent in 2006. Oolong tea consumption expanded quickly from 5 654 tonnes in 1980 to 95 000 tonnes in 2006, growing at an annual rate of 11.5 percent. The proportion of Oolong tea in the total tea consumption rose from 2.9 percent in 1980 to 12.8 percent in 2006. The consumption of black tea and other teas has grown from 61 000 tonnes in 1980 to 103 000 tonnes in 2006, but as a proportion of total tea consumption, their market share decreased from 31.1 percent in 1980 to 13.8 percent in 2006.

III. ANALYSIS OF FACTORS INFLUENCING TEA CONSUMPTION IN CHINA

A. ECONOMIC FACTORS BEHIND TEA CONSUMPTION

- i. Income Level and Disparity between the Urban and Rural Areas
 - According to available data in the Chinese Statistical Yearbook, per capita tea consumption is closely related to income levels. In 2006, the statistics indicated that households with the highest income consumed 2.2 times more tea than households with the lowest income.

Table 2 Income of Rural Residents and Tea Consumption from 1985-2004

Year	Per capita net income of rural residents in real terms	Per capita tea consumption of rural residents (kg/year)	Per capita tea consumption of urban residents (kg/year)
1985	397.6	0.24	0.40
1990	686.3	0.27	0.39
1995	1577.7	0.29	0.49
2000	2253.4	0.31	0.45
2001	2366.4	0.36	0.18
2002	2475.6	0.35	0.44
2003	2622.2	0.36	0.44
2004	2936.4	0.37	0.51

Source of data: "Study on Features of Tea Consumption of Rural Residents in China" from *Journal of Tea* 2006, 32(4): 218-221, by Mr. Kong Yuping and Mr. Tang Yi; page 36 of "Study on Features of Tea Consumption in China".

- ii. Tea consumption and price elasticity of demand
 - Price directly influences the competitiveness of tea as a commodity, its market share, and economic benefits. The magnitude of the price elasticity of demand for tea falls between daily necessities, such as grain, edible oil, salt, etc., and luxury goods, such as tobacco and wine, etc. Top-grade tea has a greater price elasticity than that of the middle or lower quality teas, while demand in non-producing regions has a greater price elasticity than in tea producing regions.
 - The availability of substitutes also affects the price elasticity of demand for tea. Since tea consumption in China is considered as a habit, competition with other soft drinks is considered to be limited. However, without estimates of cross price elasticities, it was difficult to substantiate this claim.

Table 3 Comparison between Tea Drinks and Carbonate Drinks (sales, market shares)

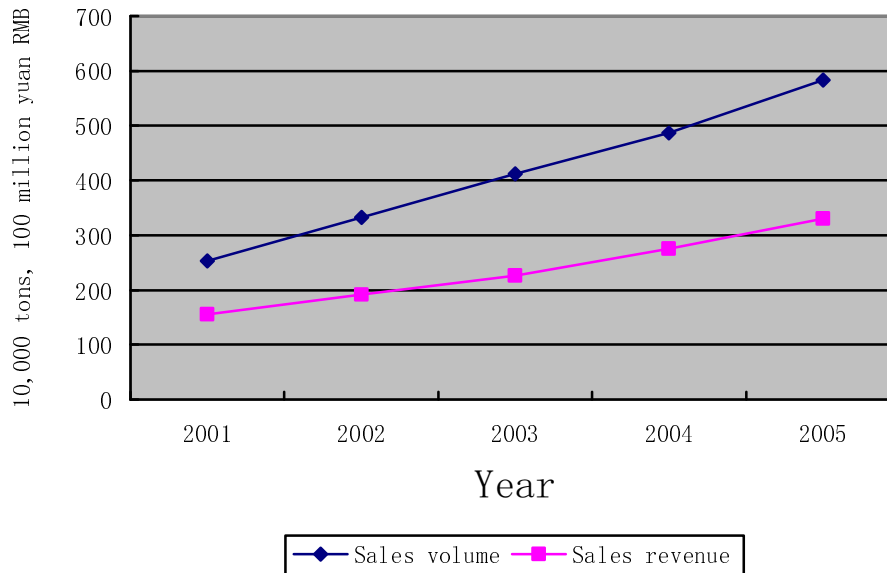
	2000	2001	2002	2003	2004	2005
Tea drinks	7%	15%	17%	18%	18%	20%
Carbonate drinks	36%	27%	25%	23%	21%	21%

