

Abstract of thesis entitled

**Modern Transformation of the Huizhou Merchant:
Wu Jim-pah (1850-1927)
the Mandarin-Capitalist in Late Qing Tianjin**

Submitted by

Hui Ching

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Contrary to the significance that HSBC and its comprador office made on the modernisation in China at the turn of the 19th and the 20th Century, studies about the Bank's expansion in the Beijing-Tianjin area were exceptionally limited. In this research, the importance of HSBC's expansion to North China in the 1880s will be primarily examined by the Bank and its comprador office's roles in the railways development in North China.

During this process, Wu Jim-pah, as the first comprador of HSBC in Tianjin, offered significant aids in establishing HSBC's collaboration with the

Qing Court and the influential Bei-yang Ministry under Li Hong-zhang's administration. This research is going to examine Wu Jim-pah's career and personal development in late Qing Huizhou, Suzhou, Shanghai, Tianjin and Beijing, so as to answer a series of questions related to China's social-economic reforms and its earliest capitalists' formation at the turn of the centuries.

Moreover, acts as the first academic study focusing on Wu Jim-pah's participation in the early modernisation projects of late Qing China, this research put the collection and classification of historical materials in the central place. The findings of primary resources from the archives in China and overseas, namely, the Institute of History and Philology of Academia Sinica in Taipei, the National Library of China, the Shanghai Library, the Southwest Jiao-tong University, the Tianjin Academy of Social Sciences (TASS), the HSBC Group Archives, London School of Oriental and African Studies (SOAS), as well as the Public Record Office at Kew, London, could be regarded as the most valuable part of this research.

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by

Hui Ching

B.A. *H.K.*; M.Phil. *H.K.*; M.Sc. *L.S.E.*

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A Portrait of Wu Jim-pah (1850-1927)

Declaration

I declare that the thesis and the research work thereof represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualifications.

Signed.....

Hui Ching

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Chapter 1-Introduction

Wu Jim-pah: an Overlooked Comprador, Bureaucrat, Educator, Industrialist and Reformer in Early Modern China¹

1.1. Background and Questions

Despite HSBC's noteworthy influence on China's economic development during the latter part of the Qing Dynasty, remarkably few studies have been made of the Bank's expansion in the northern part of the country. As Professor Hamashita Takeshi has stated, HSBC was established and built up its bases along the southeastern coast and Yangzi River during the 1860s and 1870s; and its commercial network subsequently developed on the far side of the Pacific Ocean in the following three decades. However, HSBC's branches and agents undoubtedly benefited from the strategic locations of Beijing and Tianjin, its affiliated commercial centre; and the two cities also made historic contributions to the Bank's advancement in northeast Asia, as well as the early modernisation of China.

These successes fundamentally enhanced HSBC's position in Late Imperial and Early Republican China. The primary focus of this research is the significance of the Bank's penetration in Tianjin during the 1880s, and the role of its comprador office in the development of northern China's railway network. Wu Jim-pah played a major part in this process, due to his significant contributions to

¹ Pinyin Romanisation is used for primarily all Chinese names, except for Wu Jim-pah. In comparison with 'Wu Mou-ting(ding)' and 'Wu Chong-ren' appeared frequently in the related Chinese documents, 'Wu Jim-pah' was commonly used in Western literatures and historical materials, particularly in the Hongkong & Shanghai Banking Corporations Group archives. Instead of adopting the Pinyin Wu Jim-pah's Wade Giles Romanisation is retained.

the establishment of HSBC's relationships with Chinese bureaucrats, specifically railway administrators, the Bei-yang Ministry and the Qing Court. In view of this, the decisions to open a branch in Tianjin and appoint Wu as HSBC's first comprador there both greatly benefited the Bank's further development in northeast Asia.

Wu Jim-pah – a Different Kind of Comprador

Professor Leung Yuen Sang has noted that the history of business in China during the second half of the 19th Century was greatly influenced by competition between the compradors and merchants of Ningbo and Canton. In addition, increasing links between the East and West promoted the rise of merchant-compradors. Even so, Wu, who was born and raised as the son of a Huizhou merchant, did not belong to any of the aforementioned factions or cliques. Aside from his capabilities, his success was due to the fact that his family and social background brought him to Tianjin, a commercial hub and seaport that was separated from the business centres of the south. China's economic development was constantly being driven by competing territorial and kinship interests, as well as by its connections with the West. The story of the establishment and early development of the HSBC Tianjin Branch clearly reveals what had changed and what remained unchanged in Late Qing China.

Wu Jim-pah and Chinese Politics

Indeed, right after the formation of the HSBC Branch, Wu established a personal and financial relationship with Li Hung-zhang in Tianjin. He acted as Li's personal banker and advisor while Li was the Prefect of Zhili Viceroy and a

Bei-yang Commissioner. In addition, their connection led to collaboration between the Huai Army and the British in military industries in and around Tianjin. Conversely, Wu's disagreements with Li's successor, Yuan Shi-kai, and Wu's involvement in the Hundred Day Reform severely damaged his position in Chinese political and business circles. This research attempts to outline the financial background to China's military modernisation during the Self-Strengthening Movement, particularly the roles HSBC and Wu played in it.

Wu Jim-pah, the HSBC Tianjin Branch, and the Bank's Loans to the Chinese Government

By acting as a bridge between the Bank's Headquarters and Beijing officials, Wu and the Tianjin Branch considerably deepened HSBC's involvement in China's industrialisation and strategic development. The expansion of the Tianjin Branch's operations was a key factor in the remarkable growth of HSBC's capital and revenues between 1885 and the early years of the 20th Century. Between the First Sino-Japanese War and the Boxer Rebellion, HSBC became actively involved in China's indemnities, railroad projects and maritime custom affairs.

Wu's roles in the Chinese railway administration's affairs and Western banking highlighted the rivalries that existed between the Qing Government, local interest groups, the United Kingdom, Germany and Russia. This research suggests that Wu and the Tianjin Branch witnessed and drove the transformation of HSBC's operations in China during the last decades of the Qing Dynasty, a

conclusion that enriches our comprehension of the colonial and imperial expansion of these world powers in East Asia.

An Industrialist and Investor in Northern China's Modernisation

During his years in Tianjin, Wu used his ties with HSBC and the United Kingdom to develop various businesses of his own. Drawing on his British connections, he imported machinery, materials, dyes and chemicals from the United Kingdom. By hiring British managers and engineers, he opened a new page in the westernisation of Tianjin's business community. Wu was also directly involved in the city's industrialisation. He established match, woollen-spinning and tanning factories, as well as coalmines. The packaging, electric light, gas and water supply corporations that bore his name were crucially important to the modernisation of Tianjin and China as a whole. Besides Wu's career in HSBC and his influence on the Qing Government, this project gives an in-depth analysis of the contributions made by the medium and large-scale business entities that he operated.

In summary, this research examines Wu's career and personal development in Late Qing Huizhou, Suzhou, Shanghai, Tianjin and Beijing. It attempts to answer a series of questions related to China's socio-economic reform and the formation of its first cohort of capitalists at the turn of the 19th and 20th centuries. First, it asks how did the warfare and political-economic turbulence that affected China in the 1850s and 1860s fundamentally alter the social and commercial prominence of Huizhou merchants? Second, as Shanghai arose as a modern financial centre during the 1870s, how did the Jiangsu-Zhejiang lineage

network effectively manipulate the comprador offices of foreign banks? Third, what major assignments did HSBC allocate to the Tianjin Branch and its comprador? Fourth, besides connecting HSBC with Chinese administrators, how did Wu contribute to the development of China's railways? Fifth, as one of the most renowned entrepreneurs in Late Qing China, how did Wu and his family operate their assets and enterprises?

1.2. Literature Reviews

During his lifetime, Tianjin's municipal authorities and media regarded Wu as one of the city's four biggest compradors and its leading industrialist. HSBC researchers have also noted Wu's unique role in both the Bank's and China's advancement at the turn of the 19th and the 20th centuries. In 1908, Arnold Wright said in his oft-cited *Twentieth Century Impressions of Hongkong, Shanghai, and other Treaty Ports of China: Their History, People, Commerce, Industries, and Resources*:

MR. WU JIM PAH, also known as Mr. Wu Mow Ting, a son of the late Mr. Wu Tsun Loh, merchant, of Soochow, was born in 1850 in the province in which Li Hung Chang was born. On leaving school Mr. Wu entered the Hongkong and Shanghai Bank at Shanghai as assistant compradore, and seventeen years later was transferred as compradore to Tientsin. In 1894 he was appointed by Li Hung Chang, then Viceroy of the province, managing director of the North China Imperial Railways...In a handsome illuminated

address his just dealing and his endeavours to stamp out corruption were extolled, and the assurance was given him that his example would have far-reaching influence in the country...He is a director of the Tientsin Electric Light Company, of the Hisn Chi Boden and Baugesellschaft, and of the Chinese Investment Company, and is a shareholder in many British companies in Hongkong, Shanghai, and Tientsin...²

In *Tientsin – An Outline History*, published in 1925, O. D. Rasmussen drew similar attention to Wu's status in the city. In Professor Frank King's four-volume magnum opus, *The History of the Hongkong and Shanghai Banking Corporation*, Wu was described as follows:

There were few Chinese (share) holders (of HSBC), and these, as in Hong Kong, were mainly compradores...the head shroff (of the Shanghai Branch), Wu Jim-pah or 'Jim Crow' (Wu Mao-ting), held 28...³

The future of China was seen as dependent on the encouragement of Chinese enterprises, including enterprises with official sanction. In financing these developments the Hongkong Bank again found itself dealing through its compradores, especially Wu Mao-ting in

² Arnold Wright, *Twentieth Century Impressions of Hongkong, Shanghai, and other Treaty Ports of China: Their History, People, Commerce, Industries, and Resources*

³ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 1 (Cambridge, 1984)

Tientsin. All this is reflected in the consequences of the Bank's move to the north...⁴

On the other hand, no Chinese or Western academics have made Wu or HSBC's development in Tianjin a focal point of their studies. In fact, it is not impossible to discern the reasons for this. From the early 20th Century right up to the 1980s, the role of compradors in China's socio-economic development was controversial in public and academic circles. Consequently, there were few studies about them, and discussion of this topic was primarily driven by ideology.

Outside Mainland China, the study of Chinese compradors mainly concentrates on those in Shanghai and Hong Kong. For instance, Professor Hao Yan-ping's pioneering works on this topic, *Cantonese Comprador-Merchants a Study of their Functions and Influences 1842-1884* and *The Comprador in Nineteenth Century China: Bridge between East and West*; as well as Professor Wong Siu-lun and Dr. Zheng Wan Tai's recent works on the Robert Hotung (1862-1956) family tend to regard individuals in South China as being representative of all the merchant-compradors of that era.

Other than the locality they preferred to focus on, academics studying the role of compradors have been more biased towards Chinese personnel who worked in Western trading firms, such as Swire or Jardine Matheson, rather than those attached to foreign banks like HSBC or the City Bank of New York. However, compared to Sheng Xuan-huai, Tang Ting-shu, Xu Run and Robert

⁴ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 2 (Cambridge, 1988)

Hotung – who leveraged on their associations with Western financial institutions and expertise about their operations – banking compradors occupied a vital place in China's economic reform and the struggles between outside powers in East Asia.

Indeed, in the field of research into the history of banking in China, Dr. Brett Sheehan pointed out in his recent work on Bian Bai-mei, the Manager of the Bank of China in Tianjin, *Trust in Troubled Times: Money, Banks, and State-Society Relations in Republican Tianjin*, that his role in both the development of the city's banking industry and its influence on China's modernisation has been largely overlooked. In fact, the introduction of modern banking in Tianjin, as well as in Hong Kong and Shanghai, was an essential element of China's economic history. Above all else, as previously mentioned, Tianjin acted as an affiliated financial centre to Beijing during the Late Qing and Early Republican eras. The interaction of banking compradors with the Qing Court and Bei-yang political-military figures was the chief driver of China's early modernisation, and the source of its limitations too.

The study of the roles of Tianjin's merchants in the city's commercial history has blossomed in Chinese academic circles since the 1980s – and even more so in recent years. The significance of Fan Xu-dong (1883-1945) and Zhou Xue-xi (1865-1947) has attracted the greatest amount of attention from scholars. Wu worked alongside Zhou Fu (1837-1921), the father of Zhou Xue-xi, during the 1880s and 90s; and the second generation of Tianjin industrialists/entrepreneurs has become a focal point for studies. In 2002, the Tianjin Municipal Committee of

the Chinese People's Political Consultative Conference published *Ten Compradors of Modern Tianjin*, which contains a chapter about Wu.

Although it is rare to see parallel research concerning Wu, this thesis has unquestionably benefited from a substantial amount of related literature. For instance, the latest studies about Huizhou, the social networks of Chinese merchants, the development and restructuring of the business community in Late Qing China and the urban history of the treaty ports have significantly enriched the scope and contents of this research. In general terms, Professor David Faure's *China And Capitalism: A History of Business Enterprise in Modern China (Understanding China: New Viewpoints on History and Culture)* provided the writer with an overview of the macrostructure of China's socio-economic reformation and its limitations during the 19th Century. Professor Faure regards the collapse of the salt patent system during the 1850s as being directly attributable to the Qing Court's repudiation of the national debt. The inequalities in the relationships between the country's bureaucrats and merchants posed the biggest single obstacle to the emergence of a modern financial system in Late Qing China.

In addition, *The State and Society in China* edited by Linda Grove and Christian Daniels, *Chinese Capitalism, 1522-1840* edited by Xu Dixin and Wu Chengming, *China and Historical Capitalism: Genealogies of Sinological Knowledge* edited by Timothy Brook and Gregory Blue, and Thomas G. Rawski's *Economic Growth in Prewar China* all methodically analyse various aspects of the Late Qing Dynasty's embryonic capitalism. It is noteworthy that most of the

aforementioned literature highly evaluates the individuality of China's society and economy. Such studies also enrich our understanding of East Asia's development and the general nuances of capitalism and modernity.

On the other hand, since the early 1990s, Chinese academics have been re-evaluating the participation of merchants in the country's reforms and revolutions, and their influence over them. The works of Professor Tang Li-xing, Zhu Ying and Ma Min are successful examples of this recent re-evaluation. The introduction of Western methodologies and concepts has effectively strengthened the theoretical arguments in Chinese writing about these subjects. In the field of urban historical studies, the Tianjin Municipal Government began commissioning a massive project on the city's general history in the mid-1990s,. About 30 volumes of the *Overall Annals of Tianjin*, and two volumes of the *Collection of Historical Studies on Tianjin* have been published. A large amount of foreign literature on the subject has been referenced during the project and translated into Chinese.

1.3. Archive Materials

As the first academic paper devoted to Wu Jim-pah's involvement in China's early modernisation, this thesis has made the collection and verification of historical facts its top priority. It is based on research of both Chinese and Western archival materials. Although the author's efforts and achievements in this regard have been inadequate, it is still worth noting that they brought some new finds to light, both in China and overseas.

Many of the archival materials of bureaus and corporations in Tianjin and Beijing that would have been relevant to this study were destroyed during a series of armed conflicts and wars that took place from the mid 19th to mid 20th centuries. Specifically, nearly all the documents dating from Wu's term as Director-General of the Imperial Railways of North China Administration were damaged during the 1900 Eight-Nation Alliance's occupation of Tianjin and Beijing, particularly the Russian forces' actions against the Administration. That greatly limits our ability to understand the development of the Chinese railway network and its financial position during this 20-year period. As Professor Frank King states, similar upheavals have affected the HSBC Group's archives, with the same results. Almost all the pre-1900 documents of the Tianjin Branch and its Beijing Agency were either burnt or lost during the invasion and civil disorder.

Nonetheless, a few documents of varying significance are still available in Chinese libraries and archives. For instance, two copies of the Wu family tree have been well preserved in the city libraries of Beijing and Shanghai. Wu and his British partner for the promotion of engineering education in China, Claude William Kinder, submitted a set of proposals and constitutions for railway schools to the Qing Court during the late 1890s. Some of these can now be seen in the Chinese National Library. Moreover, the Tianjin Academy of Social Sciences (TASS) has preserved several prospectuses of companies related to Wu, as well as a collection of greetings for his 70th birthday. The core archives of the Tianjin Chamber of Commerce, which Wu founded in 1903, were published in two volumes during the late 1980s and early 1990s.

In Taiwan, the Republic of China Government published a number of major documents of the Qing Dynasty Communication and Traffic Ministry many years ago. In addition, the author unearthed dozens of archives regarding the involvement of Wu and his son in the first and largest Sino-British joint-venture colliery near Beijing in the Institute of History and Philology at the Academia Sinica in Taipei. Amazingly, both the published and unpublished materials from the Southwest Jiao-tong University archives in Cheng-du survived being relocated five times from Hebei to Sichuan under wartime conditions during the last century, and these provide essential information about the Imperial Chinese Railway College, which was founded by Wu, and his railway administration role.

As for English-language materials, the British National Archives in Kew, London, contain a number of relevant documents of various kinds. The British Foreign Office (Ministry of Foreign Affairs) and Colonial Office archives cover Wu and HSBC's social, economic and political activities in Hong Kong, Shanghai, Beijing and the British Concession in Tianjin. These documents confirm the involvement of Wu and the HSBC management in the power politics of the Late Qing Dynasty, particularly the Anglo-German political and economic rivalry in northern China prior to the outbreak of World War I. In addition, the records at Kew allowed the author to investigate Wu's property transactions, his directorships of British companies, and his difficulties with Chinese bureaucrats to some extent.

The catalogue of the HSBC Group archives has not yet been completed, and the public's access to them is more restricted than is the case with other

national and corporate archives in the West. Since Professor Frank King's massive project on the Bank's history during the mid 1990s, the HSBC archives have been relocated to London from Quarry Bay, Hong Kong. Even so, members of the public have been granted some access to them by advance appointment during recent years. Although such access is still far from convenient and there are restrictions, the recent development of the Group's archives has considerably helped the author to clarify a number of points, such as the British bankers' views about Wu's role in the financial management of the Chinese railways and its loan agreements with HSBC.

Lastly, Charles Addis (1861-1945), the HSBC Agent in Beijing from the mid 1880s onwards, regularly interacted with Wu during the Bank's early expansion in the north. In 1986, Addis' correspondence, diaries and manuscripts were transferred from the Group's archives to the London School of Oriental and African Studies (SOAS), where they can be viewed today. However, as Margaret Harcourt Williams points out in the *Catalogue of the Papers of Sir Charles Addis*, Addis hardly ever mentioned or commented on his work at HSBC. The materials he left behind might help us to understand the life and experiences of a Western banker in the imperial capital, but they can add little to any discussion of HSBC's strategies or achievements concerning China's early modernisation.

1.4. Thesis Structure

In addition to its Introduction and Conclusion, this paper consists of 10 Chapters. The first two Chapters form Part 1. Taking the fall of the Huizhou

merchants and the rise of the Su-Zhe compradors as their main theme, they also describe the family and cultural background of Wu Jim-pah.

Based on Professor Ye Xian-en and Tang Li-xing's conclusions concerning the rise of the Huizhou literati-merchants during the golden age of the Qing Dynasty, Chapter 1 focuses on the impact of the 1850-1864 Taiping Rebellion on the social and economic structure of Huizhou, the place where Wu was born and raised. Besides the political instability that existed in the aftermath of this insurrection, the ineptitude of the Huizhou merchants as far as modern business practices were concerned will also be examined. To be specific, how their reliance on bureaucrat-supervised commercial monopolies was the principal reason for their decline, together with that of the Qing Dynasty itself, from the mid 19th Century onwards.

Chapter 2 follows Wu's move from Huizhou to Suzhou, and his subsequent arrival in Shanghai during the late 1860s. By elaborating on the formation and rise to dominance of the local Su-Zhe *qian-zhuang* cliques over the comprador houses, Chapter 2 illustrates how foreign banks established local roots. The families of the early HSBC Shanghai Branch compradors, Wang Huai-shan and Xi Zheng-fu, effectively integrated Western banking with the dynastic local commercial network.

The second part of this research – chapters 4, 5, 6 and 7 – attempt to cast light on Wu's involvement in the development of China's railway network during the last two decades of the 19th Century. Chapter 4 discusses the emergence of

China's first railways and their financial difficulties. The Kaiping Tramway's stock issue and HSBC's role in this process were significant in terms of both the industrial and financial history of China. Following that, Chapter 5 reviews the more substantial development of the Imperial Railways of North China. This Chapter shows how HSBC and its comprador office increased the Bank's participation in China's strategic development. In addition, it stresses how the absence of modern banking systems and the uncertainty of government investment policies affected China's railway projects.

After that, Chapter 6 concentrates on Wu's establishment of the Imperial Chinese Railway College, the country's first engineering school. The Chapter discusses its development from four angles, namely, its foundation, teachers, education and historical legacy. As the last section of Part 2, Chapter 7 sums up Wu's significance, as well as the challenges and limitations that surrounded the development of railways in Late Qing China. Following the 1894-1895 Sino-Japanese War, Wu was dragged into the political turmoil associated with diplomatic disputes concerning the Imperial Railways of North China. Even so, the contributions he and his railway administration made to the corporate development and modernisation of China's postal system should not be overlooked either.

Part 3 consists of four chapters too: namely, chapters 8, 9, 10 and 11. Wu's experiences and his ideas about industrialisation form the core topic of this section. Chapter 8 mainly covers the establishment and operations of Wu's enterprises in various industries. The match, weaving, tannery, town gas, electricity and water-

supply operations that he and his sons managed were the Tianjin region's first industrial undertakings. The goods they supplied and their modern business style laid the foundations for Tianjin's subsequent modernisation. In addition, Chapter 9 continues the discussion about the significance of Wu's sons in terms of the family businesses, and their personal involvement in northern China's commercial, political and cultural circles.

Chapter 10 discusses Wu's participation in the Hundred Days Reform as Minister of the newly established Agricultural, Industrial and Commercial Bureau in Beijing. His suggestions about institutional reforms and commercial-industrial development to the young Emperor Guang-xu clearly demonstrate a distinctive mercantile-bureaucrat's understanding of the Chinese economy and proposals for its further development. Chapter 11 uses the reports of a senior local official named Deng Huaxi to the Qing Court to reflect the vision and effectiveness of Wu's proposals about enhancing silk and tea exports. In its total of 12 chapters, and using Wu's experiences from the mid 19th Century to the early 20th Century, this thesis attempts to illustrate how one merchant adapted to the socio-political transformation of Late Qing China, as well as the breakthroughs he achieved in terms of his business operations and economic concepts during the country's early modernisation phase.

Chapter 2

The Taiping Rebellion and Wu Jim-pah's Escape to Shanghai

Wu Jim-pah (1850-1927), also known as Mao-ding, Chong-ren and Diao-qing, was born in Huizhou, Wuyuan County, Huanxi Village in Anhui Province.⁵ While he is always referred to as “Wu Jim-pah” in Western literature, he was more commonly known as “Wu Diao-qing” in Tianjin and Shanghai business circles. On official documents, such as a Memorial for the Emperor and his curriculum vitae in Qing Dynasty archives, Wu used the names “Wu Mao-ding” or “Wu Chong-ren”.

Like most Huizhou men, Wu Jim-pah's father, Wu Tsun Loh (also known as Wu Ji-chuan) worked as a merchant in Suzhou, Jiangsu Province. Wu Jim-pah was a native-born Huizhou citizen. He fled to Suzhou with his mother in 1858, during the Taiping Rebellion, and continued his studies there.⁶ The Wu family's fortunes declined as a result of the Rebellion, and he joined the Zha Er-miao Tang Ink and Brush Shop in Suzhou as an apprentice.

When the Taiping Rebellion spread to Suzhou, Wu left for Shanghai, where he joined the Hongkong and Shanghai Banking Corporation (HSBC) as a servant. Eventually, he advanced to a key role in the office of the HSBC Shanghai Branch's comprador. That helped to pave the way for his expedition northwards to

⁵ Wuyuan County is now part of Shangrao city in Jiangxi Province.

⁶ Another version is that, during the Taiping Rebellion, Wu Ji-quan took his wife and children to Suzhou. See Di Lu, “Da-mai-ban Wu Diao-qing” (“Wu Jim-pah – the Grand Comprador”) in *Tianjin Wen-shi Zhi-liao (Historical Materials of Tianjin)* vol. 9, Tianjin, 1980, p. 190. This thesis follows the version given by Wu Jim-pah's youngest son Wu Huan-zhi.

Tianjin, which later became the stage for his role in the Self-Strengthening Movement.⁷

Only a few references derived from the memories of Wu's offspring remain to enlighten us about his family background and educational experiences. Nevertheless, we know that he was the son of a Huizhou merchant, that he grew up as an apprentice and servant, and that he eventually developed his career in Western-style banking. Wu's early years are a remarkable illustration of the political-economic changes and challenges that Late Qing China faced after the Opium Wars and Taiping Rebellion.

The first part of this thesis, consisting of this chapter and the next, use Wu's early development to elaborate on Huizhou's social and cultural background, the fall of its merchants and the rise of the Su-Zhe compradors in Shanghai. These factors are crucial to our understanding of the opportunities and difficulties China's modernisation encountered during the second half of the 19th Century.

2.1. The Cultural Background and Social Structure of Huizhou

Huizhou is located at the intersection of Anhui, Zhejiang and Jiangxi provinces. The Sung Dynasty philosopher and educator Zhu Xi (1130-1200) was one of the town's most famous historical figures. Another local notable, Hu Shue-yan (1823-1885), was a well-known merchant with close links to the government

⁷ 'The Bei-yang Commissioner Wang Wen-shao's *Memorial on the 5th Day of the 3rd Month of the 23rd Year of the Guang-xu Era*, in *Zhong-guo Di-yi Li-shi Dang-an-guan comp.*, *Guang-xu Chao Zhu-pi Zhou-zhe (The Guang-xu Monarch's Imperial Instructions & Memorials)* vol. 102 Tie-lu, Beijing, 1995-1996, p. 787.

during the Late Qing period. In ancient times, Huizhou was called He County. Moreover, since the Xin'an River passes through the town, it is also referred to as Xin'an. Nowadays, Huizhou is just an administrative region of Huangshan City, Anhui Province. Yet in Imperial China, Huizhou included one *fu* and six *xian*. In 1121 AD, during the Song Dynasty, the regional county government for five other counties (Xiuning, Jixi, Qimen, Yi and Wuyuan) was also established in He County.

According to Wang An-shi (1021-1086), a prime minister of the Northern Song Dynasty, "Huizhou was surrounded by mountains and valleys".⁸ The Qing Dynasty Dao-guang *Annals of Huizhou (Huizhou Fu-zhi)* notes that the city was protected by the Da-zhang Mountain in the east, the Zhe Range in the west, the Jiang Bank in the south and the Huangshan in the north.⁹ Although its mountainous terrain was unsuitable for agriculture, it made the region an ideal shelter during wartime. The Fang clan was representative of Ming-Qing Huizhou society. Its pedigree book points out that:

Huizhou was protected by its geographical environment at the Jiangge rejoin of Sichuan Province. The town was too remote for conquerors, and basically no battles had occurred here since the mediaeval era.

The Xu clan, another influential Huizhou family, mentions in its pedigree book:

⁸ Wang An-shi, *Sun-Kang Mu-bei Ming-wen (Inscriptions of the Sun-kang Tomb)*

⁹ *The Qing Dynasty Dao-guang Era Huizhou Annals vol. 1 Geographic Terrain.*

The mountains and valleys firmly protected Huizhou from warfare and disasters, enabling its people to study the Confucian Classics for generations. Therefore, the big clans remained settled in Huizhou for centuries.¹⁰

In fact, as noted by Tang Li-xing, whenever medieval warfare spilled over from northern China to the Jiangnan region, the clans fled from the Yellow River region to the Yangzi Delta, then westward to Huizhou and its nearby hilly areas.¹¹ Major immigration to Huizhou occurred in the Jin and Song dynasties, but the population exodus stabilised during the Ming-Qing period. Zhao Ji-shi, a Xiuning County literati during the Qing period, says:

The Xin'an clans were organised and regulated by their own shrines. The ceremonies were exercises based on the *Wen-gong Jia-li*, which was devised and taught by Master Zhu Xi. The ancient custom and pedigree books were maintained here for thousands of years.¹²

Zhu Xi's *Wen-gong Jia-li* could be regarded as a set of theories and rules formulated to reinforce kinship. Its main topics included the establishment of shrines for ancestral worship, organising pedigrees, commemorating ancestors, and establishing charity fields for the benefit of the entire clan. The philosophy

¹⁰ *Chong-xiu Gu-he Dong-men Xu-shi Zhong-pu* vol.9 "Cheng-dong Xu-shi Chong-xiu Zu-pu xu".

¹¹ Tang Li-xing, *Suzhou Yu Huizhou-16-20 Shi-zi Liang-di Hu-dong Yu She-hui Bian-qian De Bi-jiao Yan-jiu* (*Suzhou & Huizhou-Interaction & Comparative Study on Social Changes 16-20 Centuries*) Beijing, 2007, p. 17.

¹² Zhao Ji-shi, *Ji Yuan Ji Xuo Ji* vol. 11 Gu-lao Nan-ji.

and ethics of Zhu Xi were preserved and developed in Huizhou. The *Huizhou Annals* state that:

Since the birth of Master Zhu Xi, the Huizhou literati-bureaucrats were familiar with Confucian doctrines, and the town was known as the Zhoulou of the southeast.

The traditional imperial examinations (*ke-ju kao-shi*) were revived by the Mongol rulers in 1313 AD, during the Yuan Dynasty. Zhu Xi's *Commentaries on the Four Books* (*Si Shu Ji Zhu*) was designated as the official reference text for the national examinations. Influential monarchs – including the Ming Emperor Hongwu (1328-1398) and the Qing emperors Kang-xi (1654-1722) and Qian-long (1711-1799) – reaffirmed the unique status and use of Zhu Xi's writings during the Ming-Qing period.

As a result, Huizhou's students dutifully participated in the imperial examinations. The town's social and cultural background, together with the emphasis on Zhu Xi's commentaries on the *Si Shu* in these examinations, led the town to focus on political power at this time. The Huizhou literati-bureaucrats' civic status was the result of their success in the examinations, and this trickled down to their hometown's socio-economic development, in which education undoubtedly played a key role.

Huizhou's colleges (*shu-yuan*) were operated and funded by the clans. During the Yuan Dynasty, Huang You-ren founded the Ji-chen Shu-yuan in He

County. This was damaged during Yuan-Ming warfare, and afterwards Huang Zhi-lian, his descendant, led his clansmen in rebuilding the *shu-yuan* to educate members of the Huang clan. In Wuyuan, Wu's hometown, the Tai-bai Jing-she was one of the area's oldest *shu-yuan*. In Qimen County, the local gentry established the Li-yuan Shu-yuan, a major local educational institution that taught Confucianism.¹³ According to the *Annals of Huizhou*, the town had 54 *shu-yuan*, 462 *she-xue* and 5 *xian-su*, so there was a total of more than 500 schools of various levels during the early Qing period.¹⁴

These schools were financed by ancestral shrines, local dignitaries and merchants, thus demonstrating Huizhou society's emphasis on cultural and political status. In fact, the He County *Xu Clan Honour Code* (*Xu-shi Jia-gui*) promoted the sponsorship of young clansmen in the imperial examinations in order to raise the town's socio-political status. The students were sponsored by their clansmen on the basis of their kinship and financial situation. These generational scholarships served as a kind of substitute for public education, as well as a form of investment by the clans in the community. Candidates who succeeded in the examinations would take up posts as literati-bureaucrats in the local or central government, and they would in turn provide patronage to their clans. The examinations certainly acted as an axis of the lineage educational tradition; and the resources they subsequently yielded were more political than financial.

¹³ Tang Li-xing, *Ming-Qing Yi-lai Huizhou Qu-yu She-hui Yan-jiu* (*Social Study of Huizhou since the Ming-Qing Period*) Hefei, 1999, p. 79.

¹⁴ *The Qing Dynasty Kang-xi Era Huizhou Annals* vol. 7.

During the Qing Dynasty, as *Essays on He County (He-shi Xian-tan)* notes, thousands of local title holders entered the government as literati-bureaucrats, including four *Da-xue-shi*, seven *Shang-shu*, 21 *Shi-lang*, seven *Du-cha-yuan Du-yu-shi*, 15 *Nei-ge Xue-shi*, five *Zhuang-yuan*, five *Chuan-lu*, three *Hui-yuan*, 13 *Jie-yuan*, 296 *Jin-shi* and around 1,000 *Ju-ren*.¹⁵ In the Qing Dynasty alone, about 50 of the empire's literati-bureaucrats originated from Huizhou. As a medium-sized city, its ability to produce so many government officials was rare, even in the Jiangnan region.

According to Zhu Peng-sho's *Jiu-Dian Bei-zhen*, between the reign of the Shu-zhi monarch to the Guang-xu years of the Qing Dynasty, nine *Zhuang-yuan* came from Anhui Province, ranking it third among all the provinces in China. Huizhou accounted for those nine. In terms of the number of *Zhuang-yuan* it produced, Huizhou came second after Suzhou among all Qing China's cities and towns; on the same level as Zhili and Guangxi provinces, and even higher than the provinces of Jiangxi, Fujian, Hubei, Hunan, Henan, Xaanxi, Sichuan, Guangdong, Guizhou, Shanxi, Gangsu and Yunnan. Besides Zhu Xi, Huizhou produced a host of leading scholars and literati between the Song and Yuan dynasties. They included Zhao Fang, Wang Ke-kuan, Cheng Min-zheng, and Dai Zhen. In addition, there were Hu Shi and Tao Xing-zhi in modern times.

The Huan-xi Wu clan, which Wu Jim-pah belonged to, was another prominent lineage in Wuyuan County, Huizhou. As its pedigree book notes, the Zuo-tai Wu clan was the predecessor of the Huan-xi Wu clan. In 640 AD,

¹⁵ Xu Cheng-rao, *He-shi Xian-tan* (Hefei, 2001)

Emperor Tai-zhong of the Tang Dynasty gathered all the Confucian masters in the country together for a convention in He County. Wu Yi-fang, one of the delegates from Yu-zhang (present-day Nanchang) in Jiangxi Province, was enthralled by the local scenery and moved there with his family. Wu Yi-fang had three sons, Tai-wei, Shao-wei and Bao-wei. Wu Shao-wei worked as the Tang Government's *Zuo-tai Jian-cha Yu-shi*, and he was the ancestor of the Zuo-tai Wu Clan in Huizhou.

During the Song-Yuan period, the Zuo-tai Wu clan grew to 1,500 members and it spread to Jinling, Dexing, Taiping, Xuancheng, Anfeng and Chiyang. According to Wu Wang-zhou of the Yuan Dynasty, the Wu clans of Furao, Chengtang, Xiuning, Jixi, Lujian, Fanchang and Wuyuan were all descended from the Zuo-tai Wu clan.

Wu Yun-sheng, a progeny of the Xiuning Wu clan, settled the Huan-xi Wu clan in the area during the Song Dynasty. Like Huizhou's other big clans, it provided education for its young males, who accounted for 23 title holders in the imperial examinations, and a total of around 40 *jiang-shen* and *gong-sheng*. During the Ming-Qing period, the following members of the Huanxi Wu clan gained titles from the imperial examinations and worked for the emperors:¹⁶

Emperor (Dynasties)	Member of the Wu Clan	Titles and Positions
Jia-jing (Ming) (1522-1566)	Wu Tian-guang	<i>Ju-ren</i> <i>Zhi-xian</i> of Huguang

¹⁶ Wu Yue-lou, *Huang-xi Wu-shi Jia-pu* (Wuyuan, 1903)

		Province, Yingshang County
Tian-qi (Ming) (1621-1627)	Wu Xian	<i>Wu Ju-ren</i>
Shu-zhi (Qing) (1638-1661)	Wu Zhi-yun	<i>Jin-shi</i> <i>Xue-zheng</i> of Henan Province
Kang-xi (Qing) (1622-1722)	Wu Zhao-rong	<i>Tong-zhi</i> of Dongzhang Fu <i>Zhi-fu</i> of Anlu Fu
Kang-xi (Qing)	Wu Wen-yan	<i>Jin-shi</i> <i>Zhi-fu</i> of Kaihua Fu, Yunnan Province
Kang-xi (Qing)	Wu Shi-jin, son of Wu Wen-yan	<i>Jin-shi</i> <i>Tong-zhi</i> of Chuxiong Fu, Yunnan Province
Qiang Long (Qing) (1736-1795)	Wu Xing-zhong	<i>Hui-kui</i> <i>Fu-cheng</i> of Huizhou Fu
Qiang Long (Qing)	Wu Wen-ran	<i>Nei-ge Zhong Shu</i> <i>Tong-zhi</i> of Jiangchang Fu, Jiangxi Province

The Huanxi Wu clan was a typical Huizhou lineage. Confucian education and participation in the imperial examinations were the foundations of the career

development of its young males. Even during the socio-political turbulence that followed the First Opium War, Wu Jim-pah's father still attempted to provide a stable environment for his studies. Nonetheless, only a very few examination candidates were able to serve the imperial government as titled bureaucrats. The population and economic pressures in Huizhou encouraged its people to seek commercial opportunities in the prosperous towns of the Jiangnan region. Huizhou's cultural background, scarcity of resources and geographical advantages promoted the combination of literati, bureaucrats and merchants. Indeed, its cultural elegance and political connections provided Huizhou's merchants with their sense of identity and superiority.

2.2 The Literati-Merchants of Huizhou

The Huizhou area had only 5,000 households during the Jin Dynasties (266-420), before major waves of immigration from northern China. Most of its population were indigenous Shan-yue people, and the demand for land for agriculture and dwellings was limited. The number of households rocketed six fold in the 130 years between AD 618 and 742, during the Sui-Tang period. Between AD 742 to 1205, the population grew at a slower pace, increasing 3.3 times within 460 years. Then, it more than doubled during the reign of Emperor Hong-wu of the Ming Dynasty, reaching a total of 580,000.¹⁷ During the reign of

¹⁷ Zheng Xiao-juan & Zhou Yu, 15-18 *Shi-ji De Huizhou Dian-dang Shang-ren (The Huizhou Pawn Merchants in the 15-18th Centuries)* Tianjin, 2010, pp. 12. Wang Lei, "Lun Hui-shang Zhi Jue-qi" (Rise of the Huizhou Merchants) in *Cai-jing Yan-jiu* 2002 vol. 2.

Emperor Jia-qing of the Qing Dynasty, Huizhou's population again surged to 2,470,000 by 1820.¹⁸

Conversely, during the Ming-Qing period between 1502 and 1820, only 10% to 20% of Huizhou's mountainous territory was cultivated.¹⁹ According to Ye Xian-en's research on Huizhou's agricultural system during the Ming-Qing period, each household had occupied an average of 74.5 *mu* of farmland during the Southern Song Dynasty. Following the Mongol invasion, the figure diminished to 20 *mu*.

In the Ming-Qing period, the average amount of land occupied by each household/farm was less than 10 *mu*.²⁰ On the basis of agricultural productivity during the Qing Dynasty, Hong Liang-ji (1746-1809) estimated that a person's annual food consumption needs could be satisfied by the output of 4 *mu* of land.²¹ In other words, during the prosperous Ming-Qing period, Huizhou's land could supply only half of the food its residents needed. During the reign of the Ming Emperor Wan-li (1573-1620), the *He County Annals* report that:

The local community had no other choice but to do business in order to survive. He County's population was huge, and the crops were insufficient to support it. Its people had no alternative but to trade in various places in order to feed themselves, just as a

¹⁸ Liang Fang-zhong, *Zhong-guo Li-dai Hu-kou, Tian-di, Tian-fu Tong-ji* (*The Historical Survey of China's Households, Land and Taxation*) Beijing, 2008, pp. 402.

¹⁹ Liang Fang-zhong, p.402 Wang Tin-gyuan, Wang Shi-hua. *Huizhou Wen-hua Quan-shu, Hui-shang* (*The Huizhou Merchants*) Hefei, 2005, p. 2.

²⁰ Ye Xian-en, *Ming-qing Huizhou Nong-chun She-hui Yu Dian-pu Zhi* (*The Cottier System in Ming-Qing Huizhou Society*) Hefei, 1983, p. 40.

²¹ Hong Lian-ji, *Juan-shi Ge Wen-jia Ji* vol. 1.

Chinese proverb describes “doing business” as “making a living”.

In fact, if people there did not involve themselves in commercial activities, they would have had no chance of surviving. The He County people were anxious about their livelihood.

Xu Da-xing, a typical Huizhou merchant of the Ming Dynasty, notes that, “our county is situated between hills and valleys. Even wealthy families do not have sufficient land to farm. Did we have any way to stay alive other than by doing business?”²² Gui You-guang (1506-1571), a literati-bureaucrat of the Ming Dynasty says the natural ruggedness of Huizhou made it impossible for the local economy to rely on farming. As a result, the literati and families of local gentry did not hesitate to engage in businesses.²³ Gu Yan-wu (1613-1682), an intellectual of the Qing Dynasty states that:

Huizhou’s farmland was scarce and precipitous; the growing population occupied considerable areas of it as dwellings and graveyards. Middle and lower-class households had no permanent fields. Huizhou people decided to become merchants as a result of such conditions.²⁴

Huizhou’s overland transportation routes were circumscribed by hills and valleys. However, the waterways connecting it with the Jiangnan provinces provided its merchants with efficient and low-cost transport. As Dan Yi-zi recorded, the waterway from Huizhou to Hangzhou was 630 *li*, about 215

²² *Xin-an-xian Bei Xu-shi Dong-zhi Shi-pu (The Xu Clan Pedigree of North Xin’an County)* vol.8.

²³ Gui You-guang, *Zheng-Chuan Ji* vol.13 Bai-an Cheng-weng Ba-shi Sho Xu

²⁴ Gu Yian-wu, *Dian-xia Jun-guo Li-bing Shu* vol. 32 Jiangnan 20.

kilometres, in length.²⁵, while the canal from Hangzhou to Suzhou was 300 *li*, around 150 kilometres. Under normal conditions, the trip took less than nine days.²⁶ Moreover, the travelling cost was as low as 3.34 *chian*, roughly the same as the price of five *dou* of rice in Huizhou.²⁷ Huizhou travellers could also opt for another route to Suzhou that combined land and water transportation. Although unsuitable for moving heavy goods, this shortened the travelling distance to 700 *li*, about 350 kilometres, and it took seven or eight days.²⁸

The availability of low-cost waterborne transportation encouraged Huizhou's surplus population to move to the major commercial centres of the Jiangnan region, particularly, Hangzhou, Suzhou and Yangzhou. During the Ming-Qing period, members of the Huanxi Wu clan, including Wu Jim-pah's family, migrated to various parts of the country, including Beijing, Jiangning, Suzhou, Hangzhou, Hankou, Songjiang, Qingpu, Xinzhuang, Bozhou, Zhengyang, Tongcheng, Jiaxing, Jiading, Shaoxin, Leling, Guangde, Zhangde and Xiuning.²⁹

Although the Huanxi Wu clan was distributed around the country, it was still concentrated in the regions along the Yangzi River. Depending on their special connections with Confucian culture, the Ming-Qing people of Huizhou became literati-merchants in two ways.

²⁵ Dan Qi-zi, *Tian-xia Lu-cheng Tu-yin* vol. 1.

²⁶ Zhan Yuan-xiang, "Wei-zhai Ri-ji" in *Qing-shi Zhi-liao* vol. 4.

²⁷ Wang Tin-gyuan, Wang Shi-hua. *Huizhou Wen-hua Quan-shu, Hui-shang (The Huizhou Merchants)* Hefei, 2005, p. 9.

²⁸ Dan Qi-zi, *Tian-xia Lu-cheng Tu-yin* vol. 1.

²⁹ Wu Yue-lou, *Huan-xi Wu-shi Jia-pu (Huan-xi Wu Clan Pedigree)* Wuyuan, 1903.

First, Huizhou merchants were experts in cultural matters. During the Ming-Qing period, they dominated a number of related industries, including the production and sale of *wen-fang si-ba*, a collective term covering paper, brushes, ink and inkstones, the publication of books and printing-related matters.

Second, through the titled members of their clans, Huizhou merchants dominated the salt and tea trades with licences granted to them by the Qing government. In particular, Huizhou salt merchants constructed political and business links with government officials, which allowed them to acquire and maintain a monopoly in the salt trade in the Huainan and Huaibei areas.

During the Five Dynasties and Ten Kingdoms period, Huizhou was renowned for its paper, ink and inkstones.³⁰ Huizhou ink sticks were particularly popular as tributes to the emperors, and they were widely available around the country, in Southeast Asia and Japan. Huizhou merchants maintained their dominance in the ink market in East Asia right up to the Qing period. Well-known brands included Cao Xu-gong, Hu Kai-wen and Zhan Da-you. In addition, Zha Er-miao Tang, where Wu Jim-pah served as an apprentice, was another well-known ink and brush shop in Late Qing China.

The owners of Zha Er-Miao Tang were countrymen of Wu's family, hailing from the Zha clan of Wuyuan County's Fengshan Village. In AD 963, during the Northern Song Dynasty, Zha Wen-zheng, a senior official of the Southern Tang (937-975), moved his family from Xiuning to Wuyuan and became

³⁰ *Southern Song Chun-xi Xinan Annals* vol. 10.

the founding ancestor of the Wuyuan Zha clan.³¹ Afterwards, many generations of the Zha clan participated in commercial activities, and they became renowned timber merchants in Huizhou.³²

The Republican *Wuyuan Annals* note that the Wuyuan Zha clan included more than 60 distinguished merchants during the Ming-Qing period. The Zha merchants operated ink shops in Jiangsu, Zhejiang, Jiangxi, Fujian and Shanghai. They also traded timber in Beijing, managed tea businesses in Guangzhou and traded salt in Zhejiang.³³ They were major ink merchants during the Qing Dynasty too, owning more than 10 ink firms in the Jiangnan region alone. Among all of these, Er-Miao Tang emerged as the most famous and recognised brand.

According to Zhou Shao-liang (1917-2005), Zha Er-miao Tang was established early during the reign of Dao-guang (1821-1850). The shop was subsequently expanded during the Dao-guang and Xian-feng (1850-1861) years. Its products were comparable to those of Hu Xue-wen and Pang Feng-ji. Er-miao was restructured during the Tong-zhi period, and the words “Shao Ji” were added to its brand name. This change might have been due to a transfer of ownership. In the late Guang-xu years, “Shao Ji” was replaced with “You Ji”, and later “You-yu Shi” or “Zhi-cheng Shi”. Zhou Shao-liang believes Er-miao Tang’s ownership could have changed hands two or three times.³⁴

³¹ Zha Yin-yuan, *Wuyuan Zha-shi Ju-pu* (Wuyuan Zha Clan Pedigree) Wuyuan, 1892.

³² *Wuyuan Zha-shi Ju-pu* vol. 2, 3.

³³ *Republican Wuyuan Annals* vol. 37 Selected Figures.

³⁴ Zhou Shao-liang, *Qing-muo Tan-cong* (Commentaries on the Qing Ink) Beijing, 2009, pp. 276-279.

In 1924, the Wuyuan ink craftsmen from the major ink shops in Shanghai staged a big strike. Er-Miao Tang and Zhan Da-you were then the largest ink shops in the town, employing around 340 craftsmen.³⁵ Western writing styles and tools were introduced in East Asia after the opening up of China and particularly during the Republican period. This gradually eroded the business of the Huizhou ink shops. Nevertheless, after he fled to Suzhou in the late 1850s, due to the Taiping Rebellion, Wu Jim-pah left Zha Er-miao Tang to go to Shanghai at the end of the 1860s or early 70s. The fighting had severely devastated and changed socio-economic conditions in both Huizhou and Jiangnan.

