An Analysis of the Announcement of China-fir as an Anti-Termite Material by the Taiwanese Governor General's Office in 1916

Yu-Hua Tsai*1 and Min-Fu Hsu2

1 Post Doctor, Department of Architecture, National Cheng-Kung University, Taiwan
2 Distinguished Professor, Department of Architecture, National Cheng-Kung University, Taiwan

Abstract

China-fir was a key building material used in Taiwan before 1894 and reached Taiwan by import from Fuzhou, China. However, at the start of the period of Japanese governance (beginning in 1895), the China-fir market in Taiwan appeared to gradually reduce as a result of an attempt by the Taiwanese Governor General's Office (TGGO) to develop the market for Japanese timbers in Taiwan.

After an investigation of the Japanese consular office in Fuzhou, the anti-termite property of China-fir was announced in October 1916. Some former studies concluded that the report was one of the reasons for China-fir's renewed dominance in the building material market in Taiwan from 1917 to 1925.

However, in contrast to the period before 1916, when the TGGO boycotted China-fir by every means, why did the TGGO announce news about China-fir as an anti-termite material, and allow it to overwhelm the market of Japanese cedar again? By reviewing the TGGO's South China Policy and other historical materials, this paper shows that the 1916 report can be seen as encouragement for Japanese and Taiwanese merchants to invest in the China-fir market in Fuzhou, which would be of benefit to the colonial government by allowing it to develop economic and political power in South China.

Keywords: South China policy; Fuzhou; timber market

1. Introduction

Taiwan is located in the Western Pacific Ocean, between Japan and the Philippines, and is separated from the southeast coast of China by the Taiwan Strait. Due to this geographical relationship with southeast China, Han immigrants from the Min-Yue region of China (nowadays Fujian and Guangdong Province) now form the main population of Taiwan.

China-fir (Cunninghamia lanceolata) was an important building material produced in the Fuzhou area of Fujian Province, China, and was also a commonly used building material in Taiwan before 1894. However, during the initial period of Japanese governance, Japanese timber materials (mainly Japanese cedar with the same grade as China-fir) gradually replaced China-fir in Taiwan. Former studies showed that the Taiwanese Governor General's Office (TGGO, the colonial government) intended to develop a Japanese timber market in Taiwan by reducing demand for China-fir. This was to be accomplished through a high customs duty and the publishing of reports showing China-fir as a poor building material. This strategy was initially successful and the TGGO gradually reduced the China-fir market in Taiwan up to 1916 (Ogino, 1965, 507-508).

However, from 1917 to 1925, China-fir overwhelmed Japanese cedar again in the building material market. The announcement of China-fir as an anti-termite material by the TGGO in 1916 was concluded as one of the reasons for the resurgence of the China-fir market (Lin, 2006, 5-12). Additional factors were the increasing price of Japanese timber due to the First World War beginning in 1914, and a supply decline caused by the Kanto Earthquake in 1923 (Ogino, 1965, 514).

But according to historical evidence, there are factors which have not been discussed in the former studies:

(1) The anti-termite property may not have been the main reason for using China-fir. According to the building standards specified by the Ministry of Building and Repairs of the TGGO in 1920, it was noted that both China-fir and Japanese cedar used for new buildings should be treated by preservatives.

(2) The long-lasting property of China-fir had been reported to the TGGO by Kitaro Moroto in 1899. During 1898 to 1899, Moroto, a forestry expert, had...
been sent by the TGGO to Fuzhou to conduct a survey of the forest's resources. It appears that through the local users' experience, Moroto had learned of the long-lasting property of China-fir. However, not until 1916, after an investigation on the Japanese consular office in Fuzhou, was the anti-termite property of China-fir recognized by the TGGO. Thus it is important to understand why the government allowed the import of high quantities of China-fir to Taiwan from 1917 to 1925, which overwhelmed the market of Japanese cedar, despite boycotting China-fir by every means in the previous period.