Date source: Tea Drinks Industry Analysis Report, 2006.

iii. Supply Channels

- Tea consumption may also be encouraged by the number of outlets that offer tea products in their shelves. The more tea shops, the larger the per capita tea consumption. According to the survey, in 2000, Beijing had 6 000 tea retailers; Shanghai, around 6,000; Chengdu, 5 000; Tianjin, 1 000. Conversely, the greater the demand the more outlets will be established.

Chart 2. Tea drinks sales in China from 2001-2005



Data source: Tea Drinks Industry Analysis Report, 2006.

B. NON-ECONOMIC FACTORS INFLUENCING TEA CONSUMPTION

i. Population

- Population represents an important factor in determining the size of the market. Generally speaking, regions with higher population concentration often have the greatest demand for tea. In addition, various other characteristics, such as age structure, occupation, mobility and education, have far reaching impacts on tea consumption.
- China has a large population, but only 20 percent drink tea. Alongside the improvement of living standards and increasing attention to health issues, it is expected that tea consumption will continue increasing in the near future. Multiple surveys also show that tea consumption tends to increase with education level, income, and age.

ii. Habits and Preferences

- Tea has always been a daily necessity in ethnic minority regions of China, including Xinjiang, Inner Mongolia, Gansu, Qinghai, Ningxia. In these regions, most people live on animal husbandry, and take beef, mutton, dairy products as their staple food. Such a diet structure is rich in fat and residents claim that tea helps with digestion.
- Middle aged and the elderly groups consume more tea than any other population group, and most of them still prefer the traditional method of preparing tea, i.e. Leaf stewing. The younger consumers prefer tea drinks, tea bags, etc.

iii. Difference between the Urban Area and the Rural Area

- At present, a vast gap still persists between urban and rural areas in China. Factors like income differences have led to a higher consumption volume of tea in urban areas than in rural areas. Currently, the per capita urban consumption of tea is 0.5 kg compared to only 0.3 kg in the rural areas. In the vast countryside of China where tea is not grown, farmers still have a low living standard and tea is still a luxury good.

IV. ILLUSTRATIVE CASE STUDY

10. Two case studies were carried out to analyze the characteristics of tea consumption in China. The purpose was to quantify some of the characteristics of demand as listed in the previous sections of the document.

A. TEA CONSUMPTION SURVEYS IN HANGZHOU

11. Hangzhou is a well known tea growing and consuming region. A sample survey was conducted in Wulin Plaza of Hangzhou with 790 respondents. Some of the findings are described below:

Large Variation in Demand for Tea among Individuals

12. Residents of Hangzhou are considered to be at the fore-front of tea consumption in China, but the survey revealed obvious differences among individuals. 30 percent of the interviewees did not drink tea. Consumers with an annual consumption of over 600g accounted for 17.36 percent, while those with an annual consumption level of between 100g and 300g account for 36.14 percent. This showed that tea consumption for most interviewees was still low, and there was great potential for further expansion.

Table 4 Tea Consumption and Tea Preferences in Hangzhou

Item		Number of people	%
Annual tea consumption	Hardly drink tea	234	30.31
	100-300g	279	36.14
	300-600g	125	16.19
	Over 600g	134	17.36
Favorite tea (multiple choice allowed)	West Lake Longjing tea	273	33.17
	Longjing tea produced in other places	72	8.75
	Other green tea	288	34.99
	Oolong tea	55	6.68
	Pu-erh tea	24	2.92
	Other	111	13.49

Consumer preferences

13. Results of the survey show that tea consumption has become increasingly diversified, though well known local varieties and traditional drinking habits of the local residents still played an important role in consumption. In Hangzhou, West Lake Longjing tea was considered a strong local brand, while many other brands of green tea were also consumed, underlying the traditional nature of tea consumption in Hangzhou.