2.3. The Taiping Rebellion and the Decline of Huizhou's Licensed Merchants

As previously mentioned, Huizhou's mountainous terrain made it a perfect refuge from warfare and natural disasters. However, during the 1850s and 60s, the Taiping Rebellion and the Qing army's counter-attacks caused unprecedented turmoil there. The Taiping rebels and Qing army repeatedly overran Huizhou for three main reasons.

First, it was situated at the intersection of Anhui, Zhejiang and Jiangxi provinces, and on the frontline between the territory controlled by the Qing army and its enemies.

Second, Anqing was then the capital of Anhui Province, and it was surrounded and protected by Huizhou and its nearby counties. Indeed, three

³⁵ Liu Shi-ji, "1924 Shanghai Hui-bang Muo-jiang Ba-gong Feng-chao-Jin-dai Zhong-guo Cheng-shi Shao-yi Gong-ren Ji-ti Xing-dong Zhi Feng-xi' in Jin-dai Zhong-guo Qu-yu Shi Yan-tao-hui Lun-wen-ji" (Taipei, 1986).

counties – Huizhou, Chizhou and Ningguo – were immediately adjacent to southeast Anqing. It was essential for both the Taiping rebels and Qing army to capture Anhui Province and its capital in order to proceed to Jiangsu and Zhejiang. Therefore, capturing Huizhou and turning it into a bridgehead for seizing Anqing became a major strategy in the armed conflict.

Third, Huizhou was rugged, yet it was connected to the Jiangnan region by its waterways. From 1854 onwards, the Taiping rebels' hold on Huizhou shielded Tianjing – the capital of their “Heavenly Kingdom”. Later, the Qing forces under Zeng Guo-fan and Zuo Zhong-tang captured and advanced through Huizhou towards Jiangsu and Zhejiang via the regional waterways. Consequently, as Huang Chong-xing points out in *He-shi Xian-tan*:

Prior to its fall, the rebels attempted to attack Zhejiang through Huizhou, devastating the city. After Zhejiang fell, they resisted the imperial army's advance on Zhejiang at Huizhou, where there was further intense fighting.³⁶

Huizhou's abundant civil records and writings describe the fighting and the damage it did to the local community in great detail. During the decade between the spring of 1854 and 1864, the bloody Taiping conflict completely destroyed the socio-economic base of Huizhou's merchants.³⁷ Within that period, He County, where the Huizhou government was located, was captured by the Taiping rebels four times, Xiuning County 10 times, Qimen and Wuyuan 11 times,

³⁶ *He-xian Xian-tan* vol. 19.

³⁷ *The Qing Dynasty Tong-zhi Qi-men Annals* vol. Zha-zhi, Ji-bing; *Guang-xu Anhui Annals* vol. Wu-bei-zhi, Bing-zhi 4; Huang Chong-xing, *Feng-shan Bi-ji*.

and Yi County and Jixi a remarkable 15 times. Tens of battles caused serious loss of human life, and Huizhou's population did not fully recover until the Xuantong years (1909-1912). The following table compares the recorded population of Huizhou during the Mid and Late Qing period.

County	1819 population	1904 population	Percentage change
He	680,072	219,944	-67.65%
Xiuning	650,289	219,982	-66.17%
Wuyuan	585,985	140,259	-76.06%
Qimen	488,490	110,249	-77.43%
Yi	256,769	40,729	-84.13%
Jixi	232,050	88,158	-62%

In 1904, 40 years after the Taiping Rebellion, the population of the six counties of Huizhou was still between 62% and 84% lower than in 1819. Hu Shi's father, Hu Tie-hua, tells in his memoirs how in 1865, one year after the Heavenly Kingdom's collapse, he was elected by his own clan to survey the survivors of the insurrection. After an investigation lasting several months, he concluded that the membership of his clan had decreased from over 6,000 to 1,200. Wu Jim-pah's hometown, Wuyuan, was totally destroyed during the fighting, and it did not recover for 50 years.³⁸ In the whole of Huizhou, "fewer than two or three out of 10 males were still alive after the fighting".³⁹

³⁸ *Tao-pi Gong-du* vol. 12 'Fa-zhi-ke, Wuyuan Feng-xu Shi Xi-guan'

³⁹ Huang Chong-xing, *Chong-ding Tan-bin Zha-zhi Xu*. Xu Ke Comp. *Qing-bai Lei-chao* vol. 15, Beijing, 1986 'Hun-yin-lei'.

Other than the blows struck by the civil war during the 1850s and 60s, changes in the salt trade also contributed to the decline of Huizhou merchants. The Qing Government exercised the *gang-fa* for the salt trade. This was a form of monopoly in which only those on a list of officially approved merchants were allowed to engage. All the listed merchants were required to pay a certain amount of salt tax in advance. In return, the government assigned them stipulated sources and markets for selling their salt. Most importantly, the monopolies of listed salt merchants could be inherited by their offspring. That meant the merchants and their families and heirs controlled the sale of salt throughout China. The system was known as *Guan-du Shang-xiao* (Bureaucratically Regulated Sale of Merchandise). During the Qing Dynasty, Huizhou merchants in Yangzhou and Hangzhou became the country's most influential salt dealers.

Obviously, the most basic systemic shortcoming of this type of arrangement was the fact that the government's objectives and the market could never be reconciled. The prepaid sale tax system was prone to manipulation when official expenses greatly exceeded the actual demand for salt. That meant the Qing Dynasty's political and security needs, rather than those of the market, determined the production and price of salt, as well as the tax on it. Huizhou salt merchants had no legal rights or political power that would allow them to dispute any decisions made by the imperial throne and court. Between the early 18th and mid 19th centuries, the Qing government's salt tax more than doubled.⁴⁰

⁴⁰ Wang Shou-ji, 'Liang-huai Yan-Fa Yi' in Liu Jin-zao comp., Liu Jin-zao comp., *Qing-chao Xu Wen-xian Tong-kao*, vol. 36, Taipei, 1965; Ge Shi-jun, *Qing Jing-shi-wen Xu-bian* vol. 50.

The central government's expenses rocketed during the Taiping Rebellion. Meanwhile, the sale of salt was disrupted by the conflict in Jiangnan. The Huizhou merchants were burdened with the prepaid salt tax decreed by the Qing government; yet the market failed to produce and consume enough salt. The Qing government realised that the *gang-fa* system was unsustainable and finally terminated it, abolishing the monopolies of the Huizhou salt merchants without compensation. Under the new system, any entity that paid the salt tax was allowed to sell any quantity of salt in any location.⁴¹

As David Faure states, the prepaid salt tax under the *gang-fa* system could be regarded as a kind of government bond. Its abolition without reimbursing the taxpayers was like the government defaulting on its debt. The Qing Court's repudiation of this liability not only ruined Huizhou's salt merchants, it also became a major obstacle to the development of capitalism in China.

2.4. The Ineptitude of Huizhou Tea Merchants in the International Market

After the collapse of the salt licensing system in the mid 19th Century, the international tea trade became the mainstay of the Huizhou merchants' livelihoods until the 1880s. Before the Opium War, China exported approximately 450,000 *guan-shi* of tea leaves per year. By 1862 the amount had reached 805,100. In 1886, it attained an all-time high of 2,210,000 *guan-shi*. However, by 1886, China's tea

⁴¹ *Qing Jing-shi-wen Xu-bian* vol. 51.

exports had declined to 1.5 million *guan-shi*, according to Yang Duan-liu. More seriously, the price per *guan-shi* fell from 25 to 15-20 taels.⁴²

In 1888, the Imperial Customs of China submitted the *Survey of Tea Production* to the Zhong-li Ya-men. It attributed the slump in exports to the inferiority of Chinese tea leaves compared to those of the West on four counts. First, their taste was not sufficiently strong and long-lasting. Second, they included damaged and substandard tea leaves. Third, the packing cases were easily broken. Fourth, the products delivered were completely different from the samples provided. Apart from the third point, all these shortcomings were related to quality.

In fact, the Huizhou merchants who dominated China's tea-export business during the second half of the 19th Century concentrated entirely on its commercial aspects. They seldom paid any attention to enhancing the products. For instance, the Yi County Jiang Yao-hua family, who were tea dealers for many generations, compiled a book entitled the *Essentials of Tea Purchase (Mai-cha Jie-lue)*. This elaborated on buying and selling tea leaves at various prices. In 1897, the family spent 68% of its total expenses on purchasing tea leaves in bulk; 13% on transportation, taxes and licence fees; and only 18.8% on processing and packaging.⁴³

⁴² Yang Rui-liu & Hou Hou-pei, *65 Nian-lai Zhong-guo Guo-ji Mao-yi Tong-ji (A Survey on China's International Trade for 65 Years)* Nanjing, 1931.

⁴³ Wang Tin-gyuan, Wang Shi-hua. *Huizhou Wen-hua Quan-shu, Hui-shang (The Huizhou Merchants)* 'Yang-zhuang-cha Zong-yu Qing-ce', p. 494.

On the other hand, the Western tea houses invested massive sums in capital, labour and machinery to power their expansion from the mid 19th Century onwards. In the spring of 1888, Kang Fa-da, Head of the Zhejiang Customs, reported to the Imperial Customs:

The production, packaging and transportation of tea leaves in other countries is done by the use of machines. In China, these processes entirely depend on human labour. Chinese merchants lack the capital needed to introduce machines.⁴⁴

Wu Cheng-luo's *Farm Produce Research in Brief (Diao-cha Nong-chan Zhi-lue)* mentions that tea bushes were planted using scientific methods in British India, Ceylon and Java. The work on tea plantations and in tea factories was done using machinery.⁴⁵ Moreover, their scale of economy greatly enhanced the competitiveness of foreign products. Foreign merchants operated plantations with many thousands of tea bushes. All the processes – from growing and picking the tea leaves through to drying, packaging and transporting them – were undertaken by the same company. The entire system was managed by the same firm, which received all the revenues from it. Therefore, foreign tea was high in quality and sold at competitive prices.⁴⁶

In contrast, Chinese tea merchants had followed the same traditions for thousands of years, without making any changes. As a result, Chinese tea leaves

⁴⁴ Kang Fa-da, Head of the Zhejiang Customs, *Report on the Tea Trade to the Imperial Customs 1888*.

⁴⁵ *Qing-chao Xu Wen-xian Tong-kao*, vol. 382, Taipei, 1965.

⁴⁶ Beng Ze-yi comp. *Zhong-guo Jin-dai Shou-gong-ye-shi Ji-liao 1840-1949 (Historical Materials of Modern Chinese Handicraft Industries 1840-1949)* vol. 2, Beijing, 1962, p. 183.

were unable to maintain their position in the world market.⁴⁷ In 1888, the Guangzhou Customs noted that the fragmentation of tea production was weakening the competitiveness of Chinese products. Chinese tea was produced by a vast number of individual families; it was planted, harvested, processed and transported in completely separate operations undertaken by farmers, dealers and exporters. The industry's fragmented supply chain increased the costs of production and made it hard to improve product quality.

Furthermore, the Huizhou merchants were only interested in handling tea leaves from the main production areas in Anhui, Zhejiang and Fujian through to the international market. They were dealers, not producers. Their revenues came primarily from the margins between their purchasing costs and the sale prices of ready-made products. The transaction costs and commission paid at various levels increased the price of tea leaves, whereas their quality was not assured. This scenario made it even more difficult for Chinese products to compete with their Western counterparts.⁴⁸

Most seriously of all, as the golden age of the Qing Dynasty drew to a close in the late years of Qiang-long, from the 1850s onwards, the Chinese government drastically increased taxes and licence fees on the tea trade in an effort to cover the country's fiscal and trade deficits. This was very similar to the burdens imposed on the salt merchants, In 1853, the tea tax increased to 9 *chian* 3 *fen* per *yin*. Ten years later, in 1862, the rate had reached to 2 taels 4 *chian* and 8

⁴⁷ *Qing-chao Xu Wen-xian Tong-kao*, vol. 382, Taipei, 1965.

⁴⁸ Liu Jin-zao comp., *Qing-chao Xu Wen-xian Tong-kao*, vol. 382, Taipei, 1965.

fen, a rise of 166.7%. During the Guang-xu years, taxes accounted for 25% of the price of export tea.⁴⁹ Conversely, as Sheng Xuan-hai states:

Japan and British India did not tax their tea producers. In Ceylon, the government subsidised the tea merchants at 4 taels per *guan-shi*, in order to promote the production and export of tea leaves.⁵⁰

Nevertheless, political changes and the internal security situation during the mid 19th Century led the Qing Court to focus exclusively on its own survival, rather than the economy's development and reform. Undoubtedly, the Taiping Rebellion in the 1850s and 60s had drastically shaken the Manchu regime and drained the vitality of the Huizhou area and its merchants in the Yangzi region. Ultimately, the Taiping Rebellion and the political, military and economic interventions of the Western powers in the Yangzi Delta brought about the rise of Shanghai and played a significant role in China's modernisation.

⁴⁹ Zhang Hai-beng & Wang Ting-yuan, *Hui-shang Yan-jiu (A Study on the Huizhou Merchants)* Hefei, 1995, pp. 654-655

⁵⁰ *Guang-xu Zheng-yao Chao-ben* 'Shi-ye 3'

Chapter 3

The Su-Zhe Comprador Clique and Wu Jim-pah's Relocation to Tianjin

After capturing Huizhou, the Taiping Rebels moved on to the more prosperous towns of Southern Jiangsu and Eastern Zhejiang. In the early 1860s, when the conflict reached Suzhou, Wu Jim-pah left the city and travelled to Shanghai. Through an introduction by a friend of his father, Wu worked as a factotum on the foreign vessels anchored at its piers.⁵¹ In the late 1860s and by now 17 years old, Wu was introduced by a Suzhou countryman to Xi Zheng-fu (1838-1904), the influential comprador of the HSBC Shanghai Branch.⁵² Wu leapt at the opportunity to become a carriage servant at the Bank.⁵³ By the late 1870s, he had been promoted to Head Shroff in the HSBC comprador's office, working as Xi Zheng-fu's principal assistant.⁵⁴

At the turn of the 1870s and 80s, HSBC planned to open another major branch in Tianjin. It was proposed that Xi Zheng-fu's eldest son, Xi Li-gong, be relocated to the north as the Bank's Tianjin comprador. However, Xi Zheng-fu worried that he might not be able to bequeath his own position to his son when he retired if Xi Li-gong had been away from Shanghai for a long time. In addition, Wu might succeed Xi Zheng-fu in the absence of his eldest son. In fact, Wu was 12 years younger than Xi Zheng-fu, halfway between the ages of the comprador

⁵¹ Li Xin & Sun Si-bai, *Min-guo Ren-wu Zhuan (The Republican Figures)* vol. 5, Beijing, 2005, p. 195.

⁵² Wu Huan-zhi, "Guang-yu Wo-fu Wu Tiao-qing Shi-ji De Hui-yi" ("A Memoir of My Father Wu Jim-pah") in *Wen-shi Zi-liao Xuan-ji* vol. 49, Beijing, 1964. p. 228.

⁵³ Zhang Yu-fen, "Tianjin Si-da Mai-bang Zhi-yi-Wu Mao-ding" ("Wu Jim-pah – One of the Four Grand Compradors of Tianjin") in *Ren-wu* vol. 58, p. 131. Arnold Wright Ed., *Twentieth Century Impressions of Hongkong, Shanghai, and other Treaty Ports of China: Their History, People, Commerce, Industries, and Resources* (London, 1908)

⁵⁴ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 1, p. 246, 254.

and his son. Xi Zheng-fu therefore nominated Wu for the Tianjin comprador's position, a suggestion that was accepted by HSBC's managers.⁵⁵

In 1880, Wu left Shanghai for Tianjin and, after years of preparation, the HSBC Tianjin Branch officially opened in 1883. Wu's relocation to Tianjin would have major significance for the development of HSBC's business in the city, as well as his own advancement. Even so, it was the formation of the Su-Zhe *qian-zhuang* clique that gave the greatest impetus to Wu's departure from Shanghai, which was Late Qing China's first and largest financial centre.

3.1. Wang Huai-shan and the HSBC Chop-loan system

During the 1860s and 70s, compradors from Jiangsu and Zhejiang Provinces, particularly those from the towns of Suzhou, Ningbo and Huzhou, increased their involvement in and influence over Shanghai's business community. Gradually, their Gungdong counterparts lost their dominant positions in the comprador offices of Western firms and banks.⁵⁶ From the 1870s onwards, the so-called "Su-Zhe" cliques became the most influential force in Shanghai's comprador community.

In fact, merchants from Huzhou in Zhejiang, which was then a major silk-producing region, had dominated the comprador offices of foreign firms that were involved in international trade since the 1850s. In financial circles, people from

⁵⁵ Wu Huan-zhi, "Guang-yu Wo-fu Wu Tiao-qing Shi-ji De Hui-yi" ("A Memoir of My Father Wu Jim-pah") p. 228.

⁵⁶ For more about competition between Guangdong and Su-Zhe merchants, see Leung Yuen Sang, *Wan-qing Shanghai: Yi-ge Cheng-shi De Li-shi Ji-yi* (Hong Kong, 2009).

towns in the Su-Zhe region, particularly Ningbo and Suzhou, had controlled the comprador offices of Western banks ever since the HSBC Shanghai Branch had established the first one during the 1870s. The careers of most Su-Zhe compradors and their families had their origins in traditional Chinese banking houses (*qian-zhuang*) in the commercial hubs of the Jiangnan region.

As Shanghai developed into a financial centre during the second half of the 19th Century, native clans with local financial networks became the obvious partners for Western bankers. In the case of HSBC in Shanghai, its earliest compradors, such as Wang Huai-shang (1822-1874) and Xi Zheng-fu, had abundant experience of dealing with Su-Zhe *qian-zhuang* before they joined the Bank. Wang Huai-shan, a native of Yuyiao in Zhejiang Province, began his career at the San-yu Qian-zhuang, which was opened by his mother's brother, Chen San-yu.

As a former *qian-zhuang* staff member, Wang knew that these local financial agencies were undercapitalised. Also, foreign banks lacked good links to the local financial markets and agents, so they were unable to lend funds to Chinese customers at that time. Whilst working in the HSBC comprador's office, Wang hired former *qian-zhuang* staff members Yu Ming-an and Chen Guang-yan as his assistants, and he established the "chop-loan system" involving HSBC and the local Su-Zhe *qian-zhuang*.⁵⁷

⁵⁷ *Shun Pao* 12th January 1884.

Under this system, HSBC received bank drafts (*zhuang-piao*) from the *qian-zhuang* as collateral for providing them with loans. Depending on their demand for capital and their solvency, the Su-Zhe *qian-zhuang* received financial support from HSBC and Shanghai's other foreign banks. The chop loans might amount to 700,000 or 800,000 taels in a single transaction. This mechanism significantly expanded the amount of capital the *qian-zhuang* could put into circulation, and it enabled them to offer larger loans to their local customers.⁵⁸

HSBC and its comprador office led by Wang generally provided short-term chop loans for one or two-day periods. The compradors were personally responsible for their repayment. During the 1860s and 70s, HSBC offered loans with annual interest rates of 7 or 8%. The *qian-zhuang* lent these funds out in the local market at a 15% rate. As the agent between HSBC and the *qian-zhuang*, the comprador office received a 1 or 2% commission in most cases. When a loan was particularly badly needed, the comprador might charge a higher rate.

The chop-loan system gradually allowed HSBC to replace the major foreign firms as the main clearing bank for cheques and transactions between local and Western companies. From the 1870s onwards, foreign firms that sold imported goods in China received *zhuang-piao* from a *qian-zhuang*. Foreign traders could convert these *zhuang-piao* into silver, or deposit them in Western banks.

⁵⁸ S. R. Wagel: *Finance in China*, *North-China Daily & Herald*, 1914, p. 238. *North-China Herald*, August 17th 1878, p. 159.

On the other hand, if a Chinese merchant sold local goods, the foreign dealers would pay him with personal cheques or bank drafts, and the merchant would normally convert these into silver or *zhuang-piao* via the *qian-zhuang* and their related foreign banks. But if HSBC acted as a clearing bank for the parties concerned, then the cheques and bank drafts could be offset against *zhuang-piao*, thus reducing the need to circulate massive amounts of silver.⁵⁹ Shanghai's international trade and banking services therefore came to rely increasingly on the integration of Western banking, compradors and *qian-zhuang*, which began with the establishment of HSBC and its comprador office. In turn, HSBC became a player in the local financial market and China's foreign trade through its comprador office's links with the Su-Zhe *qian-zhuang*.

Shanghai's financial market was deeply influenced by the balance of foreign trade. The chop-loan system developed by HSBC and Wang clearly reflected the equilibrium of capital between foreign banks and the *qian-zhuang*. If Shanghai's international trade was balanced, the transactions between foreign banks and *qian-zhuang* would be more or less in balance too. If there was a surplus, the Chinese merchants would receive more than they paid out, and foreign currency and imported silver would accrue to the *qian-zhuang*.

In the case of a trade deficit, the payments of Chinese merchants would exceed their earnings, resulting in a flow of capital to foreign trading and banking corporations. Consequently, the shortage of capital would directly result in a rise in the chop-loan interest rate. This scenario offered HSBC and its comprador

⁵⁹ Yi Ji-cang, *Mai-ban Yu Shanghai Jin-rong Jin-dia-hua (Compradors and Shanghai's Modern Finance)*, Beijing, 2006, p. 112.

opportunities to increase their profits from the chop-loan system. Ten years after it was introduced, HSBC and its comprador office extended the system to the domestic market, achieving a turnover of millions of taels per year.⁶⁰ The *qian-zhuang*'s dependence on capital supplied by the foreign banks considerably reinforced the importance and aggressiveness of the Su-Zhe compradors in the local financial market and Shanghai's socio-economic system.

3. 2. The Xi Zheng-fu Comprador Clique and the Su-Zhe *Qian-zhuang* Families

Wu Pei-chu, a Suzhou comprador at the National City Bank of New York in Shanghai, noted that:

Prior to the 1911 Revolution, there were only a limited number of Chinese banks in Shanghai, and the foreign banks and *qian-zhuang* supported the city's international trade. HSBC acted like a central bank, and it was extremely influential. Most of the compradors at the foreign banks came from the Dongtingshan area. These included Xi Li-gong at HSBC, Wang Xian-chen at Standard & Chartered Bank, Xi Xi-fan at Russo-Asiatic Bank, and Ye Ming-zhai at Yokohama Specie Bank.⁶¹

Additionally, they directly or indirectly invested in a number of *qian-zhuang*, including Zheng-da, Xie-sheng, Zhen-chang and Jiu-

⁶⁰ *Shun Pao* December 10th 1878.

⁶¹ "Wu Pei-chu Fan-wen Ji-lu" ("An Interview with Wu Pei-chu") April 10th 1957 in *Shanghai Qian-zhuang Shi-liao (Historical Materials of the Shanghai Qian-zhuang)* Shanghai, 1961, pp. 36.

yuan. During that period, the members of the Dongtingshan *qian-zhuang* clique used their relationships with the foreign banks' compradors to gain influence in Shanghai's financial sector.⁶²

Before Shanghai's emergence as a financial centre, the *qian-zhuang* were obliged to conduct business using silver-copper coins. The Zhejiang merchants, particularly the Ningbo clique, dominated this business. When Suzhou fell into the hands of the Taiping Rebels in the 1860s, the Dongtingshan *qian-zhuang* merchants fled to Shanghai with their capital. Using their socio-economic networks, they established and operated *qian-zhuang* partnerships there. Due to security considerations, the *qian-zhuang* were usually managed by their owners' families, and fellow-countrymen.

As a result, the Shanghai *qian-zhuang* gained a high profile at the turn of the 19th and 20th centuries. From the 1880s onwards, a number of clans from Dongtingshan, namely, the Yan, Wan, Xi, Wang and Ye, established dozens of *qian-zhuang* in Shanghai, mainly in the British Concession. Among these Suzhou Dongtingshan *qian-zhuang* families, those of Yan Lan-qing, Wan Mei-feng, Xi Zheng-fu, Wang Fu-chen and Ye Zhen-min were the most prominent.

Xi Zhen-fu succeeded Wang Huai-shan as HSBC's comprador in Shanghai. From the 1870s onwards, Xi and his family developed links with the *qian-zhuang* groups from Suzhou, Huzhou, Huizhou and Ningbo. They also created a network of the comprador offices of dozens of foreign banks in Shanghai. As a result, the

⁶² Ibid, p 37.

Xis became the preeminent comprador group for a period of 70 years spanning the Late Qing and Early Republican periods. They dominated interactions between foreign banks and local *qian-zhuang*; and the vast extent of the lineage-commercial network that they formed is shown by the following table.⁶³

	Individuals	Relationships	Careers
	Patrilineal		
	Xi Yuan-le	Father of Xi Zhen-fu	A Dongtingshan merchant who fled to Shanghai during the Taiping Rebellion. Opened a pawnshop at Kunshan.
	Matrilineal		
	Shen Er-yuan	Elder brother of Xi Yuan-le's second wife	A Dongtingshan merchant who arrived in Shanghai in 1860 and worked for the British Sassoon & Co. (the Old Sassoon Co.). Appointed as the first comprador of E.D. Sassoon & Co. (the New Sassoon), becoming the first comprador from Dongtingshan. Adopted Xi Su-heng, the fourth son of Xi Yuan-le, as his only son. Three generations of the Shen family

⁶³ Xi Xi-fan comp. *Dong-ting Xi Gu-qing Xian-sheng Yan-xing-lu*. *Zhong-guo Ren-min Yin-hang Shanghai Fen-hang comp. Shanghai Qiang-zhuang Shi-liao*, Shanghai, 1961, pp. 36-39. Wu Pei-chu, "Shanghai Wai-shang Yin-hang Mai-ban Qun-xiang" ("The Compradors of Foreign Banks in Shanghai") in *Wai-shang Yin-hang Zai Zhong-guo (Foreign Banks in China)* Beijing, 1996, pp. 260-294. Huang Yi-feng, Jiang Duo, Tang Chuan-si, Chen Yi, *Jiu-zhong-guo De Mei-ban Jie-ji (The Comprador Class in Old China)* Shanghai, 1982, pp. 247-249.

			<p>served as compradors of Sassoon & Co. for a total of 35 years.</p> <p>During his term with Sassoon, he introduced his nephew Xi Zhen-fu to the HSBC comprador office.</p> <p>Was also a partner in several <i>qian-zhuang</i>.</p>
	The 1 st House		
	Xi Su-xuan (Xi Jin-yun)	Eldest son of Xi Yuan-le	<p>Trained in pawnshops in Suzhou and Zhejiang during his early years.</p> <p>Worked in Shanghai <i>qian-zhuang</i> from 1853 onwards.</p> <p>Joined the National Bank of China in 1858.</p> <p>Entered the Old Sassoon & Co. in 1859.</p> <p>Worked for Standard & Chartered Bank from 1860, rising to the position of comprador.</p>
	Xi Yu-kang (Xi Xi-fan)	Eldest son of Xi Su-xuan	<p>Trained in the Chong-de Qian-zhung during his early years.</p> <p>Joined the comprador's office of Standard & Chartered Bank in 1879, and was subsequently promoted to Deputy Comprador.</p> <p>Served as Standard & Chartered Bank's comprador from 1896 to 1906.</p> <p>Succeeded his uncle Xi Jin-hua as Russo-</p>

			<p>Asiatic Bank's comprador from 1907 to 1925.</p> <p>Became the comprador of the Industrial and Commercial Bank of China-France (Banque Franco-Chinoise pour le Commerce et l'Industrie) in 1925.</p>
Xi De-jun (Xi Song-ping)	Eldest son of Xi Yu-kang		<p>Worked for Standard & Chartered Bank and Russo-Asiatic Bank in his early years. Joined Bank of China afterwards.</p>
Xi De-yuan (Xi Han-sen)	Second son of Xi Yu-kang		<p>Served as comprador of the Industrial and Commercial Bank of China-France from 1938 to 1948.</p> <p>Subsequently became the comprador of a Swiss shipping company.</p>
Xi De-lu (Xi Ji-qun)	Son of Xi Yu-kang		<p>Deputy comprador of the United States Thriftcor Bank's Shanghai Branch.</p>
Xi Yu-zhao	Second son of Xi Su-xuan		<p>Trained in the Yuan-li Qian-Zhuang</p>
Xi De-chuan (Xi Run-shen)	Son of Xi Yu-zhao		<p>Trained in the Qing-xian Qian-zhuang from the age of 13, and was subsequently promoted to become its manager.</p> <p>Partner of the Xin-he Qian-zhuang (in which his son, Xi Yu-zhen (Xi Xing-nan), also worked).</p>

	Hu Di-lan	Brother-in-law of Xi Xi-fan	Nephew of Shen Er-yuan's wife and a native of Jixi County in Huizhou. Served as the comprador of HBSC Shanghai Branch's Hongkou Office.
	Hu Ji-mei	Xi Xi-fan's relative in-law and a cousin of Hu Di-lan	Russo-Asiatic Bank's comprador from 1897 to 1901. Also served as comprador of the Belgian Bank and British Mercantile Bank.
	Hu Yun-lai	Eldest son of Hu Ji-mei	Comprador of the Japanese Mitsubishi Bank.
	Hu Yun-qiu	Second son of Hu Ji-mei and son-in-law of Xi Xi-fan	Succeeded his father as the Belgian Bank's comprador
	Hu Yun-zhuang	Youngest son of Hu Ji-mei	The Deutsch-Asiatische Bank's comprador.
	Ye Zhen-ming	Son-in-law of Feng Yu-kang	A member of the Huizhou Dongtingshan Ye clan. Comprador of Industrial and Commercial Bank of China-France from 1925 to 1938.
	The 2 nd House		
	Xi Su-gui (Xi Jin-liang Xi Zheng-fu)		Began his career in the Shanghai <i>qian-zhuang</i> . Served as the HSBC Shanghai Branch's comprador from 1874 to 1904.

			Established the Xie-sheng Qian-Zhuang with Yan Lan-qing in 1887.
	Xi Yu-cheng (Xi Li-gong)	Eldest son of Xi Zheng-fu	Succeeded his father as the HSBC Shanghai Branch's comprador from 1904 to 1923. Opened the Jiu-yuan Qiang-zhuang with Yan Chan-xian and Wan Mei-feng in 1904. Established the Zheng-da Qian-zhung as one of its partners in 1906. Set up the Yu-xiang Qiang-guang with Yan Chan-xian in 1908.
	Xi De-rui (Xi Lu-seng)	Son of Xi Yu-cheng	Succeeded his father as the HSBC Shanghai Branch's comprador from 1923 to 1937.
	Xi Yu-kun (Xi You-yu)	Second son of Xi Zheng-fu	Operated <i>qian-zhuang</i> in his earlier years. Served as Associate Manager of the Yingkou Ta Ching Government Bank from 1908 to 1911. Opened the Bao-da-yu Qian-zhuang with Xu Xiao-xia, Lu Jia-sun and Shen Xing-su in 1925.
	Xi De-xun (Xi Bo-yu)	Eldest son of Xi Yu-kun	Deputy comprador of American Express Co.
	Xi De-yiao (Xi Ji-ming)	Youngest son of Xi Yi-kun	Worked as a manager at the Shanghai Hui-feng Qian-zhuang, which was owned by his

			<p>father-in-law, Sun Zhi-zhai, a tycoon from Changshu in Jiangsu Province who acted as Wang Xian-chen's partner in the Rong-kang and Hui-chang Qian-zhuang.</p> <p>A member of the Executive Committee of the Shanghai Guild of Qian-zhuang from 1933 onwards.</p>
	Xi Yu-guang (Xi De-hui)	The third son of Xi Zheng-fu	<p>Comprador of the Cathay Trust Ltd. Associate Manager of the Ta Ching Government Bank.</p>
	Xi De-mou (Xi Jian-hou)	The eldest son of Xi Yu-guang	<p>Became comprador of the Italian Bank for China in Shanghai in 1925.</p> <p>Appointed Undersecretary of the Issuance Bureau of Chinese Central Bank in Shanghai in 1928.</p> <p>Appointed Managing Director of the Exchange Bureau of Central Bank and a member of the Foreign Exchange Authority Committee and the Central Bank Management Council in 1932.</p> <p>Became China's Representative at the United Nations International Monetary Fund and International Bank for Reconstruction and Development in 1946.</p> <p>Appointed General Manager of the Bank of</p>

			China in 1948
	Xi De-bing (Xi Bin-ru)	Son of Xi Yu-guang	Head of the Central Mint of China in Shanghai.
	Xi Yu-mei (Xi Yun-ru)	Fourth son of Xi Zheng-fu	Comprador of a British firm in Shanghai
	Xi Yu-kui (Xi Ju-xing)	Fifth son of Xi Zheng-fu	<p>Became Manager of the Hankou Ta Ching Government Bank in 1906.</p> <p>Appointed Deputy Comprador of HSBC's Shanghai Branch in 1907.</p> <p>Served as the Japanese Sumitomo Bank's comprador from 1916 to 1931.</p> <p>Succeeded his uncle Xi Jin-hua as Mercantile Bank's comprador from 1931 to 1938.</p> <p>Formed the Shen-yi (De-ji) Qian-Zhuang with Xu Mei-quan, Sun Ji-fu, Wu Bo-ji and Gu Li-san in 1922.</p>
	Xu Chun-rong	Father-in-law of Xi De-hui	<p>Born in Huzhou, Ningpo.</p> <p>Became comprador of the British Reiss & Co. in 1850.</p> <p>Established a number of successful <i>qian-zhuang</i>, namely, Fu-feng, Ding-feng, Tong-yu and Tong-yuan.</p> <p>Also operated a number of others in partnership with his relatives-in-law, the Ye</p>

			<p>Cheng-zhong comprador group from Zhenhai, including, Yu-da, Rui-da, Zhi-da and Cheng-da.</p> <p>Managed several more <i>qian-zhuang</i> in which he was a partner, including Hong-da, Zheng-da <i>qian-zhuang</i> and Yang Qing-he Fu-ji Yin-lou.</p> <p>Served as first comprador of the Deutsche Asiatische Bank and National City Bank of New York from 1889 to 1910.</p>
	Xu Pin-nan	Son of Xu Chun-rong	Comprador of National City Bank of New York.
	Xu Xing-chuan	Son of Xu Chun-rong	Comprador of Deutsche Asiatische Bank.
	Xu Cheng-ji	Grandson of Xu Chun-rong	<p>Comprador of the United States Park-Union Foreign Banking Corporation.</p> <p>Comprador of American Express Co. from 1927.</p>
	The 3 rd House		
	Xi Su-rong (Xi Jun-hua)	Third son of Xi Yuan-le	<p>Began his career in the Shanghai <i>qian-zhuang</i>.</p> <p>Subsequently worked in the comprador's office at HSBC's Shanghai branch.</p> <p>Became British Mercantile Bank's comprador in 1889.</p>

			Served as Russo-Asiatic Bank's comprador from 1903 to 1906.
	Ye Ming-zhai	Son-in-law of Xi Su-rong	A native of Dongting Dongshan. Served as the Japanese Yokohama Specie Bank's comprador from 1893 to 1918.
	The 4 th House		
	Xi Su-heng (Xi Jin-yan)	Fourth son of Xi Yuan-le	Adopted by Shen Er-yuan as his son, and renamed Shen Ji-cheng. Succeeded Shen as comprador at E.D. Sassoon and Co.
	Shen Zi-hua (Shen Zeng-rong)	Son of Shen Ji-cheng	Succeeded his father as comprador at E.D. Sassoon & Co. Succeeded his uncle Xi Jun-hua as comprador at Russo-Asiatic Bank.
	Wang Ren-rong (Wang Xian-chen)	Son-in-law of Shen Ji-cheng Brother-in-law of Xi Yu-kun	Served as shroff of E.D. Sassoon & Co. from 1888. Appointed deputy comprador of National Bank of China from 1896 to 1897. Served as deputy comprador of E.D. Sassoon & Co. from 1906 to 1931 Succeeded Xi Xi-fan as Standard & Chartered Bank's comprador.
	Wang Ren-sen (Wang Jun-chen)	Younger brother of Wang Xian-chen	Comprador of National City Bank of New York from 1919 to 1932. His second son subsequently became the

			Bank's deputy comprador.
	Wang Su-lin	Son of Wang Xian-chen	Succeeded his father as Standard & Chartered Bank's comprador.
	Huang Zhen-zhi	Son-in-law of Xi Su-heng	A native in Huzhou who began his career in <i>qian-zhuang</i> . Acted as the deputy of Xi Jin-hua, the Russo-Asiatic Bank's comprador, from 1903 to 1907.

As shown above, the Suzhou Dongtingshan clans – namely the Xi, Shen, Wang and Ye families – formed the core of Xi Zeng-fu's comprador clique. Furthermore, the Suzhou comprador families were associated with the Huizhou Hui clan and the Xu and Huang clans from Huzhou. Between them, they controlled the comprador offices of 17 foreign banks between the 1870s and the 1940s. These were HSBC, Standard & Chartered Bank, Mercantile Bank, Cathay Trust, National Bank of China, National City Bank of New York, American Express, Yokohama Specie Bank, Sumitomo Bank, Mitsubishi Bank, Deutsch-Asiatische Bank, Belgian Bank, Russo-Asiatic Bank, Industrial and Commercial Bank for France-China, and Italian Bank for China.

Moreover, the Xi family and their relatives held senior positions in a number of Chinese banks, including the Ta Ching Government Bank in Shanghai, Yingkou and Hankou; the Beijing and Shanghai Branches of the Central Bank of China; and the Central Mint of China in Shanghai. In addition, they and their in-

laws managed the comprador offices of a number of foreign firms engaged in other major industries, such as shipping and international trade.

On the other hand, the Su-Zhe comprador clique operated more than 20 *qian-zhuang* and *yin-lou* during the late 19th Century and the first half of the 20th Century. These were Chong-de, Yuan-li, Qing-han, Xin-he, Xie-sheng, Jiu-yuan, Zheng-da, Bao-da-yu, Hui-feng, Rong-kang, Hui-chang, Sheng-yi (De-ji), Fu-feng, Ding-feng, Tong-yu, Tong-yuan, Yu-da, Rui-da, Zhi-da, Cheng-da, Hong-da, Zheng-da, and Yang Qing-he Fu-ji Yin-lou. Between them, these *qian-zhuang* and *yin-lou* formed a vast local financial network in Shanghai and its environs. They also strongly supported the partnerships between the Su-Zhe compradors and foreign banks. Local staff members of foreign banks who lacked access to the Su-Zhe *qian-zhuang* clique's network had to struggle hard to overcome its stranglehold on the banking sector and avoid being marginalised in their work.

3.3. The Operations and Successions of the Su-Zhe Comprador Clique

Unlike the early 20th Century generation of compradors, the Suzhou Xi and Huzhou Xu families had been involved in operating *qian-zhuang* long before their associations with Western banks. During the Jia-qing and Dao-guang years, before Shanghai's emergence, the ancestors of both of Xi Zeng-fu's parents were already participating in the local *qian-zhuang* and pawn businesses. Many young males in the Xi clan trained in *qian-zhuang* or related undertakings. After gaining sufficient specialised knowledge, experience and connections, they were

supported by their family-run *qian-zhuang* as they set out to build relationships with foreign banks or companies.

As far as the succession mechanism was concerned, the Xi family compradors were usually succeeded in their positions by their sons, brothers, nephews and sons-in-law. In some circumstances, posts might be transferred between families who were closely tied by marriage. For instance, the comprador's office in the HSBC Shanghai Branch was controlled for seven decades by Xi Zheng-fu and Xi Li-gong and his firstborn. Xi Xi-fan inherited his father Xi Su-xuan's position at Standard & Chartered Bank. Xu Chun-rong passed on his positions at City Bank and Deutsch-Asiatische Bank to his two sons.

Successions involving uncles and nephews, fathers-in-law and sons-in-law or two different families were also not uncommon. For example, Xi Yu-kang took over his uncle Xi Su-rong's position at the Russo-Asiatic Bank, while Xi Yu-kang's compradorship with Standard & Chartered Bank was passed on to his brother-in-law, Wang Xian-chen. His compradorship with the French Industrial and Commercial Bank was inherited by his son Xi Han-sheng and son-in-law Ye Zhen-ming sequentially. Shen Zi-hua succeeded his uncle Xi Su-rong as comprador at Russo-Asiatic Bank. In summary, by kinship and affinity, the Xi family effectively built and consolidated its domination over the comprador offices of foreign banks and firms. Only the Hotung family in Hong Kong was able to execute succession planning on a similar scale.

Moreover, the families of the clique's members provided them with the financial guarantees they needed in order to take up their positions. When Xi Zheng-fu died, his position at HSBC was taken up by his eldest son, Xi Li-gong, with his siblings' support. The entire family of Hu Ji-mei supported the inheritance of his position as Mitsubishi Bank's comprador by his eldest son, Hu Yun-lai. Shen Zhi-hua offered Xi Xi-fan the balance he needed when was unable to provide adequate financial guarantees to become Standard & Chartered Bank's comprador.

In addition, the Xi, Shen and Wang families lobbied foreign managers to obtain positions as compradors for their members. For instance, Shen Ji-chen lobbied the British managers of Standard & Chartered Bank on behalf of Wang Xian-chen when the latter sought to succeed Xi Xi-fan as its comprador. In another case, when Shen Zhi-hua learned the Russians intended to remove their comprador Xi Jin-hua, he suggested that Xi transfer his position to Xi Xi-fan. This kind of lobbying and networking was a vital aspect of the careers of the Su-Zhe clique's compradors.

The Xi, Wang, Hu and Xu families intentionally reinforced their family ties by marriage. The wife of Shen Er-yuan was the aunt of Hu Di-lan and Hu Ji-mei. Therefore, the Huizhou Hu clan was linked with the Shen and Xi clans of Suzhou Dongtingshan. Xi Xi-fan and Hu Di-lan married the daughters of Gu Song-chuan (1857-1926).⁶⁴ The Xi and Hu families enhanced their relationship through their affinities with the Gu sisters. Afterwards, Xi Xi-fan's daughter was

⁶⁴ On July 9th 1888, Gu Song-chuan founded the Great China Dispensary in Shanghai – China's first pharmacy.

married to Hu Ji-mei's second son, Hu Yun-qiu. Shen Ji-cheng, the fourth son of Xi Yuan-le, was adopted by Shen Er-yuan, and he betrothed his daughter to Wang Xian-chen. Meanwhile, Wang's sister married Xi Yu-kun. As a result of these intermarriages, the descendents of Xi Yuan-le, Shen Er-yuan and the Hu clan became increasingly related. The bonding between *qian-zhuang* families did not grow diluted as the lineage expanded down the generations. In fact, the clique's members were often related on both their paternal and maternal sides.

Obviously, the Xi clan's kindred and geographical associations formed the heart of the socio-economic network of Shanghai compradors right up to the mid 20th Century, especially during the years prior to the 1920s. This structure strongly reinforced the links between the Western banking community and the local financial network. The Xi clan's development and its domination of the compradors' offices depended entirely on its hereditary connections with *qian-zhuang* families. However, the advantages created by this kind of kinship and affinity sometimes limited the career options of Su-Zhe clique members. On the other hand, if a staff member of a comprador's office wished to advance his career, but lacked this kind of valuable support from his family and local financial network, he would need to work hard to break through the formidable socio-economic barriers that existed in Shanghai's Western banking sector. Wu Jim-pah was a rare example of someone who succeeded in this endeavour.

Chapter 4

The HSBC Tianjin Branch and Kaiping Railway Company

Taking the *qian-zhuang* clan as an example, the previous Chapter illustrated how the Suzhou merchant group was transformed into a network of compradors, thus revealing developments in Shanghai's social, commercial and financial spheres during the 1870s. First, the relationships between the Su-Zhe *qian-zhuang* clan and European banks changed the latter's operating mode and the source of its profits; while the local socio-economic network became integrated with the international financial system, with each supporting the expansion of the other. Second, during the 1870s, the Su-Zhe *qian-zhuang* clan increasingly influenced and dominated the comprador offices of Western banks; a trend that peaked at the turn of the centuries. Often, those who were not members of this clan were unable to compete fairly to become a comprador in Shanghai.

The second part of the thesis, consisting of Chapters 4, 5, 6 and 7, attempts to analyse Wu Jim-pah's contributions to the HSBC Tianjin Branch and Li Hong-zhang's modernisation projects in North China. It illustrates the distinctive roles of HSBC and its comprador in China's first attempt to develop a railway network, and the financing problems experienced by industrial enterprises during the era of the Self-Strengthening Movement. The disadvantages of the existing financing platform and banking system paved the way for Wu and HSBC's business in Late Qing China. Conversely, prevailing conditions limited the effectiveness of China's early economic reforms.

4.1. Wu Jim-pah Goes North to Tianjin

In 1880, shortly after he arrived in Tianjin, D.H. Mackintosh, the Manager of HSBC, and Arthur Davenport (1866-1916), the British Consul in Tianjin, introduced Wu to Li Hong-zhang (1823-1901). Li then held the posts of Zhili Viceroy and Bei-yang Tong-shang Minister, and he was in charge of the administration and defence of Tianjin and its surroundings. More importantly, he was the major promoter of modernisation projects in North China. The government supervision and merchant management (*Guan-du Shang-ban*) enterprises also came directly under his control. Therefore, any foreign bank or firm that wished to open up for business in Tianjin needed to establish a relationship with him. During their meeting, the Viceroy gave Wu a warm welcome. He was glad that a fellow-countryman from Anhui Province was going to manage the new HSBC comprador's office in Tianjin.

In fact, Li's Huai Army clique, which was playing a major role in the expansion and modernisation of China's military, was mainly controlled by bureaucrats and generals from Anhui. As far as industrialisation and economic development were concerned, Li relied more on compradors and merchants who had originated in Guangdong Province.

Besides being the Viceroy's fellow-countryman, Wu was a merchant who had strong connections with the British, an unusual combination in Li's camp. As a result, Wu was quickly accepted by Li and the Reform Faction, and he made notable contributions to the Huai Army's modernisation and to the expansion of

the North China railway network. Drawing on his knowledge of and associations with the Western banking system, Wu's activities in the Self-Strengthening Movement definitely did not disappoint Li.

As Frank King states, HSBC's expansion in North China was a result of the rapid growth of Tianjin's port during the 1870s. After the city opened up to the outside world in 1860, Tianjin's international trade with Japan and the West greatly strengthened its role as a logistical hub in North China. However, the Bank's main consideration was its strategic relationship with Beijing, the Chinese Empire's capital. Due to its special political status, Beijing never became a treaty port.⁶⁵ As the first foreign bank to set up in Tianjin, HSBC attempted to use the city as a bridgehead for creating commercial links with China's central government,⁶⁶ and its association with Li enabled it to compete for financing mandates related to industrial projects.⁶⁷

Mackintosh may not have realised that Wu and the Zhili Viceroy came from the same area when he transferred him to the Tianjin Branch. Nevertheless, the British merchants and bankers definitely understood the importance of kinship in the establishment of political-economic ties in Late Qing China. Moreover, Li's acceptance of Wu gave HSBC's development in North China a decisive impetus. Mackintosh's appointment placed Wu in charge of its dealings with Li and the

⁶⁵ Frank King, *The History of the Hongkong and Shanghai Banking Corporation vol. 1* (Cambridge: 1984), pp. 322, 510.

⁶⁶ Ibid, p 395.

⁶⁷ Ibid, pp. 501-502. J.J. Keswick to Irving, 18th November 1885, based on information from J.G. Dunn's letter in Jardine Matheson's Archives. Edward Le Fevour, *Western Enterprise in Late Ch'ing China* (Harvard: Harvard University Press, 1968) pp. 94, 97, 138, 140, 194. Stanley Chapman, *Merchant Enterprise in Britain - From the Industrial Revolution to World War I* (Cambridge: CUP, 2004) p. 238.