This paper tries to provide an alternative interpretation of the key 1916 report which announced the anti-termite property of China-fir. By following the ideas of the South China Policy, a policy which the TGGO implemented to develop its political and economic power in Southern China (mainly in the Min-Yue regions of China) by geographic and cultural relationships between Taiwan and China, it is clear that the TGGO always backed the import of China-fir in Southern China during the period of Japanese governance (1895 to 1945). In particular, the government's support reached its peak from 1916 to 1923 (Nakamura, 1988, 5-6). This paper will discuss the South China Policy and historical materials concerning the China-fir market in both Taiwan and China before and after 1916, in an attempt to explain the meaning of the 1916 China-fir anti-termite experiment and the associated report.

2. The Period before 1916 (1895-1915)

During the period of 1895-1915, the government's customs policy and the news reports appeared to be unfriendly towards the China-fir market in Taiwan. However, there was no obvious decrease in the total quantity of China-fir imported during this period.

Moreover, there is evidence that during this period the Japanese were engaged in the China-fir business. A 1908 government report stated that the majority of Chinese-fir was imported using a fleet of wooden ships monopolized by Chinese merchants (TGGO, 1908, 29-30). However, an article in the Taiwan Daily News in 1906 reported that China-fir was the primary cargo carried by Osaka Shosen Kaisha (OSK Lines, a Japanese steamship company) sailing between Fuzhou and Taiwan, which was supported by the TGGO. In addition, from 1911 to 1913, another Japanese company, Mitsui & Co. Ltd., cooperated with Chinese merchants to operate one of the two biggest wood manufacturing companies in Fuzhou (another one was operated by Siemssen & Co., a German company). Mitsui & Co. Ltd. employed their own fleet of steamships to transport the company's China-fir products. By comparing the cost of transportation and the quantity of timber carried by the wooden ships, the usage of the company's own steamships could reduce the price and also secure the supply of timber to Taiwan.

In fact, the TGGO had begun to survey the forest resources and the market situation of China-fir in Fuzhou since 1898, as exemplified by Kitaro Moroto. In Moroto's report, he concluded that it might be worthwhile encouraging Japanese merchants to invest in the China-fir market in China, not only because of the Japanese long-term plans in Taiwan (i.e. the South China Policy), but also because the business could be profitable. The reasons for this were two-fold:

1. The China-fir forest resources in Fuzhou were rich and cheap.
2. In contrast to the Chinese merchants who had to pay duties to their own local governments, the Japanese had the duty free right in transporting goods in China. (This was due to the unequal bilateral Treaty of Shimonoseki between Japan and China after the First Sino-Japanese War).

Parts of Moroto's report appeared in the Taiwan Daily News in 1899 and appear to be a public advertisement with the goal of attracting Japanese merchants to invest in the China-fir market in China. Furthermore, news in 1901 also tried to persuade Japanese and Taiwanese merchants to form partnerships with Chinese merchants. The reports tried to show that if a Chinese China-fir merchant had no connections with a foreign company, then the Chinese local government would be more likely to ignore the frequent robbery of timber within the China-fir transportation process. By joining with a foreign company, it was possible to place more pressure on the local government to act in this matter.

Based on the historic evidence presented above, the ban on the use of China-fir for government buildings in Taiwan does not appear to be the choice of the TGGO. Following this argument, this study proposes that the customs policy was imposed by the TGGO as a strategy to adjust the market structure of China-fir and to help the Japanese merchants control the economic power in the Fuzhou area, rather than boycotting the import of China-fir.

Since Japanese merchants enjoyed duty free transportation in China, and were able to further reduce operating costs by utilizing their own steamships, their business was still profitable despite the fact that some customs duties were taken by the TGGO.

With relatively powerful capital and the unequal bilateral Treaty of Shimonoseki, Japanese merchants gradually entered the China-fir market in Fuzhou during this period. However, the occurrence of a serious movement boycotting Japanese goods in the South China regions from 1908 to 1909 (Xu, 2005, 104-105), and a political revolution led by Yat-Sen Sun, resulted in a negative effect on Japanese merchants' business in China. Furthermore, the TGGO had to face pressure from traditional Japanese timber manufactures (the timber manufacture groups in Akita,
in 1908, but until 1916 there were no anti-termite experiments conducted on China-fir\textsuperscript{11}. In contrast, experiments had been conducted on Japanese cedar and pine in 1913. Regarding China-fir, Masamitsu Oshima, the director of the official research group, did hear of the anti-termite property of China-fir from Taiwanese folktales. However, he did not believe it according to his field research in Taiwan. Furthermore, Oshima also considered the Japanese cedar and pine as poor anti-termite materials and recommended that they should have preservatives added\textsuperscript{12}. One of the areas of research focused on by Oshima's team was the development of chemical methods for preserving the timber materials adopted in Taiwan.

