The Distribution of Tea Industry in Huizhou: 
Based on the Records of Investigations during the Republic of China

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Abstract: Huizhou, which locates in the southern part of current China’s Anhui Province, is an important tea producing area of China in modern history. Its natural environment provides suitable conditions for tea production. The spatial distribution of local tea industry also bears a close relation to the geographical base of the region. Separated by the watershed, Huizhou belongs both to the Xin’an River Basin and Poyang Lake Basin. Tea production in these two river basins utilized different transport routes. Under the influence of different river system structures, the tea industry formed different industrial patterns: the clustered river system in the Xin’an River Basin formed a sole pole pattern taking Tunxi as the center, and the scattered river system in the Poyang Lake Basin presented a multi-central pattern with tea factories in Qimen and Wuyuan scattered around.

Key words: Huizhou, tea industry, China, the Republic of China

1. Introduction
Huizhou, formerly consisting of six counties, specifically the She, Xiuning, Wuyuan, Qimen, Yi and Jixi, is generally the equal of the current prefecture of Huangshan, a prefecture in the southern part of Anhui Province. From the third year during the reign of Xuanhe in the Northern Song dynasty (1121) to the first year of the Republic of China (1912), the six counties had belonged to Huizhou for a long time. In the Republican period, the six counties still maintained their cultural identity despite that “Huizhou” was no longer on the list of administrative regions, and formed a relatively independent geographical unit. Tea industry has been a significant industry of Huizhou. The famous Keemun tea (Qimen black tea) and Twankey/Tienkai tea (Tunxi green tea) since modern times are native to Huizhou.

This paper is mainly devoted to a study of the distribution of tea industry in Huizhou during the Republican period. Tea industry covers multiple links such as planting, processing, trading, etc. In this paper, the spatial distribution of each link of the tea industry in all the counties of Huizhou will be restored, and the relations between the spatial distributions of all links will be further explored.

Special investigations into the tea industry in Huizhou were once conducted by the national government during the Republican period. Some of those investigation reports were published separately as special issues, some were published in the then financial magazines as papers, and some others were saved in governmental archives. The research work of this paper is mainly carried out based on these findings in the Republican period.

2. Natural Environment of Huizhou
2.1 Landform
Huizhou is situated in the hilly region of Anhui’s southern part, and surrounded by mountains at watershed level, forming a relatively enclosed region. In its east are the Tianmu-Baiji Mountains, its north the Huangshan Mountains and its middle the Wulong Mountains. Low mountains and hills are distributed within the encirclement of watersheds.

Among them, the southwest ranges of the Huangshan Mountains and Wulong Mountains become a watershed within the Huizhou region, separating Huizhou into two parts: one in the Xin’an River Basin with She, Xiuning, Yi and Jixi in the east and the other in the Poyang Lake Basin with Qimen and Wuyuan in the west.

Fig. 1. Rivers and mountains in Huizhou’s six counties
Xin’an River, namely the upstream of the Qiantang River, has two sources that are Jianjiang River and Lianjiang River. The Jianjiang River is divided into two tributaries with Shuaishui River in the south and Hengjiang River in the north. Tunxi (now downtown of Huangshan city) is located in the confluence of Shuaishui River and Hengjiang River. Four tributaries, which are the Fengle River, Yangzhishui River, Fuzi River and Busheshui River, form the upstream of Lianjiang River. Lianjiang River joins the Jianjiang River at Pukou near the county seat of She, forming the Xin’an River. The river system in the Xin’an River presents a clustered pattern.

The two counties of Qimen and Wuyuan belong to the Poyang Lake Basin. The Changjiang River, Dabeihe River, Xin’anhe River and Wenshanhe River are the four most important rivers within the Qimen territory. The main stem of river system within the Wuyuan territory is the Le’anjiang River, converged by Qinghuashui River, Duanxinshui River and Jiangwanhe River. After Le’anjiang River runs through Ziyang Town, it is joined successively by Gaoshashui River, Hengchahe River and Fuchunshui River. Since Gaoshashui River, Hengchahe River and Fuchunshui River are blocked by mountains, they each drain into the Le’anjiang River independently. Generally, the river system in the Poyang Lake Basin appears to be scattered.

2.2 Temperature

Tea bushes belong to the family of thermophilous plants, whose growth requires an annual \( \geq 10^\circ \)C accumulated temperature of over 4000 degrees and minimum temperature of above -14°C. Annual \( \geq 10^\circ \)C accumulated temperature in Huizhou is between 4800-5200 degrees, which is suitable for tea growth. And its average extremely lowest temperature has been -8--10°C for many years, under which tea bushes will pass the winter safely.