Factors Affecting Tea Consumption

14. Tea consumption is influenced by consumer characteristics, including age, gender, income etc. Results from the survey showed that, among the group with an annual per capita consumption of above 600g, more males drank tea than females. This was perhaps attributable to the fact that men tended to be involved with many social activities that were generally associated with drinking tea. The non-tea drinkers were mainly those consumers below 25 years of age, while those above 50 years were among the group with the highest tea consumption rate. Consumers that had per capita consumption levels above 600g, were those at the higher income levels. This implied that with the improvement of China's per capita income, tea consumption was likely to see a steady growth.

Table 5 Impact on tea consumption from consumer structure

Item	Consumption	Do not drink tea	100-300g	300-600g	Over 600g
Sex	M	29.64	35.39	15.57	19.40
	F	31.31	37.71	17.51	13.47
Age	Below 25	42.65	41.23	9.48	6.64
	25-40	18.92	37.30	24.32	19.46
	40-50	11.76	22.35	21.18	44.71
	Over 50	11.25	21.25	27.50	40.00
Personal income	Below 1500	39.10	40.10	11.28	9.52
	1500-2000	22.82	34.90	23.49	18.79
	2500-3500	17.82	28.71	24.75	28.71
	3500-4500	11.11	27.78	25.00	36.11
	Over 4500	8.00	16	16	60

15. The survey also shows that consumption is correlated with the price level. A rise in tea prices, reflecting the quality level, implies a decrease in consumption.

Table 6 Tea Price and Consumption

Item		Consumers	%
Price of tea consumed (yuan/500 g)	Below 100	366	51.48%
	100-300	218	30.66
	300-600	74	10.41
	600-1000	35	4.92
	1000	18	2.53

B. SURVEY OF TEA CONSUMPTION IN TONGCHENG, ANHUI PROVINCE

16. Tongcheng City is located in the central part of Anhui Province, with a total population of 750 000, of which the rural population comprised over 600 000. The annual per capita tea consumption is 0.4 kg. Tongcheng is a typical example of small and medium sized tea producing cities. Random sampling was taken from three villages in the urban, suburban, and rural mountainous area. 30 households were selected randomly out of each village as samples. Some of the findings are listed below:

- Tea drinkers accounted for 66 percent of the total sample. Urban residents had the highest proportion of tea consumption, as much as 90 percent; followed by the mountainous area which produces tea, at 60 percent; and lastly, suburban area at 50 percent. In terms of real expenditure on tea consumption, urban residents spent the most on tea, about 250 RMB per household a year; followed by residents in tea-producing mountainous area, at 150 RMB; and lastly, suburban residents, with 80 RMB. Differences in the grades of tea consumed occur between the urban area and the rural area. Urban residents consumed top-grade and middle-grade teas, while residents in suburbs and mountain farmers did not. They consumed bulk tea instead, which was priced at 10-100 RMB per kg.
- Tea drinking is closely related to age. In the survey, children consumed the lowest percentage of tea, 5 percent; the young people (25-40), 44 percent; the middle-aged (40-50), 64 percent; and the elderly had the highest percentage of tea consumption, at 67 percent.
- The survey showed that a variety of teas was consumed, including green tea, black tea, jasmine, and Oolong teas. Green tea represented the largest share in total consumption.

17. The results from this survey show that tea consumption was influenced by income, preference, education, occupation and age. Tea consumption in this region is still at a low level and there was room for further growth.

V. CONCLUSION

18. The two case studies highlighted critical elements that influence tea consumption in China. These can be summarized as follow:

- Consumption habit, culture, tradition and values play an important role in tea consumption.
- Just like any other consumable, population size, age group, and income level correlate with overall tea consumption. There is a strong disparity in consumption between cities and rural areas. With rising income in rural areas, this gap is likely to shrink.
- Promotional campaign and marketing efforts have shown results in increasing consumer awareness on the benefits behind tea consumption, especially those that associate tea with a healthy life style. In addition, opportunities in the value added market segments exist, particularly for specialty and organic teas, as income levels rise in both rural and urban areas.