The

ANNALS

of

Philippine Chinese Historical Association



Inaugural Issue March, 1970

Published By

Philippine Chinese Historical Association 4th Floor, Liberty Hall, 820 Benavides St. Manila, Philippines

民國五十九年三月出 版

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THE HISTORICAL TREND OF URBANIZATION IN TAIWAN

Gong-yuh Lin

Preface

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The object of this study is to examine the historical process of the development of towns and cities in Taiwan as distinguished from rural agricultural villages. Mere size is not a suitable criterion for this. The distinction revolves around the concept of the basis of functional differences between urban and rural settlements. Thus, villages having periodic market-days for sale and barter of farm produce by the farmers are not considered urban centers, however large. But where villages had a signified core of permanent shops and service establishments which served both resident population and surrounding farmers, these may be considered incipient urban centers even though they may not be very large. In Taiwan, villages or towns having the above urban functions historically were called "Chief" or "Gai" (literally: "market street") Most of these subsequently developed into true urban centers in the modern sense.

The modern criteria for classifying centers as urban or rural differs from country to country. Some classifications are merely based upon size of population. However, the functions or roles that gave rise to one particular town or city may differ from those for another. Explanations for origins of particular urban centers vary, therefore, and are of great historic interest. In the following study, a geographic scholar at the University of Hawaii, Lin Gong-yuh, traces the historical development of the towns and cities of Taiwan and examines the causes and purposes of these urban developments. His study provides a better insight into and understanding of the geography and economy of modern Taiwan.

(Herold J. Wiens, University of Hawaii)

Introduction:

It has been almost 350 years since the Dutch establishment of the first walled town Anp'ing (now part of Tainan City) along the southwestern coast of Taiwan. During this short period, ninety urban centers have been formed. According to the present administrative classification, all the urban centers can be grouped into two major orders,

¹ Camill, Imbault-Huart, L'Ille Formosa, Histoire et Description, 1893, translated into Chinese by Lee Ley-Wen, reprinted by Bank of Taiwan, 1958 p. 12-13.

those called *Chen* (i.e., townships) and those called *Shih* (i.e., cities).² However, there is no information provided as to the definite statistical criteria to classify *Chen* and *Shih*. For example, Ilan *Shih* and Hualien *Shih* have less population than Chungli *Chen*. Usually, *Chen* serves as a local urban center; whereas *Shih* is a regional urban center. Ilan *Shih* and Hualien *Shih* are two major regional urban centers in eastern Taiwan where the economic development is more backward as compared with western Taiwan.

The classification of a *Chen* may be subjectively changed to a *Shih* if it is deemed that its functions are developed into a regional service center. For example, Shanchung *Chen* was promoted on this basis as a *Shih* in 1961 by the provincial government.³

In 1953, Ch'en Cheng-Siang defined an urban center by establishing three criteria: (1) The inhabitants of the core of an urban area where houses are clustered together must be more than 2500, (2) There must be at least one distinguishable street with a length of more than 100 meters, and the shops or stores must constitute more than 50% of the total dwellings, (3) It serves as a commercial node for the adjacent villages. At present time, all the *Chen* and *Shih* fulfill these three criteria.⁴

Although the history of the urbanization in Taiwan is relatively short, there have been many changes. Many towns enjoyed their peak of prosperity in the earlier colonial period and then declined in importance due to the functional and physical changes of the island. On the contrary, some towns which developed later have had accelerated development due to a number of favorable physical and socio-economic factors. Consequently, the purpose of this paper is to study the formation and the development of townships and cities in different periods. In addition, various physical and socio-economic factors which have affected this urbanization will be examined.

Statistical data are inaccurate or unavailable prior to the Japanese rule on Taiwan. Therefore, the approach of this study of urbanization during this period is based on sequent occupance. In a recent paper, Chang Sen-Dou pointed out that a study of the development of urban civilization are characteristic features of historical geography, such as territorial expansion, frontier colonization, sequent occupance and regional development within various areas. Conversely, the analysis of sequent occupance through time can be used in an attempt to reconstruct the evolution of townships and cities.

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² Wen, Ling, Reconstruction of China in Taiwan, Taipei, 1966, p. 45.

³ Ibid. p. 45.

⁴ Ch'en, Cheng-Siang, Cities and Rural Towns of Taiwan, Research Report No. 48, Institute of Agricultural Geography, Taipei, 1953, p. 10.

⁵ Chang, Sen-Dou, "The Historical Trend of Chinese Urbanization," Annals of Association of American Geographiers, vol. 53, 1963, p. 109-143, ref. to p. 109.

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A great number of publications concerning the territorial expansion of Taiwan are available. It is possible to determine the period of the formation of most towns and cities by using local gazetteers. In this study, however, there are some inherent problems involved in using local gazetteers.

Firstly, many place names have undergone changes through time. For instance, present day Changhua was previously called Panhsien Therefore, the preliminary step of this study was to identify these changes. The primary reference Gazetteer of Old and Present Names of Chinese Places does not include Taiwan. However, Cheng-Siang's Ch'en Gazetteer of Taiwan Place Names proved to be useful for the identification of the old names of towns and cities of Taiwan.

Secondly, the definition of urban centers in gazetteers is quite vague. Usually, the urban centers were called *Chieh* (i.e., street) in gazeteers. However, the size of *Chieh* was unspecified. For eaxmple, *Changhua Hsien Chih* called Chichi a *chieh* in 1830,8 but in *L'Ille Formosa*, *Histoire et Description*, Chichi was considered as a village in 1893 by the author who travelled the island.9

Thirdly, a number of inaccuracies have been found in gazetteers. For example, Taiwan Sheng T'ung Chih Kao listed 41 chieh which had already been formed by 1899, each with a population of 1,000 or more. However, according to Chen Cheng-Siang's study, there were at least 62 urban centers, each with a population of 1,000 or more in 1900. Apparently, there is an error in Taiwan Sheng T'ung Chih Kao because it excluded the large towns such as T'aoyuan and Chungli. In addition, Suao was called chieh by the Taiwan Sheng T'ung Chih Kao although its population was less than 500 in 1899. Consequently, one needs to exercise careful judgment in this kind of study.

Fourthly, many towns and cities are the incorporation of two or more *chieh* which were created during different periods. For example, Kaohsiung city consists of two major *chieh*, Chouying and Ta-kou. The former developed at the end of the 17th century, whereas the latter at the end of the 19th century. In this case, it is presumed that Kaohsiung was formed at the end of the 17th century for the purpose of mapping.

Since the beginning of the Japanese rule on Taiwan in 1905, accurate population censuses have been made. Therefore, the population and sizes of towns or cities can be soundly determined by census data.

⁶ Liu, Juin-Zun, Gazetteer of Old and Present Names of Chinese Places, Taipei, 1967.