2.3 Precipitation

The optimal annual precipitation for tea bushes is 1000-1500mm. During their growing peak period from April to October each year, more water is required. Annual precipitation in Huizhou region is 1200-1600mm, and amount of precipitation in the spring and autumn accounts for 80% of the total annual precipitation. In terms of air humidity, the annual medial humidity in Huizhou region is above 80%. The high humidity will form smog, which is a great advantage for the growth of tea bushes.

2.4 Altitude

Appropriate altitude for tea bushes is 300-600m. The Baiji-Tianmu Mountains, Huangshan Mountains and Wulong Mountains in Huizhou region belong to middle mountains. Their elevation is between 800-1500m, and relative height difference is above 700m, therefore, foothill areas with altitude between 100-800m are universal. On the two sides of the middle mountains are low mountains with altitude between 400-800m and relative height difference between 300-600m. Similarly, foothill areas with altitude between 100-500m can also be found. Hills are the major geomorphic type in Huizhou region with altitude below 400m and relative height difference below 200m. As a result, hilly areas that are suitable for the growth of tea bushes are widely distributed in Huizhou.

2.5 Soil texture

Tea bushes thrive in red soil and yellow soil that are rich in humus. Red soil and yellow soil are most widely distributed in the hilly areas of Huizhou.

2.6 pH

Tea bushes require the soils to be slightly acidic, with a pH value of 4.0-6.5 being optimal. The pH value of red soil in Huizhou’s hilly areas is
generally between 4.0-6.0.

2.7 Conclusion

It is thereby concluded that the natural conditions in Huizhou region are suitable for the production of high-quality tea.

In terms of waterway transportation in Huizhou, the Xin’an River Basin showed a clustered pattern, while the Poyang Lake Basin presented a scattered pattern, which both affected the distribution of tea industry.

Influenced by the broken hilly areas in Huizhou, tea plots presented a broken pattern as well. In the meanwhile, social factors such as the proportion of owner-peasants in Huizhou, the decentralization of land ownership, the equal-sharing inheritance habit adopted by the locals, as well as the habit of purchasing new lands by year based on financial resources, have all accelerated the fragmentation of tea plots.

3. Spatial Distribution of Tea Industry in Huizhou

By river basins, the 4 counties in the Xin’an River Basin produced a total of 59600 piculs of fine tea, which didn’t appear to be much different from that in the Poyang Lake Basin where the output was 56205 piculs.

The gray scale in the figure indicates the difference in output of each county.

The scattered dots in the figure show that tea output of each county was basically in positive correlation with the area of the county.

4. Spatial Distribution of Tea Industry in Each County

4.1 She County

Fig. 3. Spatial distribution of tea industry in She County


Note: Interpolation with Kriging

Tea industry chain in She County: chanong (tea
Tea growers planted tea bushes and conducted primary processing of tea leaves to make crude tea. Chahang purchased crude tea from tea growers and resold to chahao. Chahang did not assume any processing of tea and they gained benefits by receiving commissions from the contracting parties.

Chahao were where the refining process of tea was conducted. Usually, chahao were categorized into two types: benzhuang (domestic-oriented tea factory) and yangzhuang (foreign-oriented tea factory). The domestic-oriented chahao were responsible for manufacturing tea for domestic consumption, while the foreign-oriented ones were in charge of manufacturing tea for exportation.

The distribution of tea growers can be generally figured out based on the distribution of tea output. It can be seen from Fig. 3 that tea output in the south of She County was larger than that in the north. The terrain of She County slopes downward from the north to the south. And shancha (mountain tea) was more often in the north, while yuancha (garden tea) was often in the south.

Chahang were mostly distributed in central towns and villages of the tea producing areas. Besides, they also preferred to locate themselves along the waterway. These chahang purchased crude tea from tea growers in their nearby counties such as Taiping, Jixi, and even Chun’an and Suian in Zhejiang depending on water transport. However, chahang later began to experience recession with some tea growers starting to refine the tea by themselves, which allowed many chahao to purchase crude tea directly from tea growers instead of from chahang who played a role of tea agent.

Domestic-oriented chahao in She County were largely opened by northern tea merchants, commonly known as Shandongke (merchants from Shandong). The northerners were fond of scented tea, so domestic-oriented chahao were usually distributed in the Wenzhengshan Hill, Lincun, Choumuling Hill and Xiongcun where were abound in chloranthus flowers, a type of scent for scented tea manufacture.

Foreign-oriented chahao, usually opened by the locals, specialized in manufacturing refined tea in boxes. Tea manufactured by foreign-oriented chahao was finally transported to Shanghai for sale through the Xin’an River. Consequently, foreign-oriented chahao were concentrated in major cities and towns along the Xin’an River and its tributaries, and mostly near the river confluences such as Yuliang and Shendu.