Chinese Government. During the closing decades of the 19th Century, HSBC, Wu and Li all embarked on a new chapter in their respective missions.⁶⁸

Generally speaking, the HSBC Tianjin Branch was more interested in providing financial support for long-term industrial development projects, particularly railway construction in China, rather than financing existing war or relief funds.⁶⁹ During the decades that followed, Wu developed a variety of commercial and industrial businesses in the city. These included Tianjin's first and most important armaments factories and the establishment of public utilities in the British Concession. HSBC's unique and powerful position in Tianjin's economic development and the Bank's support for the extension of the North China railway network placed Wu in an advantageous position to enlarge his wealth and political networks during his time there.

Firstly, he received an enormous amount in commission for railway loans and fundraising arrangements from both HSBC and its Chinese partners. During his stints with HSBC and the Chinese railway authorities from 1882 to 1904, Wu's annual income ranged from 200,000 to 400,000 taels.⁷⁰ Wu and his sons used his earnings from railway development and related businesses to make significant investments in a variety of modern industries and enterprises.

⁶⁸ Wu Huan-zhi, *Guang-yu Wo-fu Wu Tiao-qing Shi-ji De Hui-yi* (A Memoir of My Father Wu Jim-pah) p. 229.

⁶⁹ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 1 (Cambridge: 1984), p. 523.

⁷⁰ Huang Yi-feng, Jiang Duo, Tang Chuan-si, Chen Yi, *Jiu-zhong-guo De Mei-ban Jie-ji* (The Comprador Class in Old China) Shanghai, 1982, p. 15.

Secondly, during the process of railway development, Wu strengthened his connections with British financial and technology providers. Those special ties with foreign sources of money and technical support further reinforced the dependence of the Chinese reformers on him. During the 1880s and 1890s, prior to the Hundred Days reform, Wu expanded his participation and influence in China's earliest economic reforms with support from senior officials in the Qing Government, namely, Li, Wang Wen-shao (1830-1908) and Hu Yu-fen (1840-1906). Ultimately, Wu was able to play a unique role in both Tianjin's commercial circles and the history of China's early modernisation. By transforming himself from a rapidly rising comprador into a bureaucrat capitalist, Wu epitomised the evolution and transformation of Huizhou's merchant class.

4.2. Founding the Kaiping Tramway – China's First Colliery Railway

Li Hong-zhang had launched some ambitious industrialisation projects on the eve of Wu Jim-pah's relocation to Tianjin. They included shipping, coal mining, the development of railways and the formation of the New Army in the Tianjin-Tanggu area. At the turn of the 1860s and 1870s, the China Merchants' Steam Navigation Company and Bei-yang Arsenal were established in Shanghai and Tianjin, respectively. These two enterprises could be regarded as China's first industrialisation pilot projects. Shortly after their establishment, Li and his followers recognised the importance of coal as an indispensable fuel for all mechanised industries.⁷¹

⁷¹ H. Stringer, *The Chinese Railway System* (Shanghai: 1922) p. 2.

Between 1871 and 1880, China imported 81,500 tonnes of coal. In 1880, the year when the Bei-yang Navy was established, Tianjin imported 19,402 tonnes of it. The cost of imported coal had a big influence on the pace of China's industrialisation. Coal from Japan was the cheapest at 6 taels per tonne, whereas British coal cost 8 taels.⁷² China did not become self-sufficient in modern fuels until the late 1870s. This situation seriously hampered the Li camp's attempts to modernise and defend the country. Moreover, mining and transporting coal required a well-planned and constructed railway system. As H. Stringer, Resident Engineer of the Peking-Mukden Railway (formerly the Imperial Railway of North China) states, from the late 1870s onwards, the development of collieries and railways became the main focus of Li's modernisation projects.

Tianjin was the hub of China's first railway network, which was gradually expanded to cover other major North China cities and ports, including Beijing, Tangshan, Shanhaiguan, Yingkou and Fungtian.⁷³ By the beginning of the 21st Century, after more than 100 years of development, the Chinese railway system had extended to every county in the nation, equipping it with the world's biggest and most modern railway network. The provision of foreign loans for railway development in China also began in Tianjin. For instance, the Tianjin-Tangku line was financed by foreign lenders to the tune of 1,076,000 taels; the Tianjin-Shanhaiguan line received 1,530,000 taels; the Tianjin-Lugouqiao line, 1,540,000 taels; and the Tianjin-Tongzhou line, 134,500 taels – a grand total of around 4,280,000 taels.⁷⁴

⁷² *Tianjin Tong-Zhi Tie-lu Zhi (Complete Annals of Tianjin, Railways)* Tianjin, 1996, p. 41.

⁷³ H. Stringer, *The Chinese Railway System*, p. 2.

⁷⁴ Wang Zhi-zhong, *Zhong-Guo Tie-lu Wai-zhai Yian-jiu 1887-1911 (A Study of the Foreign Loans of the Chinese Railways, 1887-1911)* Beijing, 2003, p. 35. Percy Horace Braund Kent,

In the winter of 1876, on Li's instructions, Tang Ting-shu (1832-1892), the former Jardine Matheson comprador and Director-General of the Shanghai China Merchants' Steam Navigation Company, surveyed the coalmines at Tangshan, southwest of Kaiping Town in Zhili Province.⁷⁵ Within a few months, they were producing a considerable volume of coal, which became a decisive factor in the expansion of the Bei-yang administration's military and transportation enterprises.⁷⁶

In 1877, the prospectus of Tianjin's first joint-stock company, the Kaiping Colliery Company (later the Chinese Engineering and Mining Company), was published.⁷⁷ In the summer of 1878, Kaiping Colliery issued 8,000 shares for 100 taels each, raising 800,000 taels in capital. It officially launched production in 1881, and its output increased progressively during the following years. Tang Ting-shu commented at the time that "the colliery cannot become a success without railway transportation".⁷⁸

In fact, geographical constraints created a bottleneck in the colliery's development during the early 1880s. Coal from Tangshan could be moved from Lutai to Tianjin by sea, and the terrain between Lutai and Xugezhuang was fairly

Railway Enterprise in China: an Account of Its Origin and Development (London, 1907) Chapter V: The Kaiping Railway Administration and the China Railway Company.

⁷⁵ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* (London: Arnold, 1907) Chapter IV: The Kaiping Tramway.

⁷⁶ Zeng Kun-hua, *Zhong-guo Tie-lu Shi (The History of Railways in China)* Xin-hua, 1924.

⁷⁷ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter IV: The Kaiping Tramway.

⁷⁸ Tang Ting-shu, "Cha-kan Kai-ping Mei-tie Kuang-wu Bing Tiao-chen Qing-xing Jie-lue" in *Kai-ping Kuang-wu Zhao-shang Zhang-cheng (The Kaiping Colliery Stock Issuance Prospectus)* on the 29th Day of the 9th Month, the 2nd Year of the Guang-xu Era. pp. 3-8.

flat, which made it possible to construct a canal.⁷⁹ However, the topography between Xugezhuang and Tangshan was extremely rugged; so livestock or locomotives would be the only practical means of transport. Tang had already considered how its coal could be transported during his early surveys for the mine. In his estimation, moving it by oxcart or carriage from Tangshan to Lutai, and then on wooden barges to Tianjin via the Ji Canal would cost 4.7 taels per tonne. The transportation costs would rise to 6 taels per tonne if it was delivered to Shanghai, almost the same as the market price of imported coal.

Obviously, the combination of livestock and non-powered vessels to deliver the coal was totally uncompetitive. On the other hand, a railway between Tangshan and the mouth of the Ji Canal would significantly reduce freight costs. Transporting coal from Tangshan to Shanghai in this way would cost less than 4 taels per tonne. More importantly, the China Merchants' Steam Navigation Company's fleet could be used to ship the coal to Shanghai. At that time, they were delivering rice from Shanghai to Tianjin, and returning empty.⁸⁰

In fact, the birthplace of industrialisation, Northern England, had also established a "colliery-railway-industry" system. This constituted a modern economic model from which the rest of the world could learn. The Steam Navigation Company in Shanghai and the Arsenal in Tianjin both depended on coal, while the Kaiping Colliery needed an efficient way to produce and distribute it for industrial purposes. In 1879, the Kaiping Colliery Bureau submitted a proposal for a self-funded railway. Li had been one of the earliest advocates of

⁷⁹ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter IV: The Kaiping Tramway.

⁸⁰ *Tianjin Tong-Zhi Tie-lu Zhi (Complete Annals of Tianjin, Railways)* p. 41.

railways in China. Shortly after the Taiping Rebellion, he proposed building a coastal railway, but his plan was turned down by the Qing Court.⁸¹ He clearly appreciated the pivotal role railway construction could play in his industrialisation projects, and he threw his support behind Tang's plan.

Tang instructed R.R. Burnett, a French engineer working at the Kaiping Colliery, and his English partner Claude W. Kinder (1852-1936) to design and construct a tramway.⁸² Connecting Tangshan and Xugezhuang, and 9.67 miles in length, the Kaiping Tramway commenced operations on June 9, 1881. The following year, Kinder reused discarded boilers, steam engines and wheels from mining machinery to build the "0-2-0" model locomotive, the first of its kind in China. Mrs Burnett christened it the "Rocket of China". Its traction power was about 100 tonnes.⁸³

The Kaiping Colliery imported two more locomotives from England during the same year.⁸⁴ The colliery was responsible for the entire cost of constructing and operating the tramway. Its construction costs amounted to about £3,000 per mile.⁸⁵ Since the colliery was a joint-stock company under the government supervision and merchant management system, the Kaiping Tramway was owned by Chinese merchants and operated by civilians for commercial purposes.

⁸¹ See "Cho-yi Hai-fang Zhe" (Memorial Concerning Coastal Defence) in the 13th Year of the Tong-zhi Era in the *Collection of Li Hong-zhang*.

⁸² *Jia-tong Shi Lu-zheng Bian (The Communication History of China-Railways)* vol. 1, pp. 11-12.

⁸³ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* (London: Arnold, 1907) Chapter IV: The Kaiping Tramway.

⁸⁴ *Tianjin Tong-Zhi Tie-lu Zhi (Complete Annals of Tianjin, Railways)* p. 41.

⁸⁵ *Tianjin Tong-Zhi Tie-lu Zhi (Complete Annals of Tianjin, Railways)* p.11.

The Kaiping Colliery produced 3,600 tonnes of coal during the same year, and its workforce grew to 3,000. The coal was used by the Bei-yang Navy, the Steam Navigation Company and the Tianjin Arsenal. Some of it was also sold in the local market, providing a considerable return for the company. Previously, Tianjin's bureaucrats and merchants had needed to import large quantities of coal from Europe and Japan in order to fuel industrial projects in North China. Burnett resigned from the company in 1883, and Kinder took over his post.

After the completion of the colliery and tramway, the local coal output was traded extensively in regional markets throughout the country. In 1883, Kaiping Colliery sold 8,503 tonnes of its production in the domestic markets. In 1886, the volume rose to 33,677 tonnes, a three-fold increase within three years. In the same period, the amount of coal Tianjin imported decreased dramatically from 9,728 tonnes to only 301 tonnes.

The Kaiping Tramway was constructed using lightweight rails weighing 30 pounds per yard. Kinder firmly believed it would one day become part of a mega-railway network spanning China. So, when the time came to extend the Tramway, he strongly opposed using a two-and-a-half-foot narrow gauge or the Japanese three-foot-six-inch gauge for the extension. His argument prevailed and the English four-foot-eight-and-a-half-inch standard gauge was adopted instead. Kinder's decision ultimately laid the foundation and set the standard for the subsequent development of railways in China.⁸⁶ After more than a century of

⁸⁶ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter IV: The Kaiping Tramway.

growth using Kinder's standard gauge, China now operates the world's largest high-speed railway network and exports its expertise globally.

The construction or extension of railways in East Asia countries has never been a purely economic matter since the 19th Century. It has always involved political and security considerations. However, after more than a century, the English gauge has prevailed over those of Russia, France and Japan to become the industry standard.

In fact, Kinder was criticised for many years for introducing his country's standard gauge. He was accused of doing so in order to advance British business interests. However, he did not pay too much attention to the shortage of funds during the construction of the Kaiping Tramway, and instead he insisted on using the broader and more popular gauge for China's first railway. Frankly speaking, the adoption of the English standard gauge has put China at the centre of the pan-Asia railway industry. The contributions of Kinder and other Western engineers to China's strategic development should never be overlooked.

4.3. The 1884 Sino-French War and the Extension of the Kaiping Tramway

Shortly after the Kaiping Tramway became operational, the bureaucrats in Beijing started to complain that its trains were causing turbulence and disturbing the calmness of the Eastern Mausoleums. Furthermore, "the locomotives eject dark smut that damages the crops". Consequently, the Qing Court closed down the

Kaiping Tramway for a while.⁸⁷ However, the security threat that it faced from the Western powers and its rudimentary technological level ultimately forced the government to accept the industrialisation projects of Li Hong-zhang and his administration in Tianjin.⁸⁸

In fact, however distasteful it may have been to them, the Qing Court eventually had to concede that the New Army's formation, the construction of fortresses along the coastal areas, the introduction of modern transportation methods and fuels, and integrated military, technological and economic reforms were all inescapable aspects of progress. Against this backdrop, the colliery and railway enterprises were able to expand their operations and increase their funding gradually from the mid-1880s onwards. On the other hand, while the introduction of coal and railways gave China's early modernisation a strong boost, the inept financial and banking system severely hampered the progress of enterprises related to them in the Late Qing Period.

In December 1883, French attempts to establish colonies in Indo-China led to the outbreak of the Sino-French War. By August 1884, the fighting had spread from China's southwestern borders to its southeastern coast. The French attacked Fujian and Zhejiang provinces and destroyed the Mawei Arsenal and Fujian Fleet. On Taiwan, the port of Jilong and the Pescadores fell to the French Army as well. Liu Ming-chuan (1836-1896), the Taiwan Viceroy and a member of the Huai Army, was trapped in Taipei as his forces ran short of ammunitions and supplies.

⁸⁷ *Tianjin Tong-Zhi Tie-lu Zhi (Complete Annals of Tianjin, Railways)* pp. 11-12.

⁸⁸ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

To save Liu's Army on Taiwan, Li Hong-zhang ordered the Tianjin Salt Department to bring forward the salt tax to raise funds to buy firearms. Also, on behalf of the Huai Army, Wu Jim-pah leased six steamships from foreign firms in Tianjin (including Jardine Matheson) to transport arms and other supplies to Taiwan. This resulted in the rescue of Liu and his troops.

After the Sino-French War, the Qing Court agreed to reinforce the country's coastal and maritime defences. Yi-huan (1840-1891) Prince Chun of the royal family and the father of Emperor Guang-xu (1871-1908) acted as the founding director of the new Board of Admiralty.⁸⁹ Li Hong-zhang and Zeng Ji-ze (1839-1900) were appointed as his assistants. Zeng had previously served as an envoy of the Qing Dynasty to the Western powers for eight years; and his direct contact and experience of modern Western economic and military power had cemented his belief in the development of railways.⁹⁰

Due to the association between naval construction and the transportation infrastructure's development, railway affairs were also placed under Prince Chun's administration. At the turn of the 1880s and 90s, the political-military leaders in the reform camp, including Li Hong-zhang, Zuo Zhong-tang, Zeng Ji-ze and Xue Fu-cheng, all advocated extending the railway network in southern and northern China, so as to link the inland munitions factories and coastal defence

⁸⁹ Arthur Lewis Rosenbaum, *China's First Railway: The Imperial Railways of North China, 1880-1911* (Yale, Ph.D. 1972) p. 51.

⁹⁰ Correspondence from Yi-huan on the 9th Day of the 4th Month, the 15th Year of the Guang-xu Era, p. 16; Correspondence from Yi-huan on the 16th Day of the 4th Month, the 15th Year of the Guang-xu Era, p. 18; Correspondence from Yi-huan on the 17th Day of the 4th Month, the 15th Year of the Guang-xu Era, p. 18; Correspondence for Yi-huan on the 2nd Day of the 4th Month, the 15th Year of the Guang-xu Era, pp. 28-31; Memorial of Yi-huan on Naval Affairs dated the 1st Day of the 8th Month, the 15th Year of the Guang-xu Era, pp. 257-261, all quoted in *Zhong-guo Jin-dai Shi Ji-liao Chong-kan, Yan-wu Yun-dong* 6 (*Historical Materials of Modern Chinese History, The Self Strengthening Movement* 6) Shanghai, 1961.

zones. In view of this, the Qing Court finally approved the Kaiping Tramway's extension.

In August 1886, Kaiping Colliery submitted an application for the Tramway to be extended, pointing out that the existing facilities were unable to support the increasing volume of coal that it produced. The tramway was less than 10 miles long, far too short to reach Tianjin directly. The coal therefore had to be transported via canal from the Kaiping Tramway's terminal to Tianjin. Moreover, the colliery management said the canal's depth was insufficient for the cargo barges to use it during the spring and autumn. It also silted up frequently, delaying the coal's delivery.⁹¹ As a result, the military and merchants were unable to stock their fleets with fuel on time.⁹²

The Kaiping Colliery requested permission to extend the railroad from Xugezhuang to Yianzhuang in Lutai. In November 1886, Li Hong-zhang received the Court's approval and announced a stock offering for the colliery and its railway.⁹³ The initial fundraising target was around 250,000 taels, approximately £76,000. Half this amount would be used for the colliery's operations and expansion, while the rest would be invested in developing a more efficient railway network.

⁹¹ Claude Kinder, On Railways and Collieries in North China, *Minutes of Proceedings of the Institute of Civil Engineers* (vol.103 1891) pp. 286-287.

⁹² Kai-ping Kuang-wu-ju Shang-dong Qing Zhan-zhu Tie-lu Bing (An Application for the Railroad's Extension from the Mercantile Directors of the Kaiping Colliery) in *Shin Pao*, 26th Day of the 6th Month, the 12th Year of the Guang-xu Era (July 27th 1886).

⁹³ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

The railway company would be independent of the colliery in terms of its daily operations and finances.⁹⁴ Hence, the Kaiping Railway Company was China's first true railway enterprise. Wu Ting-fang (1842-1922) was appointed as its founding Director-General, Kinder worked as its Chief Engineer, and Kuang Sun-mo acted as his deputy.⁹⁵ To rationalise and consolidate the railway's management, the Kaiping Railway Company spent 100,000 taels, around £35,000 to acquire the Tangshan-Xugezhuang section.⁹⁶ In addition, the newly established Railway Company increased its equipment by importing one locomotive and 40 carriages from the United States.⁹⁷

The extension project commenced in 1886, and the company began to lay rails in November that year. The project was completed by May 1887, and the entire railroad, now 25 miles long, was renamed the Tangshan-Lutai line.

The Railway Company received remarkable returns on its investment within a year of the Tangshan-Lutai Railway's completion. In May 1887, when the extension had just been finished, its income from transporting passengers and freight amounted to 3,830 taels. Twelve months later, in April 1888, the amount reached 7,873 taels. The small Kaiping railway, China's first railroad project under the government supervision and merchant management system, had achieved steady progress during the first phase of its development.

⁹⁴ *Shun Pao* July 27th 1886. Claude Kinder, On Railways and Collieries in North China, *Minutes of Proceedings of the Institute of Civil Engineers* (vol.103 1891) pp. 288-289. Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development*, pp. 27-29.

⁹⁵ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

⁹⁶ Claude Kinder, On Railways and Collieries in North China, *Minutes of Proceedings of the Institute of Civil Engineers* (vol.103 1891) pp. 288-289. Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* pp. 27-29.

⁹⁷ *Jia-tong Shi Lu-zheng Bian (The Communication History of China - Railways)* vol. 1. pp. 11-12. PRO FO 228/855 Consul Brenan, 16 Dec 1887.

However, the uses and operations of North China's first railway system grew increasingly sophisticated, and it became overwhelmed by demand for the transportation of passengers, cargo, and military equipment and weaponry. Likewise, its funding requirements increased in tandem with its extension. As a result, more and more Chinese and Western interests became involved in its construction and operations. In the mid-1880s, when he advocated the Tangshan-Lutai Railway's extension to Tianjin, Li and his administration recognised that the city's tycoons did not find the project attractive. Financing therefore became a major hurdle for the railway's development during its earliest years.

In the spring of 1887, Li duplicated the experience of the Kaiping Colliery by launching a 100,000-tael stock offering for the Kaiping Railway Company. He also suggested that the capital raised in this way be used for the railway's development, so that it did not have to rely on government funding and foreign loans. In a letter to Prince Chun dated November 11, 1886, Li said he had taken the initiative to extend the railway as early as the autumn of 1885. The Viceroy also suggested that the railway company stock offering could serve as a model for future fundraising in the Tianjin financial market.⁹⁸

Li's vision was for the railway to be extended so that it linked Tianjin and the north shore of Dagu; and that it would serve the dual functions of transporting military and commercial freight.⁹⁹ However, Prince Chun placed more emphasis

⁹⁸ *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)* Hai-jun Han-gao (Correspondence on Naval Affairs) vol. 2, p.18.

⁹⁹ *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)* Yi-guan Han-gao (Correspondence on Foreign Affairs) vol. 18, p. 55.

on its military role.¹⁰⁰ As a result, the railroad's stated purpose of supporting the region's defence and its design made it more difficult to raise commercial funds in the local financial market, where investors were mainly concerned about its potential profitability.¹⁰¹ In view of this, Wu Jim-pah acted as an intermediary, bringing together the political, commercial, financial and diplomatic interests associated with the development of railways in North China. The extension of the Kaiping railway offered Wu and the HBSC Tianjin Branch more opportunities to provide financing for Late Qing China's strategic industrial projects.

4.4. The HBSC Tianjin Branch and the Kaiping Tramway Stock Issue

Meanwhile, Wu, as Li's fellow-countryman, had been accepted as a member of the inner circle of the Huai Army clique.¹⁰² Since the very beginning, he had served as Li's personal interpreter and advisor on banking affairs; and from the early 1880s onwards, he became a frequent visitor to the Viceroy's personal office. On Li's recommendation, Wu purchased the title of Zhili Dao-yuan. Subsequently, Li put him in charge of the Huai Army Treasury, which managed the income and expenditure of the Viceroy's armed forces and political assets.

In addition, Li respected Wu's expertise in financial matters and his links with foreign banks in Tianjin and Shanghai. Indeed, Wu helped to manage the Viceroy's personal financial affairs. Through Wu, Li deposited 1,500,000 taels in

¹⁰⁰ *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)* Hai-jun Han-gao (Correspondence on Naval Affairs) vol. 2, p. 25.

¹⁰¹ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

¹⁰² Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. II, pp. 304-305.

the HSBC Tianjin Branch. After Li's death, Wu handed over this amount to the Viceroy's eldest son, Li Jing-fang.

A British merchant named P. Heath established a firm called Heath & Co. in Davenport Road in the British Concession. This became one of Tianjin's biggest firearms dealers. On behalf of the Huai Army, Wu imported a number of machineguns via Heath & Co. Li tested them personally and he was satisfied with their performance. Wu was therefore encouraged to import more weaponry from the British dealer.

In 1887, the same year the Kaiping Railway Company launched its stock offering, Li supported Wu's appointment as Director-General of the Tianjin-Tangshan Governmental Railway General Bureau. During his time with the Bureau, Wu helped Tianjin HSBC to acquire a stock offering mandate for the railway. On the 4th of April that year, Kaiping Railway Company advertised its prospectus in the Shanghai *Shun Pao*. The HSBC Tianjin Branch was appointed as the company's banker, and prospective shareholders were invited to deposit funds for their subscriptions with the Bank's branches in various Treaty Ports.¹⁰³

At that time *piao-hao* bankers from Shanxi Province and the local salt merchants were the major sources of capital in Tianjin. These two groups of merchants were not interested in the Kaiping Company's stock, so the company could only raise 108,500 taels from those sources.¹⁰⁴ Together with a government

¹⁰³ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

¹⁰⁴ *Shun Pao* April 26th 1887.

subsidy, the most that the company was able to collect was 160,000 taels, which fell short of Li's target and was insufficient to develop the railway further.

However, Wu's relationship with Li prompted the HSBC Tianjin Branch to provide banking services for the development of China's railways for the first time. Together with their roles in the further development of other strategic industrial projects in China, this gave the Tianjin HSBC Branch and other British firms, merchants and technicians greater opportunities to become deeply involved in China's economy. Compared to its Hong Kong and Shanghai divisions, the Bank's Tianjin Branch occupied a more significant position and had stronger links with the Qing Government.

On the other hand, Prince Chun and Li had prioritised the sources of funding for railroad construction as (1) stock offerings, (2) government investments and (3) foreign loans. In fact, things turned out the exact opposite. From 1880 and the establishment of Tianjin HSBC through to the Early Republican Period, foreign loans formed the preeminent source of funding for China's railway development, because the proceeds of stock offerings and state financing were insufficient to support the various railway projects. This illustrates the lack of coordination that existed between government and business interests in China at that time. The absence of local financing sources and mechanisms left scope for Western Powers and their banks to get involved in China's railroad construction. and, without doubt, Tianjin HSBC and its comprador's office were the main beneficiaries of this process.

The results of the Kaiping Railway Company's stock offering disappointed Li, and the Viceroy had no choice but to seek financing from Westerners. Eventually, Jardine Matheson and a German bank won the contract to provide the amount that he needed. The former offered 637,000 taels and the latter offered 439,000 taels at an annual interest rate of 5%.¹⁰⁵

The financing of the Tianjin-Dagu line was the first example of foreign loans in China's railway development. They were offered on the basis of the Qing Government's credibility. The lenders did not ask for its reserves or the railway itself as collateral. The loan agreements did not weaken the Qing Dynasty's sovereignty. Moreover, the loans were provided for a nominal amount and with a reasonable interest rate. Their terms gave China's railway enterprises and economy a chance to develop healthily.

Once the financing problem had been resolved, work on the Tianjin-Dagu extension of the Kaiping Railway commenced in 1887 under the supervision of Shen Pao Jing and Zhou Fu. The project was carried out smoothly and completed in October 1888. Following a personal test run by Li, the *North China Herald* reported that:

On his return, however, he held up both his thumbs and was enthusiastic over this new mode of travelling. The country people have discovered its advantages, and send large quantities of vegetables to Tientsin, which return unheard-of prices. Live fish

¹⁰⁵ Correspondence for Yi-huan on Railway Development on the 2nd Day of the 4th Month, the 15th Year of the Guang-xu Era in *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)* Hai-jun Han-gao (Correspondence on Naval Affairs) vol. 3, pp. 28-31.

are brought up on the train from Taku to Tientsin, and the gentry and well-to-do people send their servants down to the station to meet the train, with basins of water in which they take away the fish alive out of the tank. And we learn that the camel drivers and other people engaged in the old means of transport, already see that the railway is not going to ruin them, but will, on the contrary, increase their business.¹⁰⁶

Meanwhile, four more locomotives with 70 tonnes of towing power were imported from England. The new railroad extension ran from Lutai to Tianjin's East Station, via Beitang, Tanggu, Xinhe and Junliangcheng – a total length of 48.6 miles. The Tanggu-Ludai line was renamed the Tianjin-Tanggu line.¹⁰⁷ From November that year, it operated two daily services between Tianjin and Kaiping. The 72-mile journey took three hours. In 1889, the railroad was extended by a further 2.5 miles, from Tianjin East Station to Dingzigu. This facilitated the transport of Chang-lu salt, a major product of the Tianjin region that was sold to consumers throughout the country.

For the first time, a railway line had begun serving one of China's major cities. Its functions had expanded from hauling coal to transporting travellers, the military and salt. Its target market had shifted from the colliery to the residents of Tianjin and its vicinity. The railway's commercialisation in this way could be regarded as a milestone achievement. A limited tramway that was originally built

¹⁰⁶ *North China Herald* November 2nd 1888 p. 495.

¹⁰⁷ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company. H. Stringer, *The Chinese Railway System* p. 2. *Consular Letters* vol. 3. No. 56, Smithers to Mives October 20th 1888.

to serve a specialised purpose had ultimately become integrated into North China's economic modernisation process. By the end of the 1880s, it was being operated by an enterprise that sought financial returns, and its non-economic benefits were also becoming increasingly obvious.

In the meantime, the railway company's administration was reorganised and its staff grew. As it had expanded way beyond Kaiping, its name was successively changed to the Jin-Gu Railway Company, the Tianjin Railway Company and the China Railway Company.¹⁰⁸ Its headquarters were located near Wang Hai Lou in the Hebei area of Tianjin.¹⁰⁹ At the turn of 1889 and 1890, Li Hong-zhang instructed the China Railway Company to extend the Tianjin-Tanggu line a further 8.3 miles to Guye in the east. Another 5.1-mile extension, from Guye to Linxi Colliery, was completed afterwards.¹¹⁰

As its 1889 official report shows, the China Railway Company received 120,000 taels in revenue, while operating expenses amounted to 108,000 taels and interest charges totalled 50,000 taels. In 1892, the British Consular Report for Tianjin recorded that the company's income had reached 235,651 taels, consisting of 90,000 taels from passenger fares plus a further 45,993 taels for transporting freight and 99,658 taels for coal.¹¹¹

¹⁰⁸ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

¹⁰⁹ *Shun Pao* on the 4th Day of the 4th Month, the 13th Year of the Guang-xu Era.

¹¹⁰ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company. Chapter VI: The Imperial Railway of North China and the Chinese Eastern Railway, 1890-1900.

¹¹¹ PRO UK FO 228/1126 Report of Port of Tientsin for 1892, pp. 4-5.

Wu was elected as Director-General of the China Railway Company in 1894. Soon after, he began a drastic shake up in the company. As the British Consul reported, Qing officials had been running it like a traditional government department, which had severely hampered its efficiency:

The office staff is all out of proportion to the business of the company. At the head office in Tientsin there are 100 clerks, most of them forced on the directors by importunate friends; and the stream of applicants keeps pace with the development of the line. Recently the directors have put a notice in the local Chinese paper stating there are no more vacancies; and while thanking those who have recommended so many efficient employees they announce that no more applications or recommendations can be taken into consideration.¹¹²

In addition, before Wu's accession, his predecessor Zhang Shi-yu had acquired several temporary loans from HSBC at a rate of 7%. During his term of office, Wu renegotiated these with the Bank and succeeded in bringing down the interest rate to 5.5%, which significantly decreased the company's fiscal burdens.¹¹³

¹¹² PRO UK FO 228/1126 Report on Trade of Tientsin for year 1892, p. 4.

Memorial of the Bei-yang Commissioner, the Zhili Viceroy Wang Wen-shao on the 5th Day of the 3rd Month, the 23rd Year of the Guang-xu Era in *Zhong-guo Di-yi Li-shi Dang-an-guan comp., Guang-xu Chao Zhu-pi Zhou-zhe (The Guang-xu Monarch's Imperial Instructions & Memorials)* vol. 102 Tie-lu (Railways) Beijing, 1995-1996, p. 788.

Chapter 5

The HSBC Tianjin Branch and Imperial Railways of North China

Tsarist Russia posed a major threat to the Qing Dynasty during the 1880s and 90s, in contrast to France, which was busily expanding its colonial empire and sphere of interest in Southeast Asia. Russia's exploitation of Siberia and its ambitions concerning Manchuria and Korea alarmed the Qing Court.¹¹⁴ Unlike the 1870s, when debates about the construction and use of railways raged among senior Qing officials, China's bureaucrats finally reached consensus about the relationship between national defence and railways in North China during the 1890s.

On the other hand, their emphasis on the railway system's defensive purposes created an obstacle for fundraising. This concept meant that the government and armed forces would be the major direct users of the railroads and their facilities. However, the incomes of both these parties became increasingly shaky towards the end of the 19th Century. By the turn of the 19th and 20th Centuries, the railway debates in China came to focus more on their ownership and management. There were disagreements about whether the government or private sector should be the dominant force in their development. Indeed, such arguments reflected the incompatibilities that existed between the military and commercial roles of the railroads.

5.1. Inadequate Government Investment in the Construction of the IRNC

¹¹⁴ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

In 1890, Russia began constructing the Siberian Railway to Vladivostok. Russia's railroad plans in East Asia would undoubtedly encircle China's northeastern provinces. To resist Russian expansionism and pressure on Manchuria and Korea, the Qing Court supported Li Hong-zhang's proposal to extend the railway to the northeast, via Shanhaiguan. On April 21, 1891, the Emperor announced the postponement of the construction of the Lugouqiao-Hankou line, which had been advocated by Zhang Zhi-dong, and instead launched the extension of the Guandong Railway (also known as the Imperial Railways of North China or IRNC).

More importantly, the Qing Court agreed to transfer the 2,000,000 taels originally earmarked for the Lu-Han Railway's annual subsidy to Li's project.¹¹⁵ The Reserve Ministry would be responsible for 1,200,000 taels of this, and 16 provinces – Zhili, Henan, Shaanxi, Shanxi, Szechuan, Shandong, Hubei, Hunan, Jiangning, Jiangsu, Anhui, Zhejiang, Jiangxi, Guangdong, Fujian and Taiwan – were each required to contribute 50,000 taels per year, a total of 800,000 taels, for the railway's extension.¹¹⁶

The proposed extension was to run from Guye to Jilin City via Shanghaiguan, Jinzhou and Shengjing (present-day Shenyang).¹¹⁷ The Bei-yang

¹¹⁵ Memorial of Yi-kuang & Li Hong-zhang on the Development of the Guandong Railway in the 3rd Month, the 17th Year of the Guang-xu Era in *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)*.

¹¹⁶ Memorial of Li Hong-zhang for the Preparation of the Guandong Railway on the 24th Day of the 5th Month, the 17th Year of the Guang-xu Era in *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)*.

¹¹⁷ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* (London, 1907) Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

Governmental Railway Bureau was established in Shanhaiguan with Li as its Supervising Director, Yu-lu as its Associate Director, and Kinder as Chief Engineer once again. Li nominated Wu Jim-pah as Director-General of the Tangshan-Shanhaiguan Governmental Railway General Bureau. In May 1891, construction of the government-owned Tangshan-Shanhaiguan Railway commenced.

The railway reached Shanhaiguan in 1893, and it was then extended to Zhonghosuo in Liaoning Province (present-day Xuzhong County), a span of 107 miles. Backed by the central and local governments, the Tangshan-Shanhaiguan Railway became China's first-ever state-owned railroad¹¹⁸, since the threat from the West and defence considerations had pressured the mercantile railway management to concede control over it to the government. Due to a shortage of funds and the Qing Government's complex politics, the state's investments were insufficient to support the long-term development of China's railway system. Even so, as Rosenbaum states in his Ph.D. thesis *China's First Railway: The Imperial Railways of North China, 1880-1911*:

Railway investment is characterized by the immobilization of large sums of capital which are likely to earn only modest rates of return. With the exception of Great Britain, every other nation has provided some form, of government assistance, such as tax incentives, land grants, guaranteed interest, direct government investment, or cash subsidies... In countries with a modern

¹¹⁸ H. Stringer, *The Chinese Railway System* (Shanghai: 1922) p.3.

banking system and abundant capital such as the United States and France, limited intervention by the government was sufficient to induce private investment. The situation was otherwise in China where capital was expensive and scarce... Modern firms such as the China Merchant's Steam Navigation Company and the Kaiping Mining Company found it necessary to offer inflated dividends of 10 percent to compete with the traditional sector and even then were only moderately successful.¹¹⁹

Moreover, using the example of the United States, Albert Fishlow points out the rationale for such policies:

What justifies such aid are technical characteristics of overhead capital – long gestation periods, durability, indivisibility – that add up to low private rates of return. Extensive external economies in turn mean great social profitability. So long as the social return exceeds private gain, and decisions are determined by the latter, insufficient investment is the inevitable result. Government recognition of the broader advantages can redress the balance.¹²⁰

On the other hand, China's serious trade and fiscal deficits meant the so-called state-owned railroads were actually subsidised by foreign loans that were underpinned by guarantees of China's credibility and national assets. The ultimate result was greater Western involvement in China's internal affairs. The Qing

¹¹⁹ Arthur Lewis Rosenbaum, *China's First Railway: The Imperial Railways of North China, 1880-1911* (Yale, Ph.D. 1972) p.61.

¹²⁰ Albert Fishlow, *American Railroads* p. 307.

Dynasty eventually lost control over its own modernisation agenda and the country's strategic development.

The difficulty and instability of state investments seriously delayed construction of the Guandong Railway. Up to the outbreak of the Sino-Japanese War, the railroad barely extended beyond Shanhaiguan and Zhonghousuo.¹²¹ The proposed funding for it between 1891 and 1895 was 10,000,000 taels, yet the Qing government only provided 6,000,000 taels, leaving a shortfall of 40%. The original plan was for the central government's Reserve Ministry to provide 1,200,000 taels a year, which meant Li's railway bureau should have received a total of 4,800,000 taels between 1891 and 1894. However, the funds for 1891 were delayed for two years, and the 1892 funding never materialised at all. The funding for 1893 and 1894 of 2,000,000 taels was instead spent on the 60th birthday celebrations of the Empress Dowager Cixi (1835-1908).

The shortfall of funds forced the suspension of the Guandong Railway's construction. The bureau's staff did not receive their salaries, so they abandoned the construction sites and returned to Tianjin until the end of the Empress's birthday celebrations.¹²² Afterwards, the railway's funding for 1895 was used to support the war against Japan. This re-allocation of funds directly led to the

¹²¹ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

¹²² *Shun Pao* March 22nd 1894.

suspension of the railway's extension at Zhonghousuo.¹²³ Li demanded compensation for the delay, and funds for the railway's construction.¹²⁴

The Viceroy argued that the Luan River Steel Bridge supervised by the British engineer A.G. Cox was the only piece of unfinished work¹²⁵ on the 66-mile section between Linxi Town in Zhili Province and Shanhaiguan. A temporary bridge was therefore built to carry the trains. Meanwhile, the bureau resumed work on the section south of Shanhaiguan. However, the crews working on the section from Shanhaiguan to Jinzhou encountered difficulties because the bureau had no funds to pay for materials, land and labour. Moreover, equipment that had been ordered from overseas had not yet arrived, although it was expected soon. In all, 1,000,000 taels was urgently required to complete the railway's construction.¹²⁶

The parlous financial situation rapidly deteriorated further just after the Guandong Railway's construction got underway. Li was unable to rely on the Chinese Government for funding, so he was left with no choice but to seek foreign loans. In a memorial dated December 6, 1898, Hu Yu-fun, the Supervising Director of the Tianjin-Shanhaiguan Railway Bureau, and Wu Jim-pah, the

¹²³ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of its Origin and Development* Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900. *North China Herald* June 2nd 1893, p. 785; June 16th 1893, p. 864.

¹²⁴ Memorial of Yi-kuang & Li Hong-zhang on the Development of the Guandong Railway in the 3rd Month, the 17th Year of the Guang-xu Era

¹²⁵ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

¹²⁶ Memorial of the Bei-yang Commissioner Li Hong-zhang on the 21st Date of the 1st Month, the 19th Year of the Guang-xu Era in *Hai-fang-dang (The Archives on Coastal Defence)* No. 84, Taipei, 1957.

Bureau's Director-General, requested 155,000 taels from HSBC to make up for the shortfall in government funding.

Moreover, six years before the outbreak of the Sino-Japanese War, Li had the idea of building a railroad between Tianjin and Beijing. In 1888, the Board of Admiralty accepted his proposal and submitted a memorial concerning the construction of a line from Tianjin to Tongzhou, a suburb of the Imperial Capital.¹²⁷ The Qing Court approved this proposal on November 30 of the same year. It authorised the China Railway Company to reach agreement with HSBC for a loan of £450,000 with an annual interest rate of 5%. This would be repaid out of the returns of the railway itself. However, a number of officials were opposed to any railway entering the Capital, and their opposition resulted in its construction being terminated. In the end, the Bureau had borrowed £134,500 for surveying works.

5.2. The 1894 Sino-Japanese War and the IRNC's Extension

As was the case with the Sino-French War 10 years earlier, the 1894 Sino-Japanese War demonstrated the railway system's strategic value. During the Sino-Japanese War, most of the military engagements on land occurred in the Fengtian area. At that time, the Guandong railway extended as far as Zhonghousuo, beyond Shanhaiguan. This extension efficiently transported soldiers, weaponry and

¹²⁷ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter V: The Kaiping Railway Administration and the China Railway Company.

supplies from south of Shanhaiguan to the north.¹²⁸ Indeed, the railway provided crucial support to the Xiang Army's Liaodong Counterattack.

Nonetheless, the Qing Dynasty's defeat seriously damaged the reputations of Li and his Bei-yang Army and Navy. The Viceroy was assigned to negotiate with the Meiji administration, which further diminished his status in the Chinese government and society. However, it is noteworthy that the reform camp's promotion of railways was not abandoned after the war. Indeed, senior officials, including Zhang Zhi-dong, Liu Kun-yi and Hu Yu-fun, repeatedly called for the construction of new railways in various parts of the country.

On July 19, 1895, in a remarkable announcement in the name of the Guang-xu Emperor, the Qing Court formally outlined its post-war national strategies. It stated that the Imperial Government had accepted the proposals of central and local officials, and that it would implement self-strengthening policies during the difficult days ahead. The Empire would support projects related to railways, mintage, machinery and mining. Crucially, the Qing Court made the construction of railways a priority task in the process of China's modernisation. It approved the extension of the railway network centred on Tianjin to Beijing in the west and Manchuria in the north.

In December 1895, the Qing Court endorsed the construction of the Tianjin-Lugou Bridge Railway and appointed Hu Yu-fun as its Supervising Director. It also established the Tianjin-Lugou Bridge Railway Bureau in Tianjin.

¹²⁸ Ibid, Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

The new railroad's major works were completed by June 1897. It ran from Fengtai, east of Lugou Bridge (The Marco Polo Bridge), to Magiabao, via Beijing's You'an Gate. Later, it was further extended to the city's Qian Gate.¹²⁹ The double-track railway had a total length of 87 miles.¹³⁰ Kinder expressed concern that its profitability might be affected by the decision to double-track it before the volume of traffic warranted it.¹³¹ The heavy rails weighed 93 pounds per yard, and they had to be imported from Britain.

It was during the construction of the Tianjin-Lugou Bridge Railway that the Qing Government began nationalising the nation's railway networks.¹³² According to the *Veritable Records of the Guang-xu Emperor*, the Qing Court's original intention was that the railway would be constructed jointly by the Reserve Ministry and Bei-yang Commissioner. The initial budget for this double-track line was 3,000,000 taels. The Reserve Ministry would invest 1,600,000 taels of this; Wang Wen-shao, the Bei-yang Commissioner, would raise 600,000 taels; and commercial financing of 400,000 taels would also be lined up.¹³³

However, the Reserve Ministry's funding formed part of its relief fund, while the Bei-yang Ya-men's funding had been allocated to the Huai Army and coastal defence. Therefore, the amount that was actually collected for the railway was only sufficient for its immediate needs, not its long-term development. Moreover, the Qing Dynasty had just been defeated by Japan on both land and sea. Chinese merchants had lost their confidence, and they were not interested in

¹²⁹ Ibid.

¹³⁰ Ibid.

¹³¹ Kinder to Hilliar, Tongshan, June 25 1898, HSBC Group Archives.

¹³² H. Stringer, *The Chinese Railway System*, p.3.

¹³³ PRO UK FO 228/1247 Misc. 46 Hilliar to MacDonald, June 3rd 1897;

making any strategic investment in the government. Raising funds in the local market appeared to be impossible. Hu Yu-fun therefore had to apply for loans from HSBC via Wu Jim-pah on a number of occasions.¹³⁴

The railway project subsequently ran over budget to the tune of 1,114,000 taels. To plug the gap, Wu borrowed this amount from HSBC. In addition, the Railway Bureau that he headed agreed to apply for an overdraft on its account with HSBC.¹³⁵ In fact, as Chen Chung-sieu points out:

The Tientsin Manager was authorised to permit overdrafts of up to 300,000 taels under Li's official seal, and the Chinese companies Li sponsored did most of their banking business with the Hongkong Bank. Many proposals were made during the period from 1889 to 1891, including proposals concerning the financing of the railway's construction, but these proved abortive.¹³⁶

The Railway Bureau arranged two smaller loans with Standard & Chartered Bank and Russo-Chinese Bank for 200,000 taels each. Under this

¹³⁴ Memorial of Hu Yu-fen on the Jin-lu Line on the 26th Day of the 11th Month, the 21st Year of the Guang-xu Era; Memorial of Hu Yu-fen on the Foreign Loans for the Construction of the Jin-lu Line on the 24th Day of the 12th Month, the 21st Year of the Guang-xu Era; Attachment by Hu Yu-fen on the Foundation of the Majiaobao Station, in Chen Yi comp. *Gui-zheng Ji-yao, Gui 7 (Summary of Railway Development in China 7)* Taipei, 1970. Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development*, Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

¹³⁵ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development*, Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

¹³⁶ Chen Chung-sieu, *British Loans to China from 1860 to 1913, with special reference to the period 1894-1913*, PhD Thesis (University of London, 1940). Frank King, *The History of the Hongkong and Shanghai Banking Corporation vol. 1*, p. 561.

arrangement, the Railway Bureau still owed Jardine Matheson 240,000 taels for its investments in equipment.¹³⁷

It appears that, although the Qing Court still insisted on governmental investment in the development of China's railways, the reform-minded local administrators had already changed their views significantly. The leaders of the reform camp in Tianjin circuitously introduced foreign loans for the extension of North China's railroads. Twenty years of painful and fruitless experience had shown them beyond doubt that the development of railways required a tremendous amount of capital that neither the Chinese Government nor the local capital market could provide.

China's bureaucrats and the country as a whole were unable to offer either the amount of money nor the financing platform such modernisation projects needed. The only solution was to transform the irregular financing methods that were already being used, such as the overdraft facilities Wu provided at HSBC, into formal loan agreements between the Imperial Government of China and the foreign banks and syndicates. The Qing Court reluctantly decided to authorise foreign loans to finance railway development after the Sino-Japanese War.

5.3. The Imperial Railways of North China and the British & Chinese Corporation

It is worth mentioning that, while the use of foreign loans was becoming more acceptable to the Qing Government, it also introduced a railway

¹³⁷ Chen Yi comp. *Gui-zheng Ji-yao, Gui 7 (Summary of Railway Development in China 7)* pp. 62-64. *Jia-tong Shi Lu-zheng Bian (The Communication History of China - Railways)* vol. 7, pp. 15-16.

nationalisation policy.¹³⁸ In 1896, the Qing Court instructed Wu, in his capacity as Director-General of the China Railway Company, to reintegrate the Tianjin-Guye Railway and Guandong Railway lines into one system with a total length of 193 miles.

The China Railway Company was then merged with the Bei-yang Governmental Railway Bureau to create the Tianjin-Shanhaiguan Governmental General Railway Bureau (also known as the Bei-yang General Railway Bureau). Wu succeeded Tang Ting-shu as Director-General, Wu Ting-fang became Associate Director, and Sun Bao-ki was appointed as their principal assistant. Wu also reformed the Bureau's management and increased the railway's profitability.¹³⁹

One of Wu's major achievements at the beginning of his term with the IRNC (China Railway Company) was the consolidation of the governmental and privately owned lines into one system with a modern financial structure. Using his expertise in financial services, he easily resolved the IRNC's share problems, especially the 300,000 taels that were outstanding in investors' shares, which were redeemed by the issue of interest-bearing government bonds.¹⁴⁰ Until the Tianjin-Lugou Bridge Railway was completed, the railway line from the Bridge had been owned and managed exclusively by the Qing Government, except for the section

¹³⁸ H. Stringer, *The Chinese Railway System* p.3.

¹³⁹ *Tientsin Cable Books*, 16 December 1898. See also the Addis Papers and Diaries. Government Loans, Railway Loans, Correspondence 1898-1900, SHG 255.1, in HSBC Group Archives.

¹⁴⁰ *North China Herald* 11 November 1895 p. 804; 21 July 1896 p. 299,

between the Imperial Capital and Zhonghousuo and Shanhaiguan.¹⁴¹ The Tianjin-Lugou Bridge Railway and Tianjin-Shanhaiguan Railway were thus united as the Imperial Railways of North China (IRNC).