⁷ Chen, Cheng-Siang, Gazetteer of Place Names, research report no. 105, Fu-Min Geographical Institute of the Economic Development, Taipei, 1960.

⁸ Chow, Shi, Changhua Hsien Chih, 1830, reprinted by Bank of Taiwan, 1957, p. 45.

⁹ Camill, Imbault-Huart, op. cit., p. 127.

¹⁰ Cheng, Shao-Shien, Taiwan Sheng T'ung Chih Kao, vol. 2, 1964, p. 273-275.

¹¹ Ch'en, Cheng-Siang, Cities and Rural Towns of Taiwan, op. cit. p. 11, 14-15.

¹² Feng, Tsao-Min, One Hundred Lessions of Taiwan History, Taipei, 1966. p. 95.

¹³ Ibid., p. 150.

The recent 350 years of Taiwan's history can be divided into five distinct periods on the basis of political regimes. These are: (1) The Dutch Period, (2) The Koxinga Period, (3) The Ch'ing Dynasty Period, (4) The Japanese Period, and (5) The Chinese Nationalist Period. For each of these periods, there were varied socio-economic factors and political policies which affected the development of the patterns of urbanization. Of these five periods, the Ch'ing Dynasty is by far the most significant in the formation and development of towns and cities. In addition, since it covered a time span of more than 200 years, it is useful to divide it into separate periods. This division is also favored by the fact that the written accounts of most historians and geographers are usually done in terms of dynastic periods. Therefore, the urbanization during the Ch'ing Dynasty is divided into three periods, i.e., K'anghsi Yung-cheng, Ch'ien-lung, and Chia-ch'ing Kuang-hsu. 14

Urbanization During The Dutch Period (1622-1661 A.D.)

The contact between the mainland of China and Taiwan dated back to 610 A.D. when general Cheng Ling was ordered by the Emperor of the Sui Dynasty to visit the island. By the time of the Sung Dynasty, there was regular contact between the port of Ch'uanchou in Fuchien Province and Peikang in Taiwan. However, there was no evidence that Peikang developed as an urban center in Taiwan.

The Dutch were the first to set up towns in Taiwan. In 1622, the Dutch landed at Makung in the P'eng-hu Island (i.e., Pescadore) with 17 warships. They captured 600 Chinese fishing boats and forced 1500 Chinese to build a walled town for them. 16 Since P'eng-hu Island had long been a part of the Chinese territory, there was a war between China and the Dutch. Finally, the Dutch were forced to leave the P'enghu Island after being promised by the Chinese officials that they could occupy Taiwan which was not the territory of China during that time. Consequently, the Dutch destroyed the walled town which they were building in P'eng-hu and move to Taiwan to build another walled town which they called Fort Zeelandia (the Chinese called it Red Hair City and the aborigines called it Saccam).17 This town was named after the first Dutch ship which reached Taiwan. It was located at one end of a spit, called ile de Tai-ouan, in front of a lagoon at the mouth of Chin Wen River (see figure 1). Fort Zeelandia was built in one year and was expanded in 1630 with 2800 people residing inside.18 Fort Zeelandia was located on a spit which limited the expansion of the town to support

¹⁴ Yang Ming Shan Institute, Taiwan: Land and People, 1959, p. 351.

¹⁵ Ibid., p. 351.

¹⁶ Camill, Imbault-Haurt, op. cit., p. 8.

¹⁷ Ibid., p. 13.

¹⁸ Feng, Esao-Min, op. cit. p. 37.

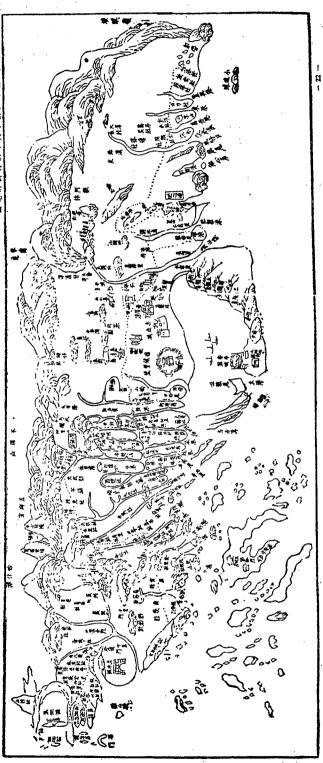
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Figure 1 Map Of Taiwan In 1694 A.D.



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the increasing Chinese immigration. In 1625, a new walled town called Provintia (now part of T'ainan City) was built at the land side of the lagoon opposite to Fort Zeelandia (now called Anp'ing and part of T'ainan City). All the Chinese living in Fort Zeelandia were forced to move to Provintia Town. Provintia Town was established as an administrative, trade, tax collection and military base for the Dutch East Indian Company. The purpose of establishing Provintia Town in Taiwan by the Dutch was to monopolize the international trade of Taiwan under the shield of military protection. Before the Dutch arrival on the island, the Chinese in Taiwan enjoyed free trade with the Japanese. Once the Dutch established control, they levied a tax on exports, mainly on deerskins and sugar. The average annual deerskin export amounted to 4,000-5,000 pieces and sugar export amounted to 5,332 tons.19 Taiwan under Dutch control, became the center for exchanging goods among a number of areas, such as Japan, China, Batavia and Netherland. Taiwan's exports to China included rice, sugar, rattan, deerskins, deerhorns and drugs. The island's imports from China included silk, textiles, porcelain and medicine. Among the branches of the Dutch East Indian Company in Asia, Taiwan stood as a major source of profits. In 1649, the profits made from Taiwan reached 26%, next to Japan, of the total profits made in Asia.20

Under this background, Provintia Town became the major trade base of the Dutch East Indian Company in Asia and developed very rapidly. It was estimated that the population of Provintia Town reached more than 5,000 during the latter part of the period of the Dutch control of Taiwan.21

At this time, the port of Anp'ing which served as the outlet of Provintia Town, was deep and wide and could accommodate large ships. It has estimated the water of the port was 6 meters deep.22

Before the Dutch occupation of Taiwan, the aborigines of the island still remained in a primary economic stage of food collecting, hunting and fishing. Athough there were some Chinese and Japanese in the island, they were seasonal visitors engaged in the export of the native production such as deerskins and rattan to China or Japan. It was impossible to create towns under this tribal social organization. The mass Chinese immigration after the Dutch arrival in Taiwan altered the tribal economy to an agricultural economy which led to the establishment of villages and thus laid the foundation for urbanization.

Since large profits could be made from Taiwan, the Dutch were interested in the development of agriculture, especially sugar production. Since Dutch with a the ea the Di were drough 1630.2 der tl first v Han (and su Compa but al

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¹⁹ Hsieh, Chiao-Ming, Taiwan, Ilha Formosa, A Geography in Perspective, Butterworths, Washington, 1964, p. 143.