### 4.2 Xiuning County

The author failed to find tea production data in village or town level within Xiuning County, but a list of tea villages in this county was discovered, based on which a figure was made below.

![Fig. 4. Spatial distribution of tea industry in Xiuning County](image)


Generally, the distribution of tea growers can be learned from the tea producing villages. In Xiuning County, tea output in the south was more than that in the north. The leading tea producing areas concentrated in the neighboring villages and towns along the Shaishui River and its tributaries, where high-quality tea was produced.

Similarly, chahang in Xiuning were also in decline, which were expressed in two aspects. On the one hand, chahang in Xiuning were no longer...
scattered in central villages and towns of the tea producing areas, but concentrated in Tunxi, the center of foreign-oriented green tea industry in Huizhou. When local crude tea could no longer satisfy the production demand, chahao in Tunxi needed to import crude tea from nearby counties. Chahang in Tunxi then acted as a crude tea purchasing agent. However, on the other hand, quite a few chahao also began to purchase crude tea on their own, which resulted in a sharp decrease in the number of chahang in Xiuning. Till 1934, the number of chahang in Xiuning was decreased to only two.

Chahao in Xiuning were distributed in two places: Tunxi, the center of green tea industry both in Xiuning County and Huizhou, and Shangxikou, the shipping terminal of Shuaishui River. Almost all the chahao in Xiuning were foreign-oriented ones.

In addition, another type of tea organ-chazhan (tea loan firm) also existed in Xiuning. Chazhan were actually intermediate traders between chahao and foreign firms at the treaty ports. They played the role of financial institutions. Chazhan concentrated in Tunxi and they were all branches of Shanghai chazhan in Huizhou.

4.3 Wuyuan County

Wuyuan was an important place of origin for green tea. In the Shanghai custom reports around 1880s, Wuyuan green tea (Moyunes) and Huizhou green tea (Fychows) were of equal significance because Wuyuan was located in the Poyang Lake Basin, therefore Wuyuan green tea was usually transited from Jiujiang to Shanghai; while Huizhou green tea mostly referred to the tea transported to Shanghai from Tunxi along the Xin’an River.

The author found a tea output record of each town and village in Wuyuan in the 1930s in the Wuyuan Archives, and made a map based on the record.

![Fig. 5. Spatial distribution of tea industry in Wuyuan County](image)

It can be seen from Fig. 5 that both shores of each tributary in the upstream of Le’anjiang River within Wuyuan County were the major tea producing areas, especially the upstream area of Duanxinshui River in the northeast. This tea producing area was joined with the aforesaid tea producing area in Xiuning County.

Meanwhile, the author found an address registration form of local chahao in Wuyuan Archives. From the form we could see the chahao in Wuyuan presented a scattered distribution pattern with most of them located in central villages and towns. Chahao in the following four places were relatively concentrated: Wangkou, Xucun, Qinghuajie and Taibai. After referring these four places on the map, it could be found that these places were situated exactly in the vital communications hub of the major tributaries of Le’anjiang River.

The scattered distribution pattern of chahao in Wuyuan was closely related to local landform. As is stated above, tributaries of Le’anjiang River are blocked by mountains, thus the water system shows a scattered pattern.

Chahang, as purchasing agents, were not so developed in Wuyuan either. Chahao locating in central villages and towns of the tea producing areas generally sent people to purchase crude tea from tea growers on their own. Also, some private tea vendors purchased crude tea in remote mountain...
areas and then resold to chahao.

Belonging to the Poyang Lake Basin, Wuyuan’s green tea was mostly transported to Jiujiang along the Le’anjiang River and transited to Shanghai then. After Tunxi became the center of foreign-oriented green tea industry in Huizhou, part of the green tea was also transported to Tunxi by land over the Wulong Mountains.

4.4 Qimen County

Qimen was also located in the Poyang Lake Basin and the tea industry there was famous for its red tea. The author found a statistical table of chahao in each village of Qimen County in 1932 among the investigation reports during the Republican period, and made a figure below.

Fig. 6. Spatial distribution of tea industry in Qimen County

Data source: Jinling daxue nongxueyuan nongye jingjixi (Department of Agricultural Economics, College of Agriculture in University of Nanking). 1936. *Qimen hongcha zhi shengchan ji yunsiao (The Production and Commodity of Keemun Black Tea)*, p. 40.

Note: Interpolation with Kriging

Fig. 6 indicates that tea output in the southwest of Qimen was far more than that in the northeast, which had something to do with the landform of Qimen. Ranges of Huangshan Mountain extend to Qimen County from northeastward, forming the watershed between Poyang Lake Basin and Xin’an River Basin. Therefore, the northeast part of Qimen is mostly middle mountains with altitude of above 800m. The middle mountains in the northeast extend further southwestward and gradually transit to low mountains and hilly lands, namely the middle, western and southern parts of Qimen. With altitude between 100-800m, these areas are covered with red soils that are suitable for the growth of tea bushes.