Later, in July 1916, when Oshima was sent by the TGGO to investigate the Japanese consular office in Fuzhou which was damaged by termites, he found the impact of termite-eating on the China-fir built section was not as serious as he predicted. After some chemical analysis, the anti-termite property of China-fir was announced in October 1916\textsuperscript{13}.

However, the 1920 building standards specified by the Ministry of Building and Repairs of the TGGO stated that preservatives should be added to both the China-fir and Japanese cedar in new buildings\textsuperscript{14}. This is one of the key pieces of evidence to support this paper's argument that the anti-termite property may not have been the main reason for the colonial government's use of China-fir.

Moreover, in October 1915, an anti-Japan atmosphere had just cooled down in China (Xu, 2005: 105-106). This might have resulted in more opportunities for Japanese engagement in the China-fir business. Starting from March 1916, a series of reports about events in Fuzhou could be found in the Taiwan Daily News. Among them, the market situation of China-fir in Fuzhou was reported from the 9th to the 11th of August. This report concluded that the colonial government should encourage the Japanese to invest more in the China-fir business, in addition to forest management in Fuzhou\textsuperscript{15}.

Simultaneously, this was the same period in which Oshima stayed in Fuzhou to investigate the Japanese consular office. The content of these news reports was also mentioned in Oshima's final report presented in 1917\textsuperscript{16}. Therefore, Oshima's report was not simply an anti-termite investigation.

In the Taiwan Daily News, the development of Japanese merchants in the China-fir market during this period also was reported. For example, a joint venture between Mitsui & Co. Ltd and Chinese merchants resulted in the Kenshin Wood Manufacturing Company, and in 1916 this was still one of the two biggest timber manufactures in the Fuzhou area. Its main competitor was another Germany merchant operated company, Siemssen & Co\textsuperscript{17}. Later, during the First World War, the Japanese empire took control of Germany's economic power in Shandong China. In June 1917, as the Japanese army occupied the German...
controlled concession of Shandong China, the manager of Siemssen & Co was incarcerated by the Japanese army. Meanwhile, the wood-manufacturing factory operated by Siemssen & Co was "accidentally" burned down at approximately the same time. It resulted that Kenshin Wood Manufacturing Company rose to be the dominating timber manufacturer in Fuzhou.

From the viewpoint of the TGGO, allowing a vast quantity of China-fir to be imported from China may have been able to solve the timber supply problem in Taiwan. In addition, in an atmosphere where Japan intended to develop its economic and political power in China, the TGGO was glad to see a vast quantity of China-fir imported from China to Taiwan. One of the reasons is that the goods imported from China could help to stabilize prices in Taiwan. In addition, trade across the Taiwan Strait could benefit both Japanese Zaibatsu (large business conglomerates which controlled significant parts of the Japanese economy) and Japanese-Chinese joint ventures that had already gained a powerful position in the marketplace. This was a way to expand economic power as well as consolidate the ties between the business sector and the colonial government, which served to fit the purpose of the TGGO's South China Policy.

However, after the First World War (from 1919 onwards), Japanese ambition to expand its power in South China was challenged by the recovering western countries. A combination of the slow-selling of Japanese timber materials, a vast quantity of China-fir imported from China, and the fact that the officials' newly constructed buildings in Taiwan adopted China-fir in contrast to the prior period, resulted in a petition being proposed by Japanese timber manufacturers in 1920. One of the Japanese merchant requests was to implement a stricter audit of the declared China-fir export price in Fuzhou. Since the import customs duty was decided by the declared export price, merchants would generally supply custom officials with an under-valued market price to benefit themselves. Another request was to conduct scientific experiments which compared China-fir with Japanese cedar and other materials, since the Japanese merchants generally believed that the physical quality of China-fir was inferior.