²⁰ Ibid., p. 143.

²¹ Cheng, Shao-Shien, op. cit., p. 108.

²² Bank of Taiwan, Tidal Land Economy of Taiwan, Taipei, 1966, p. 81.

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Since the aborigines were not familiar with agricultural techniques, the Dutch encouraged Chinese immigration to Taiwan by supplying them with agricultural implements and cattle and by not taxing them during the earlier part of colonization. There were no cattle and horses before the Dutch arrival on the island. In order to develop agriculture, cattle were imported from the P'eng-hu Islands.23 Coincidently, a severe drought occurred along the coastal area of Fuchien Province around 1630.24 Hundreds of thousands of refugees were shipped to Taiwan under the financial support of the Chinese government. This was the first wave of mass immigration to Taiwan. In 1648, the population of Han Chinese swelled to 100,000.25 Most of them were engaged in rice and sugar cane production on the land owned by the Dutch East Indian Company. Therefore, Provintia Town became not only the trade base but also the immigration capital of the island.

The colonization of the Dutch along the southwestern coast of Taiwan stimulated the Spanish to take the northern cape of the island which they called Santiago in 1626. Before long, they gave up the settlement and moved to Santissima Trinidad (now Keelung Harbor) where the site and location were more desirable and built a walled town as the counterpart of the Dutch Fort Zeelandia. In 1629, they occupied another harbor which they named Castillo (now Tanshui) and built Fort Santo Domingo.26 They further tried to expand their forces into the T'aipei Basin and southward to Hsinchu but failed due to strong resistance by the aborigines. There was frequent trade between the Philippines and Tanshui or Keelung. In 1634, there were about 200 Spaniards in Tanshui and 300 in Keelung. The major exports from these two ports included sulphur, deerskins and rattan.27

In 1642, the Dutch defeated the Spanish and took over Tanshui and Keelung. The Dutch then also engaged in the export of sulphur in the northern part of the island.

Although the Dutch were expelled from Anp'ing by Cheng Ch'eng-Kung (i.e., Koxinga) in 1661, they still remained in Tanshui until 1668.28 From then on, the importance of Tanshui and Keelung decreased. The trade between Taiwan and other areas, Japan and Southcast Asia, were centered at Anp'ing port.

Both the Dutch and the Spanish had built the European type of walled towns in Anp'ing, Tanshui and Keelung. These towns were square in shape with concentric walls enclosing a fort. Within the outer

²³ Cheng, Shao-Shien, op. cit., p. 98. 24 Yang Ming Shan Institute, op. cit., p. 37.

²⁵ Chow, Sen-Wen, A General Economic History of Taiwan, Bank of Taiwan, vol. 2, 1955, p. 7.

²⁶ Hsieh, Chiao-Ming, op. cit., p. 41.

²⁷ Lee, Lu-Ping, Influences of Physical Geographical Factors On The Decline of Tanshui, Department of Geography, National Taiwan University, p. 2. 28 Ibid., p. 2.

wall were a church, dwellings, barracks, trading posts and stores. The base of the wall was built of European bricks, which were usually larger than the native bricks.29

Urbanization During the Koxinga Period (1661-1683 A.D.)

After the Dutch were expelled from Taiwan in 1661, Cheng Ch'eng-Kung began to delineate the administrative units for colonization. Cheng Ch'eng-Kung established Taiwan as an independent country with its capital at Anp'ing. He divided the island into two Hsiens (counties), i.e., Tienhsing in the north and Wannien in the south with their seats at Chiayi ang Fengshan, respectively.30

Military colonization for cultivation characterized the territorial expansion during this period. Many settlements were created by armies. Therefore, these settlements carried military names such as Chouying ... (The term ying 尝 and Hsinying means barracks or encampment).

The areas colonized during this period included the Chiayi Plain, the Fengshan Plain, the Changhua Plain, the Hsinchu Plain, the T'aipei Basin and the southern end of Taiwan.³¹ It was notable that the colonization proceeded from the coastal areas upward along rivers and inland. Consequently, the oldest settlements of each area were along rivers. Because there were many rivers flowing westward to the sea from the high mountains in the central part of the island, it was hard to build bridges across rivers which hindered the north-south land transportation. In addition, most of the plain areas were still occupied by the aborigines who strongly resisted Chinese colonization.

Since Koxinga still kept military bases in Fuchien coastal areas from earlier times, the contact between Anp'ing and Quemoy as well as Amoy was frequent. Trade between Taiwan and Japan as well as Southeast Asia developed. The production of rice and sugar increased greatly. Metallurgical and salt producing techniques were introduced. The export of camphor also increased.32

The population had increased largerly since the Koxinga's control of Taiwan. The number of soldiers with their families who followed Koxinga to Taiwan reached 40,000.33 In addition, the Ch'ing government forced all people along the Fuchien coastal areas to move inland in order to isolate Taiwan from the Chinese mainland. A great number of people, not willing to move inland, fled to Taiwan. Owing to this,

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²⁹ Hsieh, Chiao-Ming, op cit., p. 147

³⁰ Fong, Tsao-Min, op. cit., p. 71.

³² Wu, Chuang-ta, Colonization of Taiwan, Science Publication Company, Peking, 1958. p. 42.

³³ Ibid., p. 44.

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the population of Han Chinese in Taiwan rose to 200,000 by the end of the Koxinga Period.³⁴

Although no additional urban centers were formed during this short period, many settlements in southwestern Taiwan developed as urban centers later.

Urbanization During The K'ang-hsi Yung-cheng Period (1684-1735 A.D.)

At the end of 1683, Admiral Shih Lang of the Ch'ing government defeated Koxinga's troops. This led to the control of Taiwan by the Ch'ing government. Admiral Shih recommended the retention of Taiwan, pointing out the strategic importance of Taiwan for the security of the Chinese coastal areas. However, Emperor K'anghsi did not intend to colonize the island as he worried about the rebelliousness of the people in Taiwan who were still loyal to Koxinga or to the Ming Dynasty. Therefore, immigration to Taiwan was limited. The government prohibited Hakkas from immigrating to Taiwan. The immigrants from Fuchien Province were not allowed to bring their families with them. The purpose of this limitation was to limit population increase in Taiwan. This policy resulted in an unbalanced population among the sexes in Taiwan. However, illegal immigration prevailed. 16