The bureaus of the two railroads were also merged into the IRNC Administration, which had its headquarters in Tianjin's French Concession on the bank of the Hai River. Hu Yu-fun was appointed as the new administration's head and Wu acted as its Director-General.¹⁴² The Bureau's Chief Engineer was Kinder, while Zhan Tian-you served as his associate.¹⁴³ A number of subdivisions and special teams were set up under Hu and Wu to oversee matters relating to engineering, sourcing, accounting, traffic, external affairs, general affairs and electricity.¹⁴⁴

At that time, the North China railway network fanned out from its Tianjin hub to Beijing in the west, Tangshan in the east and Shanhaiguan in the north. This modern rail system linked the Beijing-Tianjin political-economic centre with strategic locations in and around Shanhaiguan. It provided collieries, docks, fortresses, barracks, arsenals, shipyards and military training bases with an integrated transportation structure that supported China's industrialisation and national defence.

¹⁴¹ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

¹⁴² A. Feuerwerker, *China's Early Industrialization: Sheng Hsuan-huai (1844-1916) and Mandarin Enterprise* (Harvard, 1970), p. 270n50.

¹⁴³ Memorial of Hu Yu-fen on the Jin-yu Line on the 23rd Day of the 10th Month, the 24th Year of the Guang-xu Era in Wang Yan-wei & Wang Liang comp. *Qing-ji Wai-jiao Shi-liao (Diplomatic Historical Materials of the Qing Dynasty)* Beijing, 1987.

¹⁴⁴ *Tianjin Tong-Zhi Tie-lu Zhi (Complete Annals of Tianjin, Railways)* Tianjin, 1996, p. 444.

For Wu himself, the railway system's nationalisation offered an opportunity to transform himself from being simply a comprador into a official-cum-businessman, and it increased his participation and influence in China's modernisation process. During the 1890s, the partnership of Li Hong-zhang, Hu Yu-fun and Wu Jim-pah – a combination of literati-bureaucrats and a comprador-merchant – had laid solid foundations for the development of the railway network in Late Qing China. The involvement of a comprador-merchant in the government's strategic development programme was itself a socio-economic reform during China's early modernisation phase. It revealed how earnestly the Qing Court was attempting to reclaim administrative and financial control over railway construction. In addition, the bureaucracy's involvement and influence over China's railroad projects increased considerably around the turn of the 19th and 20th Centuries.

Wu had created special relationships with Western bankers, entrepreneurs and traders during his compradorship. He had been invited to take up important positions within railway administrations. The success or failure of railway companies and bureaus deeply influenced his future in both the political and business spheres. The transfer of railway ownership in the Tianjin region from the China Railway Company to the Qing Government during the 1890s should be regarded as a watershed event for both the railways and Wu personally.

The subsequent tussles concerning state and private ownership of China's railways was to obstruct their further development and bedevil the nation's politics right up to the Qing Dynasty's collapse. The formation of the Railroad

Construction Rights Protection Movement was in fact a direct precursor of the 1911 Revolution that ended 268 years of Manchu rule. Merging the railway companies and bureaus into the IRNC Administration triggered a struggle between bureaucrats and the business community over the future of railroad construction.

When China's railways were nationalised, the financial role of foreign banks and firms and their comprador offices changed from underwriting stock offerings by related companies to providing loans for railroad construction. In Wu's case, a foreign bank's comprador progressed from being a shareholder to becoming the manager of China's national railways. His connections with the Western banking world and his familiarity with its systems grew increasingly important in the railway network's development in Late Qing China.

Between Tang Ting-shu's time at Jardine Matheson & Co. and Wu Jim-pah's tenure at HSBC, Western banks had grown more important than foreign companies in the field of railway development. In 1887, Jardine Matheson & Co. had won the right to lend money to the Kaiping Railway Company. In May 1895, it joined forces with HSBC to establish the British & Chinese Corporation (B&CC) in London.¹⁴⁵ However, it was HSBC who played the leading role in this business expertise partnership by providing it with financial support and representing it in negotiations with the Chinese Government. This structure illustrates how power had shifted from British companies to the banks.

¹⁴⁵ For more details about the formation and development of B&CC, see the relevant files at Companies Registry House, London, and in the archives of the company secretaries at Matheson and Co. For B&CC, see file 57,491. The summary of the B&CC's annual reports is in HSBC Group's Archives.

The Chinese Central Government's nationalisation policy did not increase its political control over railway construction and management. Nor did the withdrawal of the merchants from railway ownership enhance the financial benefits that the Qing Court derived from it. The absence of modern financial institutions in China obliged the country to rely on the pecuniary support of British banks and firms like HSBC and Jardine Matheson for its railway construction projects. It therefore had to accept their influence over its plans.

B&CC established branches in Shanghai and Beijing, and it became involved in a variety of different businesses, with a focus on railroad construction and mining in China. Jardine Matheson was responsible for project management, while HSBC provided banking services and financial support. Among the many European syndicates in China, B&CC was regarded as the most influential and competitive. With Wu's backing, it beat rival syndicates and the foreign governments behind them to obtain the lion's share of deals with IRNC.¹⁴⁶

In June 1898, the HSBC Manager E.G. Hillier signed a provisional agreement on behalf of B&CC with Wu Yu-fun. A formal agreement was concluded on October 10 the same year. Under this, HSBC provided funds that were mainly used to construct a railway connecting Tianjin and Xinminfu (present-day Xinmin City) in Liaoning Province, as well as the Bangzigou line in

¹⁴⁶ Memorial of Hu Yu-fen on the Foreign Loans for the Imperial Railways of North China on the 3rd Day of the 3rd Month, the 24th Year of the Guang-xu Era; Memorial of Hu Yu-fen on the Ministry of Reserve on the 18th Day of the 4th Month, the 24th Year of the Guang-xu Era; Attachment by Hu Yu-fen for the Application of British Loans for the Construction of the Imperial Railways in North China on the 18th Day of the 4th Month, the 24th Year of the Guang-xu Era; in Chen Yi comp. *Gui-zheng Ji-yao, Gui 7 (Summary of Railway Development in China 7)*

Yingkou.¹⁴⁷ Starting with the Kaiping Tramway, the railway system in North China had already been growing continuously for more than a decade. During this time, foreign institutions had made a series of loans for various purposes. Besides HSBC, the other major fund providers for Chin's railway construction projects included Jardine Matheson & Co., Deutsch-Asiatische Bank and Standard & Chartered Bank. Part of the new loan granted by B&CC was used to repay previous foreign loans and to replace equipment.¹⁴⁸

Under an agreement between the Chinese Government and HSBC, the latter would provide a loan of £2,300,000, or approximately 16,000,000 taels, at a discount of 90% and with a 5% annual interest rate. In practice, this loan had an 89% discount by the time the railway administration received it, due to a fall of silver prices on the international market. The loan tenor was 45 years, and the Qing Government had no right to repay it prior to maturity. Besides the newly built Xinminfu section, HSBC took all IRNC's railroads, assets and income as collateral.

Following the Qing Court's acceptance of the loan, all the cash flows entering and leaving the Railway Bureau, including government financing from the Reserve Ministry and the assigned 16 provinces, was supervised and managed by the Tianjin Branch of HSBC. The Chinese side was obliged to convert silver into British pounds in order to repay HSBC at an exchange rate decided solely by HSBC. The Tianjin Branch of HSBC would receive a commission fee of 2.5% of

¹⁴⁷ Percy Horace Braund Kent, *Railway Enterprise in China: an Account of Its Origin and Development* Chapter VI: The Imperial Railways of North China and the Chinese Eastern Railway, 1890-1900.

¹⁴⁸ MacMurray, John V.A., comp. and ed. *Treaties and Agreements with and concerning China, 1894-1919*. vol. 1 (New York, 1921) pp. 173-83.

the annual repayments.¹⁴⁹ According to an IRNC corporate policy statement issued in the 1920s, “the intention of the loan agreement was that the Engineer-in-Chief should be the head of the railway staff and its administrator, but under a Chinese Administrator-General”.¹⁵⁰ The British chief engineer was accordingly placed under the supervision of a Chinese director.

However, in the area of fiscal management, the Railway Bureau was obliged to set up an Accounting Department under a British Auditor-in-Chief. The loan agreement specified that an accountant appointed by B&CC and HSBC had “full powers to organize and direct the keeping of the railway accounts and to act with the Administrator-General and the Chief-Engineer in the supervision of receipts and expenditures.” The daily operations and turnover of the railway came under the auditor’s control and management. Consequently, IRNC’s financial management, income and expenses, as well as its reimbursement schedule, were administered by the HSBC Tianjin Branch.

The deal with the IRNC was HSBC’s first large-scale railway loan to the Chinese Government. Compared with the returns it received from its routine insurance and currency exchange business, the railway loans earned the Bank enormous revenues. As previously mentioned, HSBC provided the loan for a nominal amount of £2,300,000 with an 89% discount and a 5% annual interest rate. Between 1902 and 1944, the Chinese Government was committed to repay £2,702,520 for the principal and interest, plus an annual commission of 2.5% for

¹⁴⁹ The Sino-British Agreement on the Loans for the Imperial Railways of North China in Zhong-guo Ren-min Yin-hang Zong-hang Can-shi Shi comp. *Qing-dai Wai-zhai Shi-liao (Historical Materials of the Foreign Loans of Qing China)* Beijing, 1991.

¹⁵⁰ PRO UK FO 228/2798 Memorandum by S.F. Mayer 26th September 1923.

£12,506. HSBC's return would therefore be £5,015,022 – 250% of the £2,020,000 that it actually loaned to the IRNC.

The Railway Bureau began its construction works after it accepted the HSBC loan. The Suizhong-Goubangzi line and Goubangzi-Yingkou section were both completed in June 1900, and track-laying work commenced on the Goubangzi-Dahushan section. However, it had to be suspended when the Eight-Nation Alliance occupied Tianjin and its vicinity. Russian forces occupied the northern section of the IRNC during the war, while the British seized the southern part of the railway.¹⁵¹

5.4. Railway Loans and the Absence of a Modern Banking System in Late Qing China

As David Faure states in his *China and Capitalism: A History of Business Enterprise in Modern China*, although China's commerce had developed extensively during the Ming-Qing Period, the economy still lacked modern accounting and banking systems. The absence of efficient and powerful financial institutions emerged as the biggest single hurdle to the development of large-scale industries and infrastructure in the country. Enormous funds needed to be collected, managed and invested in industrial and economic development. Providing some of these in the form of railway loans to the Chinese Government became the major source of HSBC Tianjin Branch's income from the 1880s onwards.

¹⁵¹ On the division of spheres of interests between Britain and Russia, see MacMurray, John V.A., comp. and ed. *Treaties and Agreements with and concerning China, 1894-1919*. vol. 1 p 205.

The Kaiping Railway Company's original stock issue was far from successful. But the challenges it encountered enlighten us about the economy of Late Qing China. As a news commentator of the time pointed out:

The local merchants were willing to support the entire fund required by the railway extension. Nevertheless, the prerequisite was the protection of their capital and management authority of the Railway Company.¹⁵²

Conversely, as China's collieries and railways developed steadily, the central and local governments strengthened their domination over state-owned or so-called Bureaucratically Regulated Sale of Merchandise enterprises. For instance, the newly established China Railway Company was operated by its Director-General Wu Ting-fang and his associate Wu Chi-chang, both of whom were experienced merchants. However, the Board of Admiralty appointed Shen Bao-jing and Zhou Fu as its Supervisors. Shen was formerly a senior official in Fujian Province, and Zhou was in charge of salt affairs and the Imperial Customs in Tianjin.¹⁵³

Before the stock issue was formally launched, Li Hong-zhang had explicitly regarded Tianjin's merchants as the major source of funds. Without doubt, the big difficulty was not lack of capital in local business circles or the financial markets, it was lack of mutual trust and respect between the Chinese

¹⁵² *North China Herald* April 29th 1887.

¹⁵³ *Hai-fang-dang* (Archives on Coastal Defence) Taipei, 1957, p. 39.

bureaucrats and merchants. China's legal and political systems did not offer sufficient protection to the rights and investments of merchants. The bureaucrats and merchants were unable to establish any stable method of collaborating. Consequently, business investors were suspicious about the involvement of the Board of Admiralty and Bei-yang Commissioner in industrial projects and railway construction.

It is telling that, during the run-up to the formal stock offering for the Railway Company, Li personally introduced its details in the pages of the Shanghai *Shun Pao*, emphasising that:

The Kaiping Railway Company is operated on commercial principles. Bureaucrats act as trustees of the enterprise, and do not interfere in its management.

Moreover, Li Hong-zhang explicitly noted that:

The bureaucrats are responsible for preventing malpractices from occurring and the harm these would cause to the rights and benefits of investors.¹⁵⁴

Li's wish to dispel the negative image of government officials in local business circles and the financial markets is clearly highlighted by this clarification. As discussed in the first section of this research, the reforms of salt

¹⁵⁴ Diplomatic Dispatches, China, vol. 81, roll 80, No. 354, Denby to Bayard, April 19 1887; No. 351, Denby to Bayard, May 1 1887.

transactions during the Ming-Qing Period involved the central government's repeated repudiation of its obligations. The government turned its back on its liabilities to the salt merchants by issuing an excessive number of licences. More importantly, the origin of the Bureaucratically Regulated Sale of Merchandise model was the Ming-Qing Bureaucratically Regulated Sale of Merchandise enterprises (*Guan-du Shang-xiao*) salt-transaction system. Salt merchants acted as the main providers of funds in Tianjin up to the turn of the 19th and 20th Centuries, as socio-political conditions in Late Qing China did not provide a conducive environment for the development of Bureaucratically Regulated Sale of Merchandise enterprises.

Besides Li's dilemma, Zhang Zhi-dong (1837-1909), another major promoter of railway and modernisation projects, faced similar challenges in the construction of the Lugou Bridge-Hankou Railway. Zhang mentioned in a telegram to Wang Wen-shao dated May 8, 1896 that:

The government is unable to provide funds for railway construction, so I paid more attention to raising funds in the markets. As foreigners are not permitted to invest in Chinese railways, only local merchants' interests were involved. However, I believe Chinese merchants are neither interested nor able to provide such amounts of funding for railway development.¹⁵⁵

¹⁵⁵ Zhang Zhi-dong's Telegram to Wang Wen-shao dated May 8th, 1896

Nevertheless, Zhang obeyed the imperial ordinance. Without state investment, he managed to establish the Lu-Han Railway General Bureau under the title of Guan-du Shang-pan. On the one hand, he struggled to raise funds from local merchants, while on the other, he instructed the Bureau's Director-General to ask for foreign loans.¹⁵⁶ The Lu-Han Railway Company was nominally a private enterprise, but in practice it was owned and managed by the local government. Foreign banks and firms acted as its main providers of funds. Once again, as the *Shun Pao* points out:

During previous years, the *Guan-du Shang-ban* bureaus and factories raised funds by offering stocks. However, those institutions were only joint-stock companies on paper. The merchants' investments were wasted or embezzled. These painful experiences in the recent past mean the public is still fearful about such activities. The poor are unable to invest, while the rich choose to wait and see.¹⁵⁷

In other words, besides Tang and Wu, who were unique in having relationships with both bureaucratic reformers and Western bankers, only a handful of Chinese investors and enterprises in Tianjin were interested in investing in government-private-enterprise partnerships. Besides, during the early years after the opening up of Tianjin, Li had relied on the compradors of foreign banks and companies, namely Tang, Wu Ting-fang and Wu Jim-pah, to build up modern enterprises in the city and its vicinity. This group of comprador-merchants

¹⁵⁶ Sheng Xuan-huai, *Yu-zhai Chun-gao* (Taipei, 1975), p. 22.

¹⁵⁷ *Shun Pao*

had begun their personal and career development in treaty ports like Guangzhou and Shanghai, and they were familiar with modern business methods.

Moreover, compradors of major banks and foreign firms like Wu Jim-pah had significant amounts of capital and connections with the West. Nonetheless, the modernisation projects advocated by Li and his followers involved increasing quantities of equipment, materials and human resources, and these required vast capital investments. The funds of the compradors and their socio-economic networks were no longer sufficient to support such development. The involvement of the broader local business community was becoming increasingly vital to China's modernisation.

On the other hand, the Self-Strengthening Movement followed the *fu-qiang* principle, which was to increase defensive capabilities by building the economy. The Qing Dynasty believed it would be able gradually to achieve the military strength it needed by adhering to a policy of “enterprises-technologies-commerce-economy”. The operation of modern enterprises by the government and military was regarded as an inevitable element of this process, and such involvement increased steadily during the 1890s.

Yet there was no system or mechanism to reconcile the disagreements and interests of the government and merchants in Late Qing China. The division of interests, balance of power, and protection of rights needed to nurture the growth of modern enterprises and capitalism simply did not exist there at the turn of the 19th and 20th Centuries. The Chinese Government subordinated the socio-political

status of merchants to its interests, which dampened their enthusiasm about investing in the strategic projects it initiated.

The immense demand for mercantile investment in industrial and railway construction projects clashed seriously with the bureaucracy's involvement in the institutions that undertook them during China's early modernisation. The dilemma about whether these should be owned and managed by the government or by the merchants was the result of a bureaucratic-oriented socio-political system that suppressed the private sector's productivity. The Manchu emperors and their bureaucrats used their political-economic supremacy to dominate society at every level. The Qing Court regarded transferring the management of newly developed industrial enterprises to merchants as being tantamount to the dilution of their power, which was strictly forbidden.

Western Europe's political and cultural environment had been conducive to the development of modern banking and industrial systems, whereas foreign loans were virtually the only method of financing railway development in Late Qing China, even though they were the most unwelcome. Where HSBC was concerned, as Frank King says:

The move north to Tientsin and Peking had accomplished the purposes of the Hongkong Bank. It was positioned for its merchant banking operations, for its increasingly close dealings with Customs and other funds, and for its important political contacts. Activities and relationships in the North, either in Tientsin or

Peking, did not, however, change the basic business patterns of the foreign and Chinese communities, nor did they affect the key role of the compradore.¹⁵⁸

As previously mentioned, Wu acted as HSBC's comprador, as well as an investor in China's railroad projects. When the railways were nationalised in the 1890s, he received commissions on loans, rather than returns on investments in railway companies. His re-investment of his surplus capital in various factories drove North China's industrialisation and made him one of the earliest industrial capitalists in the Tianjin region.

¹⁵⁸ Frank King, *The History of the Hongkong and Shanghai Banking Corporation vol. I* p. 535.

Chapter 6

Wu Jim-pah and the Imperial Chinese Railway College

Wu Jim-pah's most outstanding achievement during his time with the IRNC Bureau was the establishment of the Imperial Chinese Railway College (ICRC) in Shanhaiguan. This was an outstanding milestone in the process of China's modernisation, and it provided professional training for the nation's first generation of railway and civil engineers.

Following the completion of the Tangshan-Xugezhuang line in 1881 and during Wu's tenure as Director General of the Bei-yang General Railway Bureau, the North China railway network based in Tianjin was extended to Beijing, Tangshan and beyond Shanhaiguan into Liaoning Province, thus growing from less than 10 miles of tracks to hundreds of miles. For more than a decade, thousands of engineers and skilled workers participated in its construction. However, most of these came from Britain, Germany, the United States and other Western countries.

On September 20, 1893, Kinder, the Chief Engineer of the Bei-yang General Railway Bureau, submitted a proposal to Li Hong-zhang concerning the establishment of a railway college.¹⁵⁹ Due to lack of funds, Li decided to postpone the project, but instead he set up a railway engineering department in the Bei-yang Military College (Bei-yang Wu-bei Xue-Tang) in Tianjin. A German engineer

¹⁵⁹ Kinder stated that, 'unlike the Japanese, the Chinese students attached to the railway service have not yet shown any aptitude for accurate surveying, but this possibly is due to the danger they incur from the mobs that speedily collect, and the limited means provided for their protection in case of any disturbance.' 'On Railways and Collieries in North China' *Minutes of Proceedings of the Institute of Civil Engineers* (vol.103 1891) pp. 300.

from the renowned Krupp Arsenal was employed as its Chief Instructor. Although Li's arrangements satisfied the demand for human resources during the construction of the Tianjin-Tangshan Railway to certain degree, the shortage of well-trained engineers and engineering assistants remained one of the biggest technical difficulties for the development of China's railways during the 1890s.¹⁶⁰

Wu founded the ICRC in Shanhaiguan, and its value was highly appraised by the media at the time. On November 20, 1896, *Shun Pao* published a commentary about its establishment. It stated that preparations for the College and its regulations had been comprehensive, and its tuition focused on railway engineering and related subjects. The students were strictly trained and examined. Most important, their training was practical; the College's graduates were able to apply their knowledge and skills to railway construction. As the ICRC's founding Director General and Principal, Wu undoubtedly made a unique and remarkable contribution to the education of China's first generation of engineers.

6.1. Establishment of the Imperial Chinese Railway College

As mentioned in Chapter 5, the Qing Court had approved the construction of the Tianjin-Lugou Bridge line prior to the outbreak of the 1894 Sino-Japanese War. Hu Yu-fun, the railway's Supervising Director, enlisted Kinder from the Bei-yang General Railway Bureau to become the Chief Engineer in its administration. On May 4, 1896, Kinder again submitted a proposal for the establishment of a railway college to Hu. Kinder pointed out that the Qing Court

¹⁶⁰ *North China Herald* May 8 1891 p. 562; December 16 1892, p. 900.

had already concluded its great debate concerning railway construction, and it had approved the extension works. Nonetheless, the human resources then available were insufficient to complete the extension's 160 miles. It was clear that the schedule for railroad construction could not be implemented by relying solely on a handful of foreign personnel. Chinese engineers needed to be trained to carry out the railway system's expansion.¹⁶¹

Meanwhile, the Qing Dynasty had recently been defeated by Japan, and Li had just resigned from the post of Bei-yang Minister. However, the drastic political and diplomatic changes that were taking place in China did not slow down the development of its railways and collieries. Indeed, under the leadership of Hu and Wu, preparations for the education of railway engineers accelerated in Tianjin and its surrounding area after the Sino-Japanese War. In this context, it is incorrect to regard Li's peace negotiations with the Japanese as a watershed event that marked the end of the Self-Strengthening Movement. Hu wholeheartedly agreed with Kinder's suggestion, and he forwarded the proposal and its attachment to Wang Wen-shao, Li's successor in the Bei-yang Ministry.

It is worth mentioning that Kinder's proposal included the draft constitution for the planned Chinese railway college. In its 16 articles, the British engineer laid emphasis on the quality rather than the quantity of its students. Kinder wished to attract the best young people to enrol in the school, stipulating that a significant number of scholarships should be provided. The Imperial Examination system was still used in China, and Western educational concepts

¹⁶¹ *Xi-nan Jiao-tong Da-xue Xiao-shi Ji-liao Xuan-ji He-ding-ben (Historical Materials of the Southwest Jiao-tong University)* vol.1-10, Chengdu, 2001.

had not yet fully taken root. In the 1890s, the lack of students was a major concern for all the promoters of modern education, including Kinder and Wu.

The nationalisation of the railways led to the creation of the IRNC Bureau, a development that served as the backdrop for the establishment of national railway colleges in major cities throughout the country. Without the Imperial Government's administrative, human resources and financial support, the founding of China's first railway college would have been considerably more difficult, if not impossible. The state-owned railway bureaus contributed more to the training of its personnel than the privately-owned railway enterprises.

Wang promptly endorsed the establishment of railway colleges. On November 20, 1896, *Shun Pao* reported the Bei-yang Minister had approved the foundation of the ICRC. It noted that the North China railway system could previously be categorised into state-owned and commercially-managed sections. These had been merged since Wu's accession. In addition, Wu had effectively reformed their administration with assistance from Zhu Shen-chu and Yuan Chui-chu. The Bureau regarded the training of personnel as a key element in the network's further expansion. Viceroy Wang had already approved the railway college's constitution, which speeded up the formation of such institutes.

At the turn of 1895-96, the Tianjin-Lugou Bridge Railway Bureau was preoccupied with constructing the railroad linking Tianjin with Beijing. Burdened by this major project, it was unable to establish the railway college as well. Consequently, Viceroy Wang instructed Hu and Wu to set it up under the Bei-

yang Railway Bureau's administration. The actual work of planning, operating and fundraising for the college rested on Wu's shoulders. Since the Kaiping Colliery had a long history and was in a sound financial position, Wu suggested that the engineering school should be jointly operated with the colliery.

However, the Colliery Company was a government supervision and merchant management enterprise, and private investors still held a significant number of its shares. That meant a joint-venture college could have become embroiled in disputes concerning its affiliation and the use of funds. Indeed, the Tangshan Railway and Mining College, which was established on the initiative of the ICRC in the early years of the 20th Century, ran into a series of such difficulties, and these eventually forced the closure of its Mining Departments. This meant that China's first engineering college was unable to combine training for the railway and mining industries, even though they were highly complementary in terms of both their theory and practice.

Wu succeeded in establishing the Tianjin-Lugou Bridge General Railway Bureau during the summer and autumn of 1896, and preparations for the railway college were placed under his supervision. He finalised its prospectus in early November that year. It allowed for 20 Principals, and it systematically set out the curriculum and funding arrangements.¹⁶² Wu's proposals were forwarded to the Qing Court via Wang Wen-shao.

¹⁶² *Hsin Wen Pao* November 19th 1896.

In these proposals, Wu stated that the construction of China's railway system had been underway for more than a decade, from the Kaiping Tramway to the Tianjin-Shanhaiguan Railway. The completed railroads had already proved their great value in a variety of commercial activities, as well as the suppression of rebellions in Chaoyang and the war against Japan. The network was presently being expanded beyond Shanhaiguan to connect Tianjin and Beijing; and the Lugou Bridge-Hankou Railway had recently been proposed.

On the other hand, Western engineers had been hired for all the railway projects to date. The lack of suitably trained local personnel made the further development of China's railways unsustainable. The railway college proposed in 1893 had not been established due to lack of funds. The wide-ranging schemes for the rail network required a considerable number of engineers for the construction of bridges, rail tracks, trains and other facilities. The railway engineering training provided by the Tianjin Military College was insufficient to meet the demand, while employing foreign engineers was both costly and time consuming.

More importantly, the untrained Supervisors and managers who were in charge of the railways lacked modern professional knowledge. Therefore, they could contribute nothing to the system's development and operations. To remedy this problem, Wu recommended the establishment of a college specialising in railway engineering, in which 80 students would be taught a number of subjects by Western and Chinese instructors during a three-year vocational education course. Depending on their academic and practical performance, the graduates

would afterwards be assigned to suitable positions in the development of China's railway system.

The Qing Court speedily accepted Wu's proposal. Besides his rationale for the railway school, the limited resources required establish it was another crucial factor in gaining the central government's support. Wu's plan was cautious about how these funds would be raised and used. He suggested investing 10,000 taels in the railway college's establishment. It should be funded from the existing railway system's profits. A levy of 30% should be charged on ordinary passengers and cargoes. The Kaiping Colliery, which was still the largest single user of North China's railroads, would be asked to pay a mark-up of 20%, because transportation fees made up a significant portion of its costs.

To keep the college budget under control during its early days, Wu suggested using spare rooms at the Railway Bureau in Shanhaiguan as temporary classrooms. After successfully raising funds, it would purchase a plot of land in Beidaihe and construct its campus there. Its location in a hilly coastal area made Beidaihe an ideal place to teach and practice surveying. Moreover, the Railway Bureau in Tianjin would be responsible for the college's management, which would avoid the need for a foreign Principal. This arrangement also aimed to reduce costs and promote the use of local management by eliminating the hiring of non-essential senior personnel from the West. A Chinese person would also be appointed as its Supervisor, and he would work at the school and report to the Railway Bureau in Tianjin.¹⁶³

¹⁶³ *Hsin Wen Pao* November 19th 1896.

Wu calculated that the railway college would require an initial investment of approximately 10,000 taels. Compared to the financial scale of the existing railroads, this was a relatively small amount. Besides asking for a modest budget, Wu was himself a professional and experienced comprador-merchant from the Western banking world. He was very sensitive about the collection and disbursement of funds, and he attempted to transfer the cost of the railway college onto railroad users, instead of asking the Qing Government for a lump-sum investment. In summary, Wu proposed using market forces to drive the creation of China's first railway college.

6.2. The Instructors at the Imperial Chinese Railway College

Britain was the birthplace of railway technology and designs, and its technicians formed the backbone of the team responsible for railroad construction in China. Wu had gained abundant experience of collaborating with British engineers and technicians in the course of operating his own factories and his duties with HSBC and the Chinese Government. British engineers therefore formed the core of the ICRC's teaching faculty. Before the Shanhaiguan campus was completed, the college was temporarily located in Tianjin, where the Railway Bureau was also situated. So, from the winter of 1896 to the autumn of 1897, it did not hire a Principal. Instead, Wu supervised its teaching and operations in his capacity as the Railway Bureau's Director General.

From late 1897 until the Eight-Nation Alliance invasion in 1900, the ICRC appointed three Supervisors in succession as its Principals. They were in charge of its day-to-day operations. Following the ICRC's relocation from Tianjin to Shanhaiguan, Luo Xian-qiao worked as its Supervisor from October 1897 until the autumn of 1898; and he was succeeded by Hu Su-buo. Hu was removed from his post after the Empress Dowager's coup d'état during the winter of 1898, due to his support for the Hundred Days Reform. Ernest Headly Sprague, the ICRC's Dean, temporarily took up his duties. In the spring of 1899, the Railway Bureau assigned Lan Yi-fu to take charge of the ICRC.¹⁶⁴

After the appointment of the ICRC's first Supervisors, Wu turned his attention to the IRNC's further extension. He was no longer directly involved in the ICRC's daily management. The Supervisors undertook its administrative work, while the Dean held a higher position in its academic affairs. The separation of administration and teaching was one of the ICRC's most important characteristics. The Dean and most of its Senior Instructors were Westerners hired from countries that possessed advanced technologies and experience in railway construction and management.

Through Kinder, Wu invited Professor Sprague from London to take up the position of Dean during the autumn of 1896, shortly before the ICRC was opened. Due to the long journey, Sprague only arrived in China in February 1897.

¹⁶⁴ *Xi-nan Jiao-tong Da-xue (Tangshan Jiao-tong Da-xue) Xiao-shi (History of the Southwest Jiao-tong University/Tang-shan Jiao-tong University)* vol. 1, Chengdu: 1996, p. 20.

To open the college on time, Wu therefore hired Schaller, a German teacher from the Tianjin Military College, as its Acting Dean.¹⁶⁵

This created political dangers for Wu, since Germany was then attempting to seize Jiaozhou Bay in Shantung Province. Indeed, Schaller was later dismissed due to foreign-policy reasons. Nevertheless, he made some important contributions to the ICRC's establishment. He supervised two batches of student recruitment; and when the first term began, he taught mathematics, cartography, and surveying. During the winter of 1898, Schaller completed his contract and left the ICRC.

Sprague began to teach railway architecture, engineering mechanics and engineering equipment after he arrived in March 1897. In early March 1900, before Sprague had completed his contract, Hu Yi-fu appointed D. P. Griffithm, a British engineer from the construction site north of Shanhaiguan, as Sprague's successor. After leaving the ICRC, Sprague returned to Britain, where he continued to do teaching and research on engineering. He subsequently lectured on hydraulics and the strength of materials at the University College of London (UCL), and he became a lecturer at Westminster Technical Institute. Sprague's *The Stability of Arches* was published in London in 1916, and it was followed by a textbook entitled *The Elements of Graphic Statics* one year later.

The ICRC also hired a number of Chinese engineers and teachers who had been trained overseas or in modern local colleges. They included Zhuang Ren-

¹⁶⁵ *Xi-nan Jiao-tong Da-xue (Tangshan Jiao-tong Da-xue) Xiao-shi (History of the Southwest Jiao-tong University/Tang-shan Jiao-tong University)* vol. 1, Chengdu: 1996, p. 17.

song, also known as Le-feng, who was ranked first for his academic performance when he graduated from the Bei-yang Navy College. Zhuang was appointed as Professor Sprague's assistant and as a teacher of English and physics. Another Chinese faculty member was Zhang Jia-rui, also an outstanding Bei-yang Navy College graduate. Zhang worked as Griffithm's assistant and was responsible for teaching English and mathematics.¹⁶⁶ Moreover, the ICRC assigned several more Chinese teachers, including Liang Zi-feng and Zhao Yuan-li. These had either been educated in the West or at Kaiping Military College.

On November 20, 1896, the Bei-yang General Railway Bureau announced the enrolment of students in *Shun Pao*. Its notice stated that the ICRC specialised in teaching bridge and railroad construction, and that it was recruiting 40 young people aged around 20 who already had a basic Chinese and Western education. They would receive monthly allowances. Applicants should apply with references from their parents and local gentlemen at the Railway Bureau on or before October 20 that year?. Those who were successful would serve a three-month probation period. After completing their three-year studies, the ICRC's graduates would be allocated to suitable positions with favourable salaries and encouragement from the Imperial Government.

Initially, Schaller recruited 12 students in Tianjin. After a discussion between the Railway Bureau and the Kaiping Military College, he gathered another eight students who had performed well at the Military College. These 20 candidates formed the ICRC's first student intake. At that time, modern-style

¹⁶⁶ Zhong-guo Di-yi Li-shi Dang-an-guan comp., *Guang-xu Chao Zhu-pi Zhou-zhe (The Guang-xu Monarch Imperial Instructions & Memorials)* Beijing, 1995-1996 vol. 8

education was still undeveloped in China; so only a few students had a basic understanding of English and mathematics.

The ICRC was originally supposed to recruit two classes with a total of 40 students. However, due to recruitment problems, it could not start conducting lessons during 1896.¹⁶⁷ In 1897, the Tianjin-Lugou Bridge Railway Bureau was merged with the Tianjin-Shanhaiguan Railway Bureau, and the ICRC was placed under the new Bureau of Imperial Railways of North China, which was overseen by Hu Yu-fun and Wu Jim-pah. Its classes were formally inaugurated in 1897.

6.3. The Imperial Chinese Railway College's Schooling

Wu's plan was for the ICRC to start teaching in the former premises of the Bei-yang General Railway Bureau in Shanhaiguan. After sufficient funds were secured, a new campus would be built for it in Beidaihe, Zhili Province.¹⁶⁸ However, Bei-yang General Railway Bureau was unable to vacate and refurbish its rooms for teaching purposes in time.

As a result, the Railway Bureau agreed to borrow a few rooms to teach railway engineering at the Tianjin Modern Knowledge College. Starting from the 1860s, Li Hong-zhang's reforms had promoted the establishment of modern schools in Tianjin, and he had instructed Shen Xuan-huai to set up this College.

¹⁶⁷ *Xi-nan Jiao-tong Da-xue (Tangshan Jiao-tong Da-xue) Xiao-shi (History of the Southwest Jiao-tong University/Tang-shan Jiao-tong University)* vol. 1 p. 17.

¹⁶⁸ *Hsin Wen Pao* November 19th 1896.

Wu's trials and tribulations about obtaining classrooms were just a few of the challenges he would need to overcome during the establishment of the ICRC.

With the help of Modern Knowledge College's teachers, and using its libraries and other facilities, the ICRC's students began their studies in Tianjin. But in early October 1897, conflicts arose between the students of the two institutions. Hu Wu-fun therefore instructed the ICRC to implement its original plan by moving to Shanhaiguan. Afterwards, the Railway Bureau reached a final agreement with Modern Knowledge College, and the ICRC relocated to Shanhaiguan on November 16 that year.¹⁶⁹

The ICRC's Shanhaiguan campus was built with bricks and tiles on a south-north axis. Its central building consisted of four sections, from south to north. The main gates bore an inscription of four large Chinese characters – “Tie-Lu Xue-tang”, meaning Railway College, together with five smaller ones – “Bei-yan Shanhaiguan”. The first three sections of the building formed a # shape, with extension rooms on both its east and west ends. The final section was used as a schoolyard.

A courtyard on the west side of the main college building served as its laboratory. It contained many pieces of machinery for the students to practice on. These included engines, water pumps, lathes and a drill press, as well as telegraph, woodworking and electrical tools and clamps. A canteen for both the teachers and students was located on the east side. After its relocation from Tianjin to

¹⁶⁹ *Xi-nan Jiao-tong Da-xue (Tangshan Jiao-tong Da-xue) Xiao-shi (History of the Southwest Jiao-tong University/Tang-shan Jiao-tong University)* vol. 1 p. 17.

Shanhaiguan, the ICRC had only a small laboratory and mini-library, both of which were managed by the Dean. The limited reading resources were reserved for teachers; they were out of bounds to the students. Lectures were the main method of learning, even though the students' teaching materials were far from adequate.

Besides the subject of Chinese, all the courses were taught in English. Students were required to take handwritten notes while the instructors were lecturing. Occasionally, the teachers provided mimeographed materials. The lack of reference materials was a major challenge for both teaching and learning. In general, the instructors did not offer personal tutoring to students who were experiencing difficulties. Yet despite its limited resources and unfriendly environment, the ICRC and its teachers attempted to offer a comprehensive education to China's potential railway and civil engineers. The ICRC courses included:

Chinese Language: Literature, Ethics

Mathematics: Calculation, Algebra, Geometry, Stereometry,

Trigonometry, Analytic Geometry, Calculus

Physics

Dynamics: Statics, Kinetics, Hydrostatics, Engineering Dynamics,

Material Mechanics, Mechanism, Structural Design

Cartography: Drawings, Geometry, Scenography, Mechanics'

Charts, Civil Engineering Charts

Surveying: Earthwork, Levelling, Cures, Turnoff and Entrance

Surveying

Mechanics: Theories of Mechanics, Engineering Machinery

Railway Construction: Roadbed, Bridges, Culverts

Physical Education: Exercise, Instrumental Sports

Shortly after the first class of students moved to the Shanhaiguan campus, Schaller recruited a second class. In early 1898, he went to Shanghai, where he signed up 20 students, mainly from schools run by the Society of Jesus. This fresh intake was better trained in modern knowledge than the first one, and its members reached Shanhaiguan in March 1898, just after Lunar New Year.

In the spring of 1899, a third class of students arrived at the ICRC. They came from varied educational backgrounds and most of them were not used to learning in English. Also, Liang Zi-feng, the Chinese instructor, had graduated in the United States. He was a Cantonese speaker, and he was unable to teach in Mandarin. The Railway Bureau telegraphed the ICRC, asking it to send the newly recruited students to Tianjin to be examined. The Bureau assigned Hao Liang-teng as its examiner, and he passed only six students in the third class. These were sent back to Shanhaiguan, while the rest were dispersed in Tianjin.¹⁷⁰

By 1900, the ICRC was on track in implementing the constitution and plans Wu had drawn up for it. The examination system was very strict. According to Wu's constitution:

¹⁷⁰ *Xi-nan Jiao-tong Da-xue (Tangshan Jiao-tong Da-xue) Xiao-shi (History of the Southwest Jiao-tong University/Tang-shan Jiao-tong University)* vol. 1 p. 18.

The Railway Bureau Engineer-in-Chief will invite foreign engineers to visit the ICRC once a month. In April and September every year, the Engineer-in-Chief will hold two exams in the ICRC. In February every year, the Railway Bureau will appoint an official familiar with modern knowledge to conduct the final examinations.¹⁷¹

Although the ICRC did not implement its examination system in strict accordance with Wu's plan, the Dean and instructors did evaluate its students frequently; and their academic performance determined their subsequent career development. Outstanding students were identified, and the most exceptional ones were awarded extra subsidies. On the other hand, poorly performing students were either allowed to remain in the same class and repeat the course, or else expelled with no qualifications. As a result, most of the ICRC's students studied extremely hard.

The ICRC constitution set clear goals for its graduates. Regarding their career path, it stated: "After three years of study at the college and on site, qualified students will be assigned to railway construction jobs. During their fourth year, selected graduates will work as Third-Class Deputy Engineers for a monthly salary of 50 yuan. Up to their fourteenth year, First-Class Engineers may receive a monthly salary of 200 yuan."¹⁷²

¹⁷¹ Wu Jim-pah, 'the Constitution of the Imperial Chinese Railway College'.

¹⁷² *Shin Wen Pao* November 19th 1896.

6.4. The Impact of the Imperial Chinese Railway College

On March 17, 1900, the first class of students finished their studies. The second class did not fully complete the curriculum, and it graduated ahead of schedule. Of the 37 students in the first two classes, only 17 were awarded diplomas. These 17 young men formed the first group of locally educated civil engineers in Chinese history. In April that year, the ICRC welcomed 30 more students for the fourth class from Shanghai and Guangzhou. Its earliest graduates formed the backbone of railway construction in North China during the early 20th Century. Twenty years after the completion of its first railway, China had gained the ability to construct and operate the northern section of the IRNC by its own resources. As Miller, a journalist at the New York *International Herald Tribune*, notes in his *The New Far East*:

In the field of railway management, the Chinese will be self-sufficient soon, and would not require any assistance of Westerners. During a recent visit of mine, I was not able to see any Caucasian staff on the whole Guangdong Railway (IRNC). The switchmen, drivers and patrols were all Chinese nationals. I suggest the Westerners to visit Tangshan, where a number of railway related factories are located. The Railway Company produces a few locomotives, water pumps and machineries of other kinds by the involvement of Chinese workers. Westerners are still supervising the core tasks of production there, and such a situation may continue for a few more years. However, simply taking the

case of Japan, the roles of the Westerners would end sooner or later.¹⁷³

Starting from the mid-1870s, Tangshan gradually grew from a small town far away from North China's major cities into a centre for coalmining and railway construction. The Kaiping Colliery's opening and the railroad between Tangshan and Tianjin acted as key factors in the development of both Tangshan and North China. In addition, the reestablishment of the ICRC in Tangshan laid the foundation for nurturing the technologies and human resources needed to develop related industries in the city.

Immediately after the Eight-Nation Alliance's invasion, the ICRC was closed down for five years, from 1900 to 1905. This was not due to any financial or operational difficulties affecting the IRNC Bureau or the College itself; instead, it was the Boxer Rebellion and ensuing warfare that interrupted China's earliest railway education programme. Otherwise, Wu, the Bureau and the College under their administration might have had the opportunity to contribute even more to the development of China's railways.

The Boxer Rebellion broke out in May 1900, just as the third class of students arrived at Shanhaiguan. The rebels were hostile to Westerners as well as Western culture and technologies. They deliberately inflicted serious damage on the new railroads. The ICRC's teachers and students were threatened by the rebellion, because it was a modern educational institute. The INRC Bureau

¹⁷³ Miller, *The New Far East* (New York, 1906), p. 258.

ordered the college to start its summer vacation early, and the students left for places of safety.

In late May, a few students returned to the ICRC under the leadership and protection of Professor Griffithm. They visited construction sites near the Xiaoling River and Daling River in Jinzhou. Zhan Tian-you was acting as the engineer-in-charge of that railway section at the time. He led the students in inspecting the bridges across the two rivers and the construction of a river dam. At the site of the Daling River, A.G. Cox, the British bridge engineer, demonstrated the use of caissons.¹⁷⁴ Griffithm, Cox and Hu Zhao-rong, a recently arrived ICRC graduate, elaborated on the details and techniques of bridge construction to the students.¹⁷⁵

Compared to the Boxer Rebellion, the Eight-Nation Alliance invasion, particularly the Russian and British seizures of the IRNC and ICRC, caused much more serious damage to the development of railways and education in China. On June 10, 1900, a group of 2,000 soldiers of the Western Powers marched on Beijing from Tianjin. During the unrest, the instructors and students on the worksites returned to the Railway College in Shanhaiguan. The Alliance captured the Dagu Fortress one week later, on June 17. The teachers and students left the ICRC. Griffithm and some of the students fled to the Kaiping Colliery, where they sought jobs. On September 30, the British and Russian forces captured Shanhaiguan, and the Russians occupied the ICRC campus.

¹⁷⁴ Percy Horace Braund Kent, *Railway enterprise in China: an account of its origin and development* (London: Arnold, 1907) Chapter VI: The Imperial Railway of North China and the Chinese Eastern Railway, 1890-1900.

¹⁷⁵ *Xi-nan Jiao-tong Da-xue (Tangshan Jiao-tong Da-xue) Xiao-shi (History of the Southwest Jiao-tong University/Tang-shan Jiao-tong University)* vol. 1 p. 19.

In October 1902, the Qing Dynasty and Tsarist Government reached an agreement on the return of Shanhaiguan. The British troops withdrew, and the Russians retreated to the east of the Liao River. In the spring of 1903, Hu Yu-fun, the Supervising Director of the IRNC, and Liang Ru-hao, its Director General, made plans to re-establish the ICRC at Shanhaiguan. Due to a shortage of funds, Liang suggested operating the college jointly with the Kaiping Colliery, as Wu had originally proposed. However, the colliery argued that the schoolyard in Shanhaiguan was too small for further expansion. It suggested rebuilding the ICRC in Tangshan. Liang rejected this idea, and the ICRC's reestablishment did not materialise at that time.

Wu Jim-pah's establishment of the ICRC opened a new page in the history of education in China at the turn of the 19th and 20th Centuries. There was only a very limited number of modern schools in China at that time. In August 1902, the Qing Court announced the *Regius Constitution for Higher Education*, which informally introduced and recognised the modern educational system. The Imperial Examination system had not yet been abolished at the time when the ICRC was operating. In September 1905, the Qing Government issued a royal decree entitled *The Termination of Imperial Examinations and the Establishment of Modern Schools*. The ICRC had already been in existence before the government took this step.

Thanks to the farsightedness of the reformers and the IRNC's financial support, Wu and his subordinates educated the first group of Chinese railway

builders without any material assistance from the Qing Government. As previously mentioned, he never managed to obtain sufficient tangible and intangible support when he was planning and operating the ICRC, which meant that its human and material resources were extremely limited. The ICRC's campus at Shanhaiguan also lacked both space and facilities.

However, under Wu's supervision, the ICRC earnestly carried out all its assigned tasks. It appointed local and Western instructors, recruited students in a number of cities, provided subsidies to outstanding scholars, designed teaching materials, and assessed the progress of its students. Undoubtedly, Wu and his administration understood how urgently China needed railway engineers, and they paved the way for the successful establishment and management of the ICRC.

Besides the Chinese language subject, the contents of all the other courses were based on those taught in England. More importantly, apart from the lectures and practice sessions on its campus, the ICRC stressed the importance of site visits to various railway construction projects. In fact, Wu's proposal to the Qing Court clearly outlined his criteria for the college's location. Either Beidaihe or Shanhaiguan would be ideal, as they were surrounded by an array of infrastructure projects, including surveys or construction work on railroads, stations, tunnels, bridges and other associated facilities.

In addition, the ICRC students were encouraged to wear light and simple uniforms that would enable them to do physical exercises. Consequently, the physical appearance and mental attitudes of its graduates were entirely different

from those of the old-style Chinese literati. The college's teaching methods stressed both scientific theory and practice. Despite the uncongenial political and financial conditions, the instructors and affiliated engineers did their best to arrange on-site visits and teaching for the students. Outstanding engineers who had graduated from Britain and the USA, such as Cox and Zhan Tian-you, treasured the opportunity to interact with the ICRC's students, even under the shadow of civil disorder and warfare.

It is noteworthy that some of the ICRC's earliest graduates – Zhang Hong-hao, Xu Shi-yuan, Chai Jun-chou, Su Yi-zhao and Geng Rui-zhi – went on to assist Zhan in the construction of the Beijing-Zhangjiakou Railway, an all-Chinese undertaking. The ICRC's establishment not only symbolised China's successful adoption of modern education during the late 19th Century, it also provided most of its railway construction elite during the early 20th Century. Wu's pioneering work revolutionised higher education in China, equipping the country with the contents, methods, objectives, organisation, management and achievements of modern education.