It can be assumed that the TGGO still intended to develop the South China market even in the post-WWI period according to the experimental report performed by Kikuo Nagayama in 1922, an official researcher working in the Forestry Bureau of the Central Institute founded by the TGGO. This document, also published in the Taiwan Daily News, seemed to be an official response to the Japanese timber manufacturers' petition. By emphasizing the anti-termite property of China-fir and the fact that there was not enough experimental evidence to confirm the statement that China-fir's physical characteristics were weaker than Japanese cedar, Nagayama's report claimed that the ban against the use of China-fir was unnecessary.

4. Conclusion

By discussing the TGGO's South China Policy in combination with historical materials regarding the China-fir market in both Taiwan and China before and after 1916, this study argues that the announcement of China-fir as an anti-termite material by the TGGO in 1916 was based on the eagerness of the TGGO to develop its political and economic power in Fuzhou, China. The TGGO never ceased the attempt in Southern China during the whole Japanese colonial period (1895 to 1945), as China-fir continued to be a significant export good of the Fuzhou area.

During the period 1895 to 1915, the TGGO imposed import customs duty on China-fir and limited the use of China-fir in constructing official buildings, thus helping to build the Japanese timber market in Taiwan. At the same time, the Japanese government also encouraged Japanese merchants to enter the China-fir market.

Japanese merchants obtained support to monopolize steamship lines connecting Taiwan and Fuzhou from the TGGO. The opportunities were also improved by the unequal Treaty of Shimonoseki which provided duty free imports to foreign merchants who transported goods within China. On the other hand, Chinese wooden ships did not possess the same advantages as Japanese merchants. Thus Japanese merchants were able to gradually penetrate into the China-fir market.

Then, in 1916, the TGGO's South China Policy accelerated and reached its peak during the period of 1916 to 1923 due to the reduction in Western influence resulting from the First World War. Historical material shows Japanese merchants were deeply involved in the China-fir market after 1916. They cooperated with Chinese manufactures in a mutually beneficial partnership perusing both profit and political power.

The anti-termite studies conducted by the TGGO from 1908 onwards were performed with the goal of developing chemical methods to preserve the timber building materials used in Taiwan. However, even though the long-lasting property of China-fir was reported by the TGGO's experts in 1898, it was not until 1916 that the anti-termite experiment was performed on this type of timber. Furthermore, despite the positive results of this experiment, there was no difference in the treatment of the China-fir and Japanese cedar adopted in the new buildings; both timber types had preservatives added as can be seen in the TGGO's 1920 building standards. Thus, showing the anti-termite property of China-fir was not the key reason for the TGGO to adopt the usage of China-fir. Instead, the announcement in 1916 can be seen as an encouragement for Japanese and Taiwanese merchants to invest in the China-fir market, which would be of advantage to the colonial government.
References