Immediately after the conquest of Taiwan, the Ch'ing government established 3 hsien named Chulo, T'ainan, and Fengshan, with their seats at Chiayi, T'ainan and Hsing-lung-ch'uan (now called Chouying and now part of Kaohsiung City). Chulo Hsien covered a large area from the southwestern coast to the northern end of the island. In 1721, there was a revolution led by Chu Yi-Kuei in Taiwan. As soon as the revolution was put down, the Ch'ing government divided Chulo Hsien into two smaller administrative units, called Tanshui Bureau and Changhua Hsien, in order to enforce the military control of these areas. Tanshui Bureau covered the area of Chulo Hsien north of Tachia river. Changhua Hsien covered the area of Chulo Hsien south of Tachia river. Hsinchu and Changhua were respectively the seats of Tanshui Bureau and Changhua Hsien. In addition, P'eng-hu Bureau was established with the seat at Makung.³⁷

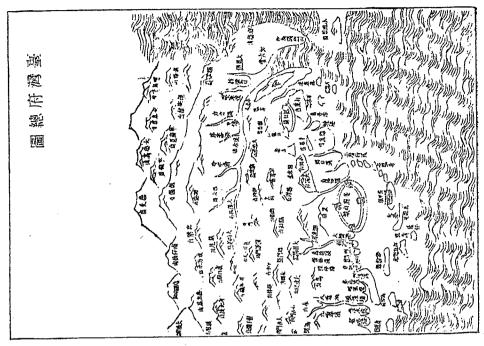
During this period, aborigines inhabited the coastal plains. There were frequent conflicts between Han Chinese immigrants and aborigines due to the invasion of the former into the areas occupied by the latter. Therefore, during the early colonization of each area, Chinese immigrants had to build earth, wooden or bamboo walls surrounding villages for protection against attacks from aborigines. City walls were built

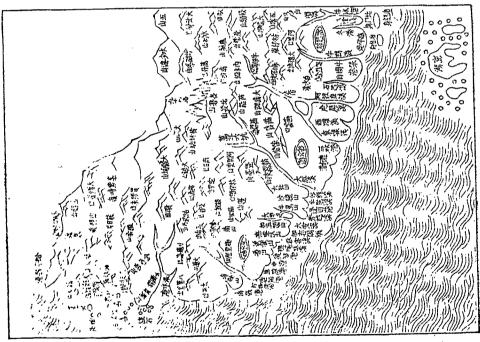
³⁴ Ibid., p. 45.

³⁵ Yang Ming Shan Institute, op. cit., p. 42.

³⁶ Cheng, Shao-Shien, op. cit., p. 121-125.

³⁷ Feng, Tsao-Min, op. cit., p. 95-97.





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around T'ainan, Changhua, Chiayi, Chouying and Hsinchu (see figure 2).³⁸ The structure of these walled towns was similar to that of traditional Chinese walled towns with their four major gates. The materials of these city walls were bamboo, wood and earth because the local government was poor and could not afford the cost of transporting bricks from the Chinese mainland. These walled towns served the functions of administration, trade and military control of the surrounding regions. It was notable that all these walled towns were hsien capitals.

Despite the limitation of immigration to Taiwan, the colonization of Taiwan expanded northward rapidly because illegal immigration prevailed. At the end of the 17th century, northern Taiwan was not colonized. In 1697, a government official called Yu Yung-Ho visited Peitou in the T'aipei Basin to purchase sulphur. According to his report in Pi Hai Yu Chi, the area between Hsinchu and Nankang (now a village along the coast of T'aoyuan) still remained wilderness with abundant deer and foxes. No Han Chinese settlement was found here. However, when Huan Hsu-Jung visited the same region in 1722, many areas were being cultivated by Chinese immigrants. This indicates the rapid colonization of northern Taiwan during this period.

The urban centers usually developed at locations where accessibility was the major concern. Changhua and Hsinchu were two examples. Both were administrative centers for the purposes of tax collection, trade and the protection of immigrants.

Changhua had been a base of colonization for both northern and central western Taiwan since the Koxinga period. It was located at the center of the western coastal plain of Taiwan. At this time, junks could reach Changhua along the Tatu river from Lukang which was an important port along the central coast of western Taiwan. The development of Changhua was due to its central location in western Taiwan.

Hsinchu was established as an administrative capital because it was located between two important bases of colonization, i.e., Changhua and Tanshui. A sea port was built at the mouth of Tachia river as the outlet for Hsinchu in 1691.40

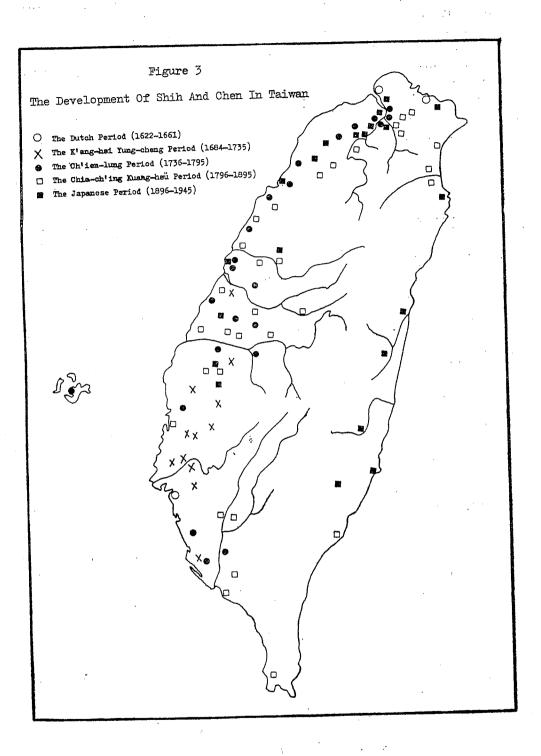
Piracy provided an additional motivation for the government development of an administrative center in this area. Pirates had previously established themselves in this area as forward base camps from which they could mount attacks on the Chinese mainland.

A number of present townships or cities developed from chieh during this period. The townships of Matou, Shanhua, Chiali, Hsinhua,

³⁸ Chiang, Tao-Chang, "Walled Towns of Taiwan: A Survey In Historical Geography," Geographical Studies, Taiwan Normal University, No. 1, 1966, p. 53-80, ref. to p. 76.

³⁹ Cheng, Shao-Shien, op. cit., p. 134.

⁴⁰ Bank of Taiwan, op. cit., p. 95.



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Peikang, Yenshui, and Touliu, and the cities of Changhua and Hsinchu were formed (see figure 3).⁴¹ It was also pointed out that Peikang was a large port in the southwestern coast of Taiwan.