In fact, six years later, the ICRC reopened in Tangshan. The re-established college followed the same operational structure, method for selecting instructors and criteria for recruiting students that Wu had developed. In June 1906, the Railway and Colliery College was reinstated under the administration of the IRNC Bureau. Yuan Shi-kai, then the IRNC's Director General, re-appointed Griffiths as its Dean. In August that year, the Railway and Colliery College began

recruiting students with announcements in the newspapers of Tianjin, Shanghai and Hong Kong. Eventually, it enrolled 121 candidates.

The modern engineering education established by Wu and Griffithm were eventually restored in Tangshan. Throughout the 20th Century, the Tangshan Railway College fully demonstrated its strategic value in China's modernisation. During the years of the Second World War and Cold War, the College moved inland from the coastal area. Now, it has developed into the Southwest Jiao-tong University in Chengdu and Ermei, Sichuan Province. Yet it still focuses on teaching and research related to railway engineering and related subjects. Now in its 115th year, the university that originated in Shanhaiguan still remembers and honours the pioneering role of its founder, Wu Jim-pah.

Chapter 7

Disputes and the IRNC's Significance in Late Qing Politics and Economics

During the 1860s, the Anglo-French Alliance invaded China and captured Beijing. Two centuries after the establishment of the Manchu regime, its political centre had been occupied by its enemies for the first time. Meanwhile, a great debate concerning railway construction broke out between conservatives and reformers in the central government. One of its issues was whether railways would be used by the invaders if the West attacked the Qing Empire again. Since Tianjin had been designated as the hub of a proposed railway network, the Qing regarded such Western-style facilities as a threat. Lack of confidence and understanding about modern technology delayed the introduction of railways for more than a decade.

In fact, railways provided vital assistance to the Chinese forces fighting the Japanese invaders during the 1894-1895 Sino-Japanese War. Most of the land battles in this conflict took place north of Shanhaiguan, especially in the area around the Sino-Korean border. The Imperial Railways of North China (IRNC) projects led by Hu Yu-fun and Wu Jim-pah had been held up by a shortage of funds, so its extension north of Shanhaiguan had made hardly any progress.

Following the defeat of the Bei-yang Army and Navy and Li Hong-zhang's trip to Japan for peace negotiations, condemnation of the Viceroy and his followers erupted in the Court and throughout the country. The railway construction programme Li and Hu had advocated came under substantial

pressure and criticism during the mid-1890s. Wu, who was supervising the IRNC and its subordinate institutions, also became the subject of accusations at the Qing Court.

7.1. Wu Jim-pah, the IRNC and the 1894 Sino-Japanese War

Even before the Sino-Japanese War ended, a number of senior officials claimed that, “Wu Jim-pah had subsidised the Japanese invaders by providing them with 8,000 sacks of rice. In addition, he had accompanied the Japanese when they surveyed inland and coastal fortresses.” Indeed, the critics explicitly asserted that, “Since he was acting as the Managing Director of the IRNC, it was no surprise that Wu Jim-pah used the railways to support the invaders.” Under his title of *dao-yuan*, Wu operated the IRNC as a government official. If he had assisted the Japanese aggressors by providing them with supplies and transportation, he would definitely be condemned as a traitor and executed. The Qing Court was shocked by the accusations and ordered Li to investigate them.

Li replied to the Court that there would be no difficulty in investigating whether or not Wu had collaborated with the enemy. On the Court’s instructions, Sheng Xuan-huai, the head of the Imperial Customs in Tianjin, with the assistance of Huang Jian-xian, an official of the Tianjin China Merchants' Steam Navigation Company, carried out the investigation and reported as follows.

Tianjin’s rice exports were routinely and independently checked using conventional methods, as well as by the newly established customs service. The

export manifests of ships that had docked there were inspected, and no records of rice transactions like those described were found. Moreover, Wu had escorted a number of British HSBC bankers to Shanhaiguan to entertain them. The accusation he had acted as a guide for the Japanese invaders might have originated from the Shanhaiguan tour. The investigators went through all the details of the allegations, yet they discovered no concrete evidence concerning them.

Besides, Tianjin did not produce rice. The rice consumed by the military and civilians was imported from the south. It would therefore be illogical to supply the Japanese with rice in Tianjin. Apparently, 8,000 sacks of rice was a considerable amount of freight. If a shipment of that size had been handled in the city, it would not have gone unnoticed. Ultimately, both the conventional records and those of the new customs services, as well as taxation forms, revealed no rice had been exported from Tianjin. The accusation was clearly based on rumours. Most importantly, the railways had remained under Chinese control, and the enemy had not been able to take them over and use them during the fighting.¹⁷⁶

7.2. Wu Jim-pah, Hu Yu-fun and the Pro-British Accusation

Besides the accusations concerning collaboration with the Japanese invaders, Wu and his partner in the IRNC Administration Hu Yu-fen, faced criticisms about a series of pro-British actions that were said to have betrayed China's interests after the Sino-Japanese War.¹⁷⁷ Specifically, Wu was condemned for "controlling the use of funds and human resources in the Bureau". It was said

¹⁷⁶ *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)* 'Cha-fu Long Dian-yang Wu Mao-ding Can-an Zhe' on the 26th Day of the 10th Month, the 20th Year of the Guang-xu Era.

¹⁷⁷ A.D. Bruce to E.G. Hillier, 5 January 1900.

that Wu completely dominated the IRNC's administration, and that he had taken advantage of this fact.

It must be understood that Anglo-German controversies concerning the development of China's railways and the power politics of the Qing Court sometimes made Hu and Wu vulnerable to criticism. According to reports in the *North China Herald*, during Wu's term of office at the IRNC in the mid 1890s, he established more rational operating procedures. More significantly, he effectively eliminated corruption among the local staff. However, he and his colleagues offered gave foreign personnel greater latitude.

In addition, Wu restored the Western-style open bidding system for purchases, thereby enhancing managerial efficiency and cost controls. As the newspapers reported and commented, all Wu's reforms significantly improved the IRNC's operations. However, they also antagonised the company's senior staff. As a result, Hu and Wu were constantly being harassed by Zhang Yi (Zhang Yen-mou), a member of the IRNC's administration, and his supporters in the Qing Court.¹⁷⁸ Rosenbaum suggests that Zhang and the Chinese railway administration's pro-German directors orchestrated the complaints against Hu and Wu after Li Hong-zhang had stepped down following the 1895 Sino-Japanese War.

T'ang (Ting-shu)'s successor as general manager of Kaiping Mining Company was Chang Yen-mou (Zhang Yi), a hereditary

¹⁷⁸ *North China Herald* 2 July 1895 p. 191; 22 May 1896 p. 787. FO 17/1233 Desp. 74 O'Connor to Kimberly 6 March 1895.

retainer in Prince Ch'un's household and a personal favorite of Tz'u-his... His rise to prominence... indicates Li's growing inability to resist Tz'u-hsi's whims... Chang associated himself with the "pro-German" faction of the directorate which, in 1893 and 1895, sought to oust the British staff.¹⁷⁹

As it turned out, Zhang Yi seized the directorship of the IRNC after Hu and Wu had been dismissed from it. A.M. Bruce – who had been seconded to the IRNC's administration to establish and operate its accounting system under the terms of the HSBC loan agreement – wrote in a letter to E.G. Hilliar, the Bank's manager in Beijing, that, "The new director, Chang Yen-mou, was simultaneously attempting Bruce's removal and memorialising the Throne relative to alleged misconduct by Hu and his 'close-relative', Wu Jim-pah."¹⁸⁰

Regarding the personal relationship between Wu and Hu and the accusations of nepotism, investigations revealed that, prior to Wu's appointment, Hu had reported to his superiors that they were in fact distant relatives. However, under institutional regulations, Hu and Wu were not forbidden to work together in the same bureau.¹⁸¹ Concerning the manipulation of human resources, the

¹⁷⁹ Arthur Lewis Rosenbaum, *China's First Railway: The Imperial Railways of North China, 1880-1911* (Yale, Ph.D. 1972) p.109. For more details about the Anglo-German controversy in the time, see PRO UK FO 17/1233 No.74 O'Connor to Kimberly, March 6 1895; FO 228/1203 No.21 Bristow to O'Connor, March 4 1895; No.22 Bristow to O'Connor, March 5 1895.

¹⁸⁰ A.D. Bruce to E.G. Hillier, 5 January 1900; translation of a memorial by Chang Yen-mao, 25 January 1899; and other correspondence in file, 'Government Loans, Railway Loans, Correspondence 1898-1900', SHG 255.1, in Group Archives.

¹⁸¹ Liu Jin-zao comp., *Qing-chao Xu Wen-xian Tong-kao*, Taipei, 1965, vol. 363 *You-chuan 4 the 25th Year of the Guang-xu Era*, pp. 11084-11085. Zhong-guo Di-yi Li-shi Dang-an-guan comp., *Guang-xu Chao Zhu-pi Zhou-zhe (The Guang-xu Monarch Imperial Instructions & Memorials)* Beijing, 1995-1996 vol. 102 *Tie-lu* the 3rd Day of the 3rd Month, the 23rd Year of the Guang-xu Era. pp. 787-791 °

accusers did not provide further details; therefore no investigation could be conducted.¹⁸²

Ironically, during the 1880s and 90s, the Qing Court had appointed Wu and Hu to a series of positions related to industrial and railway development, due to their ability to “co-operate with the British.”¹⁸³ However, Wu was censured for his “predilection for the British in the construction and operation of the IRNC, as the British had failed to occupy the railways.”¹⁸⁴ The Qing Court instructed Wang Wen-shao, who succeeded Li Hong-zhang as the Bei-yang Commissioner shortly after the Sino-Japanese War, to investigate the relationships between the railway administrations and Western banks, particularly the Tianjin HSBC. He reported the following findings.

First, his accusers misrepresented Hu’s request to HSBC concerning loans to extend the railway network. Initially, he had suggested using the Tianjin-Lugou Bridge Railway rather than the existing Tianjin-Shanhaiguan Railway as collateral. Second, as Hu had announced, the deal was made with both British and German banks. HSBC was not the sole beneficiary of the loan arrangement. Third, during the spring of 1895, when the war against the Japanese was at its height, someone had proposed placing the IRNC under the protection of Western businessmen. Both Hu and Wu strongly opposed this idea. All these facts formed persuasive

¹⁸² *Qing-chao Xu Wen-xian Tong-kao*, Taipei, 1965, vol. 363 *You-chuan* 4 the 25th Year of the *Guang-xu* Era, pp. 11084-11085.

¹⁸³ Zhu Shou-peng comp. *Guang-xu Chao Dong-hua Xu-lu*, Beijing, 1984, the 9th Month, the 27th Year of the *Guang-xu* Era, pp. 4777-4778.

¹⁸⁴ Zhong-guo Di-yi Li-shi Dang-an-guan comp., *Guang-xu Chao Zhu-pi Zhou-zhe* (*The Guang-xu Monarch Imperial Instructions & Memorials*) Beijing, 1995-1996, vol. 102 *Tie-lu* ‘Bei-yang Da-chen Zhili Zong-du Wang Wen-shao Zhe’ on the 5th Day of the 3rd Month, the 25th Year of the *Guang-xu* Era, p. 787. PRO UK FO 17/1241 Des 489, O’Connor to Salisbury, December 17 1895. *North China Herald* January 24th 1895.

evidence that neither Wu nor Hu had used the Sino-Japanese War as an opportunity to betray China's interests to Britain.¹⁸⁵

With Li's resignation, Wu and Hu lost their strongest political protector, and they were forced to face a flood of condemnation. In fact, whether or not they had done their best to maintain or enhance the Qing Dynasty's interests was not the focal point of the political struggles that were taking place in China during that period. Even so, the two people most responsible for the early development of the North China railway network were accused of being traitors and collaborators. Indeed, these accusations reveal the reality of Chinese politics during the mid-1890s. China was then at the crossroads between further modernisation or regression.

With the support of Emperor Guang-xu, the Tianjin-based IRNC had steadily grown and developed for 20 years into a modern regional transportation system. Nevertheless, a significant number of senior mandarins in the Qing Court still resisted the notion of accepting Western ideas and technology as a means to solve China's political, economic and security problems.

Back in the 1860s and 70s, Li Hong-zhang had picked Shanghai and Tianjin as bases for the promotion of Self-Strengthening. The process and experience of China's early modernisation were fundamentally different from Japan's during the Meiji Reform. The Chinese ruling class did not properly

¹⁸⁵ Zhong-guo Di-yi Li-shi Dang-an-guan comp., *Guang-xu Chao Zhu-pi Zhou-zhe (The Guang-xu Monarch Imperial Instructions & Memorials)* vol. 102 *Tie-lu* 'Bei-yang Da-chen Zhili Zong-du Wang Wen-shao Zhe' on the 5th Day of the 3rd Month, the 25th Year of the Guang-xu Era, p. 786-787. 'Sheng Xuan-huai Yu-chou Tie-lu Huan-kuan Bing Bao-chuan Zhi-lu Zhe' in the 10th Month, the 25th Year of the Guang-xu Era.

understand the technology, people or capital that were being introduced from overseas; nor did they believe these could help to ensure the survival of their regime.

A few members of the Qing Court even regarded such reforms as threats to the Divine Dynasty. As the reputation of Li and his Westernisation projects declined drastically after the unexpected outcome of the Sino-Japanese War, criticisms of Wu and Hu became reactions to the development of railways and collieries. The bureaucrats who complained about the relationship between Wu, a Chinese official, and HSBC, a British bank in Tianjin, were wary about the role of foreign loans in China's strategic development, even though the introduction of railway technologies was eventually accepted by most at the Qing Court.

Since the 1840s, China had suffered from military, diplomatic and economic defeats at the hands of the Western powers. The rejection of foreign loans was understandable. Facing the West's technological and financial superiority, the Qing rulers underwent a process of denial, consideration, introduction and then resistance against the encroachment of the West between the 1840s and 1900s. The collaboration of the Boxers and Qing army in attacks against churches, schools, factories and foreign concessions in the first year of the 20th Century was the regime's final counter-attack against the modernisation process that had begun in the 19th Century.

As noted in Chapter 2, the growth of the populations, territories, military garrisons and socio-economic functions of the foreign concessions in Shanghai

and Tianjin could be regarded as results of the Opium Wars and Taiping Rebellion. With its comprador offices in Shanghai and Tianjin, HSBC deeply influenced China's economic reform and development during the Late Qing period. The lack of a modern financial platform in China paved the way for foreign involvement in the country's strategic development, including the construction of railways. The contributions HSBC's participation made to the growth of the IRNC should not be underestimated. In this regard, regardless of whether Li Hong-zhang, Wang Wen-shao, Hu Yu-fen and Wu Jim-pah had formed a corrupt clique or not, China's dependence on financial support from HSBC was hard to avoid.

7.3. The Introduction of the Joint-Stock Company System in Late Qing China

Besides his role in providing financial support and banking services for railway construction in North China, Wu made a series of contributions to the modernisation of transport and commerce during his terms with the railway bureaus. These included the establishment of corporate organisations, modern postal services and the urban development of Tianjin and its surroundings.

In the West, the establishment of corporations, particularly joint-stock companies, took place alongside the growth of capitalism. The accumulation of capital through market forces and mechanisms under the protection of proper legal and accounting systems and commercial agreements had allowed the joint-stock company system to secure funding for large-scale investment projects and to promote the sharing of risks and returns.

In China, the traditional structures of businesses were sole proprietorships, family proprietorships and partnerships. The modern joint-stock company's structure and ownership system was imported from Britain, and the establishment and operations of railway institutions served as pilot projects for such modern enterprise concepts in Late Qing China.

China's state and privately-owned railway enterprises experienced a series of challenges during the last decades of the 19th Century. The emergence and development of the railway network were interrupted by complex political, economic and security upheavals. Nevertheless, the railways exemplified the concept and operations of joint-stock companies in China, and they influenced the new companies and industries that were being established during this period.

In this respect, the effects of the introduction of the joint-stock railway company structure from Britain were neither limited to the modernisation of transportation, nor did they form a model for further projects. The joint-stock railway companies obliged the Chinese government, business community and society as a whole to revise their business concepts, methods of fundraising and business-development strategies. Furthermore, the impact of these joint-stock companies, together with their introduction of new technologies and investment and management tools, was just as profound as the tangible benefits created by the railways themselves.

In Western countries, the construction of railways had laid the foundation for the development and expansion of large-scale industries. In addition, railway

development was both capital and technologically-intensive. Therefore, it was naturally suited to the joint-stock company model. For instance, the Stockton and Darlington Railway (S&DR), the world's first railway, had been a creation of the English financial markets and joint-stock system. With the support of the local financial community, the S&DR had used leverage to collect the funds it needed. It had been completed with extraordinary efficiency within one year.

By the mid 19th Century, the railways in the United States had extended inland from the coastal areas to form the largest transportation system in history. Benefiting from the experience of their predecessors elsewhere, the United States joint-stock railway enterprises were able to collaborate with financial markets at a higher level. In fact, the US railway corporations had been established by the joint-stock system, and their mammoth railway enterprises supported the early development of Wall Street during the 19th Century.

In Asia, the Kaiping Colliery and its tramway brought about the emergence of joint-stock industrial companies in Late Qing China. The Kaiping Colliery and Tramway directly raised funds from the public, an example of the securitisation of stocks and assets. However, as some of the first joint-stock companies, the railway enterprises were unable to separate their ownership and management functions completely. As discussed in Chapter 5, the rights and interests of shareholders in government supervision and merchant management enterprises were not fully protected, which created an obstacle to the further development of railway corporations.

Nevertheless, Wu worked actively in the China's early railway management. Starting from the stock offering of the Kaiping companies to the establishment of the China Railway Company, together with the extension of the Tianjin-based railway network to Beijing and Manchuria, he acted as an intermediary between foreign providers of loans and banking services, as well as the railway administration's professional managers. He thus provided the coordination between the financial markets, public capital and professional management that underpinned the emergence and growth of modern stock companies.

Wu's experience in Western banking and commercial circles helped Li to create and operate the joint-stock companies that developed railways in North China. His participation in the introduction of railway companies was a remarkable example of the role compradors played in bridging East and West. Wu and his colleagues' contributions to modernisation and socio-economic reform in Late Qing China should never be underestimated. Conversely, his experiences in the early development of China's railways transformed him from a mandarin comprador into an industrial capitalist at the turn of the 19th and 20th Centuries. Chapters 8 and 9 of this research will elaborate on this subject in greater detail. However, interference by viceroys and other senior officials, including Li himself, severely circumscribed how railway managements could use their funds. As Zheng Guan-ying (1842-1922) reports:

The companies that opened in China raised funds from the public, but they were still called *ju* (bureaus). These bureaus were operated

by *dao-yuan*, whose education did not qualify them to fulfil the requirements of such jobs. Westerners were always poking fun at such situations in China.¹⁸⁶

Reports and comments in the Tianjin and Shanghai newspapers, such as *Shun Pao* and *North China Herald*, showed that the railway companies and bureaus under Wu's management performed exceptionally well in terms of both their revenues and contributions to society. This was due to his experience of working with Western bankers and modern industries,. Unfortunately, as Zheng points out, under Li and Zhang Zhi-dong's government supervision and merchant management framework, literati officials working as supervising directors had supreme power over the frontline management. Only a few managing directors, such as Zheng himself, as well as Tang Ting-shu and Wu, were experienced businessmen or compradors. As a result, both the supervisors and managers usually regarded the profit-making purpose of an enterprise as being subordinate to its political, social and military functions.

The Qing Dynasty's central and local governments were unable to provide sufficient funds for modernisation projects by themselves. As a result, there were repeated delays and interruptions during the development of China's railways . However, the country's political leaders refused to ease their control over the finances of these new businesses. The market's financial clout and the potential role of the business community as investors were therefore not fully mobilised and used. Political-financial power and funding were severely misallocated. This

¹⁸⁶Xia Dong-yuan comp. *Zheng Guang-ying Ji (The Collection of Zheng guang-ying)* Shanghai, 1982-1988, p. 626.

imbalance of power obstructed the emergence and expansion of the strategic industries that required sizeable investments of capital and technologies.

The Kaiping Railway Bureau was the first joint-stock company of its kind. It raised funds in a stock offering to the public through a financial platform provided by the HSBC Tianjin Branch and Wu. The Western banking system provided the Kaiping Railway with an opportunity to use private-sector capital. In fact, HSBC managed the first railway enterprise stock offering in its role as an agent and warrantor. Yet, the bank and its comprador office in Tianjin derived very little financial advantage or influence from the project. Nor were HSBC or Wu able to intervene in China's internal affairs by providing similar services to the development of railways thereafter.

Nevertheless, the bitter experience of the Kaiping Tramway stock offering clearly demonstrates how lack of trust between the Chinese government and local tycoons disrupted such fundraising operations. Ultimately, the Chinese railway institutions, which gradually came under the control of the Qing Court, were forced to seek financial support from foreign banks. During the 1880s, despite a series of military defeats at the hands of the European powers, the division of China into spheres of foreign interest had not yet begun. However, the nation's socio-political structure had sown the seeds that led to the failure of the government supervision and merchant management enterprises. Gradually, the IRNC's extreme reliance on HSBC loans for its expansion handed over China's economic sovereignty to the United Kingdom. The foreign spheres of interests

were thus the logical outcome of China's economic development at the turn of the 19th and 20th Centuries.

7.4. The modernisation of North China's Transportation and Postal Systems

The development of the government supervision and merchant management enterprises was constrained by the political and economic power structure of Late Qing China. Joint-stock companies were likewise unable to optimise their efficiency and performance due to the inadequate market mechanisms and legal system that prevailed. Indeed, the Tianjin-based railway network supervised by Li Hong-zhang and Hu Yu-fen, managed by Wu Jim-pah and designed by Kinder had driven the development of transportation in North China and the establishment of modern cities in related areas. The introduction of railways significantly transformed the appearance and functions of urban centres like Tianjin, Tangshan and others in the region.

From the 1880s to the early 20th Century, the success of the Kaiping Tramway, Tianjin-Tangshan Railway and IRNC turned Tianjin into a logistics hub serving Beijing and Fengtian in North China. Meanwhile, the city served as a transshipment centre for shipping in the Bo Sea and land transportation. Consequently, after 30 years of growth, the railway network had transformed Northwest, North and Central China into Tianjin's economic hinterland.

Fifty years after the city was opened up, Tianjin's population had rapidly grown to many millions by the 1920s and 30s. It came a close second to Shanghai

in terms of economic influence and importance during the Early Republican years. However, its adjacent areas, including Zhili, Henan and Liaoning provinces, lacked the economic potential and populations of the South Jiangsu-East Zhejiang regions surrounding Shanghai. As noted in Chapter 4, the Shanhaiguan region's mountainous and coastal terrain had prevented the use of canals and livestock for transportation. Railway construction significantly expanded Tianjin's economic horizons by helping it to overcome these geographical obstacles, which had stood in the way of its development.

By 1906, 48% of all the goods moved to Tianjin from inland were being transported by train. In 1913, the figure had increased to 55%. Meanwhile, the percentages that came by ship and livestock had declined to 41% and 4% respectively. As previously mentioned, since the Kaiping Colliery opened, railway construction had remarkably improved the efficiency of transportation and reduced its costs.

Tianjin's international trade expanded considerably during the early 20th Century. Between 1893 and 1913, Tianjin Imperial Customs recorded an increase of 290.3%, nearly threefold, in the value of goods imported from the West and Japan. Exports from North and West China grew even more, by 424.5%.¹⁸⁷ In 1899, Tianjin's annual imports were valued at 25,130,000 taels. In 1911, the figure reached 41,220,000 taels.¹⁸⁸ Meanwhile, people with various professional and personal backgrounds flocked to the city and boosted its commercial expansion.

¹⁸⁷ *Custom Reports, Tientsin 1893-1913*.

¹⁸⁸ Yang Rui-liu & Hou Hou-pei, *65 Nian-lai Zhong-guo Guo-ji Mao-yi Tong-ji (A Survey on China's International Trade for 65 Years)* Nanjing, 1931, p. 92.

In addition, the IRNC conceived the integration of China's postal system and railway network during Wu's administration. In October 1888, the Tangshan-Xugezhuang Railway was extended to Tianjin and renamed the Tianjin-Tangshan Railway. At that time, mail boats operated by the Tianjin Imperial Customs berthed in Dagu Port and then delivered mail to Tianjin by rail, the earliest use of railways in China's postal system. In the winter of 1893, when the Tianjin-Tangshan Railway had been lengthened to Shanhaiguan and renamed the Tianjin-Shanhaiguan Railway, the delivery of mail by rail from Tianjin to Nuzhuang began on a trial basis.

On July 15, 1897, the Tianjin General Post Office signed an agreement with the IRNC Administration under which the latter offered to provide a number of special carriages for the transfer and storage of mail between Tianjin and Tanggu. This could be regarded as the genesis of regular railway postal systems in China. In August 1899, the Zhong-li Ya-men, Post Office and Railway Bureau reached a further agreement under which the latter would issue free passes to mail carriers. In addition, mail-posting boxes would be placed on trains on the Tianjin-Tanggu and Tianjin-Beijing lines.¹⁸⁹

The reestablishment and reform of the Imperial Chinese Railway College founded by Wu is another illustration of the relationship between the railway network and postal system in China. During the early years of the 20th Century, the re-established Railway College in Tangshan still came under the IRNC's

¹⁸⁹ *Zhong-guo Jin-dai You-dian-shi (The Modern History of Postal and Telegraphic Communications in China)* Beijing, 1984.

administration. However, its supervision was later transferred to the newly established You Chuan Bu (Post and Transportation Ministry).

Nevertheless, the integration of railway and postal systems did not necessarily create a lot of additional income for the bureaus and enterprises concerned. Indeed, the modernisation of the transport system significantly reduced the costs of communication. This trend further boosted the movement of goods, personnel, capital and information in Tianjin and its surroundings. Eventually, these modern communication and transportation methods paved the way for the industrialisation of Tianjin and North China. This new commercial and technological environment led Wu to invest in a number of businesses between the late 1880s and the early 1920s, thereby further contributing to Tianjin's industrialisation and urbanisation.

Chapter 8

Wu Jim-pah and Tianjin's Early Industrialisation

As stated in Part 2 of this thesis, despite the constraints created by political disputes and lack of human and financial resources, Tianjin eventually became the centre of North China's railway network between the mid 1870s and 1900. The city's economic reforms benefited from its geographical location in terms of its proximity to the Bo Sea to the east and Beijing, the seat of political power, to the west. In addition, the establishment of the Bei-yang Tong-shang Da-chen Ministry in Tianjin made it a very convenient place for the introduction of foreign technologies, capital and personnel.

Undoubtedly, the strengthening of China's national defence capabilities exerted a considerable influence over the railway system's design and construction. Its appearance provided Tianjin with a modern and effective transportation infrastructure that contributed to the city's industrial and commercial development. At the very beginning, Kaiping Mines had built the tramway solely to transport coal; yet the construction of the Jin-yu Line and the growth of Imperial Railways of North China transformed it into a trunk route for transporting passengers, freight and mail during the 1890s. This process gave Tianjin – which had served as a distribution centre for commercial goods and raw materials in North China for centuries – an even more important role as a hub for China's international trade.

The introduction of locomotives and steamships led to a rapid growth in the number of locals and foreigners, as well as the volumes of freight, capital and information that flowed through Tianjin. The city's potential and its demand for modern economic development grew tremendously at the turn of the 19th and 20th Centuries. This was due to a number of reasons. First, its commercial activities were attracting more Chinese and Western merchants, politicians and military personnel to settle there. As had happened in Shanghai, Tianjin's growing population led to the establishment of a Municipal Council. From the late 1880s onwards, this body introduced a number of modern public utilities – such as water, oil, gas, electricity, communications and transportation services – to communities in the foreign concessions. The Council either provided these itself or, as in most cases, contracted them out to one or more European firms. The majority of the utilities were initially set up in the British Concession, and then they were gradually extended to the rest of the city.

In addition, some Chinese merchants recognised that Tianjin, with its modern transportation, technology and financial platforms, offered them many opportunities to cash in on the boom in international trade. They also saw the city had the potential to transform itself from a trading port into an industrial centre. In doing so, it would be following the example set by Shanghai's remarkable socio-economic growth during the 1870s and 80s, which had been made possible by the availability of all the primary resources it needed. As a result, Tianjin's manufacturing sector grew continuously from the city's opening up in 1860 until the 1900 Boxer Rebellion.

Demand for military reform and equipment during the Self-Strengthening Movement resulted in the establishment of institutions such as Li Hung-zhang's Bei-yang Arsenal (which opened in 1867) and the Dagu Shipyard (opened in 1880). At the same time, the Bei-yang Army and Navy needed industries to supply its operations, such as factories to make uniforms, equestrian equipment and various items of military hardware. Without these, Li and his successors could not build an effective, modern land and sea fighting force.

Where raw material resources were concerned, the "Three Norths" – North, Northeast and Northwest China – had formed Tianjin's economic hinterland well before the dawn of the modern era. Despite the long distances between them, Tianjin had established strong connections with China's border provinces. The city's economic network had already extended to the Northwestern provinces, including Mongolia and Xinjiang, for centuries. The start of railway construction during the late 19th Century made the transportation of freight between Tianjin and its hinterland more convenient and efficient. This improvement laid a solid foundation for the development of modern wool-spinning, weaving and tannery industries in Tianjin.

Wu Jim-pah's compradorship at HSBC and Forbes & Co. enabled him to participate in the establishment of a number of public utilities in the concessions. During his collaboration with the Zhili viceroys of the late 19th Century and early 20th Century – Li Hung-zhang, Wang Wen-shau and Yuan Shi-kai (1859-1916) – Wu became the owner of the city's first manufacturing operations to serve the military. Even so, compared to the number and size of the factories that were

turning out heavy military equipment under the direct control of Li and his successors, the scale of Tianjin's privately owned industrial sector was very small at the outset.

The picture began to change as more and more foreign and Chinese entrepreneurs invested in new factories and gained greater influence in Tianjin's economy during the closing decades of the 19th Century. And, around the turn of the 19th and 20th Centuries, Tianjin's industrialisation provided Wu with opportunities to evolve from a mandarin-comprador into the first – and undoubtedly the most active and important – industrialist in the city's history.¹⁹⁰

As an intermediary between the Qing Government, HSBC and Forbes & Co., Wu accumulated massive amounts of money in commission fees. He deliberately channelled this capital into a variety of military-related industries, laying down career paths for his sons to become military leaders and factory owners in the process. In fact, Wu's immediate family members gave up their roles in comprador offices at the beginning of Republican China. The following analysis of the process that took place, as well as the discussions in Chapter 9, 10 and 11, form the third part of this thesis. By examining the roles of Wu and his sons in the Tianjin-Beijing industrial sector, it explores and highlights the characteristics of China's early factory owners. It also looks at the Wu family's most noteworthy investment activities, how they operated their businesses, and their succession planning.

¹⁹⁰ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 2 (Cambridge: 1988), p. 5.

8.1. The Tianjin Chinese Match Factory – Pioneering the City’s Modern Industry

According to his youngest son’s memoir, Wu Jim-pah’s monthly income when he served as HSBC’s comprador ranged from 200,000 to 400,000 taels. By the time he resigned as the Bank’s comprador in 1905, he had amassed 1,400,000 taels in his account. Wu’s total assets were in the order of five to six million taels. Although he was one of Tianjin’s foremost compradors in his day, Wu may not have been the richest. Nevertheless, he was the only one among the so-called Big Four Compradors – the others were Jardine Matheson’s Liang Yan-qing (1852-1938), Swire’s Zheng Yi-zhi (1861-1921) and Russo-Chinese Bank’s Wang Ming-huai (1846-1918) – who invested in modern industry on a large scale.

Prior to the Eight-Nation Alliance invasion, there were fewer than 10 factories in Tianjin. Most of them were small ones that produced commodities for local residents. Such factories could be regarded as the first attempts by the merchants and compradors to introduce Western manufacturing technologies into traditional workshops. In 1876, Zhu Qi-ang (?-1878), the General Manager of China Merchants' Steam Navigation Company in Tianjin, built the Element Machinery Mill.¹⁹¹ A number of small foundries were also established to supply ironwork for domestic use and carriage parts.

Most of the above-mentioned small factories were located in the British concession. These combinations of stores and manufacturing plants served as a link between handicraft workshops and modern factories, and they were also

¹⁹¹ Wang Jing-yu comp. *Zhong-guo Jin-dai Gong-ye-shi Zi-liao (The Historical Materials of Industries in Modern China)* vol. 2, (Beijing, 1957) p. 870; Xu Yu-zhai *Zi-xu Nian-pu* (Beijing, 1999)

common in Hong Kong, Shanghai and Guangzhou during the late 19th Century. The absence of production lines and economy of scale distinguished them from the labour and capital-intensive industries of the West. In 19th Century Tianjin, significant capital investments, the occupation of large plots of land, the construction of manufacturing plants for specific purposes, and the employment of well-trained labour forces and European technicians and machinery gave a few of its factories the characteristics of modern industrial operations. But only three of them met these criteria fully: the Tianjin Chinese Match Factory, the Bei-yang Weaving Company and the Bei-yang Tannery. Significantly, all of these were set up and owned by Wu and his family.

In 1886, Wu and Yang Zhong-lian, the Managing Director of the Tianjin Military School (Tianjin Wu-bei Xue-tang), collaborated with Paul Georg von Moellendorff (1848-1901), the former German Consul in Tianjin, in the establishment of a partnership with a total capital of 15,000 taels to build the Tientsin Chinese Match Factory on Canton Road in the British Concession. Its products were sold under the brand names Chong Ren Tang and Bao Zhi Tang. In Late Qing China, nearly all matches were imported from the West. While their unit price might have been low, the enormous demand for them worsened China's serious international trade deficit. Li Hung-zhang noted that, according to Imperial Customs reports, the value of imported matches in 1890 totalled 1,340,000 taels. He suggested that:

Since Japan can produce matches, China should also encourage its merchants to raise funds for equipment to set up factories for the

same purpose. These would compete with imported goods and protect China's commercial interests. As a result, Wu Jim-pah, the Tianjin merchant, applied to establish such a factory.¹⁹²

Wu's decision to inaugurate a match company not only demonstrated his business acumen, it also helped to improve the imbalance in Sino-foreign trade. After the Opium Wars, reducing the trade deficit with Western countries was always a central theme in the Qing Government's economic and financial policies. A German teacher from Yang Zhong-lian's Military School was employed as the match factory's chief technician; he was responsible for the acquisition and operation of its machinery.¹⁹³ However, the Chinese and German partners fell out just one year after the factory opened. Moellendorff withdrew his investment and the German technician left the firm at the same time.

Wu's factory was the first of its kind to introduce European technicians. It is worth noting that Chinese directors were forbidden to employ foreign managers and workers at that time. But Wu was the first industrialist in Tianjin who fully understood and respected the importance of European specialist knowledge and experience. On the other hand, he implemented clear and strict guidelines concerning managerial responsibilities, and he rewarded industriousness and thrift. As *Shi-bao*, a leading Tianjin Chinese newspaper in the Late Qing period, reported:

¹⁹² Memorial of Li Hong-zhang on the Production of Matches on the 25th Day of the 7th Month, the 17th Year of the Guang-xu Era in *Li Hong-zhang Quan-shu (The Collection of Li Hong-zhang)* vol. 20, p. 21.

¹⁹³ Tu Ren-sou, *Tu Guang-lu Memorials* (Taipei, 1974) vol. 3, pp. 34-38.

When foreign technicians need to make any purchases, they have to submit a list of them to the directors. In accordance with the directors' instructions, the accounts department will procure and check the items. The firm makes all its payments on a monthly basis. Without those procedures, bills would not be paid.¹⁹⁴

As the German technicians were not shareholders, they received bonuses instead of a salary. If the match firm's revenues grew, the technicians would receive 3,000 taels. If the firm made a loss, or if a technician resigned within one year of being hired, he would receive nothing. Lastly, the German technicians were required to train a certain number of local workers every year.¹⁹⁵ This condition reveals Wu's long-term intentions for the factory.

On the other hand, the German technicians regarded these rules as being too harsh on them. Therefore, they did not work regularly in the factory, and eventually they resigned. Afterwards, they took their grievances against the match firm to the German Consul. He reported the issue to the Tianjin Customs and turned it into a diplomatic dispute. Following the intercession of the Dutch Ambassador, the match company resolved the matter by compensating the Germans with 500 taels. The dispute gave rise to a rumour in Tianjin business circles that Wu was anti-German, which hindered HSBC's co-operation with German banks and companies.¹⁹⁶

¹⁹⁴ Tianjin *Shih Pao* August 25th 1887.

¹⁹⁵ Tianjin *Shih Pao* August 25th 1887; 27th September 1887.

¹⁹⁶ Frank King, *The History of the Hongkong and Shanghai Banking Corporation*, vol. 1, p. 518. vol. 2, p. 274 (Cambridge: 1984). Mackintosh to Cameron, 30 March 1896, in HSBC Group Archives, Shanghai II, 37.

After the German shareholders and technicians had left, Wu and Yang invited Zhou Shen-bo, a general of the Xiaozhan Army, to become a shareholder, and they successfully collected 18,000 taels in additional capital.¹⁹⁷ But, unfortunately, the match firm burned down during a fire on the 21st of May 1891.¹⁹⁸ Wu and his partners lost nearly all their investment.

Interestingly, Wu did not give up. During the summer of 1891, he invited A.D. Startseff and three other British and Russian merchants to join him in establishing the Trading Company of North China, for which he gathered the sum of 14,000 taels^{199, 200}. Afterwards, he placed announcements in *Shin Pao* and the *North China Herald* offering a further 4,500 shares at 10 taels each in order to raise a total of 45,000 taels.²⁰¹ Wu moved the factory out of the British Concession and acquired a 64-*mu* site for it in Hejiakou, six miles from Zizulin.²⁰² The new factory was on Taku Road and the banks of the Hai River. A wooden work shed was constructed to accommodate its 2,400 workers.²⁰³ More importantly, Wu paid a fee of 500 taels to acquire a 15-year match-manufacturing monopoly.

After many twists and turns, Wu rebuilt and expanded his match firm and obtained his monopoly. Its products were sold in Beijing, Tianjin and Henan Province. However, the firm's re-establishment led to an unexpected intervention

¹⁹⁷ Tu Ren-sou, *Tu Guang-lu Memorials* vol. 3, p. 34-38 (Taipei, 1974).

¹⁹⁸ *North China Herald* May 22nd 1891, p. 627.

¹⁹⁹ Memorial of Li Hong-zhang on the Production of Matches on the 25th Day of the 7th Month, the 17th Year of the Guang-xu Era

²⁰⁰ *North China Herald* August 14th 1891, pp. 208, 211; *North China Daily News*, 13th August 1891, p. 151.

²⁰¹ *Shun Pao* November 21st 1878; *North China Herald* vol. 21 p. 6.

²⁰² Memorial of Li Hong-zhang on the Production of Matches on the 25th Day of the 7th Month, the 17th Year of the Guang-xu Era

²⁰³ *North China Herald* August 14th 1891, vol. 27, p. 211; *Tientsin Telegram* vol. 27.

by the German Ambassador to China, Max von Brandt (1835-1915). During the summer of 1891, he complained that the Tianjin match factory's monopoly breached an agreement with Germany, and that the Chinese government should cancel it.²⁰⁴

The German criticisms once again dragged the match firm into a diplomatic dispute and attracted the government's attention. Li Hong-zhang rebutted the Germans in a memorial to the Qing Court. First, he argued that his appointment by the Chinese administration as Bei-yang Commissioner authorised him to grant monopoly rights with a limited duration, as was the custom in Western countries. It was purely an Chinese internal affair; foreigners had no right to interfere. Second, as far as Wu's agreement with the foreigners was concerned:

The match factory is solely owned by the Chinese merchant; there is no foreign shareholder in the company. In addition, the factory was rebuilt on Chinese territory, not in the foreign concessions. The foreign directors shown on the prospectus hold no shares and receive no salaries from the company. Their roles in the match factory are limited to auditing, purchasing machinery and similar arrangements that follow the general rules for Western firms. The Germans should be informed that the match factory is not a Sino-foreign joint venture, and they have no right to interfere in it.²⁰⁵

²⁰⁴ Memorial of Li Hong-zhang on the Production of Matches on the 25th Day of the 7th Month, the 17th Year of the Guang-xu Era

²⁰⁵ Ibid.

Li believed the German complaint was due to their inadequate knowledge about the firm and their jealousy about its British technicians.²⁰⁶

8.2. Wu Jim-pah and the Tianjin Military Factories

Li Hong-zhang resigned as Viceroy after China's defeat in the 1894-1895 Sino-Japanese War. In 1898, Wu submitted a proposal to Li's successor, Wang Wen-shau, about the establishment of a weaving firm. Wu noted that camel's hair and wool were North China's biggest exports. If machinery was set up in Tianjin to produce worsted fabric and blankets, it would create economic benefits.²⁰⁷ The Qing Court accepted Wu's plan and instructed Rong-lu to monitor the progress. The government had all along wanted to compete with imported goods and improve the trade deficit by building new factories.²⁰⁸

Wu invested 250,000 taels in the Tientsin Machinery Woollen Spinning Company, which produced high-quality uniforms and blankets for the New Army.²⁰⁹ His spinning factory was the largest building in the British Concession at the time of the Boxer Rebellion and Eight-Nations Alliance invasion. The Westerners regarded it as an integral part of its fortifications²¹⁰, and foreign soldiers used its water tower as an observation post. In retaliation, the Qing army bombarded the factory with incendiary shells and reduced it to ashes. The British

²⁰⁶ Ibid.

²⁰⁷ Zhu Shou-beng comp. *Guang-xu Chao Dong-hua Xu-lu* (Beijing, 1984) book 4, roll 145, the 5th Month, the 24th Year of the Guang-xu Era, p. 4135.

²⁰⁸ Ibid

²⁰⁹ Memorial of Wu Jim-pah on the Establishment of the Machinery Woollen Spinning Company in Tianjin Shi Bo-wu-guan Eds. *Jin-dai Tianjin Tu-zhi (Illustrated History of Modern Tianjin)* Tianjin, 2004.

²¹⁰ O.D. Rasmussen, *Tientsin – An Illustrated Outline History*, Tientsin, 1924.

considered the spinning factory to be Tianjin's first modern manufacturing development, and they were deeply unhappy about its destruction.²¹¹

Similar to the case of the match factory, Wu proposed re-establishing the spinning firm after the war. On this occasion, Wang Wen-shao's successor, Yuan Shi-kai, forwarded his proposal to the Qing Court. Like Wu's earlier applications, this one focused on how the spinning factory's products could substitute for imported ones. In addition, he expressed his willingness to donate 20% of its revenue to the Qing Court, so as to reduce the central government's financial burdens.²¹²

The Court accepted Wu's application within six days; and before the winter set in, he had reopened his spinning factory and built a tannery alongside it with a total investment of 769,000 taels.²¹³ The tannery had been designed by a British tanner, and it employed two curriers at a monthly salary of 1,000 taels each. The peltries it used were bought from Zhoujiakou in Henan Province and Hankou, while the wool was acquired from Xikou. The tannery imported dyes and chemicals, such as Gambia and melanin, via British and German firms. All the tannery's equipment was bought from England, including five lime tanks, 15 tanning banks, two rotation tanks, a compander, a polisher and a paner.²¹⁴

²¹¹ Ibid.

²¹² Attachment from Wu Jim-pah on the Re-establishment of the Woollen Spinning Factory in Tianjin Tu-shu-guan & Tianjin Academy of Social Sciences comp. *Yuan Shi-kai Zhou-yi (Yuan Shi-kai Memorials)* Tianjin, 1987.

²¹³ Wang Jing-yu comp. *Zhong-guo Jin-dai Gong-ye-shi Zi-liao (Historical Materials of Industries in Modern China)* vol. 2, Beijing, 1957. p. 870.

²¹⁴ Ri-ben Zhong-guo Zhu-tuan-jun Si-ling-bu Eds., Hou Zhen-tong translator, *Er-shi Shi-ji Chu De Tianjin Gai-kuang (A Survey of Early 20th Century Tianjin)* Tianjin, 1986, p. 262.

As the Republican *Tianjin Annals* state, Wu's mechanised tannery was the first of its kind in China. Following its establishment, the Shanghai Machinery Tannery and Jiangnan Tanyard were built in the South.²¹⁵ As Yuan Shi-kai pointed out in his memorial, the Tianjin tannery's establishment reduced the outflow of silver from China, creating benefits for both the Chinese government and economy, which were both suffering from a severe shortage of hard currency at the time. Its products substituted for imports, and they turned raw materials such as wool, camel's hair and leather into consumer products that could be used for either civilian or military purposes. Its establishment considerably increased the amount of industrial activity and broadened the manufacturing base of North China, and it benefited the livelihoods of Tianjin citizens.

It is obvious from this that Wu, Yuan and even the Qing Court were able to appreciate the country's broad commercial, industrial and financial interests during the late 19th Century, a time when China was encircled by a hostile international political and economic environment. More importantly, Wu had rebuilt his spinning factory and expanded it by adding a new tannery. In terms of the nature of these two industries, Wu had facilitated the development of Tianjin's industrial base from weaving to chemical processing, even though the tannery's size and profitability were less than those of the spinning factory.

Wu's tannery also enhanced the development of technical and managerial expertise in Tianjin's industrial sector. At its zenith, it employed around 2,000 workers, including hundreds of long-term skilled employees. Its foremen could

²¹⁵ *Republican Tianjin Annals* Section 9 Chapter 3 Part 7 The Tannery Industry.

earn up to 60 taels a month, while the workers were paid 20 taels. To prevent occupational accidents, the workers were banned from wearing their hair long in a queue. That was a risky thing to do in Late Qing China, and most of them wore a false queue outside the factory.

The New Army in Tianjin relied on the factory's locally produced woollen and leather products. As the *Bei-yang Government Organ (Bei-yang Guang-bao)* commented on 22nd of July 1905, all the leather used for its uniforms, equestrian equipment and even canons was supplied by Wu's factory. The tannery produced belts, bags, and boots that met the military's specifications, using Western designs and techniques. These replaced imported equipment from Europe.

Wu's tannery placed newspaper advertisements listing its products and their prices for customers in various provinces, although its main customer was Yuan's New Army. During the Xuan-tong years, the Royal Guards, who were commanded by Prince Zai-tao (1888-1970), the younger brother of Emperor Guang-xu and seventh son of Prince Chun, were also equipped with Wu's products. Up to the outbreak of World War One, the British army ordered saddles and cannon parts from the factory as well; and the Russians bought 20,000 riding boots.²¹⁶ During the Early Republican Period, the Bei-yang warlords became Wu's main customers. Due to the needs of its South Manchuria Railway, the Japanese army bought Wu's tannery at a nominal price from his eldest son, Wu Xi-zhong, during the Japanese invasion, which began in 1937.

²¹⁶ Wu Huan-zhi, *Guang-yu Wo-fu Wu Tiao-qing Shi-ji De Hui-yi* (A Memoir of My Father Wu Jim-pah) in *Wen-shi Zi-liao Xuan-ji* vol. 49, Beijing, 1964, p. 232.

In 1899, Wu established a packaging factory in partnership with a German firm called E. Gipperich & Co. It was located on Canton Road (present-day Tangshan Lu) in the British Concession. When the Qing Army attacked Tianjin's foreign concessions in 1900, during the Boxer Rebellion, the Westerners used the tannery as a temporary shelter for hundreds of European children. This attracted the attention of the Qing forces, who prepared to bombard it.

Since Wu was both a comprador-merchant and a confidant of the Qing civil service, he learned of the Qing army's plan and informed the British Consul about it. The British authorities removed the children from the tannery before the bombardment began. The British Ambassador reported the tannery's destruction in the fighting to London, and the British Government paid Wu 500,000 taels from the Boxer Protocol Indemnity as compensation for the loss of his weaving and packaging factories. He was also awarded a Victoria Cross by the British Court for saving the British children.