1. Lin, S. L. (2006) The Experiences of Climatic and Environmental Modification on Colonial, Ph. D. National Cheng Kung University.
2. Ministry of Building and Repairs of TGGO (1920) Documents of the Newly Built Tainan Teacher's College, Archives of Former Taiwanese Governor General's Office, 3124(2).
3. Moroto, K. (1899) The forest survey report in Qing (China) by Kitaro Moroto. Archives of Former Taiwanese Governor General's Office, 371(18).
4. Nakamura, K. (1988) The Participation of Japan in South-East Asia and the relationship with Taiwan, Nara: Tenrikyo Doyusha.
5. Nagayama, K. (1922), Characteristics of China-fir, an Important Building Material for the Building Industry of Taiwan, Journal of Taiwan Forest Association, (5), pp.47-52.
6. Nagayama, K. (1922), Characteristics of China-fir, an important building material for the building industry, Taiwan Daily News, 8-11 July, p.3.
7. Oshima, M. (1909-1917), Termite Survey Report, no. 1-6, Taipei: Taiwanese Governor General's Office.
8. Ogino, T. (1965) Historical Discussion in Forest Industry Development Around Korea, Manchu, Tokyo: Foundation of Rinya Kosai Kai.
9. Taiwan Daily News (1899) About the Timber Building Materials in Taiwan, Taiwan Daily News, 8 Mar. p.2.
10. Taiwan Daily News (1901) China-fir and the Foreigner's Power, Taiwan Daily News, 13 Mar. p.2.
11. Taiwan Daily News (1902) A Comparison between China-fir and Japanese cedar Taiwan Daily News, 10 Apr. p.1.
12. Taiwan Daily News (1906) Termite and the Building Technique, Taiwan Daily News, 30 May. p.6.
13. Taiwan Daily News (1906) Sailing Lines among South China, Taiwan Daily News, 21 Apr. p.2.
14. Taiwan Daily News (1911) Traveling in Fuzhou by ship Fu-Shun Maru Days Two, Taiwan Daily News, 29 Apr. p.2.
15. Taiwan Daily News (1913) The Future of Timber Manufactures in Taiwan, Taiwan Daily News, 16 Apr. p.1.
16. Taiwan Daily News (1913) Business Depression of Mitsui & Co., Ltd's, Taiwan Daily News, 31 Dec. p.1.
17. Taiwan Daily News (1916) Fuzhou (1), Taiwan Daily News, 26 Apr. p.1.
18. Taiwan Daily News (1916) News about Fujian Province: China-fir, Taiwan Daily News, 9-11 Aug. p.3.
19. Taiwan Daily News (1916) The anti-termitic materials: China-fir and Lunta-fir, Taiwan Daily News, 15 Oct. p.7.
20. Taiwan Daily News (1917) Fuzhou News: Timber Manufactures in Fuzhou, Taiwan Daily News, 19 Jan. p.3.
21. Taiwan Daily News (1921) The Problems of China-fir Importing, Taiwan Daily News, 25 Jan. p.3.
22. Taiwanese Governor General's Office (1908) Consumer Survey Report about the Timber Market in Taiwan, Taipei: National Taiwan Library.
23. Taiwanese Governor General's Office (1921-1941) Forestry Industrial Statistics of Taiwan, Taipei: National Taiwan Library.
24. Xu, S. R. (2005) Customs Duty and Trade between Taiwan and China from 1895 to 1945, Ph. D. National Taiwan Normal University.

Notes

1. Before 1916, China-fir was reported on frequently by the Taiwan Daily News, the most powerful newspaper in Taiwan in the period of Japanese governance, as a poor building material because of its physical characteristics and the fact that it is vulnerable to termite damage. The following reports are examples: 1902. A Comparison between China-fir and Japanese cedar. Taiwan Daily News, 10 Apr. p.1: "On the other hand, China-fir, the timber material continuously imported by Taiwanese merchants, which is worse in physical property." and 1906, Termite and the Building Technique. Taiwan Daily News, 30 May. p.6: "According to the chief of Ministry of

2. Reference to the Ministry of Building and Repairs of the TGGO, 1920. Documents of the Newly Built Tainan Teacher's College. Archives of the Former Taiwanese Governor General's Office, 3124(2), p.204: "The timber materials used as trusses, and those materials attached to the wall or covered by ceiling should all be preservative treated by using Terumoru (a kind of anti-termite solution invented by Masamitsu Oshima)". p.209: "Unless otherwise noted, Timber materials used in this building should be Japanese cedar, but it can be substituted by Taiwan red cypress. The circular cross-section timbers are under the same conditions as above, but China-fir can also be used.

3. Reference to Moroto, K., 1899. The Forest Survey Report in Qing (China) by Kitaro Moroto. Archives of Former Taiwanese Governor General's Office, 371(18): p.14: "Timber material: Without research result, it is hard to assert the long-lasting property of China-fir; but it seems likely that China-fir can be kept for longer than other timber materials.

4. Reference to the TGGO, 1908. Consumer Survey Report about the Timber Market in Taiwan, pp.29-30., and Productive Industry Bureau of the TGGO, 1921-1941. Forestry Industrial Statistics of Taiwan.

5. Reference to 1906. Sailing Lines among South China. Taiwan Daily News, 21 Apr. p.2: "About the triangle of sailing lines between Fuzhou, Amoy and Tamsui, quite a number of goods from Fuzhou to Taiwan are timber and paper."

6. Reference to 1911. Traveling in Fuzhou by ship Fu-Shun Maru Days Two, Taiwan Daily News, 29 Apr. p.2: "A lot of timber is piled up along the river bank in Fuzhou. There are three timber mills on the river bank. One of them is Kenshin, operated by Chinese merchants, but Mitsui & Co., Ltd. have gained the monopolization right for selling the product, Mitsui also have many shareholders."