Notably, most of these *chieh* developed in the southwestern coastal plain which was colonized earliest. Some of these *chieh* were located near aboriginal settlements. For example, the old name of Chiali *chieh* was Shaolung which was the name of an aboriginal settlement.⁴² The contacts between Han Chinese and the aborigines proceeded for a long time in this area. The Dutch had established churches in Matau, Shanhua, Hsinhua and Peikang after 1625. The expansion of Dutch missionary efforts in this area was quite successful. About 5,400 aborigines were baptized during the ten-year period of Dutch missionary work.⁴³ During this time, many aborigines adopted Han Chinese culture. They learned agricultural techniques from Han Chinese. It was recorded that many Han Chinese married aboriginal girls and a large number of aborigines could speak Chinese.⁴⁴

The urban centers in this area developed from locations which served either as the local trade markets between the Han Chinese villages and the aboriginal settlement or among Han Chinese villages. It was estimated that there were 300 Han Chinese villages under the jurisdiction of the Dutch East Indian Company by 1650.45 The development of urban centers near aboriginal settlements occurred not only in this area but also characterized the formation of urban centers in other areas colonized later.

Some of the aborigines were assimilated after a long period of contact with the Han Chinese. The remainder retreated to mountain areas and resisted the territorial expansion of the Han Chinese.

It is notable that most of the urban centers formed during this period were river ports. The construction of land transportation from south to north was difficult because of the many westward flowing rivers. Consequently, transportation depended on river navigation and settlements were first created along rivers.

Urbanization During the Ch'ien-lung Period (1736-1795 A.D.)

This was a period of extensive urbanization in Taiwan. Most of the present major townships and cities were formed during this period. The major factors leading to the formation of a number of urban centers during this period included (1) the rapid increase in population, (2) the great expansion of cultivated land, (3) the development of trade, and (4) the construction of land transportation.

⁴¹ Cheng, Mun-Ling, Chulo Hsien Chih, 1716, reprinted by Bank of Taiwan, Taipei, 1958, p. 43.

⁴² Wu, Hsing-Jong, T'ainan Hsien Chih Kao, Committee of Taiwan Wen Hsien, 1957, p. 9.

⁴³ Feng Tsao-Min, op. cit., p. 39-40. 44 Wu Chuang-ta, op. cit., p. 43.

⁴⁵ Hsieh Chiao-Ming, op. cit., p. 143.

During the K'ang-hsi Yung-cheng Period, the immigration to Taiwan was limited by the government. However, high population pressure in Fuchien Province and the numerous areas available for colonization in Taiwan led to the prevalent illegal immigration. It was difficult for the government to stop the illegal immigration because of the long coast line. There was much exportation of would-be colonists during this period. They would often be isolated on islands in the Taiwan Strait and left to starve. In addition, the prohibition of female immigration to Taiwan resulted in an unbalanced population both in Taiwan and in Fuchien. Therefore, limitations on immigration to Taiwan were removed during the periods of 1732-1740 and 1746-1748, and in 1760, limitations were completely abolished. Consequently, the population of Taiwan increased more rapidly than before, and by the end of the 18th century, the population of Taiwan reached close to two million.

This rapid increase in population was associated with the rapid expansion of the cultivated land. During the K'ang-hsi Yung-cheng Period, the colonization of Taiwan was focused on the southwestern plain areas. During the Ch'ien-lung Period, the T'aipei Basin, the T'aoyuan Table Land, the Miaoli Basin and the P'ingtung Plain were heavily colonized. The colonization even reached the foothill area from T'aichung to the northern end of the island. The T'aoyuan Table Land, the Miaoli Basin and the P'ingtung Plain were mostly colonized by Hakkas.

During the Dutch and the Koxinga Periods, Taiwan enjoyed prosperous trade not only with the Chinese mainland, but also with many other countries including Japan, the Philippines, Southeast Asia, and Europe. However, when the Ch'ing government gained control of Taiwan in 1684, the trade between Taiwan and other countries ceased. Trade was opened only between Taiwan and Fuchien, and Amoy was the only port allowed to trade with Taiwan. Trade was monopolized by specified commercial companies, and was allowed between Amoy and Tanshui only for a short period each year between September and December. Anp'ing was the only port which enjoyed year round trade with Amoy. In 1756, this limitation on trade between Taiwan and Fuchien was cancelled. Anp'ing, Lukang and Tanshui were the three ports ports allowed to handle trade between Taiwan and the Chinese mainland.

Obviously, the Ch'ing government policies dealing with Taiwan changed significantly during this period. Both immigration and trade limitations were abolished. These changes stimulated the economic de-

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⁴⁶ Cheng, Shao-Shien, op. cit. p. 122.

⁴⁷ Ibid., p. 164.

⁴⁸ Wu Chuang-ta, op. cit., p. 80.

⁴⁹ Ch'en, Cheng-Siang, A Geography of Taiwan, op. cit., p. '34.

⁵⁰ Lee, Lu-Ping, op. cit., p. 34.

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h Taiwan and trade onomic development of the Island, and, as a result, a number of urban centers developed.

Lukang was originally an important port of entry for immigrants seeking to colonize the island. It was located along the central coast of western Taiwan opposite Ch'uanchou, Fuchien, and was only 130 miles from the latter port, or approximately one day's journey with a fair wind.51 At this time, Lukang was a deep water port capable of accommodating ships of 700 tons.52

The hinterland of Lukang was the Changhua Plain which prospered in rice production. Since the export of rice to the Chinese mainland was officially limited, there was frequent smuggling of rice to Fuchien from the Changhua plain by way of Lukang. Consequently, a military inspection base was established at Lukang. In 1731, Lukang 53 was opened as one of the nine domestic trade ports, and in 1784, the town was designated as a national port between Taiwan and Fuchien. This led to a boom in Lukang, and the town developed as the second largest town on Taiwan during the latter part of the 18th century and the earlier part of the 19th century.54

The development of a town depended not only on its location but also on the policy of the government. During the Dutch Period, Tanshui enjoyed prosperous trade with Japan and the Philippines. However, it declined in importance after the control of Taiwan passed to the Ch'ing government. The Ch'ing government ignored the importance of trade between Taiwan and other countries. The rejuvenation of Tanshui during the latter part of the Ch'ienlung Period was due to the economic development of the T'aipei Basin. In 1708, the T'aipei Basin was heavily colonized by a group of Chinese immigrants. Around 1720, a small market center, called Mengchia, formed at the junction of the Tanshui and Hsintien Rivers to serve primarily the function of trade between Han Chinese and aborigines (Mengchia 43 AP means canoes in the aboriginal language). Mengchia (now part of the City of T'aipei) developed as an urban center due to the central location of the basin and the accessibility provided by the Tanshui River. At this time, the Tanshui River was deep and supported the navigation of large junks from Chinese coastal areas. Since 1759, Mengchia has been the political, military and trade center of the T'aipei Basin.55

Due to the rapid colonization and economic development during this period, urbanization was significant. A line of urban centers formed in northwestern Taiwan. The present townships or cities of Mengchia, Hsinchuang, Houlung, Wanli, Shih-lin, Yuan-lin, Hsilo, Chushan, Nant'ou,

⁵¹ Yang Ming Shan Institute, op. cit., p. 43.