In fact, British diplomats and bankers had been growing increasingly uneasy about the Qing Dynasty's political stability and the safety of Westerners in China during the years between the Sino-Japanese War and the Boxer Rebellion. Using his connections in the Chinese bureaucracy, Wu became an important informant of HSBC and British diplomats.

For instance, he was directly involved in the 1898 Hundred Days Reform, and he was one of Emperor Guang-xu's key supporters. Although the reformers were arrested or forced into exile after the Empress Dowager Cixi returned to

power and Wu was removed from his positions in the central government and railway bureaus, he was still able to report and clarify the political situation in the Qing Court to his British colleagues in HSBC. In October 1898, E.G. Hiller, the HSBC Manager in Beijing, enclosed one of Wu's reports on recent Chinese politics in a letter to Claude Maxwell MacDonald, the British Minister to China. It read in part:

The common talk on the street last night was a certain remark said to have been made by one of the members of the Council (Jun-ji Chu) that advantage should be taken of the present opportunity, when there is only a handful of foreigners here, to exterminate the lot of them and burn the legations... Of course we have heard this sort of thing before but, in view of current events, you might think it well to bring the matter to the notice of the (Zhong-li) Ya-men.²¹⁷

Moreover, when rumours about the death of Emperor Guang-xu began circulating in diplomatic and business circles in China, the HSBC Beijing office cabled to its regional headquarters in Tianjin that, "Wu Jim-pah saw the Emperor in good health yesterday noon. Have no reason to believe he is dead since". Wu's comment, "No cause for anxiety political situation", gave the Bank a concise overview of the situation following the Empress Dowager's coup d'état.²¹⁸

8.3. Wu Jim-pah and the Gas and Electricity Public Utilities in Tianjin

²¹⁷ E.G. Hillier to Sir Claude MacDonald, copy to G.E. Morrison, 6 October 1898, in Lo Hui-min, Ed. *The Correspondence of G.E. Morrison* (Cambridge, 1976), I, pp. 95-96.

²¹⁸ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 2 p. 262.

Wu Jim-pah's inauguration of Tianjin's tannery, weaving and packaging industries could be regarded as the outcome of his compradorship with W. Forbes and Co., which acted as the Tianjin division of Gibb Livingston & Co. in the late 19th Century. The latter had been founded in Guangzhou (Canton) in 1836 by a group of British East Indian Company staff, and it subsequently moved to Macau. After the first Opium War, the company was relocated to Hong Kong, and it opened branches in all the major treaty ports along the Chinese coast, including Shanghai and Tianjin.

William Forbes and his family founded and managed the Tianjin branch, and at the turn of the 19th and 20th Centuries, the main scope of its business steadily shifted towards North China. Besides its branches and agents in South China's major ports, such as Shanghai and Hankou, the firm opened more divisions in inland cities to the north, namely, Beijing, Fungtian, Ningxia, Baotou and Hailar.

The Ningxia Branch was the largest and most important of these, and it concentrated on buying wool in Xining. The Baotou Branch was responsible for purchasing Mongolian wool and camel's hair, while the Fungtian Branch acted as an agent for dogskin.²¹⁹ In Tianjin, W. Forbes & Co. concentrated on its traditional shipping business as well as the export of wool and leather. The British firm's involvement enhanced the city's role in wool and leather commerce in North China.

²¹⁹ *Tianjin Tong-Zhi Tie-lu Zhi (Comprehensive Annals of Tianjin, Concessions)* Tianjin, 1996, p. 211-212.

W. Forbes & Co. exported a variety of goods from China, including, wool, cashmere, camel's hair, bristle, horsetail, dogskin, blanket, nuts, antiques, herbs, soya beans, egg products, ores and human hair. The wool and leather trade occupied a central position in the company's business. As a result, it set up a packaging factory in 1890 at 45 Third Road, off Middle Street. The company also acted as an agent for the Peking Syndicate Ltd., the Tientsin Water Works and the Tientsin Electric Light Co.; and it purchased locomotives, carriages and parts for the Jing-Han, Jing-Feng and Jin-Pu Railways.

Using his commercial connections with W. Forbes & Co., Wu Jim-pah continuously participated in establishing public utilities to supply water, gas and electricity to the Western and Chinese residents of Tianjin's concessions. This was in addition to his tannery, weaving and packaging businesses. In May 1888, the British Municipal Council appointed W. Forbes & Co. to form Tientsin Gas Co., Ltd., with its headquarters at the corner of Canton Road and Gordon Road. It had an initial investment of 43,000 taels.

The Gas Company's first Chairman was W.W. Dickinson, a Director of Collin & Co. in Tianjin. Wu Jim-pah joined its board in his capacity as the comprador of W. Forbes & Co. The other board members included James Wilson of Wilson & Co., R.M. Brown of Russell & Co., C. Poulsen, General Manager of Electric Engineering & Fitting Co., and a representative of the Institution of Engineering and Technology. The Gas Company employed Hoffman as its Chief Engineer.²²⁰

²²⁰ Arnold Wright, *Twentieth Century Impressions of Hongkong, Shanghai, and other Treaty Ports of China: Their History, People, Commerce, Industries, and Resources* p. 745.

The Gas Company began its operations during the winter of 1889-1890, supplying 1,540,911 cubic metres of town gas annually to private and public premises for lighting, cooking and heating purposes. The streets of the British Concession were lit up from sunset to dawn at a cost of 1.5 yuan for 10 candle lights and 1.12 yuan for seven candle lights. The rate for apartment buildings was 10 yuan per 1,000 cubic feet.²²¹

By June 1893, the Gas Company had laid 7,950 yards of pipelines, it delivered 22,600,000 cubic metres of town gas a year, and it had installed 400 gas lamps. It also supplied the China Railway Company and Kaiping Coal Mine.²²² The *Collection of Tianjin Historical Materials* Volume 1 shows the Tientsin Gas Company's revenues as follows :

Year	Capital	Revenue	Profit Margin
1895	43,000 yuan	4,000 yuan	9.30%
1909	43,000 yuan	11,000 yuan	25.58%
1910	140,000 yuan	19,000 yuan	13.57%
1911	140,000 yuan	21,000 yuan	15.00%
1912	140,000 yuan	31,000 yuan	22.14%
1913	140,000 yuan	27,000 yuan	19.22%

²²¹ O.D. Rasmussen, *Tientsin-An Illustrated Outline History*, Tientsin, 1924.

²²² *Tianjin Tong-Zhi Tie-lu Zhi (Comprehensive Annals of Tianjin, Concessions)* Tianjin, 1996, p. 302.

The Gas Company became a joint-stock enterprise in 1903, and the Municipal Council renewed the contract of W. Forbes and Co. as its agent. The company also began to provide electricity in the early 20th Century, when it changed its name to Tientsin Gas and Electric Light Co., Ltd.²²³ In 1909, it made a profit of 25.58% on its revenue. In 1910, the company was restructured with a certified capital of 250,000 taels. James Stewart from the Taku Tug Boat Co. became its Board Director, while W. E. Southcott, a partner of W. Forbes & Co., and Wu served as directors. In 1920, the Municipal Council inaugurated its Electric Power Department to provide electricity directly to the public, and W. Forbes & Co. ended its 30-year role as the enterprise's manager.²²⁴

8.4. Wu Jim-pah and the Water Supply Public Utility in Tianjin

Like his participation in the gas and electricity public utilities, Wu Jim-pah also had a role in the establishment of Tientsin Waterworks Co., Ltd. as the result of his compradorship with W. Forbes & Co. Before its establishment, foreign residents used river water, just as the Chinese ones did.

A series of steps needed to be taken before this river water could be boiled and consumed. First, it had to be stored in a two or three-foot tall porcelain jar. Second, melted alum was sprinkled onto the water's surface and stirred into it. Third, the sediment in the water had to be given time to settle, and a long, hollow bamboo was placed as a straw in the bottom of the jar. Fourth, a finger had to be pressed against the hole at the end of the bamboo straw, and then released to suck

²²³ O.D. Rasmussen, *Tientsin – An Illustrated Outline History*, Tientsin, 1924.

²²⁴ *Tianjin Tong-Zhi Tie-lu Zhi (Comprehensive Annals of Tianjin, Concessions)* Tianjin, 1996, p. 308.

the sediment up into it. Fifth, the hole was covered again and the bamboo was pulled out of the water with the sediment inside it.²²⁵

This complicated method did not suit the needs and habits of the foreign residents, who put considerable pressure on the Municipal Council and made many complaints about the water supply.²²⁶ Finally, the Council gave its support to the establishment of the Tientsin Waterworks Co., Ltd. by W. Forbes & Co., in partnership with Mackenzie & Co. and Reiss & Co., on 30th of March 1897. Its board of directors included Poulsen, James Steward, Startseff, A. Philippot of Philippot & Co., and the Dutch Consul in Tianjin. The businessmen and company representatives gathered an initial investment of 73,000 taels. Unlike the gas and electricity utilities, the Municipal Council provided the waterworks with all its equipment.²²⁷

The waterworks company was located on Bund Road (present-day Taierzhuang Lu), and it acquired its franchise and tax-exemption status for 25 years on May 3, 1897. The installation of water-supply pipelines was completed in November 1898. The water intake was located on the west bank of the Hai River, beside Pao Shun Road (present-day Taiyuan Lu), and the water-treatment plant was at the corner of Parkes Road (present-day Baoding Lu) and Davenport Road (present-day Jianshe Lu). The plant was equipped with three 360,000-gallon

²²⁵ O.D. Rasmussen, *Tientsin – An Illustrated Outline History*, Tientsin, 1924.

²²⁶ Luo Shu-we, *Jin-dai Tianjin Cheng-shi-shi (The Modern Municipal History of Tianjin)* Beijing, 1993, p. 150.

²²⁷ *Tianjin Tong-Zhi Tie-lu Zhi (Comprehensive Annals of Tianjin, Concessions)* Tianjin, 1996, p. 303.

precipitation tanks, five 990,000-gallon filtration pools, three water pumps and three boilers.²²⁸

The company began supplying water on January 1, 1899, at the rate of 300,000 gallons per day. It extended its services to the French and German concessions in 1902 and 1903 respectively.²²⁹ Since its initial capital was no longer sufficient to support the company's long-term development, the Tientsin waterworks raised a further 200,000 taels in 1909. It also issued bonds with a total value of 50,000 taels. The *Collection of Tianjin Historical Materials* Volume 1 reports the revenue of the Tientsin waterworks as follows :

Year	Capital	Revenue	Profit Margin
1909	278,000 yuan	24,000 yuan	8.63%
1910	278,000 yuan	17,000 yuan	6.12%
1911	278,000 yuan	28,000 yuan	10.07%
1912	278,000 yuan	29,000 yuan	10.43%
1913	278,000 yuan	28,000 yuan	10.07%

The above table clearly shows that the Tientsin Waterworks enjoyed an annual profit margin of at least 10% from 1911 to 1913. This was on the high side for a public utilities supplier. Under its agreement with the Tianjin Municipal Council, the waterworks company was responsible for supplying tap water of the same quality provided in Shanghai, and its cost should not exceed 1 yuan per

²²⁸ *Tianjin Tong-Zhi Tie-lu Zhi (Comprehensive Annals of Tianjin, Concessions)* Tianjin, 1996, p. 303.

²²⁹ O.D. Rasmussen, *Tientsin – An Illustrated Outline History*, Tientsin, 1924.

gallon. The Municipal Council had the right to acquire all the company's assets and equipment after 25 years, and the acquisition price would reflect the company's profitability and earnings potential during the five years prior to the cessation of its operations.²³⁰ The Municipal Council exercised this right, took over the company and established its own Water Supplies Department in May 1922.²³¹

From the Late Qing period to the present-day, and from the early 1840s up to the late 1970s, China's modernisation has undergone difficult periods, due to war and political upheavals. Very few of the government supervision and merchant management enterprises that existed in Shanghai, Hankou and Tianjin during the second half of the 19th Century have survived until now. That is also true of Wu's enterprises, which were either destroyed during the 1900 Eight-Nation Alliance invasion or wound up during the Second World War.

Nowadays, Chinese goods, business people and commercial capital circulate all around the world and influence the process of economic globalisation. The efforts and the growth of the country's early industrialists and entrepreneurs during the economic changes that took place in China during the 19th Century should be regarded as the birth of Chinese capitalism. Without doubt, Wu and his enterprises were pioneers of their kind. Operating within the parameters and limitations placed on them by the Qing Court and Western merchants, the rise and fall of Wu's businesses reveal the hurdles that the commercial revolution in Late Qing China had to surmount, as well as its potential. By examining the way

²³⁰ O.D. Rasmussen, *Tientsin – An Illustrated Outline History*

²³¹ The Nan-kai University Association of Politics, *The Concessions and Special Districts in Tientsin* (Shanghai: 1926), pp.68-69.

Chinese merchants made the transition from a traditional to a Western-style business environment, as well as their collaboration and competition with other stakeholders, it is possible to reassess the circuitous and often uneasy progress of China's modernisation from an apolitical angle.

Aside from the top-down reforms and the bottom-up revolutions, we can scrutinise the centre of the socio-economic structure in which this happened. The merchants are ideal subjects who help us to examine and to understand the elements that contributed to or obstructed China's modernisation. Wu's commercial and industrial enterprises in Beijing and Tianjin, as well as his proposals for economic development during the Hundred Days Reform, clearly exemplify the thoughts and actions of the earliest entrepreneurs in Late Qing China.

Chapter 9

Wu Jim-pah and the Issue of Succession in His Enterprises

By the turn of the 19th and 20th Centuries, Wu Jim-pah had successfully transformed himself from a comprador into a bureaucrat-capitalist. The issue of succession in his enterprises and the educational and career paths of his sons were visible proof of this change. It is worth noting that, although Wu accumulated tremendous wealth and a wide social network during his compradorship with HSBC and W. Forbes & Co., none of his sons followed in his footsteps as a comprador.

When Wu Jim-pah resigned from Tianjin HSBC in 1905, his position as its comprador was taken over by Guo Ju-qing (?-1926) of Qia-yuan Yin-hao. Guo died in 1926, and his eldest son Guo Xin-ming succeeded him there.²³² In this way, Tianjin HSBC followed the custom of the Shanghai Branch, which was to establish partnerships with traditional banking families and accept father-to-son successions. Wu's career at W. Forbes & Co. followed a similar pattern. When he resigned there during the early 20th Century, its comprador's office was assigned to Li Fu-chen (?-1910), a local merchant. Li passed away in 1910, and his sons Li Ji-fu and Li Zhi-niang jointly took over from him. Li Ji-fu was responsible for the import business, while Li Zhi-niang was in charge of exports.²³³

²³² *Tianjin Tong-Zhi Tie-lu Zhi (Comprehensive Annals of Tianjin, Concessions)* Tianjin, 1996, p. 140.

²³³ Huang Xian-ting, *Tianjin Mai-ban Ren-ji Li (Li of Forbes & Co. – The Tianjin Comprador)* in *Tianjin De Yan-hang Yu Mai-ban (The Foreign Firms and Their Compradors in Tianjin)* Tianjin, 1987, pp. 84-92.

It is quite remarkable that the compradors' positions in a leading bank and company in Tianjin – HSBC and W. Forbes & Co. – were both transferred in the traditional “father-to-son” manner like this. It is also surprising that the first generation of “northern explorers” was succeeded by a so-called “North Camp” (*bei-bang*) of homegrown Tianjin merchants after Wu's resignation. The latter thereby joined the Cantonese, Shanghai and Ningbo merchants as major influences in the local business community.

With a few exceptions, the *bei-bang* continued to participate in Tianjin's international trade for far longer than the merchants and compradors from the south. While the Su-Zhe compradors were increasing their investments in industrial development in the treaty ports, the new up-and-coming *bei-bang* carried less weight in Tianjin's international trading scene in Tianjin, nor the management of its companies. In the early years of Republican China, a number of modern banks arrived in Tianjin, and Bian Shou-sun acted as one of their representatives. However, most members of the city's business elite had been born, raised and educated in the Su-Zhe region. They had started their careers in Shanghai or overseas before coming to Tianjin. Tianjin's dependence on human resources from the south had seriously constrained the city's development.

9.1. The Wu Jim-pah Family and Wu Mansions

Wu Jim-pah's elder brother, Wu Mou-ze, and his nephews were the only family members who had connections with Wu's comprador business.²³⁴ Like

²³⁴ Frank King, *The History of the Hongkong and Shanghai Banking Corporation* vol. 2 (Cambridge: 1984), p. 262.

most Huizhou and Suzhou merchants, Wu Mou-ze had started his career in Shanghai. In 1891, Yang Hong-xing, the Managing Director of the Imperial Railway of North China, invited him to join the Bureau, due to his expertise in accounting. With Li Hong-zhang's permission, Wu Mou-ze came to Tianjin to take up the post. At that time, Wu Jim-pah was not yet actively participating in railroad development. It was only after he had assumed control of the Railway Bureau and college that Wu Jim-pah explained he needed his brother's assistance there.²³⁵

Furthermore, Wu had two nephews, Wu Ren-fu was the elder and Wu You-ling the younger. Wu Jim-pah nominated Wu You-ling as HSBC's first comprador in Beijing.²³⁶ Wu You-ling was energetic and influential in Beijing's commercial circles; he had formed strong ties with the capital's gentry, mandarins and compradors. Wu You-ling's activities can be followed in the diaries of a number of Beijing notables; for instance, Na-tong, a Manchu aristocrat, and Shen Xuan-huai, a bureaucrat-comprador, as well as the literati-industrialist Liu-e. According to a survey by Shanghai Commercial and Saving Banks in 1935, Wu You-ling's family had amassed total assets of around 12 million taels.²³⁷

It is significant that, like Wu Jim-pah's sons, those of Wu You-ling refused to succeed him as a comprador. Indeed, Wu You-ling's position at Beijing

²³⁵ Memorial of the Bei-yan Commissioner and Zhili Viceroy Wang Wen-shao on the 5th Day of the 3rd Month, the 23rd Year of the Guang-xu Era in *Zhong-guo Di-yi Li-shi Dang-an-guan comp. Guang-xu Chao Zhu-pi Zhou-zhe (The Guang-xu Monarch's Imperial Instructions & Memorials)* vol. 102 Tie-lu (Railways) Beijing, 1995-1996, p. 788.

²³⁶ Addis to Robert Wilson, Agent in Tientsin, draft (no date), PP. MS. 14/64/172; Wilson to Addis, 6 July 1889, PP. MS. 14/111.

²³⁷ Ma Xue-qiang, Chu-ru Yu Zhong-xi Zhi-jian-Jin-dai Shanghai Mai-ban De She-hui Sheng-huo (Inside and Outside China and the West – the Social Life of Modern Compradors in Shanghai) in Xiong Yue-zhi Eds., *Du-shi Kong-jian, She-qun He Shi-min Sheng-huo (Urban Space, Communities and Civilian Life in Shanghai)*, 2008, p. 78.

HSBC passed to his sister's son, Deng Jun-xiang, who was already working as a senior official in the comprador's office. Deng lost a fortune in bond speculation at the turn of 1926 and 1927. Even more seriously, he embezzled 3 million taels from the HSBC Beijing Branch, and he was ordered to be sent to London to face trial. However, Marshal Zhang Zuo-lin (1875-1928), the head of state and *de facto* ruler of Beijing at the time, placed him under his protection. Moreover, Wu Jim-pah personally pleaded with HSBC on Deng's behalf. Eventually, the Bank withdrew its request for his extradition, which meant Deng was effectively exonerated.²³⁸ No member of the Wu family was ever actively involved in the comprador business from that time onwards.

All Wu Jim-pah's sons obtained a modern education, either in Tianjin or overseas. Afterwards, the Wu brothers worked for the Late Qing and Early Republican regimes in Beijing and managed their father's enterprises in Tianjin and its surroundings. This marked the completion of the Wu family's transformation from banking and trading compradors to bureaucrat-capitalists. After Wu Jim-pah's death on 16th of February 1927, his eldest son, Wu Xi-zhong, became the family's patriarch, which made him responsible for major decisions concerning the industries bequeathed to it by Wu Jim-pah.²³⁹

As mentioned in Chapters 7 and 8, Wu Jim-pah and his sons focused their financial resources and energies on manufacturing and public utilities. In addition, like other major Chinese and Western tycoons in Tianjin, Wu had invested in property developments in the foreign concessions. He served as a director of

²³⁸ *Wen-shi Zi-liao Xuan-jì* vol. 25, Beijing, 1991, pp. 114-116.

²³⁹ Wu Huan-zhi, *Guang-yu Wo-fu Wu Tiao-qing Shi-ji De Hui-yi* (A Memoir of My Father Wu Jim-pah) in *Wen-shi Zi-liao Xuan-jì* vol. 49, Beijing, 1964.

several property development enterprises, namely Hsin Chi Boden Baugesellschaft and the Chinese Investment Company.²⁴⁰

However, there were a few differences between Wu and Tianjin's other developers. Wu was uninterested in land speculation. Instead, he developed long-term partnerships with Western firms to undertake large-scale residential and commercial property developments. For instance, Hsin Chi Boden Baugesellschaft was a joint venture with a German company. Without doubt, Wu's most famous project in Tianjin was the first Wu Mansion on Davenport Road in the British Concession. This was one of the concession's biggest-ever developments, and it was also the home of Wu and his family for some years.

During the early 1880s, shortly after he arrived in Tianjin, the young Wu had temporarily lived at the Nan-zhan Inn, which was owned by the China Merchants' Steam Navigation Company. During that time, Liang Yan-qing of Jardine Matheson's and Zheng Yi-zhi of Swire & Co. also resided there. In the late 19th Century, Wu, Liang and Wang became three of the so-called "Big Four Compradors of Tianjin". As Wu increased his wealth by running the HSBC comprador office, he bought and moved into a Western-style house in the French Concession behind the Zizulin. During the 1900 Boxer Rebellion and war, Wu fled from the concessions after he had saved the European children. The Russian invaders occupied his house and burned it down when they withdrew afterwards.

²⁴⁰ Arnold Wright, *Twentieth Century Impressions of Hongkong, Shanghai, and other Treaty Ports of China: Their History, People, Commerce, Industries, and Resources* p. 745. Zhang Yu-fen, Tianjin Si-da Mai-bang Zhi-yi-Wu Mao-ding (Wu Jim-pah – One of the Four Grand Compradors in Tianjin) in *Ren-wu* vol. 58. p. 134. Wang Jing-yu comp. *Zhong-guo Jin-dai Gong-ye-shi Zi-liao* (*Historical Materials of Industries in Modern China*) vol. 2, Beijing, 1957, p. 1,312.

Following the Eight-nation Alliance's invasion, Wu bought a plot of land on Davenport Road as the site for his new home, the first Wu Mansion (Wu-jian Da-yuan). When it was completed, he moved in with his family. Wang Ming-huai was his next-door neighbour.²⁴¹ The new building was called a house or mansion in Chinese; but in fact it was not a single building. Rather, it was a cluster of structures covering an area of several acres. The Wu family lived in the main building, surrounded by more than 10 other houses and warehouses, which were rented out as residences, shops and even stables. As noted in Chapter 4, when Wu imported artillery pieces from England for the Huai Army, his partner, Heath & Co., rented an office at the first Wu Mansion.

Later, Wu built another new mansion with gardens on Hong Kong Road in the British Concession. The second Wu Mansion was used exclusively as the residence of Wu and his family. They also entertained there. Wu and his four wives occupied the European-style main building, which had a roof garden with a marble hall where they screened films. This building was surrounded by gardens and tennis courts, which were always full of his friends and relatives in Tianjin at weekends. Among his four wives, the third one, Madame Wu Diao, had the highest status. She oversaw family matters on Wu's behalf, and she was also the mother of his three eldest sons.

During his lifetime, Wu's three sons by his third wife – Xi-zhong, Xi-geng and Xi-yuan – assisted him in managing the tannery, weaving factory and colliery. Besides its main building, the second Wu Mansion had four more three-storey

²⁴¹ *Tianjin Dang-an-guan (The Tianjin Archives)* Eds. Tianjin Dang-an Yu Li-shi (*Archives and History of Tianjin*) vol. 1, Tianjin, 2008, p. 4. Sun Da-gan, *Tianjin Jing-ji Shi-hua (The Economic History of Tianjin)* Tianjin, 1989, p. 128.

buildings facing Hong Kong Road. Each of Wu's sons occupied one of them. Most of his relatives moved out from the second Wu Mansion after his death and the division of his assets in 1927. The majority of the family's later generations settled in foreign countries. The Wu Mansion was completely demolished after the establishment of the People's Republic.

In 1934, Wu's eldest son, Wu Xi-zhong, commissioned an Austrian architect and constructed his own residence at 117 Cumberland Road (present-day Kunming Lu). This is still in good condition today.²⁴²

9.2. The Eldest Son, Wu Xi-zhong, an Amateur Soldier and Artist

Wu Xi-zhong was born in Tianjin in 1882 and he passed away in 1966, during the Cultural Revolution. After graduating from Bei-yang Police College, he continued his studies at Ohio Military Academy. Bei-yang Police College had been established by Yuan Shi-kai, with Zhao Bing-jun as its Founding Principal. During the 1890s, Hu Yu-fun was transferred to the Bureau of Imperial Railways of North China, and Yuan was put in charge of training the New Army. After the Boxer Rebellion, the Protocol between the Chinese Government and Western Powers banned the Chinese army from garrisoning Tianjin. Yuan subsequently established two police schools in Baoding, the former capital of Zhili Province,

²⁴² Chen Jiu-sheng Ed, *Jin-dai Tianjin Feng-mao Jian-zu (Modern Tianjin Architecture)* Tianjin, 2005, pp. 141-142; Shang Ke-qiang, *Jiu-guo Zu-jie Yu Jin-dai Tianjin (The Nine Nations' Concessions and Modern Tianjin)* Tianjin, 2008.

and Tianjin. These were merged in 1903, and Zhao Bing-jun (1859-1914) was appointed as the Managing Director of Tianjin Bei-yang Police College.²⁴³

After graduating, Wu Xi-zhong purchased a reserved *zhi-fu* position from the Qing Government, and Yuan Shi-kai recommended his appointment as a *guo-bang dao-yuan*.²⁴⁴ This link between Wu Xi-zhong and Yuan led to the restoration of connections between the latter and the Wu family. Through Zhao's mediation, Yuan had recommended Wu Xi-zhong in order to reconcile himself with Wu Jim-pah. During the early 1910s, again at Zhao's behest, Yuan invited Wu Jim-pah to become Minister of Finance in the Republican Government. However, Wu declined the invitation.²⁴⁵

Furthermore, Wu Xi-zhong regarded Prince Su as his master, and the Prince recommended his appointment to the Royal Guard at the Forbidden City's Qian-qing Gate. In 1906, he was sent as a member of Xu Shi-kang's entourage on a mission to investigate transportation and hydrology along the Sino-Russian northeast border.²⁴⁶ During the Late Qing and Early Republican era, Wu Xi-zhong also enthusiastically participated in social organisations and charities. He became the Administrative Supervisor of the Tianjin Regional Autonomy Association, a member of the Xing-zhong Hui Tianjin Branch, and a director of the Tianjin Jockey Club.

²⁴³ *Bei-yan Gong-du Lei-zuan (The Classified Governmental Documents of the Bei-yang Government)* vol. 1, vol. 9. *Tianjin Tong-Zhi (Comprehensive Annals of Tianjin)* vol. 12. Tianjin, 1994.

²⁴⁴ Wu Huan-zhi, Guang-yu Wo-fu Wu Tiao-qing Shi-ji De Hui-yi (A Memoir of My Father Wu Jim-pah) in *Wen-shi Zi-liao Xuan-ji* vol. 49, Beijing, 1964. p. 299.

²⁴⁵ *Ibid*, p. 300.

²⁴⁶ Zhu Qi-jin comp. *Dong-san-shang Meng-Wu Gong-du Hui-pian (The Collection of Governmental Documents on the Three North-eastern Provinces and the Mongolias)* vol. 2, p. 40.

In 1906 and 1907, a flood seriously devastated the northern Yangzi River area. Anhui Province, the Wu family's ancestral home, was badly affected. The Managing Director of the Tianjin Chamber of Commerce, Wang Xian-bin, and its Deputy Director, Ning Zhi-fu, joined forces with nine local tycoons, including Wu Jim-pah, to establish the Charity Association (Gong-Yi Shan-hui). This organised performances and film shows at the Li Hong-zhang Shrine, thereby raising 7,000 yuan for refugees from the disaster. Wu Jim-pah, Wu Xi-zhong and their associates raised a further 4,000 in their business circles. The 11,000-yuan donation was transferred to the disaster zone by the Bank of Reserve Ministry.²⁴⁷

Besides Anhui, the flood affected the northern part of the Huai River, so the Chamber launched another drive to raise funds for that area as well.²⁴⁸ During the same year, the northern stretch of the Rong-ding River flooded too, and the Chamber sent its directors to the region to help the refugees.²⁴⁹ The Gong-yi Shan-hui initiated by Wu Xi-zhong and his father effectively pioneered a new model of social service. A number of other community groups, such as the Guang-yi Shan-hui, the Hua-jie Ci-shan Hui and the Hing-shan Hui, followed the Gong-yi Shan-hui's example by also organising programmes of charity performances at the Li Hong-zhang Shrine.²⁵⁰

During the early years of Republican China, Wu Xi-zhong worked as head of the Police Department at the Jin-xu Railway Bureau from 1923 to 1924.

²⁴⁷ *Ta Kung Pao* February 23rd 1907.

²⁴⁸ Tianjin Shi Dang-an-guan comp. *Tianjin Shang-hui Dang-an Hui-bian (The Collection of the Tianjin Chamber of Commerce Archives, 1903-1911)* Tianjin, 1989, pp. 2,132-2,133.

²⁴⁹ Tianjin Shi Dang-an-guan comp. *Tianjin Shang-hui Dang-an Hui-bian (The Collection of the Tianjin Chamber of Commerce Archives, 1903-1911)* p. 2,137.

²⁵⁰ *Ta Kung Pao* March 20th, 23rd, 24th, 26th 1907.

In the first phase of the Sino-Japanese War, the tannery Wu Xi-zhong had inherited from his father was placed under the protection of the British firm Pottinger, Paton & Co., and the Union Jack was raised over its premises. However, soon after the Japanese Empire declared war on the Allied powers, the Japanese South Manchuria Railway ordered Wu Xi-zhong to sell the tannery to Kanegafuchi Spinning Co., Ltd for 160,000 Yuan Liang-ying Quan (a currency issued by the Japanese puppet state in North China). During its occupation of Tianjin, the Japanese opened a kerosene company in the city. Its Chairman was Cao Ru-lin (1877-1966), and Wu Xi-zhong was one of the directors. After the Second World War, he also served as an advisor to Du Jian-shi (1906-1989), the Mayor of Tianjin.

Wu Xi-zhong had developed a career in the military and police departments during the Late Qing and early Republican China period. He also inherited his father's factories. However, unlike traditional comprador families in Shanghai and Tianjin, Wu Xi-zhong did not choose to inherit his father's position, although he was the eldest son.

Moreover, he became a cultural impresario in the Beijing-Tianjin area during the same period, acting as a major promoter of Beijing Opera in the city. There were about 15 or 16 amateur Beijing Opera societies (*piao-fang*) in Tianjin in the Early Republican years. The oldest of these had been established in the South City, the original Chinese Quarter (*hua-jie*). They were the Ya-yun Guo-feng She, Guang-tang Piao-fang, Hua-lou Piao-fang and Zhong-nan Guo-ju. More

were set up in the foreign concessions, such as the Jian-ying Feng-sheng She, Tianjin Guo-ju Yuan, Yu-yang Guo-ju She, Qing-sheng Ya-ju She, Yun-yin Guo-ju She, Tai-ping Guo-ju She and Yong-xing Guo-ju She. The Kai-luan Colliery, Tianjin Post Office, Tianjin Customs and Ji-an Water Supplies founded Beijing Opera societies as well.

The Ya-yun Guo-feng She in Qing-ling Lane was the oldest of these societies. Wu Xi-zhong was one of its active members during the Guang-xu years. Its other core members included the famous Tan School amateur Lao Sheng, Wang Jun-zhi. Chen Yan-heng, Wang Song-chen, Sun Ju-xian, Wang Geng-sheng, Liu Shu-du, Wu You-cai, Chen Ji-hao, Li Ke-chang and Liu Yong-kuai. Liu Yong-kuai went on to become a professional *tong-chui lao-sheng* during the Early Republican years.

Two legendary cultural icons of early modern China, Wu Xi-zhong and Li Shu-tong (1880-1942), spent some time there as well. Wu focused on *xiao-sheng* performances and studied under the well-known artiste Wang Leng-xian. *Luo-chen Jiao-guan* was one of Wu's typical plays.²⁵¹ Yu Zhen-fei (1902-1993), a famous *xiao-sheng* performer in Beijing Opera and *kung-qu*, sought his advice before performing as Shuang-Qi Hui.²⁵²

However, Wu Xi-zhong's achievements as an antiques collector outshone even his contributions as a promoter and exponent of Beijing Opera. He collected Chinese antiques for many decades. Bronze mirrors formed the backbone of his

²⁵¹ Luo Shu-we, *Jin-dai Tianjin Cheng-shi-shi (The Modern Municipal History of Tianjin)* p. 620.

²⁵² Huang Ke Ed. *Zhong-guo Jing-ju Liu-pai Ju-mu Ji-cheng*, Beijing, 2006, vol. 30.

collection, including examples from the Han Dynasty, the Wei-Jin Period and the Tang Dynasty. Wu Xi-zhong had customised quadrate hardwood cases made to house these. On the top of each case, he placed a round label with the inscription “The Collection of Wu Song-pin from Xin’an County”. Wu Song-pin was his alternative name, and Xin’an was the ancient name of Huizhou, the Wu family’s hometown.

In 1990, Wu Xi-zhong’s daughter, Wu Ya-an, and her younger brother, Wu Jing-de, both of whom had lived in the United States for decades, asked Wu Xi-zhong’s niece, Wu Pei-qiu, to donate their father’s antiques to the Tianjin Government. The Wu bequest included 31 bronze mirrors, 25 bronze stoves, 91 bronze belt buckles, 15 pieces of porcelain and 12 ancient jade and ink items, a total of 178 pieces. The Tianjin Museum placed 60 selected exhibits from the Wu donation on display in November 1990; and in 1996, the Tianjin Museum of Art held an exhibition of ancient Chinese bronze ware that included Wu Xi-zhong’s mirrors.²⁵³

9.3. The Second Son, Wu Xi-geng – Manager of the Beijing Tung Hsin Colliery

Wu Xi-geng, the second son of Wu Jim-pah, purchased the title of *zhi-fu* before the Qing Dynasty was overthrown. At the turn of the 1910s and 1920s, he worked under Chen Guang-yuan (1873-1939), the Jiangxi Viceroy. Chen was a member of the Zhili Military Clique, with strong links to General Feng Guo-zhang (1859-1919). Chen did a poor job in resisting the Southern Army led by Sun Yat-

²⁵³ *Tianjin Daily*, May 17th 2009.

sen (1866-1925) and his allies in 1922, during the Second Constitutional Protection Movement; and he was deposed by Cao Kun (1862-1938) for this reason.

Wu Pei-fu (1874-1939), the commander of the Zhili Army, lost the Second Zhili-Fengtian War in 1924. More crucially, General Feng Yu-xiang changed sides during this conflict and captured Cao in Beijing. Zhang Zuo-lin, the Fengtian Marshal, seized Beijing and became the *de facto* head of the Bei-yang Regime. Wu Xi-geng joined the Fengtian Clique and served on the staff of Li Jing-lin (1885-193?), the newly appointed Zhili Governor-General.

Shortly afterwards, Wu Xi-geng was transferred to the Zhili Province Post-war Settlement Department, where he was put in charge of investigating Cao and his brother's economic activities in Tianjin.²⁵⁴ After Germany's defeat in the First World War, the Chinese Government took back the German Concession in Tianjin and turned it into the First Special Area. The Bureau of the First Special Area was established, and Wu Xi-geng was put in charge of it.

His participation in the Tianjin Red Cross Society was one of Wu Xi-geng's most significant community activities. On July 1, 1917, Zhang Xun (1854-1923) proclaimed the restoration of the Qing Emperor Xuan-tong. The newly established Tianjin Red Cross decided to provide evacuation and medical services to the wounded in the ensuing war.²⁵⁵ Since Tianjin was close to Beijing and the

²⁵⁴ Zhao Jin Ed. *Fan Xu-dong Ji-tuan Li-shi Zi-liao Hui-bian (The Collection of Historical Materials of the Fan Xu-dong Group)* Tianjin, 2006, pp. 598, 602.

²⁵⁵ *Ta Kung Pao* July 23rd 1917.

war zone, the Red Cross Society needed to begin organising evacuation teams immediately.²⁵⁶

The Society held a board meeting at 6 pm on 7th of July. Bian Yue-ting, the Secretary In-charge, reported on the military and civilian casualties in Beijing and its surroundings. His deputy, Lu Si-xiang, urged the directors to make donations. As one of these, Wu Xi-geng contributed 200 yuan towards the establishment of an evacuation team.²⁵⁷ Afterwards, the Bureau of Railways and Red Cross worked together to construct a field hospital, provide medical staff and support the evacuation service. The Jin-Fung Railway, formerly the Imperial Railway of North China, allocated a number of carriages for the team to transport the wounded to hospitals in Tianjin.²⁵⁸

During his later years, Wu Xi-geng moved to Hong Kong. Like his elder brother, he was interested in collecting antiques, including ancient currency and Chinese paintings. In 1943, Wu Xi-geng joined the Beijing Branch of the Shanghai Ancient Currency Academy.²⁵⁹ Interestingly, he put inscriptions saying “Chang-zhou Wu Ban-hou Collection” on his paintings and calligraphy collection. “Ban-hou” was his alternative name, while Suzhou was also known as “Chang-zhou”.²⁶⁰ Unlike his elder brother, Wu Xi-geng highlighted his affiliations with Suzhou rather than Huizhou, thus illustrating the Wu family’s dual identity.

²⁵⁶ *Ta Kung Pao* July 5th 1917.

²⁵⁷ *Ta Kung Pao* July 8th 1917.

²⁵⁸ *Ta Kung Pao* July 9th 1917.

²⁵⁹ *Chuan-bi (Ancient Currencies of China)* vol. 17 p. 27.

²⁶⁰ *Yuan-jiang, Chinese Water and Ink Painting on Silk – Chun-se Ye-yue (Moon Light during Spring Time)*.

Among Wu Jim-pah's businesses, Wu Xi-geng was made responsible for the Muntougou Tong Hsing Colliery, which was the largest of its kind in Beijing during the early 20th Century. Coalmining was common in Beijing and its surroundings in the Liao and Jin Dynasties. Up to the Late Qing period, there were hundreds of coal mines of various sizes in the area around Fangshan and Muntougou. The Tong Hsing coalmine in Wei-jia Village in the Muntougou area of Wanping County was the first Sino-foreign joint-venture colliery in China's mining industry.

Duan Yi-san, a native of the Muntougou area, had received a licence from the Wanping County authorities to start a coalmine using traditional Chinese methods in 1879. However, due to lack of capital, he was obliged to invite an American merchant to set up a joint venture with him in 1896. The new company brought in English engineers and equipment, including steam engines to pump water and raise coal. After the death of Duan's foreign partner, the American's shares were transferred a number of times. Eventually, they came into the hands of a Scottish merchant called Gilmore, who worked at Doney & Co. in Tianjin.²⁶¹ Later, Gilmore also acquired Duan's shares, thus turning the Tung Hsing Colliery into an entirely foreign-owned business.

In 1911, Gilmore and his English partners proposed expanding the colliery's production. Wu Jim-pah and Wu Xi-geng argued that the existence of such a totally-foreign investment within the boundaries of the Imperial Capital was an affront to the Qing Dynasty. The Wu family proposed investing 500,000

²⁶¹ *London Gazette*, 1910.

taels in the business, and applied to operate it as a joint-venture with the foreign owners. Wu's proposal was endorsed by his old friend, the Zhili Viceroy Wang Wen-shou, who forwarded it to the Ministry of Agricultural and Commercial Affairs.²⁶²

On February 28, 1911, the Ministry granted Wu Xi-geng a licence, and on April 25, he and Gilmore signed a joint-venture agreement and changed the company's name to Tung Hsing Sino-Foreign Coal Mining Co., Ltd. It was one of the earliest Sino-foreign limited-liability joint-stock enterprises in Beijing.

Since Wu Jim-pah had made a larger investment in the company than its other Chinese and British shareholders, he was elected as its sole Chinese Board Chairman under the formal agreement. Wu Xi-geng assumed the post of Managing Director. The positions of directors and accountants were shared equally by the company's Chinese and foreign principals. Colin from Colin & Co., acted as its Foreign Manager, and a number of British engineers were put in charge of the colliery's technical operations.

It is enlightening to study the agreement between the Chinese and foreign shareholders in the Tung Hsing Colliery, as well as the contracts between the enterprise and its engineers and mineworkers. The company was managed by Chinese directors and managers. The foreign shareholders only had the right to dividends. The 36.5 *mu* of land occupied by the mine could not be mortgaged, and it was placed under the control of the Chinese shareholders. The company's

²⁶² Document on the Men-tou-gou Colliery on the 10th Day of the 6th Month, the 34th Year of the Guang-xu Era, in the Archives of the Institute of History and Philology, Academia Sinica in Taipei.

accounting system combined both Chinese and Western methods. It maintained a monthly journal account and conducted bi-annual and annual audits. Its revenues were to be calculated after deduction of both taxes and a variety of different costs.

More importantly, the company adopted the concept of depreciation, which was unusual in Late Qing China. It reserved 20 to 30% of its annual revenue for renewing its machinery and infrastructure.²⁶³ There were to be two types of stockholders' meetings: an annual general meeting of shareholders every February, plus extraordinary ad-hoc meetings called by the board's chairman when major decisions needed to be taken. The company offered its engineers and workers different contractual terms that clearly defined the rights and duties of all parties. Significantly, the workers' contracts specified that their working hours would be from 7 in the morning to 6 in the evening. In the event of any occupational injury in the mine, the company would pay the victim's medical costs and provide him with a pension.

Just as Wu Jim-pah's joint-venture match factory with the Germans had led to the involvement of Western diplomats, the Wu family's partnership with a British firm at the Tung Hsing Colliery worried the United States Ambassador. After months of investigations, the Chinese Government informed the Ambassador that the colliery no longer had any connection with any United States

²⁶³ Document on the Men-tou-gou Colliery on the 10th Day of the 6th Month, the 34th Year of the Guang-xu Era, in the Archives of the Institute of History and Philology, Academia Sinica in Taipei. Document on the Men-tou-gou Colliery on the 25th Day of the 11th Month, the 3rd Year of the Xuan-tong Era; Document on the Men-tou-gou Colliery on the 28th Day of the 11th Month, the 3rd Year of the Xuan-tong Era; Document on the Men-tou-gou Colliery on the 8th Day of the 12th Month, the 3rd Year of the Xuan-tong Era; Document on the Men-tou-gou Colliery on the 10th Day of the 12th Month, the 3rd Year of the Xuan-tong Era; Document on the Men-tou-gou Colliery on the 19th Day of the 12th Month, the 3rd Year of the Xuan-tong Era; Document on the Men-tou-gou Colliery on the 21th Day of the 12th Month, the 3rd Year of the Xuan-tong Era; 'Document on the Men-tou-gou Colliery on the 24th Day of the 12th Month, the 3rd Year of the Xuan-tong Era.

citizen. The Ministry of Agricultural and Commercial Affairs formally granted Wu Xi-geng a licence for its operations and production.

A tramway linking the coalmine with Muntougou Railway Station was built in 1914, which meant its production could be directly transported to Beijing and Tianjin by rail.²⁶⁴ The colliery was the largest of its kind in Beijing up to the 1920s, occupying an area of 4,770.2 *mu*. In April 1920, Tung Hsing Colliery was sold to a joint venture between Zhou Feng-zhang and George McBain in a deal that was formally approved by the Ministry of Agricultural and Commercial Affairs on July 20. That concluded the Wu family's links with coalmining.

9.4. The Third Son, Wu Xi-yuan, and the Wu Family's Affiliations

Wu Xi-yuan, the third son of Wu Jim-pah, served as Manager and Engineer of the Bei-yang Tannery. He died in Beijing in 1948. His wife, Yan Su-ying, was the eldest daughter of Yan Xiao-fang (1838-1906), a close subordinate of Li Hong-zhang. During the Tong-zhi years, Yan also worked as Li's aide in Shanghai, and he was one of his earliest followers. He was later put in charge of the Chang-lu Salt Affairs in Tianjin, a key position in North China's economic development and taxation system.

Yan was subsequently sent back to Shanghai, where he established the Chamber of Commerce and worked as the first President of the Imperial Bank of China. While Li relied on Wu Jim-pah's connections with the British banks and

²⁶⁴ Instruction No. 54 from the Transportation Ministry on August 7th 1916.

industries, Yan was regarded as one of his major protégés in commercial and financial circles. Yan's Feng-yuan Bureaucratic Ying-hao was placed under the management of his eldest son, Yan Zi-jun. Besides the Yan family's affiliation with Wu Jim-pah's, Yan Xiao-fang's younger daughter married Zhu Pei-qing, a salt official.

As well as Yan Xiao-fang, Wu Jim-pah created affiliations with the families of a number of bureaucrats and merchants in Beijing and Tianjin. Wu Xi-yun, the second daughter of Madame Wu Diao, married Zhan Tian-you. They had two sons and a daughter, Zhan Zhong-zeng, Zhan Zhong-yan and Zhan Zhong-meng. Zhan Zhong-meng married Zhu Wen-long, the grandson of Zhu Qi-shao. Zhan Tian-you was a well-known railway engineer in China. During the construction of the Imperial Railway of North China, he worked as a subordinate of Wu Jim-pah. Zhu Qi-shao was the younger brother of Zhu Qi-ang, with whom he established the China Merchants' Steam Navigation Company.

Later, Zhu Qi-shao was in charge of works on the Yungding River, and he compiled the 16-volume *Yungding River Annals*. Furthermore, Zhu Qi-shao made significant contributions to the development of modern education in North China. First, he supervised the expansion of the Tianjin Telegram College, and later he donated a 40-*mu* plot of land in the French Concession for the establishment of the Naval Medical School.

Tianjin was the main base of the Bei-yang during the Late Qing and Early Republican period. Its military and police training schools opened there at the turn

of the 19th and 20th Centuries. Wu Jim-pah's sons were born into this milieu, and they eventually embarked on military careers. As for the family's businesses, Wu Jim-pah's eldest son, Wu Xi-zhong, took overall charge of these after his death. His second son, Wu Xi-geng, operated the Tung Hsing Colliery, and the third son, Wu Xi-yuan, looked after the tannery.

Wu Jim-pah was one of those rare Chinese investors who amassed sizeable stakes in British firms in Shanghai and Hong Kong. It is difficult now to research and unearth the details of all the companies that he invested in. However, a lawsuit concerning Madame Wu Diao's inheritance that ran for 10 years provides some insights. In 1985, Wu Jim-pah's heirs filed suits against one another about Madame Wu Diao's shares in Hong Kong. The dispute was not finally resolved until 1995.²⁶⁵ During its course, the public learned that Madame Wu Diao, the mother of Wu Xi-zhong, Xi-geng and Xi-yuan, had owned shares in Hongkong Land, Wheelock & Co. and Dairy Farm, all of which had been founded by British businessmen more than a century earlier. These may have been gifts from Wu Jim-pah.

²⁶⁵ Dong Shi-kai nuncupates, Zhang Chong-fu notes, *Yi-ge Li-shi Shi-nian De She-wai Ji-chen-quan An-jian Dai-li Ji-shi* (A 10-Year Inheritance Argument involving Foreign Citizens) in Tianjin Lv-shi 2010 vol. 2.