Chahao in Qimen formed four clusters that were Likou, Shanli, Gaotang and Tafang. These four clusters respectively belonged to four major rivers within Qimen County, with Likou belonging to Dabeihai River, Shanli to Wenshanhe River, Gaotang to Xian’an River and Tafang to Changjiang River. Such a scattered pattern was closely related to the scattered feature of the water system.

Qimen belonged to the Poyang Lake Basin, and tea in Qimen was mostly transported to Jiujiang by waterway and then transited to Wuhan or Shanghai.

4.5 Yi County

Yi County covered the smallest area among the six counties and its tea output was also very small. The author marked the tea producing villages in Yi County onto the map according to data in the Republican period.

Fig. 7. Spatial distribution of tea industry in Yi County


It can be seen from Fig. 7 that a majority of tea producing villages concentrated in the south. Landform of Yi County is divided into the northwest and southeast parts. The northwest part belongs to Qingyijiang River Basin and chahao there were all domestic-oriented ones. The baked tea produced by domestic-oriented chahao was transported to the Yangtze River along the Qingyijiang River. The
southeast part belongs to Xin’an River Basin. Tea growers manufactured tea leaves into crude tea by primary processing and concentrated in Yuting, a waterway hub from Hengjiang River to Xin’an River. Crude tea produced in Yi County was transported to Tunxi from here for refining process by foreign-oriented chahao there. Yi County itself hardly had any foreign-oriented chahao.

4.6 Jixi County

The landform of Jixi is similar with that of Yi County. Middle mountains at watershed level lie across in the middle where Tianmu Mountains and Huangshan Mountains join each other. The northern side of the watershed belongs to Yangtze River Basin and the southern side belongs to Xin’an River Basin.

The author marked the tea producing villages in the Jixi onto the map according to data in the Republican period.

Fig. 8. Spatial distribution of tea industry in Jixi County

![Spatial distribution of tea industry in Jixi County](image)


It can be seen from Fig. 8 that most tea producing areas were situated in Xin’an River Basin and few were located in the Yangtze River Basin.

Villages in the north mainly manufactured hongqing (baked tea) for domestic consumption to attract the northern people to purchase. Crude tea manufactured by villages in Xin’an River Basin was gathered in Linxi and then transported to She County or Tunxi by sea. A majority of tea was delivered to foreign-oriented chahao for refined processing, while a small part of it was sent to Lincun in She County for scented tea manufacturing and later sold to northern China. Linxi is where Dengshui River, Yangzhishui River and Lushui River converge within Jixi territory. Therefore, Linxi Town became a transition hub for tea from the Xin’an River Basin. One third of the tea output in Jixi was transported from here down to the south.

5. Discussion and Conclusion

The natural environment in Huizhou provides suitable conditions for the growth of tea bushes. And the spatial distribution of tea industry also bears a close relation to the geographical base of the region.

In terms of landform, Huizhou belongs both to the Xin’an River Basin and Poyang Lake Basin. Tea produced in the Xin’an River Basin was mostly transported to Shanghai along the Xin’an River, while tea produced in the Poyang Lake Basin was transported to Jiujiang by waterway and then transitied to Shanghai or Wuhan. River system in the Xin’an River Basin showed a clustered pattern, while that in the Poyang Lake Basin presented a scattered pattern. Similarly, distribution of tea industry in the Xin’an River Basin formed a sole pole pattern with Tunxi as the center, and that in the Poyang Lake Basin showed a multi-central pattern.

The basic industry chain for local tea industry was chanong (tea grower) - chahang (crude tea dealer) - chahao (tea factory). Chanong were tea growers and responsible for primary processing, chahang acted as purchasing agents and chahao were in charge of refined processing. With the enhance of strength of chahao in Tunxi, chahao started to purchase crude tea directly from tea growers, thus the number of chahang gradually began to shrink. Spatial distribution of the drop of the number of chahang presented a gradually reduced pattern taking Tunxi as the center. Chahang in Xiuning and Yi County had disappeared gradually. In the She County and Jixi County that were
relatively far away from Tunxi, chahang could be still found, but they also showed a tendency of extinction.

In Wuyuan and Qimen in the Poyang Lake Basin, chahao showed a multi-central distribution pattern. Refined processing of tea was mostly completed locally; therefore, chahang were not so developed in the Poyang Lake Basin. Only some private tea vendors purchased crude tea in mountain areas.

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