⁵² Bank of Taiwan, op. cit., p. 91. 53 Chang Pin-Nan, "The History of Lukong Harbor," Taiwan Wen Hsien, Vol. 19, No. 1., 1968, p. 7. 54 Ibid., p. 7.

⁵⁵ Ch'en, Cheng-Siang, A Geography of Taiwan, op. cit., p. 283.

T'aichung, Shalu, Chinshui, Makung, Kanshan, P'ingtung and P'otzu (see figure 3) developed from *chieh* which were formed during this period.⁵⁶ Chen Cheng-Siang pointed out that Panch'iau, T'aoyuan and Chungli also developed as *chieh* during this period.⁵⁷

Hsinchuang was the first *chieh* established in the T'aipei Basin. It was located at the undercut side of Tanshui River. Hsinchuang port was navigable during the Ch'ien-lung Period, and junks from Chinese coastal areas could reach it without any difficulty. After the major road connecting T'aoyuan and the T'aipei Basin was constructed around 1740, Hsinchuang developed rapidly due to its location near both river and land transportation. Hsinchuang thus became the administrative and trade center during the earliest period of the colonization of the T'aipei Basin.⁵⁸

T'aoyuan and Chungli also developed as urban centers due to the favorable location along the major road connecting two major administrative centers, Hsinchu and Mengchia.

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Urbanization During The Chiach'ing Kuang-hsu Period (1796-1895 A.D.)

Urbanization during this period was characterized by: (1) the formation of urban centers in the foothill areas and the Ilan Plain in north-eastern Taiwan, (2) the prosperity of old coastal port towns, (3) the rapid development of Taipei as the political and economic capital of Taiwan, (4) the development of inland urban centers primarily based on agriculture.

By the end of the 18th century, western Taiwan was almost completely colonized. The colonization of eastern Taiwan was delayed because of the high mountains in the central part of the island (see figure 4), and strong resistance from aborigines in the eastern part of the island.

In 1796, the Ilan Plain was extensively colonized by a group of Chinese immigrants. In 1806, the colonization expanded to Lotung, and the population of the plain reached 40,000. In 1812, the Ch'ing government established Komalan Bureau (equal to county) with the seat at Ilan in order to more effectively administer northeastern Taiwan. A city wall was built around Ilan to protect it against attacks from aborigines. The Ilan Plain developed very rapidly, and in 1850, the population had reached 104,282.⁵⁹

The Puli Basin, which was located in the mountain region of central Taiwan (see figure 4), was colonized by Han Chinese in 1814. Since

⁵⁶ Yu Wen-Yi, Shui Shiu Taiwan Fu Chih, 1758, reprinted by Bank of Taiwan, 1959, p. 28.

⁵⁷ Ch'en, Cheng-Siang, A Geography of Taiwan, p. 1094 and 1136.

⁵⁸ Ibid., p. 1090-1091.

⁵⁹ Ibid., p. 775-776.

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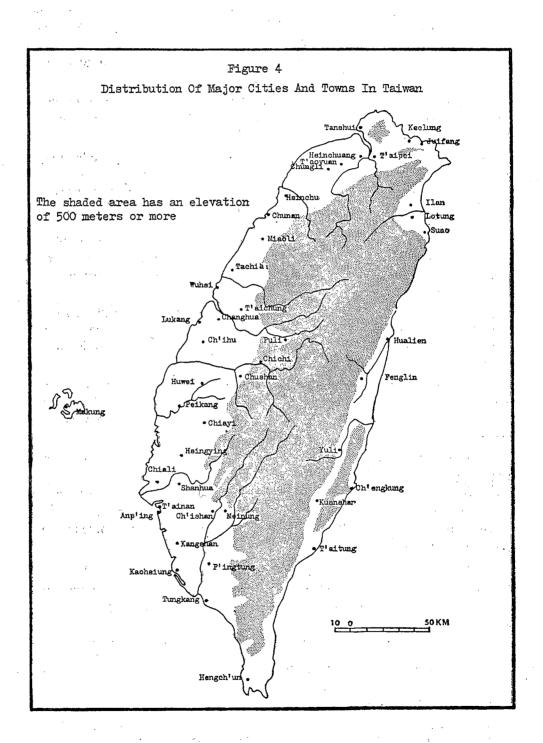
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the Basin was previously occupied by aborigines, there were frequent conflicts between the Han Chinese and these native people. In order to resolve these conflicts between the two groups, Puli Bureau was established by the government with the seat at Puli in 1888.⁶⁰ A defensive wall was built around the town of Puli in order to protect it against attacks from the aborigines.

By the middle of the 19th century, Taiwan's international trade had ceased due to the ignorance of the Ch'ing Emperors. The exports of Taiwan's products were limited to the Chinese mainland.

In 1860, Tanshui, Anp'ing, Keelung and Chihou (i.e., Kaohsiung) were opened as treaty ports under the Treaty of Tientsin.⁶¹ Due to the rapid increase of international trade, port towns along the west coast of Taiwan enjoyed their peaks of prosperity during this period. Tanshui developed as the largest port because it provided an outlet for the agricultural productions of the T'aipei Basin. The major exports of Tanshui included tea, camphor and coal. There were scheduled merchant shippings between Tanshui and Japan, Southeast Asia, Europe and North America.⁶²

On the other hand, Lukang, which was the second-largest town of Taiwan during the Ch'ien-lung Period, declined in importance during this period due to the significant silting of the port and the development of the treaty ports.

The T'aipei Basin and the hilly lands of northern Taiwan were significant tea producers, Tataochen (near Mengchia and now part of T'aipei City) developed as Taiwan's largest trading center of tea at this time.⁶³

A number of present townships or cities developed from *Chieh* formed during this period. The townships of Peidou, Chichi, Fengyuan, Erhlin and Tungshih were formed before 1830,64 and those of Nankang, Tunghsiao and Tachi were formed before 1870.65 According to Chen Cheng-Siang's study, there were at least 62 towns with a population of 1,000 or more by 1900.66

The population increase in Taiwan during this period was slow and steady. The annual rate of increase dropped from 2.2% during the Ch'ien-lung Period to 0.3% during this period. It is estimated that the population of Taiwan increased from 1.9 million in 1811 to 2.6 million in 1896.67 Apparently, the great reduction of the rate of population in-

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⁶⁰ Cheng, Shao-Shien, op. cit., p. 151.

⁶¹ Lee Lu-Ping, op. cit., p. 3.

⁶² Ibid., p. 3.

⁶³ Ch'en, Cheng-Siang, A Geography of Taiwan, op. cit., p. 284.

⁶⁴ Chow, Shi, op. cit., p. 45.

⁶⁵ Cheng, Pei-Kuei, Tanshui T'ing Chih, 1870, reprinted by Bank of Taiwan, 1956, p. 49.