Chapter 10

The Agricultural, Industrial and Commercial Bureau during the Hundred Days Reform 1898

Li Hong-zhang's demission following China's defeat in the 1894-1895 Sino-Japanese War did not mean that the country automatically abandoned the modernisation process. On the contrary, the young Emperor Guang-xu was preparing to launch another wave of political-economic reforms at the turn of the century, with the support of the more radical literati reformers. During the summer of 1898, he initiated the Hundred Days Reform, which was principally based on the ideas of Kang You-wei (1859-1927), Liang Qi-chao (1873-1929) and their followers.

In general terms, the Hundred Days Reform was initiated and organised by a group of middle-ranking literati bureaucrats who had less executive and military experience than the leaders of the Self-Strengthening Movement. This group of politicians was more interested in institutional reforms; and it emphasised the introduction of Western official and civil institutions in order to move China towards more comprehensive modernisation.

In addition, while Zeng Guo-fan, Li Hong-zhang, Zhang Zhi-dong and Zuo Zong-tang had focused more on introducing military technologies and training methods, the Hundred Days reformers regarded socio-economic reforms as being the cornerstone for China's future progress.

Wu Jim-pah's record in railway and industrial development in North China since the 1880s led to his appointed as a Minister-Supervisor of the newly formed Agricultural, Industrial and Commercial General Bureau (AICB) in August 1898. Although most of the Bureau's policies and institutional changes were later abolished by the Empress Dowager after her coup d'etat, the proposals that he and his colleagues made to the Qing Emperor clearly reveal the understanding of China's earliest industrial capitalists about economic development during the late 19th Century.

10.1. Kang You-wei, the AICB's Creator

On the 29th of January 1898, Kang You-wei submitted a memorial to the Throne that proposed the establishment of three separate bureaus to develop agriculture, industry and commerce.²⁶⁶ Afterwards, Wang Beng-yun, the *Yu-shi*, proposed setting up agricultural and commercial bureaus in the central government and in all its provincial branches. On 18th of August, Kou restated the importance of the agricultural and commercial bureau.²⁶⁷ Three days later, the Emperor appointed Duan-fang, the Magistrate of Ba-chang Circuit in Zhili Province, and Wu to create the AICB in Beijing.

In his decree, the Emperor referred to a memorial proposing agricultural and commercial projects to increase government revenue that had been submitted by Kang You-wei, a Ministry of Works official, and which had been referred to

²⁶⁶ Kang You-wei, Shang Qing-di Di-liu-shu (Ying-zhao Tong-chou Quan-ju Zhe) on the 8th Day of the 1st Month, the 24th Year of the Guang-xu Era.

²⁶⁷ Kang You-wei, Tiao-chen Shang-wu Zhe on the 15th Day of the 6th Month, the 24th Year of the Guang-xu Era; Qing-kai Nong-xue-tang Ti-zhi-ju Zhe in the 7th Month, the 24th Year of the Guang-xu Era.

him by the Office of Foreign Affairs. The memorial had noted that the promotion of agricultural and commercial activities was the key to enriching the country. The provinces had previously been given repeated instructions to implement agricultural, industrial and commercial reforms in order to expand their revenue sources. However, they had not yet submitted any progress reports concerning this. Kang pointed out that wealth originates from the land, so its development created new resources and allowed businesses to grow.

In his view, the promotion of agricultural projects would be the foundation of China's commercial and industrial development. The country had always been an agricultural one; yet no officials or institutions had ever been specifically tasked with handling matters related to this subject. Forceful persuasion was the only method that might succeed in triggering a more robust effort.

The Emperor therefore ordered the establishment of the Headquarters of the AICB, with Duan, Xu Jian-ren and Wu, all of whom were magistrates in Zhili Province, as its Minister-Supervisors. Duan was instructed to leave his post as Magistrate of the Ba-chang Circuit; and he, Xu and Wu were awarded the rank of Brevet Class 3 Ministers with the authority to submit memorials on any relevant matters to the Emperor whenever they felt it necessary.

The Emperor decreed that agricultural schools, societies and journals were to be established at provincial, municipal, district and county levels. Experiments were to be conducted by wealthy landed gentry to show the way forward. Vocational schools, commercial bureaus and other relevant matters were to be

given priority as well. Duan, Wu and Xu were to monitor all these developments at the AICB.

Branches of the Bureau were to be established in each province by its viceroy or governor. Around 12 or 13 members of the gentry who possessed sound knowledge of contemporary affairs and who had impartial and upright characters should be chosen as the officers of such branches. The dates of their establishment and details of the personnel appointed to run them should be telegraphed to the Emperor.

Since the project was still in its infancy, the government and public were instructed to make devoted efforts for its success, so that it would gradually begin to yield results. Duan and his colleagues, together with the viceroys and governors, should heed the central government's determination to strengthen the country and devote themselves to studying new knowledge and making improvements. As a result, the agricultural sector would prosper and its productivity would increase; while commercial activities would blossom and extend throughout the country, thus laying foundations for its enrichment and strengthening. The Emperor concluded by emphasising his high expectations concerning this.²⁶⁸

On the 31st of August, Duan and Wu send a progress report about their preparatory work to the Throne.²⁶⁹ Their memorial notes that they had obeyed the Imperial order and further directives concerning the Bureau's details. They had

²⁶⁸ Zhu Shou-peng Eds., *Imperial Instruction of the 5th Day of the 7th Month, the 24th Year of the Guang-xu Era* in *Guang-xu Chao Dong-hua Xu-lu* (Beijing, 1984) p. 4,160.

²⁶⁹ Memorial by Duan Fang, Wu Jim-pah, Ministers and Minister-Supervisors of Agricultural, Industrial and Commercial Bureau on the 15th day of the 7th month, the 24th year of the Guang-xu Era

also been seeking an appropriate location for the establishment of a suitable office, where they could work efficiently and expeditiously on their tasks, in order to avoid any delay.

However, it was a fact that agricultural, industrial and commercial matters are overseen by separate ministries in Western countries. To combine these tremendously important functions under the purview of a single ministry would make the situation extremely complicated. Detailed planning and consideration of a wide range of views would be required to adapt Western systems appropriately as the foundation for a more prosperous and stronger nation.

Since Xu was working in the Fujian Dockyard at the time, he would be unable to come to the capital for a while. In view of this, Duan and Wu decided to establish the Bureau first and then start implementing its various tasks one by one. Meanwhile, they had not yet managed to identify a site that would be big enough to serve as the location for its headquarters, so they rented temporary premises for the bureau's opening on the 16th. A further edict granting them permission to take further action concerning this would be sought from his Imperial Majesty once a suitable site had been found.

Regarding the Bureau's budget, Duan and Wu said they would calculate its requirements in detail and compile exact figures for submission to the Court. It was a groundbreaking project, and they recommended it should be pursued on a grand scale. However, prevailing circumstances meant that its costs needed to be kept to a minimum. The Minister-Supervisors promised to consider the actual

situation, heed the Emperor's wishes and make earnest efforts, without fear of hard work nor any criticisms they might face, to achieve real results that fulfilled the Emperor's ardent desire for reform.

Ten days later, Wu and his colleague reported on the AICB's initial operations and the financial resources it would require from the Qing Court. On the 15th day of the year's 7th month, the Emperor sent the following personal edict to the Grand Council:

In respect of the memorial submitted by Duan Fang and Wu Jim-pah regarding the establishment of the Agricultural, Industrial and Commercial Bureau, at the initial stage of the project it is advisable that it should be implemented on an extensive scale in order to provide sufficient scope for its further development, while ample funding should also be provided to facilitate its ongoing operations. I hereby order Duan Fang and Wu Jim-pah to work on this project earnestly and to report to me as and when necessary.

The Throne's intention to improve the general economy, and its farsighted vision were obvious. Wu and his colleagues had already established the Bureau, and they were in the process of recruiting suitable staff members and drawing up plans for its office premises. The project was to be large in scale, and the issues it would deal with were complex. However, unless the Bureau was able to secure adequate funds in advance, it would be difficult to proceed with it.

Nevertheless, the Treasury's difficulties at that time made the AICB's Minister-Supervisors hesitate about making any extravagant requests for funding. Instead, they took the project's current status into account and drew up some provisional financial estimates. The purchase of a site and erection of premises, together with the acquisition of equipment, would cost 10,000 taels; while, recurring expenses, such as salaries and documents, would amount to a further 1,000 taels a month.

Their plan was to seek an Imperial edict ordering the Ministry of Revenue to secure 10,000 taels as soon as possible to serve as the Bureau's start-up funding, and to provide it with a monthly appropriation of 1,000 taels for its operating expenses. Headed by Duan and Wu, the Bureau would compile relevant regulations about the use of these funds. Afterwards, the Bureau's programmes to promote agriculture, facilitate industries and foster commercial activities would be progressively developed, categorised and expanded in their scope, so as to achieve concrete results. It was difficult to estimate how much these would cost at the outset.²⁷⁰

10.2. Proposals for the Institutional Reform of Agriculture

On the 4th of September, just a few days after the AICB's formation, Duan and Wu responded promptly to the Emperor's instructions by submitting a proposal for agricultural reform. The theme of the Throne's edict had been the promotion of agricultural activities as the basis for fostering commercial and

²⁷⁰ Memorial by Duan Fang, etc., Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the 19th day of the 7th month, the 24th year of the Guang-xu Era

industrial development. It also mentioned a range of specific measures, such as the establishment of agricultural schools, the foundation of an agricultural society, the publication of agricultural journals and the purchase of agricultural equipment. The Emperor's enthusiasm was apparent, and he had given detailed directives. Duan and Wu were obliged to heed these and implement relevant measures in an orderly manner. Therefore, they presented a general overview of their plans to him.

Concerning the establishment of an agricultural middle school, they noted that the college supervised by Associate Grand Secretary Sun Jia-nai already offered agriculture as a subject. Therefore, they proposed establishing a separate agricultural middle school that would offer preliminary studies about farming at a more elementary level.

Agricultural experts would be recruited from both the East and West, together with those who were already in the capital, to teach the students and conduct research at the school. Chinese agricultural texts and farming in the West would be studied separately. Journals containing newly translated texts and covering new seeds and breeds and newly discovered knowledge would be provided for the students' reference.

Concerning the formation of an agricultural studies society in the capital, the Duan and Wu felt its principal purpose should be to organise fairs and competitions. Such events were generally held once every few years or on an irregular basis in Western countries, and they were the most effective way to

increase the knowledge of farmers about the basics of agriculture. Moreover, the agricultural studies society in the capital should study equipment and produce from around the world and collect the best botanical species. Special species from the most distant countries, and even the tiniest differences in their costs, should be assessed in the most detailed and organised manner. Farmers from the city's outskirts might also be able to make use of the society's resources and hold gatherings there.

The launch of an official agricultural journal could help to bring together the best talent in the agricultural sector in order to study the subject in a more sophisticated way. One groundbreaking publication on this subject had already been launched in Shanghai. The official agricultural journal would aim to complement the role of the Shanghai one, which was being published by a commercial enterprise that was currently struggling against various hardships. The latter should be given some special assistance, so that the two might learn from one another's experience.

In addition, they urged that the journal should adopt the British practice of confining itself entirely to agricultural matters and staying out of politics. It should print only proven facts and feasible ideas. Its circulation model would be the same as that of the *Official Current Affairs Journal*. Both the government and public should contribute to its funding in order to ensure its viability.

Regarding the purchasing of agricultural equipment from both East and West, the United States offered the best agricultural machinery, while Japan's was

the cheapest. With such equipment, a single person could farm a hundred *mu* of fields. Rich rewards like this could be brought about with a negligible amount of effort, and the use of machinery should be promoted everywhere.

to the Minister-Supervisors said they planned to ask the United States Ambassador about how to go about purchasing an appropriate quantity of equipment; or else it could be bought locally from foreign merchants. Members of the university's forthcoming study tour to Japan would buy selected items there. The aim would be to strive for quick results; the matter of cost was not necessarily a major issue.

In the West, all the above-mentioned activities were carried out separately, either by government departments or merchants who specialised in specific fields or types of business. In contrast, Duan and Wu were aiming to centralise all these process in China. It was certain the issues involved would be complex and the Bureau's expenses would enormous. Realising their limited capabilities, Duan and Wu were very concerned that they might not prove to be up to this gargantuan task.

Nonetheless, under pressure from above by the Emperor's wholehearted belief in the AICB and from below by the crisis that existed in the nation's affairs, it was obvious the Minister-Supervisors were not going to be allowed to shirk the challenges they faced or disappoint the whole country. They would be obliged to persevere in continuous efforts and seek substantial results with the limited resources available to them at the outset. They believed that, once they had begun

to move in the right direction, it would create a snowball effect that would permit them to attain their objective of enriching and strengthening China.

Besides resource constraints, Duan and Wu faced other challenges. They needed to take care of the establishment of a botanic academy. This would purchase a wide variety of plant species, as well as common ones, and carefully classified all of them and highlight their main features. For example, “coffee originates in tropical regions and its effects on humans are similar to those of tea”, or “rubber is a manufacturing material and its features are similar to those of leather”. Such knowledge would be disseminated to the public via an extensive programme of exhibitions and speeches. Meanwhile, the academy would maintain communication and exchange information with the agricultural middle schools and the agricultural studies society.

They also planned to purchase some fallow fields around the capital as the sites for pilot project involving new methods of cultivation. Those that proved successful would be promoted in line with the principle that “seeing is believing”. A few hectares should be sufficient for this purpose to begin with, although the programme’s scope might be extended to other regions afterwards.

Then there was a plan to recruit agricultural instructors. The United States was more advanced in this field of study than any other country, although Japan had been emphasising it more and more during recent years. The idea was to recruit one or two American agricultural experts to teach in China, and most probably a number of Japanese teachers as well, if necessary. Their varied

knowledge about subjects like chemical fertilisation methods and the essentials of quality assurance and seeding could prove enlightening, and it would help Chinese agriculturalists to achieve the results they desired.

Duan and Fu set out these plans to enhance agriculture in China in general terms. They left the job of working out the details for their implementation and the budgets they would require until the projects concerned were actually underway.²⁷¹

10.3. Proposals for the Development of Industry and Commerce

On the 9th of September, Duan and Wu submitted another memorial giving further details about their proposed agricultural reforms. More importantly, it also introduced the idea of establishing a national bank, which would become a bulwark of China's industrial and commercial development.

Furthermore, this memorial commented on some detailed proposals concerning agricultural, industrial and commercial matters that Imperial Attendant Pang Hong-shu had submitted to the Emperor in a memorial. On the 15th day of the year's 7th month, the Emperor had issued the following edict about these to the Grand Council:

The memorial "Pros and Cons for Improving the Economy Should Be Carefully Examined" by Imperial Attendant Pang Hong-shu

²⁷¹ Memorial by Duan Fang and Wu Jim-pah, Ministers and Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the 19th day of the 7th month of the 24th year of the Guang-xu Era

referred to certain items regarding the promotion of agriculture, the encouragement of plantations, the promotion of handicrafts and the formation of business councils. These are hereby referred to Duan Fang, Wu Mou-ding and Xu Jian-ren for their further deliberation, and a further memorial from them is required. A copy of the full text of Pang's memorial is to be provided for their reference.

Duan and Wu did indeed carefully consider and comment on each point Pang had raised in his memorial. In the item on promoting agriculture, they agreed with him that an adequate water supply was the foundation of agriculture; the digging of canals and wells was essential in order to improve the water supply; and the authorities should make every effort to promote this and make full use of any geographical advantages as far as it was concerned.

As for Pang's opinion that Western farming equipment was unlikely to prove effective, they did not believe this would necessarily be the case. Where foreign farming equipment was concerned, American products were of the best quality, while Japanese ones were the cheapest. Each unit of such equipment would cost 1,000 to 2,000 taels, and it could be used to cultivate several hectares of land. Although it seemed more economical to hire peasants to do the same work for one year, the use of machinery would be much more economical over a period of several years.

In addition, they said Pang's assertion that peasants were unintelligent was only true because they were uneducated. Agricultural schools and journals would

be established for widespread educational purposes; and the peasants would become enlightened within a few years. By then, even women and children would be literate. Then there would be no concerns about peasants being unable to operate the equipment.

As for the item in Pang's memorial that encouraged the establishment of plantations, it was noted that Western countries had specific books about botany, while countries such as The Netherlands, Germany and France even had ministries of forestry to deal with such matters. It was a fact that soil was different in different areas, and its suitability for growing various plants varied. If a particular species of plant was cultivated in some places, it would die. It was hardly surprising that there had been instances of total crop failure, such as the one involving white mulberry plantation projects in Hubei and Jiangxi.

Pang's ideas about classifying soil types and their suitability, disseminating such information, and following the practice of the Office of Foreign Affairs by accompanying the granting of land development rights with the tablets and cap badges were all feasible, and they should be approved for implementation. If the plantation projects he suggested proved to be effective in the future, then the Bureau would devise appropriate regulations and grant land for them.

As for the promotion of handicraft industries, in recent years silk and cloth products from Shanghai, matches from Guizhou, wine from Shandong and straw hats and braids from eastern Zhili had all become immensely popular among the

local public and they were hugely profitable businesses. Meanwhile, others, such as red liquor from Jilin and fur and leather products from the border region, were highly appreciated by foreigners. Every effort should be made to promote such enterprises, so as to make full use of China's competitive edge. Then the abuses by foreign countries could be contained and China's native resources would flourish.

Independent factories that manufactured their own products should be generously rewarded and actively protected, and the Bureau should extend its support to them. The 10% tariff that the Imperial Maritime Customs Service had imposed on machine-made products and its related storage arrangements were no longer being enforced. Chinese merchants were setting up their own bonded warehouses and insurance firms in the treaty ports, although such facilities were still relatively undeveloped. It was believed that China's handicraft industries would flourish once a national bank existed to finance the nation's merchants and free them from foreign control.

As Pang noted in his memorial, provincial-level local business councils established and administered by government officials had proved ineffective. He recommended the appointment of rich merchants as members of these councils. The Minister-Supervisors replied that the AICB was developing an outline policy on this issue, and they also planned to appoint such merchants in each province, and entrust them with the task of promoting local businesses.

If these councils were able to raise equity to form companies with confirmed funding through their own efforts, they would receive immediate approval and be granted charters to establish them. The Bureau's national headquarters and provincial branches would also join forces with local governments to protect the councils, but without exerting any undue control over them. Such arrangements were generally in line with those suggested in Pang's memorial.

The aforementioned items could be summed up by saying that Pang's memorial aimed at assessing potential benefits while avoiding potential pitfalls, as well as avoiding unnecessary competition and promoting hard work. Its ideas were thoughtful and detailed, and it also suggested that edicts could be issued to provincial leaders, viceroys and governors, ordering them to convey all their proposals to the AICB's provincial branches, so that they could be fully implemented.²⁷²

10.4. The Promotion of Agricultural Studies Societies

Wu and his colleague submitted a further memorial concerning the comprehensive comments about agricultural, industrial and commercial matters made by State Secretariat Officer Wang Jing-qin in a memorial to the Emperor. On the 20th day of the 7th month, the 24th year of the Guang-xu Era, the Grand Council stated that:

²⁷² Memorial by Duan Fang, etc., Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the 24th day of the 7th month of the 24th year of the Guang-xu Era

Regarding the memorial submitted by State Secretariat Officer Wang Jing-qin in respect of agricultural, industrial and commercial matters, Emperor Guang-xu has given the following instruction: “Duan Fang and Wu Jimpah should be directed to deliberate and reply properly as soon as possible.” A copy of Wang’s memorial has since been forwarded to such bureaus as directed by the Throne.

The memorial referred to suggested that an agricultural studies society be established in the capital, and that the government should provide it with a site for experimental projects; the Guangxi system of offering government loans for agricultural projects should be implemented nationally; the rates of household tax and levies should be lowered; and rules to reward or punish both officials and commoners should be formulated.

On the proposal to reduce the rates of taxes and levies, Duan and Wu reported that the AICB planned to consult the Ministry of Revenue, and it should be implemented after the matter had been reported to the Throne. As for the other items in the memorial, on the one regarding the establishment of an agricultural studies society in the capital with the government providing a site for experimental projects, Wu and Duan noted that they had stated in a previous memorial that pilot agricultural projects, agricultural middle schools and an agricultural studies society should be established, and the Emperor had already approved all of these.

Wang's submission that the agricultural studies society should be granted its charter by the Emperor and that the AICB's leaders should serve as its presidents was based on the charters of agricultural societies in Britain and Japan. This arrangement had proved to be the most practical one, and Duan and Wu agreed it should be implemented. The agricultural studies society's charter would be drafted after detailed study and consideration, and it would be forwarded to the Throne for approval. It would be permanently adopted by the society; and it would also be circulated to its provincial chapters for implementation throughout the Empire.

The memorial pointed out that the Bureau's headquarters would be unable to lead the way and marshal all the resources needed to deal with every relevant issue. Therefore, it would only have a central coordinating role, and it would not carry out any specific tasks. In their previous memorial, Wu and his colleagues had proposed purchasing unused fields in the area around the capital that would be used for pilot plantation projects, a similar arrangement to the one being advocated by Wang.

However, the AICB's leaders added that they would consult the Capital Municipality before implementing Wang's idea about appropriating government sites that were under municipal control for use as the Bureau's headquarters and agricultural studies society pilot projects.

On the other hand, they agreed with his comment that the general public had become impoverished during recent years. The people were unable to acquire

seeds or purchase agricultural equipment, and the government needed to assist them with this. The Guangxi system of promoting the development of plantations and husbandry by means of collateralised government loans should be adopted as Wang proposed, in order to provide farmers with practical support and show that the government cared about their wellbeing.

The AICB would refer to the Guangxi policy for plantations and husbandry and consider its adoption nationwide. However, the provision of government loans was a matter that needed to be handled with the utmost care. In particular, the practicality of collecting collateral and formulating a straightforward system for collecting and repaying loans were matters that should not be taken lightly, otherwise problems might occur in those areas further down the road.

Reference should therefore be made to a wide range of opinions on these issues, with a view to devising simple and clear rules that would ensure that the policy was beneficial and did not run into trouble. Moreover, circumstances differed in every province, so it was recommended that provincial commandants and governors deal with the subject in the most appropriate way.

Since the Emperor had previously decreed the formation of the Bureau's provincial branches, the Commandant-General of Jilin and the viceroys of Liangjiang and Huguang had already telegraphed reports about the development of such chapters in their districts. Other provinces were also reported to be working hard on this project, and they were expected to submit their reports soon.

The success of the provinces in promoting agriculture would depend on the concrete contributions of a large number of individuals. However, there would inevitably be those who worked half-heartedly at this task, and those who hindered it too. Strict rules and regulations were needed to at the outset to warn everyone effectively against such shortcomings. It was recommended that this issue should be handled as Wang had suggested, and that proposed rules and regulations should be drawn up for the Emperor to comment on them and authorise their implementation.²⁷³

Duan and Wu also submitted a second memorial on the same day. This one responded to detailed proposals about the promotion of the agricultural studies society and agricultural journals made by Cheng Shi-gu, an official at the Ministry of Revenue, in a memorial to the Emperor dated the 22nd day of the 7th month in the 24th year of the Guangxu Era. The Emperor had forwarded a copy of it to Duan and Wu, with instructions to consider and comment on it properly as quickly as possible, which they did. Cheng had stated:

Agricultural journals are already being purchased and circulated in Zhili. At present, their readership consists of scholars and farmers. These two groups have different interests. The few who read such journals rarely if ever make any detailed notes about their contents, nor do they learn anything from them that is worth passing on to the local elders. One solution would be to order counties and

²⁷³ Memorial by Duan Fang and Wu Jim-pah, Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the Promotion of Agricultural Studies Societies on the 28th day of the 7th month of the 24th year of Guang-xu Era)

magistracies to promote local branches of the agricultural studies society, and each branch would be provided with an extra copy of the agricultural journal. Local elders would be invited to hear presentations about the relevant content they contained by officials who had been specifically assigned to carry out this task.

In the AICB leadership's view, extra promotional efforts would be required to develop new trends in agriculture, and their success would depend on in-depth research and consideration. Since agricultural studies had not yet been fully developed, new ideas would inevitably receive a lukewarm response. Duan and Wu proposed the establishment of the agricultural studies society in the capital as a vehicle for promoting agricultural pursuits, and appropriate measures should also be taken throughout the country to encourage the study of this subject.

It was intended that the establishment of the society's headquarters should be followed by a consultative process conducted by the AICB's leaders, during which they would encourage the provinces to form local branches of the society. Following its approval by the Emperor, the society's charter would be published and forwarded to the provinces for them to implement it. Meanwhile, the local branches should deal with the details, such as appointing their officers and inviting local elders to participate in their activities. The society's far-distant headquarters would not be required to micro-manage them. On another topic, the memorial stated:

Funding is the most essential precondition for the development of new trends. Besides voluntary organisations formed by the gentry and rich people, other non-governmental organisations could be encouraged to reconstitute themselves as local branches of the agricultural studies society by highlighting the benefits it would bring to the community. The government would punish any unruly commoners who sabotaged this effort. If it turned out that the public was not up to this task, the government would give its assistance.

In the opinion of Wu and his colleagues, the public would be more than willing to support the agricultural studies society, since was being established on the government's initiative. If provincial, municipal, county and magistracy governments were able to motivate the public effectively, it might take only the smallest amount of encouragement to garner their support.

Meanwhile, the local Governments would of course be responsible for taking care the proposed local branches, and the AICB's leaders would consult the viceroys and governors to ensure they did so. Branches that lacked adequate resources to perform their roles properly would be investigated and assessed to determine whether or not they were genuinely dedicated to the study of agriculture. If they were, they would be provided with additional support to facilitate their success.

On the other hand, organisations that benefited the local community less, such as those which arranged festivals, should be strongly encouraged by fair and credible members of the gentry and local officials to contribute funds for the establishment of agricultural studies society branches. Once the local people understood that the relevant initiatives would help to enhance their livelihood and teach them about farming, they would willingly support them.

Cheng's memorial also stated:

A simple and effective approach for promoting the agricultural journal would be for it to make extensive use of tables about agricultural matters in order to explain these materials to its readers. For instance, fields should be classified in terms of their quality, namely high, medium and low; there should be five tables about different aspect of fertilisers, and so forth. Graphs should also be drawn up and included to elaborate on these. Information that was unsuitable for conveying in the form of graphs should be explained in greater detail in the text.

Wu and Duan responded that they believed the journal should aim to explain new theories and ideas. Cheng's idea of producing tables and graphs would indeed be simple and easy to understand. Each issue of the journal should include a sufficient number of such items, and the local branches could reprint excerpts from them to increase the knowledge of peasants and commoners. In addition, the local branches should be directed to keep records about the

cultivation of plants and the rearing of animals in their provinces, and report these findings to the society's headquarters for reference.

Turning to yet another topic, Chen's memorial continued:

Western equipment is expensive. If Western engineers and technicians are not hired, there will be nobody to repair such equipment if it is damaged. Also, it will be difficult for local branches to buy replacements for it in a hurry. The Bureau at national level and schools in the provincial capitals should test it before it is bought.

In fact, the AICB's earlier remit of preparing for the promotion of agriculture pursuits had covered hiring engineers and technicians and purchasing equipment for trial operations at the sites it acquired. Due to lack of funds, such activities could only be carried out in the Beijing area for the time being, and they had not yet yielded any results. In the meantime, the Bureau would support any private initiatives to raise funds to purchase equipment and hire engineers and technicians. Wu and Duan had initially planned to make copies of equipment that had proved effective during tests, and to distribute them throughout the country, although this idea was still far from being implemented.²⁷⁴

²⁷⁴ Memorial by Duan Fang and Wu Jim-pah, Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the Promotion of Agricultural Journals on the 28th day of the 7th month of the 24th year of the Guang-xu Era.

Chapter 11

The Agricultural, Industrial and Commercial Bureau and the Anhui Silk Industry

The Empress Dowager Cixi's coup d'état abruptly ended the Hundred Days Reform, and the core reformers were executed or forced into exile overseas. It was widely believed that the edicts of Emperor Guang-xu and his supporters would not create any lasting benefits for China's development.

However, in the AICB's activities and the institutional reforms they proposed, Wu Jim-pah and Duan Fang had focused on formulating measures that would have a real impact on China's agricultural and industrial output. As the newspapers reported, the Bureau's leaders had created and implemented their schemes in a sincere spirit.²⁷⁵ In fact, their memorial to the Throne on the 4th of September emphasised that:

The necessary effort must be made in order to achieve results. A hundred rumours are no match for a single close-up observation. Relying on fancy words alone, without due attention to real practice, will only take one to an empty void and negate the objective of strengthening the nation. Therefore, practicality must be emphasised when planning, while precision is the key to implementation.²⁷⁶

²⁷⁵ *Guo-wen Bao* Jing-shi Nong-gong-shang Zong-ju Kai-ju on the 21st Day of the 7th Month of the 24th Year of the Guang-xu Era.

²⁷⁶ Memorial by Duan Fang and Wu Jim-pah, Ministers and Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the 19th day of the 7th month of the 24th year of the Guang-xu Era.

On the 13th of September 1898, Duan and Wu submitted three memorials to the Emperor on the same day. These concerned the promotion of agricultural studies societies and policies to support the silk and tea industries. A few days later, Deng Xi-hua, the Governor of Anhui, reported to the Throne on the reform of silk production and trading in his province.

11.1. Proposals for Strengthening the Silk and Tea Industries

The third memorial Wu and Duan submitted for the Emperor's perusal on the 13th of September 1898 addressed the promotion of the silk and tea industries. In their opinion, China had enjoyed a monopoly position when they started to sell silk and tea to foreigners. These products had contributed three quarters of all the taxes raised on goods, and they provided roughly the same proportion of the nation's import and export revenue.

However, these significant revenue sources had gradually been appropriated by foreigners, particularly sericulture companies in France and Japan, as well as the large-scale tea plantations in Ceylon, India, Italy and Spain. These efficiently operated foreign industries were thriving, and the quality of their products was constantly improving.

If the decline of the two industries in China was not halted, it would have a significant impact on the nation's tax revenues and the livelihoods of its citizens. The prosperity or decline of the silk and tea businesses would be determined by such factors as their planting, production and sales methods. The ways silk and tea

were produced in China were unsophisticated, and that was why sales of them were declining in the face of foreign competition.

The Taihu Lake area had the best natural conditions for sericulture in the world, and the quality of the silk produced there was exceptional. Other lakes, such as Hongze, Chaohu, Boyang, Dongting, Jingming, Daming, Tianchi and Kunming, were considered to be at least as good as those in other countries like Japan and Italy. However, silk production had only recently been attempted in Jiangxi, Hubei, Guangxi and other provinces, while the rest had yet to enter the business.

Silkworm farmers throughout the country were clinging on to established production methods that used fire, snow or brine, without studying Western methods of worm keeping and cocoon drying. Meanwhile, mechanised silk production was limited to Shanghai, Suzhou, Hangzhou, Changzhou and Shaoxing. Hand-made silk remained the norm in other regions. Therefore, the skills of worm keeping and silk production should be promoted further.

Fujian, Zhejiang, Anhui, Sichuan and Hubei were renowned for their tea. However, the rural tea growers in these provinces knew little about the skills of cultivation and processing. Neither did they possess knowledge about when to harvest their crops and how to sell them to tea merchants. Processing usually took place several days after harvesting; and by then the tea's appearance and taste had already started to deteriorate, making it less valuable when it was sold to foreign merchants and exported overseas. In addition, inferior products such as *pingshui*

or re-processed tea were on the market, while some producers even dyed their tealeaves or increased their weight by not drying them out completely.

The tea industry's decline was partly self-inflicted. So the reformers planned to establish a government tea-product administration based on the Japanese model in the inland tea-producing regions. Tea experts would be recruited and equipment would be purchased for this purpose. Guidelines and manuals about the cultivation and production of tea would be compiled and distributed to the growers; and produce prepared in accordance with these guidelines would be sold to the state tea production administration. The tea leaves would be processed as soon as they were picked, then sold to the merchants. Such measures were deemed necessary to enhance the cultivation and production of tea.

Shanghai and Hankou were then China's biggest hubs for tea distribution and sale. Nevertheless, few of the tea firms in those cities were profitable and most of them operated at a loss. There were three reasons for this. The first was the large number of tea brands. Whereas silk could be classified according to its quality, there was an infinite range of tea brands. Foreign merchants based their buying prices on the brand; therefore the same type of tea might be sold at widely varying prices.

Moreover, new companies with little capital often leveraged on the prestige of other brands when their own failed to sell. This was the most damaging practice in the market. It was therefore planned to accredit and grant licences to a fixed number of firms in the tea-producing regions. They would also be issued

with registration numbers that they would need in order to operate. Once the quota of such firms had been decided and taken up, the existing companies could withdraw from it, but no new ones would be added. The brands of approved companies would also be granted patents for a limited period.

Once the tealeaves had been packed in boxes, the tea firms would be required to report the fact and apply for a government stamp showing their business registration number. This would be attached to the lid of the box and it would be checked when the consignment was shipped to one of the trading ports. There would be penalties for forging another firm's brand name or registration number, and the goods concerned would be confiscated.

11.2. Standardisation of Silk Production and Trading

Another problem Wu Jim-pah and his colleague drew attention to was the absence of quotas. Chinese silk was produced manually and sold to foreign merchants. Local traders would not buy it, even at a deep discount, because sales might be disappointing and a quantity of stock could be left over the year's end. Alternatively, a boom in sales could result in a shortage of supplies. While foreign merchants bought fixed quantities of products every year, the available supply varied. As a result, silk manufacturers often struggled to sell their output, resulting in cut-throat competition in the market.

The reformers proposed a production quota of 60,000 *dan* for each trading port in return for every 50,000 *dan* of silk that was offered for sale to Chinese

merchants. The schedule for sales would be determined by the date when the products arrived at the port.

The sale of tea leaves would be regulated in the same manner. The problem of cut-throat prices in the tea market was also exacerbated by the large number of small-volume samples being produced. Foreign merchants welcomed this situation when tea prices were rising moderately; but when they declined even slightly, the same merchants would use every possible excuse to reject the leaves.

In response to this situation, the Hankou team of merchants had agreed on a set of general guidelines during the fifth year of the Guang-xu era. Its five articles and 12 subsequent amendments called for the number of licensed firms to be limited and for sample products to be banned. When new tea leaves were offered for sale each year, the tea experts and merchants would be invited to attend regular product sampling sessions where they could choose the products they liked and pack them into glass containers. Besides such arrangements to regulate the market, the guidelines called for penalties for breaches of the rules, such as adding inferior leaves.

Lack of capital was another problem that afflicted both the silk and tea industries. The shipping costs of Chinese merchants were excessive, and they had to pay for storage, insurance, deposit and travel expenses. All these came out of their capital. They might make a profit when sales were good; yet they could incur big losses when they were poor. Perceiving this situation, foreign merchants often colluded with each other to compete against the Chinese merchants. The latter

might persevere for a while, but eventually their businesses would fail. Even larger firms with more capital were being hurt by the cut-throat tactics of smaller ones.

Moreover, Chinese merchants were unable to set prices for their own silk and tea products. Instead, these were manipulated by foreigners. The same circumstances also applied in other businesses. The best way to safeguard the merchants would be to establish state-owned banks that would help them when their capital was insufficient. Cooperative enterprises should also be formed. The merchants could participate in these and share their profits. The proposed measures would help to resolve the chronic problems of the silk and tea merchants and thereby protect the nation's revenues.

The Emperor Guang-xu had ordered the establishment of provincial commercial bureaus; and the Viceroy of Liangjiang and Huguang telegraphed reports on the progress being made in this endeavour by relevant officials in Shanghai and Hankou. The reformers also petitioned the Throne to issue a directive instructing local officials in tea and silk-producing regions to inaugurate academic journals and societies, and to make every effort to promote methods of tea and silk cultivation and processing. They also requested another directive from the Throne ordering the Viceroy of Liangjiang and Huguang to arrange for the Shanghai and Hankou commercial bureaus to establish commercial enterprises that would facilitate the sale of products in compliance with detailed rules and regulations.

The AICB was responsible for supervising agricultural, industrial and commercial activities of the provinces; and it was empowered to conduct inspections in accordance with Imperial edicts. Duan and Wu planned to dispatch representatives to inspect and appraise the performance of each provincial commercial bureau once a year. Xu Jianren had still not arrived in the capital, and he was therefore not a signatory to the Bureau's memorials.²⁷⁷

11.3. Report by Deng Huaxi on the Silk Industry in Anhui Province

Conventional accounts of the Hundred Days Reform usually assert that – apart from one or two exceptions, such as the officials in Hunan – the provincial viceroys and governors failed to respond to the young Emperor Guang-xu's edicts.

However, the policies to advance agriculture, handicraft industries and other commercial activities promulgated by the AICB under Wu's administration were implemented in the provinces to varying degrees. For instance, Deng Huaxi, the Governor of Anhui and holder of a Class 1 Head Badge, reported to the Emperor on reforms in silk production and commerce in the province. Deng's Memorial serves as a valuable reference and an empirical examination of the relevance of Wu's propositions for economic reform in Late Qing China.

The memorial notes the Throne's repeated instructions to implement agricultural, industrial and commercial reforms; its assertions that the promotion of agricultural pursuits would lay the foundations for commercial and industrial

²⁷⁷ Memorial by Duan Fang and Wu Jim-pah, Ministers and Minister-Supervisors of the Agricultural, Industrial and Commercial Bureau on the strengthening of the silk and tea trades on the 28th day of the 7th month of the 24th year of the Guang-xu Era.

development; and its orders to provincial viceroys and governors to make such reforms earnestly and to submit reports about their progress afterwards. The Emperor's officials and his other subjects clearly understood that his intention was to develop the economy, with an emphasis on utilising land resources and improving the livelihood of the population.

Deng believed the key to creating wealth would be to increase the number of people who were generating it. Since time immemorial, the cultivation of the three staple crops had been the mainstay of Chinese agriculture, while cash crops had been equally important. The exploitation of natural resources in mountainous areas and water resources had always stemmed from the government's promotion of the growing of staple crops, as well as the planting of trees.

Covering 2,000 *li*, Anhui province had large tracts of uncultivated land in the aftermath of wars and natural disasters. Its fields and paddies had undergone droughts and floods, while its peasants were impoverished. Their suffering was partly due to the poor state of the land and the dismal harvests, and partly due to their laziness. The key to resolving the problem was to assess the land's suitability for growing different types of crops. A broader range of produce would provide raw materials for industry; this in turn would create a greater variety of products for trading.

An agricultural journal had been established in Shanghai in spring the previous year. It covered many new ideas that were beneficial for agriculture. Deng had immediately subscribed to this publication, and together with Yuan

Chang, then the newly-promoted Magistrate of the Hui-ning-qi-tai-guang Circuit, he had printed and published *Key Knowledge about Common Livelihood* by Jia Sixie of the Wei Dynasty, and the *Compilation of Key Farming and Plantation Studies* by the Yuan Dynasty's Department of Agriculture.

He distributed these publications to all his subordinates, and local officials were ordered to take the initiative in studying such texts together with the local gentry, so as to enlighten the commoners and give agriculture their wholehearted support. During the previous autumn, he issued another directive explaining the obvious benefits of large-scale forestation in Western countries to his subordinates, and calling on them to follow this example. The instructions were circulated throughout his jurisdiction, and the local public was ordered to identify areas of land that were suitable for forestation, whereas those that were more suitable for growing wheat and rice should be retained for these purposes.

In addition, commoners were allowed to choose which types of trees they wished to plant on abandoned and vacant areas close to water sources or mountains, purchase seeds or saplings for this purpose, and plant 300,000 trees in each jurisdiction. The number of trees planted would form the benchmarks for either rewards or punishments, and the final results would be the basis for assessing whether or not the programme had been successful.

Deng's directives encouraged participants to make their best efforts, with the incentive of possible government honours for the most effective and diligent among them. Since spring that year, his subordinates had been submitting reports

saying that, while the local farmers were familiar with cash crops and farming, they lagged somewhat behind their Western counterparts in terms of their use of fertilisers. In response, Deng selected suitable excerpts from agricultural journals and had them reprinted every month to increase the farmers' knowledge of this subject.

Forestry was also promoted in areas where it was already customary, and it was introduced in those where it had not previously been practiced. Officials encouraged the farmers by giving them subsidies to purchase seeds and saplings, or else they urged the local gentry to form associations to raise funds for the same purpose. Rules were formulated and distributed for the guidance of local communities in some areas, while Crown land was developed and men were hired to plant trees to set an example in others.

Various reports put the number of newly-planted trees somewhere between several hundred thousand and several million. Deng had directed the participants to make dedicated efforts to implement the project, and he said he would despatch officials to verify its results and the accuracy of the reports he had received once the trees were fully grown. Timber from pine, fir, elm and willow trees that had been planted, as well as fruits such as pears, pomegranates, berries and chestnuts, needed no processing and therefore they could be sold immediately. Industries would be established to process and manufacture products from other types of agricultural produce, just as tea and sugar cane were processed. The products concerned included incense made from camphor wood, rubber, clothes made from

hemp and cotton, oil refined from paulownias and cypresses, and paper and other tools made from bamboo. These would afterwards be sold by merchants.

Deng's reasoning meant that it would be necessary to study processing methods in more detail and to recruit technical experts to use such resources and promote businesses more fully. He also issued directives and instructed his subordinates to take action on these points. Local officials who occasionally submitted progress reports late or made mediocre efforts were put back on their toes with severe warnings and penalties.

The Emperor's recent edicts had consistently emphasised the concept of developing industry and commerce on the foundation of agriculture, and he had urged everyone to make strenuous efforts. These directives were studied and implemented promptly, and every attempt was made to execute his plans.

Deng and his colleagues knew that silk was China's biggest export. While mulberry trees were grown in many local jurisdictions, there was a shortage of experts in cash crops, silkworm-keeping and sericulture. He therefore required those who were available in Anhui to organise and promote such pursuits in the provincial capital.

They included Peng Mingbao, a Prefect-Candidate, as well as others from Jiangsu who were familiar with mulberry-planting and silkworm-keeping. According to these pundits, the landscape and climate in Anhui's riverside areas made them suitable for planting mulberry trees and keeping silkworms.

Vacant Crown land outside the municipality of Anqing had been earmarked for a mulberry plantation in early spring 1898. Mulberry saplings and two experts in their cultivation were brought from Huzhou in Zhejiang to establish a pilot plantation. Its trees were growing strong and healthy. Silkworms were also obtained from Huzhou and fed with local wild mulberry leaves. The silk the worms produced was of the same quality as Huzhou products.

The success of these projects encouraged Deng to step up his efforts. Around that time, a proposal was made to establish the Rixin Worm-keeping Company. Interested officials and members of the gentry would be invited to purchase its equity, and the proceeds would be used to buy extra land to expand the mulberry plantation and new premises in which to develop the business.

Mulberry saplings would be acquired from Huzhou every year. The company would also buy mulberry leaves on an agency basis from farmers who grew trees but who were unfamiliar with worm-keeping; as well as cocoons from those who kept worms but did not produce silk. If silk farmers encountered any problems about selling their products, the company would offer to buy them.

Most of the company's employees would be local residents. Experts would be hired from Huzhou to teach them how to process the cocoons. Besides worm-keeping and growing mulberry trees, the workers would grow other cash crops, raise livestock and make handicrafts.

Chemical equipment would be bought for assessing the quality of the soil, and microscopes for selecting the breeds of silkworms to be used. New agricultural publications and equipment would also be purchased to facilitate study and discussion of these subjects. Equipment for mulberry-raising and worm-keeping would be manufactured to help local farmers engage in the industries. Elementary schools would be established to teach the peasants' children a simple curriculum.

This proposal was submitted to Deng purely for reference purposes. Its authors promised to submit a comprehensive set of estimates covering all the necessary arrangements and funding issues before making an equity offering that would allow them to inaugurate the project at a later date.

11.4. The Proposal for the Rixin Worm-keeping Company

Having studied the proposed company's draft articles of association, Deng concluded that its approach of focusing on agricultural pursuits at the outset and then proceeding to industrial production and commercial trading would be the most appropriate way to proceed. The industry's basic and peripheral aspects would then support one another, and both would benefit the community. Furthermore, the company would be a rational model that other provinces could emulate. It was also in line with Ministry Officer Xiao Wenchao's idea of establishing public worm-keeping and mulberry tree administrations, as outlined in the Throne's telegraphed directive dated the 26th day of the 7th month. Once

approved, the proposal could be earnestly implemented and gradually expanded to yield good results.

The proposed articles of association for the Rixin Worm-keeping Company, to be established in Anqing, the provincial capital of Anhui, were summarised as follows for the Emperor's perusal.²⁷⁸

Silk was a major Chinese export and serious efforts were needed to prevent such a profitable business falling into foreign hands. The landscape and climate of Anhui's riverside areas were suitable for planting mulberry trees and keeping silkworms. For many years, senior local officials had been distributing mulberry tree saplings to commoners, but the industry's further development had been stymied by the fact that worm-keeping and sericulture techniques had not been promoted, so they were not widely known. Interested parties were therefore being invited to invest in the establishment of the Rixin Worm-keeping Company as an initiative to create a supply chain linking agriculture, industry and commerce. Farmers would be encouraged to benefit from participating in this project.

Mulberry leaves are essential for silkworm-keeping, and land on which to grow mulberry trees would be a prerequisite for their cultivation. The first mulberry tree plantation had already been established in the precinct of Wuli Temple at the eastern entrance to Anqing, and a grant of Crown land had been requested for the operation's headquarters. This would be paid for in instalments over a five-year period commencing in the first month of the 24th year of the

²⁷⁸ Memorial by Deng Huaxi, Governor of Anhui on the 4th day of the 8th month of the 24th year of the Guang-xu Era.

Guang-xu Era. Upon the final payment, the land would become the company's property and it would be retained for ongoing operating purposes. However, the requested site covered just 13 *mu*, and additional land would be urgently needed to expand the plantation. The company therefore intended to offer to purchase as many of the numerous vacant sites and private properties that existed near the plantation as it needed for its growth.

The silkworms would be kept and their cocoons produced in a number of special rooms at the plantation. It would also have meeting and conference halls, as well as a laboratory and library. The factory would be entirely devoted to manufacturing operations; and ponds and enclosures would be created for livestock. Gardens and special plots would be allocated for experimental purposes. Scientific equipment would be acquired to test soil quality, and microscopes would be bought to screen the worms used for breeding. New agricultural publications and equipment would be purchased to facilitate further studies and research.

The mulberry plantation's workers would be hired in the surrounding area, while planters would be recruited from Huzhou in Zhejiang Province to teach planting methods. As the plantation expanded, its workforce would increase as well. Besides growing and maintaining the mulberry trees, the workers would study livestock keeping and the cultivation of cash crops in their spare time, using new agricultural publications as their reference materials. That would help them to make full use of the available land resources. The mulberry trees would be fully grown within three years, and a number of worm breeds would be available for

silk production by then. The operation might become a model for other regions near and far.

Huzhou possessed the best mulberry tree saplings and worm breeds. However, it was too far away for the peasants in Anqing to visit, and it was difficult for them to purchase such items in small quantities. The company would therefore send a delegation to the Huzhou-Shimen area to purchase saplings and worms every year. Local farmers and those from other municipalities and counties in the province would be asked to place orders for the quantities they required of these goods at the plantation during the ninth month of each year, and they would receive them by the following spring. The goods would be delivered on a cash-on-delivery basis. Farmers from nearby areas could also send their staff to receive training in how to look after the saplings and silkworms.