⁶⁶ Ch'en, Cheng-Siang, Cities and Rural Towns of Taiwan, op. cit., pp. 14-15.

⁶⁷ Cheng, Shao-Shien, op. cit., p. 165.

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crease during this period was due to the decrease of immigration. Although most areas had been extensively cultivated, the food production could not increase because irrigation systems and other techniques needed for the improvement of agriculture had not been developed. It is probable that the excess rural population moved to urban areas.

During this period, city walls were built around T'aoyuan, Hengchuan T'aipei, Makung, T'aichung, Chushan and Touliu.68 It is notable that during the Ch'ien-lung Period, only Fengshan had a city wall built, whereas during the latter period of the 19th century, many cities had walls built (see table 1). During this latter period, the construction of walls was stimulated by the increasing threats from the British and the French after the Opium War. During 1840-1842, British warships invaded Taiwan several times. During the Sino-French War in 1884-1885, the French fleet attacked Keelung and Tanshui.69

One of the other significant characteristics of urbanization during the late 19th century was the development of modern industries in cities. The modernization of Taiwan during this latter period was initiated by a governor named Liu Ming-Chuan. The functions of cities became diversified. A railroad connecting Keelung and Hsinchu was built in 1893. Ammunition industries developed in T'aipei and ship industries in Keelung.⁷⁰

Since the focus of the economic development shifted from southern Taiwan to northern Taiwan, Changhua was planned by governor Liu to be developed as the administrative capital of Taiwan because of its central location (see figure 4). Changhua was reconstructed and expanded in 1889. However, the governor resigned in 1891, and the construction of Changhua was terminated.

Table 1
Establishment of city or town walls in Taiwan

Cities or towns	bamboo	wooden fence	earth	brick, stone
Chiayi		1704 A.D.	1723 A.D.	1833 A.D.
Chouying			1722 A.D.	1825 A.D.
Changhua	1734 A.I).		1811 A.D.
T'ainan	,	1723 A.D.	1788 A.D.	
Ilan	2	1810 A.D.	1810 A.D.	
Hsinchu	1733 A.I	Ď.	1813 A.D.	1827 A.D.
T'aoyuan			1839 A.D.	
Fengshan	1788 A.D).	1826 A.D.	
Hengch'un				1875 A.D.
T'aipei				1879 A.D.

⁶⁸ Chiang, Tao-Chang, op. cit., p. 76.

⁶⁹ Feng, Tsao-Min, op. cit., p. 141-143.

⁷⁰ Ibid., p. 148-153.

⁷¹ Ibid., p. 148.

Makung					1887 A.D.
T'aichung					1888 A.D.
Chushan				1888 A.D.	
Touliu	_	•		1893 A.D.	
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Chiang Tao-Chang, Walled Towns of Taiwan: A survey in Historical Geography, Geographical Studies, Taiwan Normal University, 1966, p. 76.

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Urbanization During The Japanese Period (1896-1945 A.D.)

By the end of the 19th century, the colonization of Taiwan was almost completed. Urbanization of Taiwan since the beginning of Japanese rule has not been significantly associated with territorial expansion. During the Japanese Period, urbanization of Taiwan was characterized by: (1) the decline in the importance of Tanshui and Anp'ing and the development of Keelung and Kaohsiung, (2) the formation and the development of industrial towns associated with sugar production, (3) the development of railroad centers, (4) the development of Japanese towns in eastern Taiwan, and (5) the development of coastal industrial ports.

The importance of port towns has varied greatly in the history of Taiwan. During the earliest period of colonization of Taiwan, Anp'ing was the major port. As a result of territorial expansion northward, Yenshui, Peikang, Lukang and Houlung developed. Around the middle of the 19th century, Tanshui developed as the largest port of the island, because it was opened as a treaty port for international trade. In 1896, Tanshui accounted for 63% of the total value of trade in Taiwan, while An'ping accounted for 23%.72 However, at the beginning of the 20th century, Tanshui and Anp'ing rapidly declined in importance due to the serious silting of the ports (see table 2 and 3). During the long period of colonization of Taiwan, many of forested areas in the foothills which were converted to cultivated land suffered from strong soil erosion. As

Table 2 Number of ships arrived in Tanshui

	steamships		junks	
years	numbers	tonnages	numbers	tonnages
1896	113	70,269	1,564	21,580
1900	110	84,352	661	20,400
1910	98	68,518	224	10,902
1920	64	29,837	447	31,749
1930	80	52,116	199	12,936
1935	27	28,566	92	2,468
Source:	Chen Cheng-	Siang, A Geograph	y of Taiwan, P. 699.	*

⁷² Ch'en, Cheng-Siang, A Geography of Taiwan, op. cit., p. 760.

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Table 3

Number of ships arrived in Anp'ing

years	steamships		ju	junks	
	numbers	tonnages	numbers	tonnages	
1896	71	61,156	200	7,874	
1900	45	42,278	160	8,206	
1910	49	62,129	130	3,974	
1920	4.	3,003	148	8,151	
1930	21	16,828	28	1,001	
1935	1	2,518	2	171	

Source: Chen Cheng-Siang, A Geography of Taiwan, P. 700

a result, flood frequency of rivers increased from once every twenty years during the 17th century to about once every two years during the 19th century.⁷³ The increase of flooding resulted in the silting of many rivers and ports. For example, at the beginning of the 18th century, large junks could navigate the Tanshui River up to Hsinchuang (see figure 4); however, by the end of the 19th century, only small junks could reach Mengchia.⁷⁴

The two major ports of Keelung and Kaohsiung, which have deeper harbors and are located at the two ends of the north-south railroad, have developed rapidly since the beginning of the 20th century.

In 1895, Taiwan was ceded to Japan under the Treaty of Shimonoseki (Chinese called it Treaty of Makuang). During the earlier part of their rule on Taiwan, the Japanese were interested in agricultural development in order to help solve the food problem of Japan. They first focused their attention on sugar production in southern Taiwan. In 1895, the export of sugar from Taiwan reached 42,400 tons which equaled one fifth of the total sugar consumption of Japan. Several towns such as Huwei, Ch'ihu and Talin underwent significant development due to the establishment there of sugar industry plants. Huwei, which was only a village at the beginning of the Japanese rule, has developed rapidly as an important town since the establishment there of the largest sugar refining plant in 1908. In addition, Hsinying, P'ingtung, and Peikang became major sugar processing towns.

Peikang, which was the major river port during the 18th century, later declined in importance due to the silting of the Peikang River and the subsequent development of Lukang and Tanshui. However, since the sugar industry plants were established there, Peikang has undergone a renewed prosperity.

⁷³ Wu Yen Yi Fung, Socio-economical History of Taiwan, 1940, p. 208-209.

⁷⁴ Cheng, Shao-Shien, op. cit., p. 186. 75 Feng, Tsao-Min, op. cit., p. 156.

⁷⁶ Ch'en, Cheng-Siang, A Geography of Taiwan, p. 611.

⁷⁷ Ibid., p. 641.

Urbanization during this period was also related to the development of transportation. In 1908, the railroad from Keelung to Kaohsiung was constructed.78 As a result, Keelung replaced Tanshui in the north and Kaohsiung replaced Anp'ing in the south as the two major ports of Taiwan. Chunan has developed as an important town because it was located at the junction of the two branches of the main north-south railroad. Most towns which were formed during this period in northern Taiwan were located along the railroad.

From the late 1800's, urbanization in Taiwan has been mainly associated with industrialization, which the Japanese government intensified at the beginning of the 20th century. Since 1939, the total value of industrial production has exceeded that of agriculture.79

Prior to World War II, the Japanese government made many industrial and urbanization plans in order to develop Taiwan as an important industrial region of Asia. They planned to develop Wuhsi as the major port in central western Taiwan. In addition, they developed Su-ao, Hualien and Tungkang as coastal industry ports.80 The purpose of the development of the coastal industry ports was to aid the expansion of Japanese economic and military forces into Southeast Asia.

In eastern Taiwan, urban centers developed later and were related to Japanese immigration. At the beginning of the Japanese control of Taiwan, western Taiwan was already overpopulated. The only region which could support Japanese immigration was the T'aitung Valley in eastern Taiwan. Mass Japanese immigration to this region began under the initiation of the government in 1910.81 Japanese immigrants were engaged in rice and sugar production. T'aitung and Fenglin thus developed as sugar industry towns.82

Towns in the T'aitung Valley were different from those in other areas, because the former were developed by Japanese, whereas the latter were developed by Chinese. Wooden rather than brick houses characterized the Japanese towns. Towns in western Taiwan and the Ilan Plain were similar to those in southern China in terms of housing type and material (mainly bricks).83

Urbanization During the Nationalist China Period (1946-1966 A.D.)

Taiwan was returned to Nationalist China after World War II. Although the political regime changed, the trend of economic development has been similar to that of the Japanese Period. Urbanization in Taiwan since World War II has been associated with rapid indus-

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⁷⁸ Ibid., p. 668.

⁷⁹ Ibid., p. 36.

⁸⁰ Bank of Taiwan, op. cit., p. 11.

⁸¹ Ch'en, Cheng-Siang, A Geography of Taiwan, op. cit., p. 1215.

⁸² Ibid., p. 1220.

⁸³ Ch'en, Cheng-Siang, Cities and Rural Towns of Taiwan, op. cit., p. 12.

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War II. developanization d industrialization in which the Japanese had laid the foundation.⁸⁴ Industrialization has led to a tremendous rural-urban migration which resulted in a rapid increase in the size of towns and cities. The population of Taiwan increased from 6.5 million in 1943 to 13 million in 1966.⁸⁵ The rapid increase in population was due to the rapid decrease in death rate and the mass migration of about 2 million Mainland Chinese to Taiwan around 1949.⁸⁶

Table 4 clearly shows the rapid increase in size of towns and cities of Taiwan during the present period. In 1966, there were 43 towns and cities which had a population between 10,000 and 50,000 compared to only 9 in 1900. Towns and cities with a population of 50,000 or more reached a total of 47 in 1966.

Table 4

Number of cities and	towns in each size	class
Size class	1900	1966
1,000,000 or more		1
500,000-1,000,000		1
100,000 - 500,000		9
50,000- 100,000		36
10,000- 50,000	9	43
1,000- 10,000	53	

Source: 1900 data are based on Chen Cheng-Siang's study (see footnote 4)
1966 data are based on 1966 Taiwan Demographic Fact Book (see footnote 85)

Summary and Conclusion

The settlement and sequent development of towns and cities in Taiwan has occurred in a relatively short period — about 350 years — when compared to the Chinese mainland. Taiwan was first colonized in the southwestern coastal plain with the City of T'ainan (including Anp'ing) as the center of colonization. The further expansion and establishment of cities and towns did not follow a direct land route from south to north as one might expect, but rather from west to east. Bases of colonization were first established near the mouths of rivers. As a result of territorial expansion, towns and cities were established along rivers and then extended inland as well as into the foothill areas. In the expansion northward, it was more convenient to by-pass the rivers

⁸⁴ Raper, A. F., et al., Urban and Industrial Taiwan, Taipei, Mutual Security Mission to China and The National Taiwan University, 1954, p. 5.

⁸⁵ Department of Civil Affairs, Taiwan Provincial Government, Republic of China, 1966 Taiwan Demographic Fact Book of China, 1967, p. 2.

⁸⁶ Raper, A. F., et al, op cit., p. 201.

by taking a seaward course along the coast. However, once settlements had been established, the rivers were utilized for inland penetration.

Essentially, two factors contributed to this type of colonization. Firstly, the land transportation from south to north was difficult because of the large number of rivers flowing westward into the sea. Secondly, the aborigines who then inhabited the plain areas exerted a strong resistance against Han Chinese colonization.

Various socio-economic factors have contributed to the development of urbanization in Taiwan. The primary function of towns and cities historically was based essentially on trade, administration, military control and agricultural production. In addition, since the end of the 19th century, industrialization has played a major role in the urbanization of Taiwan.

During the Dutch Period, walled towns were established along the northern and the southwestern coast to serve the function of international trade. Urbanization was made possible by the mass immigration of Han Chinese who initiated the sedentary agriculture that laid the foundation for urbanization.

Later, during the early part of the Ch'ing Dynasty, cities and towns expanded inland in order to serve domestic functions of military control, administration and local trade. A number of walled towns and cities, after the traditional Chinese fashion, were permanently established for these purposes. During this period, coastal ports only served the functions of local trade and as immigration entrances rather than that of international trade as during the Dutch Period. However, there was limited trade between Taiwan and the Chinese mainland. Urbanization during this period was favored by mass immigration to Taiwan due to the high population pressure in the coastal areas of China. In the latter part of the Ch'ing Dynasty, prosperity returned to the coastal port because of the opening of Taiwan to international trade.

Lastly, during the Japanese Period, the eastern portion of Taiwan was settled and new towns established. This development in the east as well as further urbanization in the western portions were significantly associated with industrialization by the Japanese — particularly those associated with the growth of the sugar industry. By this time, the present distribution of towns and cities had become established.

Acknowledgments

The author expresses his sincere appreciation to Professor Herold J. Wiens, Department of Geography, University of Hawaii, for his helpful criticism of the first draft of the manuscript of this article, and to Mr. James J. Nasuti for his help in the preparation of this article.

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