The company's primary focus would be on the community's interests. Commoners who grew mulberry trees but did not know about worm-keeping could sell their leaves to the company. These sales would be agreed and half the purchase price would be paid during the first half of the year, and the other balance would be paid when the leaves were delivered the following year. Those who lacked land for growing mulberry trees but who wished to keep worms could buy leaves from the company at the same price it had paid for them. Indigent peasants could obtain mulberry tree saplings and worms to establish a pilot silk-producing operation with their neighbours acting as guarantors. They could pay for the materials out of their profits afterwards. The company would purchase the

products of those who kept worms but were unable to produce silk, and those who had difficulty selling their silk.

An elementary school would be established at the mulberry tree plantation to educate 50 boys from nearby peasant families free of charge. Teachers would be recruited for this purpose. The school would offer them a simple curriculum: there would be vocabulary lessons and explanations of the meanings of words from 8 am to 10 am each day, followed by revision of the words they had learnt from 2 pm to 4 pm, during which time the students would also be taught how to write the characters for them. Concrete terms would be taught during the first two years, followed by abstract words. The learning of phrases would progress from four-word phrases to eight-word ones. Ultimately, the students would learn a total of 3,000 words.

Apart from revising and writing the words they had learnt, third-year pupils would be asked to write the answers to simple questions. Clarity and precision, rather than grammar and handwriting, would be the benchmarks for assessing their work. The students would start with one or two sentences, and then progress to 20 or 30. During their fourth year, the students would receive full board and lodging at the plantation. They would be divided into groups according to their aptitude, and they would learn science, how to check seeds and breeds, worm-keeping, cocoon-drying and sericulture, as well as relevant knowledge about arboriculture and livestock-keeping. Simple calculations would also form part of the curriculum.

The students would graduate after completing a five-year programme, and they could then choose whether or not they wished to remain and work for the plantation. Those who opted to stay would be tested on their proficiency and offered an appropriate salary. In this way, the students' education and future livelihood would be integrated to create the greatest possible advantages for them.

The company would start to promote agriculture by establishing the mulberry tree plantation. Then it would progress to worm-keeping and sericulture in a way that emphasised the industry's skills. Subsequently, its business would extend to selling and shipping silk. The success of each of these phases would depend on the commitment of those responsible for them. Once the company's establishment had been approved, it would prepare a large site for the plantation and buy mulberry tree saplings. Interested parties would be invited to invest in it, and all the functions stipulated in the articles of association and the necessary funds for them would be systematically confirmed and compiled into a budget estimate for equity-raising purposes.

However, since the sole purpose of this initiative at the outset was to promote local interests it would pay no dividends on its equity during the first three years. If it subsequently became profitable, the government would receive dividends. After five years, if its sales of silk proved satisfactory and its profits increased, it would start paying dividends to its shareholders based on their equity stakes, after the Government had received its due share.

Chapter 12 – Conclusion

From Huizhou to Tianjin – The Road to Industrialisation and Modern Banking

On September 21 1898, a coup engineered by the Empress Dowager ended the short-lived Hundred Days Reform. The Agricultural, Industrial and Commercial Bureau set up during the reform period was abolished. Emperor Guang-xu was placed under house arrest in the Imperial Palace. Kang You-wei and Liang Qi-chao fled overseas, and a number of leading reformers, including Kang's younger brother Kang Guang-ren (1867-1898), Tan Xi-tong (1865-1898) and Lin Xu (1875-1898) were executed within a week. Wu Jim-pah fled to the HSBC Agent's office in the Beijing Legation Quarter (Dong-jiao Min-Xian) and the Bank placed him under the British Embassy's protection. On October 8, under the terms of an agreement between Li Hong-zhang and Wang Wen-shao, Wu was dismissed from all his government positions but allowed to continue his business activities in Tianjin and Beijing.

As O.D. Rasmussen recounts in *Tientsin – An Illustrated Outline History*, Wu's proposal during the Hundred Days Reform for the establishment of a chamber of commerce attracted extraordinary support across the country. More importantly, the suggestion was one of the few reforms that remained in place after Cixi's coup. Rasmussen argues that China's wide-ranging modern commercial organisations during the early 20th Century were the direct result of Wu's submission. Interestingly, in 1903, Yuan Shi-kai instructed Wu to establish the Tianjin Chamber of Commerce, one of the first in North China.

Wu passed away in Tianjin on February 16, 1927. Before his death, he appointed Pan Zi-xin (1876-1951), a Suzhou-born celebrity living in Tianjin, as his executor. Pan came from a distinguished family in his home city. Moreover, his clan had originated in Huizhou, just as Wu's had. Pan's family was therefore known as the "Hui Pan" in Suzhou. Pan himself studied in Japan for five years and returned to China in 1908. He settled in Tianjin in 1910, and ran chemical factories and hotels in the city.

Wu was away from Huizhou and Suzhou, where he had been born and raised, for more than 60 years, from the 1860s up to the 1920s. Instead, he pursued his career in North China. Towards the end of his life, he asked a fellow native of both cities to look after his affairs after his death. It may be argued that this was a coincidence. Nevertheless, Wu's career and personal development undeniably represent the transformation of a Huizhou merchant into a comprador-merchant and then into a bureaucrat-industrialist during the first phase of China's modernisation.

12.1. The Merchants' Social Mobility and Economic Changes in Late Qing China

Throughout the history of mankind, both in China and the West, in ancient and in modern times, the members of the mercantile class have been more socially mobile than other sectors of society. The term "mobile" reflects their long-distance trading and travelling, their contact with people from many different backgrounds, and their social status. Merchants have also been more "mobile" in the sense that they have made a living in various ways and changed their social

networks at different times and in different places. Merchants throughout history have always relied on networks of contacts in cities to make their living.

On the other hands, cities and towns have been shaped by the merchants who moved in and out of them. The close relationships between the treaty ports, trading centres and merchants during the second half of the 19th Century were responsible for the complex socio-economic development of Late Qing China. The interaction between cities and their merchants, such as Huizhou and the Hui merchants, Suzhou and the *qian-zhuang* families, Shanghai and the Su-Zhe compradors, and Tianjin and the bureaucrat-capitalists, illustrates the successes and limitations of China's first attempts to modernise herself.

China faced drastic changes at the turn of the 19th and 20th Centuries, the likes of which she had not seen for millennia. How did merchants in Late Qing China respond to their ancient empire's economic development? How did they restructure the nation's urban and commercial infrastructure?

At the same time, Western merchants were arriving in China backed by their home countries' military and diplomatic support. To a large extent, foreign banks and enterprisers had the ability and power to build a Westernised Shanghai or Tianjin according to their aspirations, demands and values.

However, without exception, the Westerners in China also had to collaborate with local merchants, workers and bureaucrats, in order to integrate themselves into the country's socio-economic structure. Without this kind of

adaptation, Western merchants would never have been able to use their political, economic and technological clout to achieve their economic goals in the East.

The first part of this thesis, chapters 2 and 3, elaborates on the decline of the Qing Dynasty after its Kang-Yong-Qian golden age. The previous sections have also demonstrated the radical changes that took place in the Jiangnan region and among its merchants during the Taiping Rebellion. The foreign invasions, internal rivalries and eclipse of the Qing Court's prestige during the Jia-qing and Dao-guang eras, together with the deteriorating economy, formed a vicious circle. The prosperous Jiangnan region and once-prominent Huizhou merchants group had left their golden age behind them and entered a new phase in their development.

The rise and expansion of the Huizhou merchants were partly the result of their home city's unique cultural environment. The Zhu-xi philosophies and Imperial Examination system had resulted in their cultural and political dominance of Huizhou's society and economy. For centuries, the Ming and Qing governments had ruled local communities via gentlemen-bureaucrats at the county and village levels. This type of power structure had sometimes been modified, due to external and internal reasons such as the Taiping Rebellion and the series of invasions launched by the West and Japan. The salt and tea merchants from Huizhou had been unable to continue exercising their traditional political-economic role smoothly in the face of such traumatic changes.

During the Taiping Rebellion, Huizhou was frequently attacked by both the Qing Army and insurgents. This had destroyed the political, economic, social and cultural base of the Huizhou merchants during the mid 19th Century. In addition, the Yangzi River's role as their most important waterborne transportation route was seriously interrupted by the rebellion. The radical changes in Huizhou and along this watercourse eroded both the psychological and physical foundations of the Huizhou merchants.

Before Huizhou's fall, its merchants had faced a series of internal and external challenges. First, the structural crises in the salt and tea monopolies began to ensnare them during the late Qian-long years. Second, the unequal balance of power between bureaucrats and merchants denied the latter any socio-political rights or benefits. Although most Huizhou merchants desired higher political and cultural status, the natural gap between officials and merchants in China could not be fundamentally altered during the mid 19th Century.

Third, during the 1850s and 60s, the Huizhou tea merchants faced competition from their counterparts in Japan and British India. Western investors introduced modern machinery, management techniques and production systems in the tea industry during the 19th Century. These destroyed China's position as the world's main provider of tea. The market shares of Huizhou tea merchants shrank drastically during the second half of the 19th Century. Under these circumstances, it is worth asking how the Huizhou merchant families managed to survive and adapt to the new global economic environment that China found herself in during

late 19th Century. As Huizhou's cultural and political soil rapidly became barren, how did they create new networks of capital?

12.2. Shanghai's Integrated Local-International Banking Network

While the Taiping Rebellion was destroying Huizhou and paving the way for the decline of Huaibei, Huainan, Hangzhou and Suzhou, the treaty ports were growing into new platforms for China's domestic and international commerce. The number of recently developed port cities was limited. In fact, Shanghai, Tianjin and Hankou were the only significant ones. Nonetheless, the involvement of Western bureaucrats and entrepreneurs in their administration and development gave the treaty ports entirely different functions and a different appearance to conventional Chinese walled cities. From the 1860s onwards, the modernisation and industrialisation of Shanghai and Tianjin turned the two cities into breeding grounds for modern China and modern Chinese entrepreneurs. Wu's self-development, from Huizhou to Suzhou, and thence to Shanghai, followed eventually by his arrival in Tianjin during the 1880s, undoubtedly exemplify the challenges and achievements Huizhou merchants faced at the turn of the 19th and 20th centuries.

Although the Taiping Rebellion blockaded economic links between the Jiangnan region, the Southwest, North and South China, the leading lights in the Heavenly Kingdom's various political camps favoured the international trade being conducted at the Jiangnan ports. The princes and ministers at its headquarters in Tianjing saw the production of silk and tea for export as the

Kingdom's most important economic activities. Therefore, treaty ports such as Shanghai and Ningpo developed rapidly during lulls in the Taiping Rebellion in the 1850s and 60s. Up to the 1860s, the Shanghai concessions sheltered tycoons and labourers alike who had fled from Huizhou, Suzhou, Hangzhou and other nearby places.

Western bankers and entrepreneurs arrived in Shanghai almost at the same time. The convergence of Chinese and Western capital and human resources formed the base for the city's transformation from an entrepôt into a major financial centre of East Asia. By assisting the Europeans, particularly the British bankers, in expanding their activities in Shanghai, the Su-Zhe *qian-zhuang* were transformed into the comprador clique during the 1870s. Positions as compradors changed hands on the basis of kinship or affinity right up until the 1930s. The collaboration between HSBC in Shanghai and the Xi family from Suzhou was the most outstanding example of this.

After leaving Shanghai and being promoted to the position of comprador in Tianjin, Wu still needed to establish a socio-economic network through his own efforts. Furthermore, unlike the Su-Zhe comprador clique, he lacked the advantages of kinship and local financial connections. Therefore he had to seek out new industries in which to invest and thus diversify the high risks and considerable earnings he had made by his activities as a comprador.

Wu's departure from Shanghai HSBC was the result of the Su-Zhe clique's hegemony over the comprador offices in that city. His involvement in

various endeavours in Tianjin, including the HSBC Branch, the Self-Strengthening Movement, the Hundred Days Reform and the early industrialisation and urbanisation of the city and its surroundings, highlight the thoughts, schemes and features of early industrial capitalists in Late Qing China.

12.3. Wu Jim-pah and the Western Personnel and Management of China's

Railways

The military threat the Western powers and Japan posed to China had a profound impact on the development of the country's railways during the late 19th Century. At that time, HSBC sent Wu to Tianjin, North China's most important treaty port, and sought to collaborate with the Qing Court. Wu's Huizhou roots served as stepping stones to his relationships with the Huai Army's literati-bureaucrats. His fellow countrymen, especially Li Hong-zhang and Hu Yu-fen, offered him significant patronage in return for his participation in governmental and commercial institutions in the North; whereas his long-term co-operation with British bankers, investors and technicians established and underlined his status in China's modernisation projects.

The military purposes of railway development in Late Qing China increased the complexity of its financing. The reformers in the central government and Bei-yang ministry, including Li himself, were inclined to extend the railway network around the Imperial Capital by means of private investment. However, the unenthusiastic response of the local merchants to railway enterprise stock offerings opened up space for foreign banks to get themselves involved.

The direct participation of Wu and HSBC in administering the daily operations and financial management of the railways was the inevitable outcome of the Bank's role in providing them with loans. It was mainly motivated by a desire to ensure the loans were used properly and that the enlarged railway network was more profitable. Even so, the city's Western press interpreted their role as helping the network to develop, as did the managements of HSBC and B&CC in Hong Kong and London.

However, in terms of China's prestige, economic interests and sovereignty under the Qing Dynasty, the activities of Wu and HSBC were exceptionally controversial during their time. This research suggests this controversy was not caused by personal or corporate intentions, interests or shortcomings, but by the deficiencies of China's political and financial systems. These had led to the fractious relationships between the Qing Government, local investors, foreign banks and railway managements. Furthermore, it was remarkable that one of Wu's most important submissions during the Hundred Days Reform concerned the establishment of a national bank for industrial development and international trade. Without doubt, the part he had played as a close collaborator with HSBC had led Wu to note and stress the importance of modern banks in China's industrialisation.

On top of this, during Wu's administration of the Imperial Railways of North China (IRNC), his part in the foundation and early operations of the Imperial Chinese Railway College (ICRC), which came under his direct control, was a much less contentious aspect of China's modernisation. Such localisation of

Western technologies and knowledge was essential for future railway construction and operations in China. Indeed, by introducing European teachers, equipment, curricula and methodologies, Wu's railway college provided the nation with her first locally trained civil engineers, who promptly contributed to the construction of the railway connecting Beijing with its neighbouring cities in Zhili. It might not have been possible for Wu to eliminate his bias in favour of British nationals and interests completely. Yet, by acting as an intermediary between East and West, the bureaucrat-comprador introduced European expertise and modern management methods, to the ultimate benefit of China's industrialisation and urbanisation.

12.4. Wu Jim-pah and Sino-Anglo-German Relationships

Besides the inauguration of the railway college, Wu persevered in introducing modern technologies and scientific know-how from the West into China's development during his term with the Agricultural, Industrial and Commercial Bureau (AICB). In fact, quite unlike others in the business circles of his time, Wu mainly invested the capital he received from his comprador business in modern industries, including match manufacturing, woollen spinning and tanning. Above all else, Wu's factories produced substitutes for various imports for the local market. This approach could be described as a positive response to the economic pressures being imposed by the West. It enhanced China's productivity and development, thereby helping to balance the country's trade and financial deficits with the foreign powers.

In contrast to the conventional economic wisdom of the Huizhou tea merchants, Wu regarded the introduction of modern knowledge and technologies as the basis for industrial and commercial reform. Wu advocated the use of chemicals, machinery and different strains of crops during the Hundred Day Reforms, as well as the dissemination of the latest scientific conclusions about the development of agriculture and handicraft industries.

All of Wu's sons continued their father's work in the industrial development of Tianjin and Beijing, rather than his profession as a comprador with an influential British bank or trading house. Wu and his family were unusual in this respect among all the early compradors of Late Qing Shanghai, Tianjin and Hong Kong, especially the Xi Zheng-fu clique. After all the efforts he made over a 60-year period, his family emerged as the first generation of industrialists to play significant roles in the nation's early modernisation.

To conclude, Wu did not take advantage of his Huizhou lineage in Chinese political and business circles. However, his unique financial and managerial contributions to the development of China's railways signal the role of compradors in the nation's modernisation. Moreover, his administration of the IRNC, ICRC and AICB, together with the way he operated and arranged for his succession in his family's businesses, give him all the hallmarks of a modern industrialist.

This is the first study of Wu Jim-pah's career. Undoubtedly, it has plenty of potential for enhancement and fine-tuning. For instance, the author noticed that

the Wu family visited Shanghai and the nearby Jiangnan region for personal and business purposes right up to the late 1920s. How closely Wu maintained his links with his fellow countrymen and business circles in South China after he moved north in 1880 is a question that has yet to be answered.

In addition, Wu's relationships and competition with the other bureaucrat-compradors around Li Hong-zhang is another major issue that demands more attention. The roles of Wu and HSBC during the formation of the Sheng Xuan-huai and the operations of the Imperial Bank of China should be examined in more depth. In the history of international relations, Anglo-German competition in China's railway development should be more widely understood. Both the HSBC Group's Archives and the Foreign Office files at Kew offer substantial quantities of materials on this issue. But it would not be possible to make an even-handed assessment of the subject by using only biased sources in English. Comparison of English and German materials would be essential for such a study.

However, it is worth noting that the English archival materials point to the existence of a pro-German faction in the Bei-yang Ministry, and that a group of Chinese bureaucrats was opposed to Hu Yu-fen and Wu's administration of the railways. In fact, as recounted in the chapters on the development of his match factory, railway administrations and college, Wu's relationships with German technicians and diplomats certainly attracted the attention of Chinese, German and British political figures. What were the effects of Anglo-German rivalry on Chinese Court politics and modernisation projects, specifically the development of railways under Wu's leadership? In concluding this embryonic study, the

author recognises that a set of hints exists, but that much more effort will be required to answer these questions.

Glossary of Terms

A

Agricultural, Industrial and Commercial General 農工商總局

Bureau

American Express Co. 運通銀行

Anfeng 安豐

Anhui 安徽

Anlu 安陸

Anqing 安慶

Arthur Davenport 達文波

B

Bangzigou line 溝子幫支線

Bank of Ministry Reserve 戶部銀行

Banque Franco-Chinoise pour le Commerce et
l'Industrie 中法工商銀行

Bao Zhi Tang 寶芝堂

Bao-da-yu Qian-zhuang 寶大裕錢莊

Baoding 保定路

Baoding 保定

Baotou 包頭

Bei-bang 北幫

Beidaihe 北戴河

Beitang 北塘

Bei-yang (Tong-shang) Commissioner	北洋通商大臣
Bei-yang General Railway Bureau	北洋鐵路總局
Bei-yang Governmental Railway Bureau	北洋官鐵路局
<i>Bei-yang Guang-bao</i>	北洋官報
Bei-yang Wu-bei Xue-Tang	北洋武備學堂
Bei-yang Ya-men	北洋衙門
Bo Sea	渤海
Boyang Lake	鄱陽湖
Bozhou	亳州
British & Chinese Corporation	中英銀公司/中英公司/華英 公司
C	
C. Poulsen	鮑以森
Cao Kun	曹錕
Cao Ru-lin	曹汝霖
Cao Xu-gong	曹素功
Cathay Trust Ltd.	(寶信銀行
Chai Jun-chou	柴俊疇
Changshu	常熟
Chang-zhou	長洲
Chaohu Lake	巢湖
Chaoyang	朝陽

Chen Guang-yan	陳廣延
Chen Guang-yuan	陳光遠
Chen Ji-hao	陳寄豪
Chen San-yu	陳三餘
Chen Yan-heng	陳彥衡
Cheng Min-zheng	程敏政
Cheng Shi-gu	程式穀
Cheng-da Qian-zhuang	承大錢莊
Chengdu	成都
Chengtang	澄塘
<i>chian</i>	錢
China Railway Company	中國鐵路公司
Chiyang	池陽
Chizhou	池州
Chong Ren Tan	崇仁堂
Chong-de Qian-zhung	崇德錢莊
<i>Chuan-lu</i>	傳臚
Chuxiong Fu	楚雄府
Claude W. Kinder	金達
D	
D. P. Griffithm	葛爾飛
Dagu	大沽

Dai Zhen	戴震
Daling River	大凌河
Daming Lake	大明湖
<i>dan</i>	擔
Dao-guang	道光
Davenport Road	達文波路
<i>Da-xue-shi</i>	大學士
Da-zhang Mountain	大鄣山
Deng Huaxi	鄧華熙
Deng Jun-xiang	鄧君翔
Deutsch-Asiatische Bank	德華銀行
Dexing	德興
<i>Diao-cha Nong-chan Zhi-lue</i>	調查農產志略
Ding-feng Qian-zhuang	鼎豐錢莊
Dingzigu	丁字沽/西沽
Doney & Co.	永盛洋行
Dongting Lake	洞庭湖
Dongtingshan	洞庭山
Dongzhang Fu	東昌府
<i>dou</i>	斗
Du Jian-shi	杜建時
Duan Yi-san	段益三

<i>Du-cha-yuan Du-yu-shi</i>	都察院都御史
E	
E. Gipperich & Co.	謙信洋行
E. Sprague	史卜雷
E.D. Sassoon & Co.	新沙遜洋行
(The New Sassoon,)	
Electric Engineering & Fitting Co.	裕通洋行
Empress Dowager Cixi	慈禧太后
Ermei	峨眉
F	
Fanchang	繁昌
Fangshan	房山
<i>Fen</i>	分
Feng Yu-xiang	馮玉祥
Fengshan	鳳山
<i>fu</i>	府
<i>Fu-cheng</i>	府丞
Fu-feng Qian-zhuang	阜豐錢莊
Fujian	福建
Fungtai	豐台
Fungtian	奉天
<i>fu-qiang</i>	富強

Furao	富饒
<i>Fu-zhi</i>	Annals
G	
<i>Gang-fa</i>	綱法
Gangsu	甘肅
Geng Rui-zhi	耿瑞芝
George Mcbain	麥邊
Gibb Livingston & Co.	劫行
<i>Gong-sheng</i>	貢生
Gong-Yi Shan-hui	公益善會
Goubangzi-Dahushan section	溝幫子—大虎山段
Goubangzi-Yingkou section	溝幫子—營口段
Gu Li-san	顧棣三
Gu Song-chuan	顧松泉
Gu Yan-wu	顧炎武
Guandong Railway	關東鐵路
<i>Guan-du Shang-ban</i>	官督商辦
<i>Guan-du Shang-xiao</i>	官督商銷
Guangde	廣德
Guangdong	廣東
Guang-tang Piao-fang	光堂票房
Guangxi	廣西

Guang-xu	光緒
Guang-yi Shan-hui	廣益善會
Guangzhou	廣州
<i>Guan-shi</i>	關石
Gui You-guang	歸有光
Guizhou	貴州
Guo Ju-qing	郭矩卿
Guo Xin-ming	郭心銘
Guo-bang Dao-yuan	過班道員
Guye	古冶
H	
Hai River	海河
Hailar	海拉爾
Hangzhou	杭州
Hankou	漢口
Hao Liang-teng	郝良登
He County	歙縣
Heath & Co.	謙順洋行
Hejiakou	賀家口
Henan	河南
<i>He-shi Xian-tan</i>	《歙事閑譚》
Hing-shan Hui	興善會

Hoffman	霍夫曼
Hong Liang-ji	洪亮吉
Hong-da Qian-zhuang	宏大錢莊
Hong-wu	洪武
Hongze Lake	洪澤湖
Hu Di-lan	胡笛欄
Hu Ji-mei	胡寄梅
Hu Kai-wen	胡開文
Hu Shi	胡適
Hu Shue-yan	胡雪巖
Hu Su-buo	胡叔博
Hu Tie-hua	胡鐵花
Hu Yu-fen	胡燏棻
Hu Yun-lai	胡筠賴
Hu Yun-qiu	胡筠秋
Hu Yun-zhuang	胡筠莊
Hu Zhao-rong	胡兆榮
<i>Huai Army</i>	淮軍
Huai Army Treasury	淮軍錢糧所/淮軍錢銀所
Huaibei	淮北
Huainan	淮南
Hua-jie Ci-shan Hui	花界慈善會

Hua-lou Piao-fang	華樓票房
Huang Chong-xing	黃崇惺
Huang Jian-xian	黃建筦
Huang You-ren	黃友仁
Huang Zhen-zhi	黃振之
Huang Zhi-lian	黃志廉
Huangshan	黃山
Huanxi	環溪
Hubei	湖北
Huguang	湖廣
<i>Hui-kui</i>	會魁
<i>Hui-yuan</i>	會元
Huizhou	徽州府
Hunan	湖南
Huzhou	湖州
I	
Imperial Chinese Railway College	山海關北洋鐵路官學堂
Imperial Railways of North China	山海關內外鐵路
Italian Bank for China	華義銀行
J	
James Stewart	司圖諾
Ji Canal	薊運河

Jiading	嘉定
Jia-jing	嘉靖
Jiang Yao-hua	江耀華
Jiangchang Fu	建昌府
Jiangge	劍閣
Jiangning	江寧
<i>Jiang-sheng</i>	監生
Jiangsu	江蘇
Jiangxi	江西
Jianshe Lu	建設路
Jian-ying Feng-sheng She	劍影鋒聲社
Jiaozhou Bay	膠州灣
Jia-qing	嘉慶
Jiaxing	嘉興
Ji-chen Shu-yuan	集成書院
<i>Jie-yuan</i>	解元
Jilin City	吉林
Jin Dynasties	兩晉
Jingming Lake	金明湖
Jinling	金陵
<i>Jin-shi</i>	進士
Jin-xu Railway Bureau	京綏鐵路局

JinZhou	錦州
<i>Jiu-Dian Bei-zheng</i>	《舊典備征》
Jiu-yuan Qian-zhuang	久源錢莊
Jixi	績溪
<i>Ju</i>	局
Jun-ji Chu	軍機處
Junliangcheng	軍糧城
<i>Ju-ren</i>	舉人
K	
Kaihua Fu	開化府
Kai-luan Colliery	開灤煤礦
Kaiping Town	開平鎮
Kanegafuchi Spinning Co., Ltd.	鐘淵株式會社
Kang Fa-da	康發達
Kang You-wei	康有為
Kang-xi	康熙
<i>ke-ju kao-shi</i>	科舉考試
Kuang Sun-mo	鄭孫謀
Kunming Lake	昆明湖
Kunming Lu	昆明路
Kunshan	昆山
L	

Lan Yi-fu	藍軼符
<i>Lao-sheng</i>	老生
Le-feng	樂峰
Leling	樂平
<i>li</i>	里
Li Fu-chen	李輔臣
Li Hong-zhang Shrine	李公祠
Li Ji-fu	李吉甫
Li Jing-fang	李經方
Li Jing-lin	李景林
Li Ke-chang	李克昌
Li Shu-tong	李叔同
Li Zhi-niang	李志年
Liang Qi-chao	梁啟超
Liang Ru-hao	梁如浩
Liang Zi-feng	梁子豐
Liao River	遼河
Liaodong	遼東
Linxi Colliery	林西煤礦
Liu Kun-yi	劉坤一
Liu Ming-chuan	劉銘傳
Liu Shu-du	劉叔度

Liu Yong-kuai	劉永奎
Li-yuan Shu-yuan	李源書院
Lu Jia-sun	陸稼蓀
Lu Si-xiang	魯嗣香
Luan River Steel Bridge	灤河大鐵橋
Lugouqiao-Hankou line	蘆漢路
Lujiang	廬江
Luo Xian-qiao	羅仙橋
Lutai	蘆台
M	
Mackenzie & Co.	隆茂洋行
Mackintosh	馬根道
Madame Wu Diao	吳刁氏
Magiabao	馬家堡
<i>Mai-cha Jie-lue</i>	買茶節略
Managing Director	總辦
Mawei Arsenal	馬尾船政局
Middle Street	中街
Mitsubishi Bank	三菱銀行
<i>Mu</i>	畝
Municipal Council	工部局
Muntougou	門頭溝

N

Nan-zhan	南棧
National Bank of China	中華匯理銀行
National City Bank of New York	花旗銀行
<i>Nei-ge Xue-shi</i>	內閣學士
<i>Nei-ge Zhong Shu</i>	內閣中書
<i>New York International Herald Tribune</i>	紐約先驅論壇報
Ning Zhi-fu	寧世福
Ningguo	寧國
Ningxia	寧夏
Nuzhuang	牛莊
P	
Pang Hong-shu	龐鴻書
Pao Shun Road	寶順道
Parkes Road	巴克斯道
Park-Union Foreign Banking Corporation	匯興銀行
Paul Georg von Moellendorff	穆麟德
Peking Syndicate Ltd.	福公司
Philippot & Co.	美昌洋行
<i>Piao-fang</i>	票房
<i>piao-hao</i>	票號
Port of Jilong	基隆港

Prince Chu	醇親王
Prince Su	肅親王
Q	
Qian Gate	前門
Qian-long	乾隆
Qian-qing Gate	乾清門
<i>Qian-zhuang</i>	錢莊
Qia-yuan Yin-hao	洽源銀號
Qimen	祁門
Qing-ling lane	清平巷
Qingpu	青浦
Qing-xian Qian-zhuang	慶咸錢莊
R	
R.R. Burnett	薄內
Railroad Construction Right Protection Movement	保路風潮
Reiss & Co.	泰和洋行
Rocket of China	中國之洛克提
Rong-ding River	永定河
Rong-lu	榮祿
Rui-da Qian-zhuang	瑞大錢莊
Russell & Co.	旗昌洋行

Russo-Asiatic Bank	華俄道勝銀行
S	
San-yu Qian-zhuang	三餘錢莊
Sassoon & Co. (The Old Sassoon)	老沙遜洋行
Schaller	沙勒
Shaanxi	陝西
Shanghai Hui-feng Qian-zhuang	上海惠豐錢莊
Shangrao City	上饒市
<i>Shang-shu</i>	尚書
Shanxi	山西
Shan-yue people	山越
Shao Ji	紹記
Shaoxing	紹興)
Shen Er-yuan	沈二園
Shen Ji-cheng	沈吉成
Shen Pao Jing	沈葆靖
Shen Xing-su	沈惺叔
Shen Zeng-rong	沈增榮
Shen Zi-hua	沈子華
Sheng Xuan-hai	盛宣懷
ShengJing	盛京

Shen-yi (De-ji) Qian-Zhuang	開設慎益（德記）錢莊
<i>She-xue</i>	社學
<i>Shi-bao</i>	天津時報
<i>Shi-lang</i>	侍郎
Shuang-Qi Hui	奇雙會
<i>Shun Pao</i>	《申報》
<i>Shu-yuan</i>	書院
Shu-zhi	順治
<i>Si Shu Ji Zhu</i>	四書集註
Sichuan	四川
Songjiang	松江
South Manchuria Railway	南滿鐵路
Su Yi-zhao	蘇以昭
Sui	隋
Suizhong-Goubangzi section	綏中—溝幫子段
Sumitmoto Bank	住友銀行
Sun Bao-ki	孫寶琦
Sun Ji-fu	孫吉孚
Sun Ju-xian	孫菊仙
Sun Zhi-zhai	孫直齋
Suzhou	蘇州府

T

Ta Ching Government Bank	大清銀行
Tai-bai Jing-she	太白精舍
Taierzhuang Lu	台兒莊路
Taiping	太平
Tai-ping Guo-ju She	太平國劇院
Taiyuan Lu	太原路
Taku Tug Boat Co.	大沽駁船公司
Tan School	譚派
Tang Ting-shu	唐廷樞
Tanggu	塘沽
Tangshan	唐山
Tangshan-Lutai line	唐蘆路
Tao Xing-zhi	陶行之
The Belgian Bank	華比銀行
<i>The Diary of Na-tong</i>	那桐日記
<i>The Diary of Ren-yin</i>	壬寅日記
The Mercantile Bank	有利銀行
The Pescadores	澎湖
Thriftcor Bank	信濟銀行
Tianchi Lake	滇池
Tianjin Guo-ju Yuan	天津國劇院
Tianjin Regional Autonomy Association	天津地方自治協會

Tianjin Wu-bei Xue-tang	天津武備學堂
Tianjing	天京
Tianjin-Lugouqiao line (Jin-lu line)	津蘆路
Tianjin-Shanhaiguan Governmental General Railway Bureau	津榆官軌鐵路總局
Tianjin-Shanhaiguan line (Jin-yu line)	津榆路
Tianjin-Tangku line	津沽路
Tianjin-Tangshan Governmental Railway General Bureau	津唐官軌鐵路總局
Tianjin-Tongzhou line	津通路
Tian-qi	天啟
Tientsin Gas and Electric Light Co., Ltd.	天津氣電燈公司
Tientsin Gas Company	天津氣燈公司
Tientsin Machinery Woollen Spinning Company	天津機器織絨廠
Tientsin Waterworks Co., Ltd.	天津英商自來水公司
Tong Hsing Colliery	通興煤礦
Tongcheng	桐城
<i>Tong-chui Lao-sheng</i>	銅錘老生
Tong-yu Qian-zhuang	通餘錢莊
Tong-yuan Qian-zhuang	通源錢莊
<i>Tong-zhi</i>	同知
Tung Hsing Sino-Foreign Coal Mining Co., Ltd.	華洋合辦通興煤窯（礦）有

限公司

W

W. Forbes and Co.

仁記洋行

W.E. Southcott

邵富德

Wan Mei-feng

萬梅峰

Wang An-shi

王安石

Wang Geng-sheng

王庚生

Wang Hai Lou

望海樓

Wang Huai-shang

王槐山

Wang Jing-qin

王景沂

Wang Jun-chen

王俊臣

Wang Jun-zhi

王君直

Wang Ke-kuan

汪克寬

Wang Leng-xian

王楞仙

Wang Ren-rong

王仁榮

Wang Ren-sen

王仁森

Wang Song-chen

王頌臣

Wang Su-lin

王叔麟

Wang Wen-shao

王文韶

Wang Xian-bin

王賢賓

Wang Xian-chen

王憲臣

Wang Xian-chen

王憲臣

Wan-li	萬曆
Wanping County	宛平縣
Wei-jia Village	魏家村
<i>Wen-fang Si-ba</i>	文房四寶
<i>Wen-gong Jia-li</i>	文公家禮
Wilson & Co.	新泰興洋行
Wu Ban-hou	吳班侯
Wu Bao-wei	吳保微
Wu Bo-ji	吳伯記
Wu Cheng-luo	吳承洛
Wu Chi-chang	吳熾昌
Wu Chong-ren	吳崇仁
Wu Diao-qing	吳調卿
Wu Ji-chuan	吳濟泉
Wu Jim-pah	吳仁寶吳蔭柏
<i>Wu Ju-ren</i>	武舉人
Wu Mao-ding	吳懋鼎
Wu Mou-ze	吳懋澤
Wu Ren-fu	吳仁甫
Wu Shao-wei	吳少微
Wu Shi-jin	吳士進
Wu Tai-wei	吳太微

Wu Tian-guang	吳文光
Wu Ting-fang	伍廷芳
Wu Wang-zhou	吳王粥
Wu Wen-ran	吳文然
Wu Wen-yan	吳文炎
Wu Xian	吳顯
Wu Xing-zhong	吳興宗
Wu Xi-yun	吳熙雲
Wu Xi-zhong	吳熙忠
Wu Yi-fang	吳義方
Wu You-cai	吳幼才
Wu You-ling	吳幼齡
Wu Yun-sheng	吳允升
Wu Zhao-rong	吳肇榮
Wu Zhi-yun	吳子云
Wu-jian Da-yuan	吳家大院
Wuyuan	婺源
X	
Xi Bin-ru	席彬儒
Xi Bo-yu	席伯虞
Xi De-bing	席德柄
Xi De-chuan	席德泉

Xi De-hui	席德輝
Xi De-jun	席德鋆
Xi De-lu	席德淩
Xi De-mou	席德懋
Xi De-rui	席德濬
Xi De-xun	席德熏
Xi De-yiao	席德耀
Xi De-yuan	席德淵
Xi Han-sen	席涵深
Xi Jian-hou	席建侯
Xi Ji-ming	席季明
Xi Jin-liang	席縉良
Xi Jin-yan	席縉延
Xi Jin-yun	席縉雲
Xi Ji-qun	席濟群
Xi Jun-hua	席縉華
Xi Ju-xing	席聚星
Xi Li-gong	席立功
Xi Lu-seng	席鹿笙
Xi Run-shen	席潤身
Xi Song-ping	席頌平
Xi Su-gui	席素貴

Xi Su-heng	席素恆
Xi Su-rong	席素榮
Xi Su-xuan	席素煊
Xi Xi-fan	席錫藩
Xi Xi-fan	席錫藩
Xi Xing-nan	席星南
Xi You-yu	席友于
Xi Yuan-le	席元樂
Xi Yu-cheng	席裕成
Xi Yu-guang	席裕光
Xi Yu-kang	席裕康
Xi Yu-kui	席裕奎
Xi Yu-kun	席裕昆
Xi Yu-mei	席裕美
Xi Yun-ru	席雲如
Xi Yu-zhao	席裕照
Xi Yu-zhen	席與震
Xi Zheng-fu	席正甫
<i>xian</i>	縣
Xian-feng	咸豐
Xiang Army	湘軍
<i>Xian-su</i>	縣塾

Xiaoling River	小凌河
<i>Xiao-sheng</i>	小生
Xiaozhan	小站
Xie-sheng Qian-zhuang	協昇錢莊
Xin'an	新安
Xing-zhong Hui	興中會
Xinhe	新河
Xin-he Qian-zhuang	信和錢莊
Xinjiang	新疆
Xinminfu	新民府
Xinzhuang	莘莊
Xiuning	休寧
Xu Cheng-ji	許承基
Xu Chun-rong	許春榮
Xu Da-xing	許大興
Xu Jian-ren	徐建寅
Xu Mei-quan	徐眉泉
Xu Pin-nan	許品南
Xu Shi-kang	徐世昌
Xu Shi-yuan	徐士遠
Xu Xiao-xia	徐曉霞
Xu Xing-chuan	許杏泉

Xuancheng	宣城
Xuan-tong	宣統
Xue Fu-cheng	薛福成
<i>Xue-zheng</i>	學政
Xugezhuang	胥各莊
<i>Xu-shi Jia-gui</i>	許氏家規
Xuzhong County	綏中縣
Y	
Ya-ju She Qing-sheng	琴聲雅劇社
Yan Chan-xian	嚴蟾香
Yan Lan-qing	嚴蘭卿
Yan Su-ying	嚴淑英
Yan Xiao-fang	嚴筱舫
Yan Zi-jun	嚴子均
Yang Hong-xing	楊鴻興
Yang Qing-he Fu-ji Yin-lou	楊慶和福記銀樓
Yangzhou	揚州
Ya-yun Guo-feng She	雅韻國風社
Ye Cheng-zhong	葉澄衷
Ye Ming-zhai	葉明齋
Ye Ming-zhai	葉明齋
Ye Zhen-min	葉振民

Ye Zhen-ming	葉振民
Yi	黟縣
Yianzhuang	閻莊
Yi-huan	奕譞
<i>Yin</i> (A unit of weight)	引
Yingkou	營口
Yingshang	應山
Yokohama Specie Bank	橫濱正金銀行
Yong-xing Guo-ju She	永興國劇社
You Ji	友記
You'an Gate	右安門
You-yu Shi	友于氏
Yu Ming-an	俞鳴安
Yu Zhen-fei	俞振飛
Yuan Chui-chu	袁粹初
Yuan-li Qian-Zhuang	源利錢莊
Yu-da Qian-zhuang	餘大錢莊
Yu-lu	裕祿
<i>Yungding River Annals</i>	永定河志
Yunnan	雲南
Yun-yin Guo-ju She	雲吟國劇社
Yu-xiang Qiang-guang	裕祥錢莊

Yu-yang Guo-ju She	漁陽國劇社
Yuyiao	余姚
Yu-zhang	豫章
Z	
Zai-tao	載濤
Zeng Guo-fan	曾國藩
Zeng Ji-ze	曾紀澤
Zha Er-miao Tang	查二妙堂
Zha Wen-zheng	查文徵
Zhan Da-you	詹大有
Zhan Tian-you	詹天佑
Zhan Zhong-meng	詹宗孟
Zhan Zhong-yan	詹宗彥
Zhan Zhong-zeng	詹宗曾
Zhang Hong-hao	張鴻浩
Zhang Jia-rui	張嘉瑞
Zhang Shi-yu	張士瑜
Zhang Xun	張勳
Zhang Yen-mou	張燕謀
Zhang Yi	張翼
Zhang Zhi-dong	張之洞
Zhang Zuo-lin	張作霖

Zhangde	彰德
Zhao Bing-ju	趙秉鈞
Zhao Fang	趙汸
Zhao Ji-shi	趙吉士
Zhao Yuan-li	趙元禮
Zhen-chang Qian-zhuang	鎮昌錢莊
Zheng Guan-ying	鄭觀應
Zheng-da Qian-zhuang	正大錢莊
Zheng-da Qian-zhuang	正大錢莊
Zhengyang	正陽
Zhenhai	鎮海
Zhi-cheng Shi	志誠氏
Zhi-da Qian-zhuang	志大錢莊
Zhili	直隸
Zhili Viceroy	直隸總督
<i>Zhi-xian</i>	知縣
Zhonghosuo	中後所
Zhong-li Ya-men	總理衙門
Zhong-nan Guo-ju	中南國劇
Zhou Fu	周馥
Zhoujiakou	張家口
Zhoulu	鄒魯

Zhu Pei-qing	朱培卿
Zhu Peng-sho	朱彭壽
Zhu Qi-shao	朱其詔
Zhu Shen-chu	朱慎初
Zhu Wen-long	朱文龍
Zhu Xi	朱熹
Zhuang Ren-song	莊仁松
<i>zhuang-piao</i>	莊票
<i>Zhuang-yuan</i>	狀元
Zizulin	紫竹林
Zuo Zhong-tang	左宗棠
Zuo-tai	左台
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前發此項礦照內有美人幫辦希轉請該管衙門候三個月再行妥定由》，宣統三年（1911）十一月二十五日；〈華商吳熙庚承辦通興煤一案美使請候三個月後再行妥定希核復由〉宣統三年（1911）十一月二十八日；〈英人阿樂基稟轉請發給開辦門頭溝礦務執照希查照由〉，宣統三年（1911）十二月八日；〈英人阿樂基擬開辦門頭溝礦務據美使函稱並無妨希轉咨直督查照由〉，宣統三年（1911）十二月十日；〈職商吳熙庚等稟請發給華洋合辦通興煤礦執照請查核見復由〉，宣統三年（1911）十二月十九日；〈職商吳熙庚等請發通興煤礦執照希查照由〉，宣統三年（1911）十二月二十一日；〈交涉司詳門頭溝煤礦已無與美人轆轤事項由〉，宣統三年（1911）十二月二十四日）

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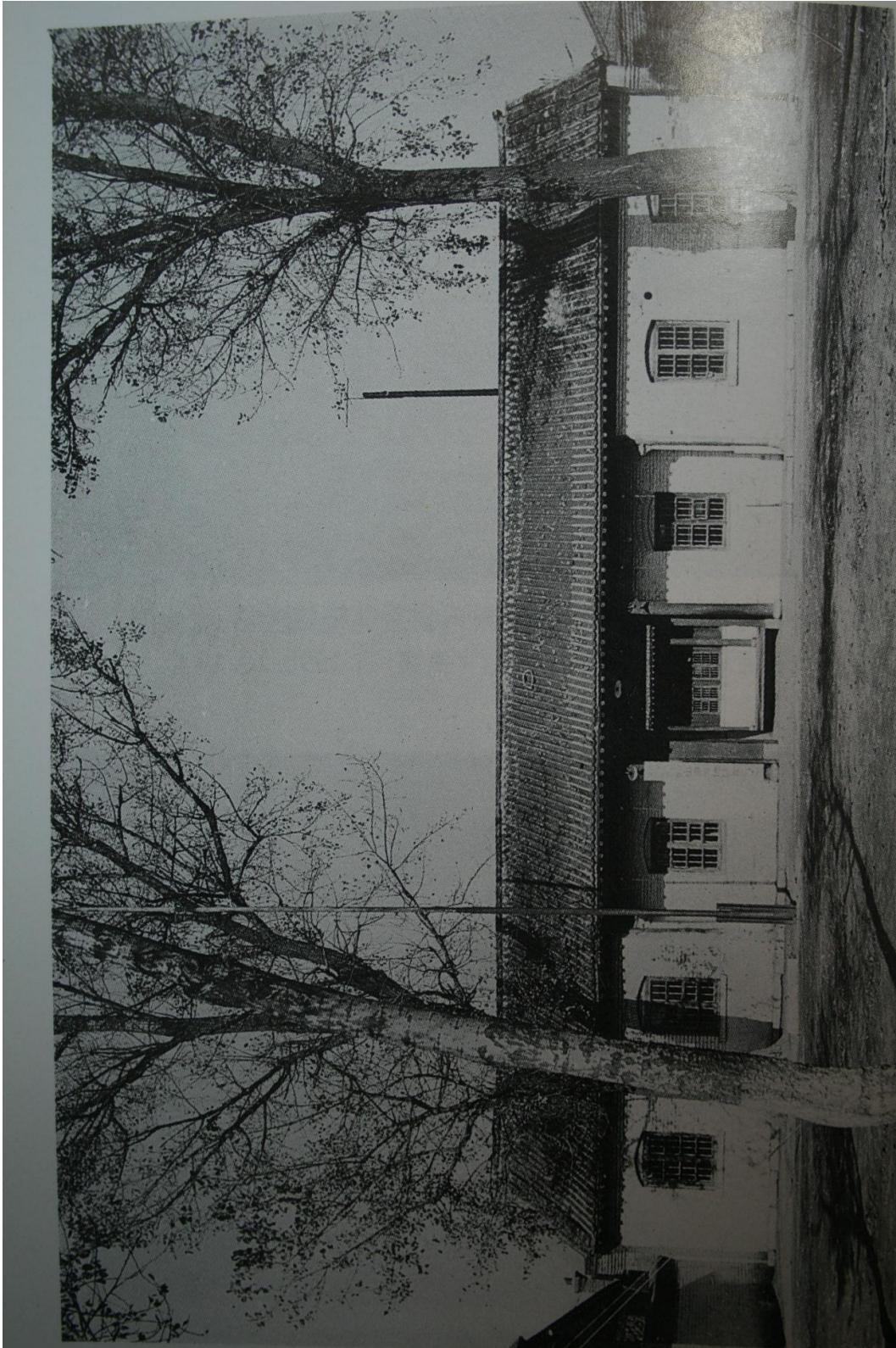
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1. The Imperial Chinese Railway College at Shanhaiguan in 1896

Imperial Chinese Railway College.

Shan-hai-kuan, March 17. 1900.

This is to certify that

Mr. *Byang Hsiao Gyi*,

was a Student of the Shan-hai-kuan Railway College
from *March 1898* to *April 1900*.

He was regular in Attendance, diligent in Study, and his conduct was in every way satisfactory.

The Curriculum included the following Subjects:—

1.—English.

(a.) Grammar.
(b.) Composition.
(c.) Conversation.

2.—Chinese.

順 德 張 基

3.—Mathematics.

(a.) Arithmetic. (d.) Mensuration.
(b.) Algebra. (e.) Trigonometry.
(c.) Geometry. (f.) Elements of Anal. Geom. and Calculus.

4.—Mechanics.

(a.) Statics, Dynamics and Hydrostatics.
(b.) Engineering and Strength of Materials.
(c.) Design of Machines and Structures.

5.—Drawing.

(a.) Freehand.
(b.) Geometrical and Perspective.
(c.) Mechanical and Civil Engineering.

6.—Surveying and
Levelling.

(a.) Setting out and Calculation of Earthwork.
(b.) Railway Curves, Levels and Crossings, &c.
(c.) General Surveying and Levelling.

7.—General Physics, &c.

Mr. *Byang Hsiao Gyi* passed through the above course, and in the final
Examination was *twelfth* in his Class.

Signed *Emery Sprague*
Professor

山海关北洋铁路官学堂第一届 (1900 年)

2. A Certificate issued by the Imperial Chinese Railway College in 1900