7. Reference to Moroto, K., 1899. The Forest Survey Report in Qing (China) by Kitaro Moroto. Archives of the Former Taiwanese Governor General's Office, 371(18): p.23.

8. Reference to 1899, Concerning the Timber Building Materials in Taiwan. Taiwan Daily News, 8 Mar. p.2: "China-fir is cheap in the original cutting area, but when it is transported to Fuzhou, the price becomes higher due to the custom duty. However, the Japanese have the duty free right in transporting goods in China, thus the Chinese naturally cooperated with the Japanese merchants in transporting the China-fir goods."

9. Reference to 1901. China-fir and the Foreigner's Power. Taiwan Daily News, 13 Mar. p.2: "Fuzhou is well known as the origin of China-fir. However, before the China-fir arrives to be shipped, it may be attacked by robbers. To avoid that, Chinese merchants make administrative appeals to the government, but the government sometimes does nothing regarding the complaint. However, if Chinese merchants fell into the name of foreign merchants, they could negotiate with the government through foreigners. Then they could force the government to act more strongly."

10. Reference to 1913. The Future of Timber Manufacturers in Taiwan. Taiwan Daily News, 16 Apr. p.1: "In past times, the majority of timber was imported to Taiwan from Wakayama (Kishu) via the Katsura Harbor, and Akita via the Nosiro Harbor. Recently, Mitsui & Co., Ltd. imports China-fir from Fuzhou, they also send China-fir to the North and the Midst of China for a long time, and now they are expanding the Hokkaido timbers market in Taiwan. While the other timber importers oppose Mitsui's entry into their business area., and 1913. Business Depression of Mitsui & Co., Ltd. Taiwan Daily News, 31 Dec. p.1.

11. Reference to Oshima, M., 1909-1917, Termite Survey Report, no. 1-6.
Reference to Oshima, M., 1911, *Termite Survey Report, no. 2*, pp.31-32: "Japanese pine is a favourite type of timber for termites, and Japanese cedar is close to it. Generally, people think Japanese cypress is an anti-termite material. But the Taiwan Shrine, constructed of Japanese cypress, is still attacked by termites. Therefore, it is no basis for the anti-termite property of Japanese cypress. China-fir is imported from Fuzhou; people say that the houses constructed of China-fir can avoid the damage of termites. But we can still find the termite attacked constructions everywhere, just like the Japanese cedar."

Reference to 1916. The anti-termite materials: China-fir and Lunta-fir. *Taiwan Daily News*, 15 Oct. p.7.

See the Endnote 2.

Reference to 1916. News about Fujian Province: China-fir. *Taiwan Daily News*, 9-11 Aug. p.3.

Reference to Oshima, M., 1917, *Termite Survey Report, no. 6*, pp.43-55.

Reference to 1916. Fuzhou (1). *Taiwan Daily News*, 26 Apr. p.1: "The main timber fabricating factory: Kenshin Sawmill, Siemssen & Co. Sawmill."

Reference to 1917. Fuzhou News: Timber Manufactures in Fuzhou. *Taiwan Daily News*, 19 Jun. p.3: "The timber businesses were rising along with the heydays of tea export. But now it rests with three companies: Kenshin, Siemssen & Co. and Hoshin-Suzuki. When the previous operator of Siemssen & Co. died, the latter was captured by the Japanese in the Siege of Tsingtao. So now the Chinese manage the company. But last year, on purpose or accident, the whole factory was damaged in a fire. Its position is replaced by the companies Kenshin and Suzuki, and they process night and day."

Reference to 1921. The Problems of China-fir Importing. *Taiwan Daily News*, 25 Jan. p.3.

Reference to Nagayama, K., 1922, Characteristics of China-fir, an Important Building Material for the Building Industry of Taiwan. *Journal of Taiwan Forest Association*, No. 5, pp.47-52.

Reference to Nagayama, K., 1922. Characteristics of China-fir, an Important Building material for the Building Industry. *Taiwan Daily News*, 8-11 July. p.3: "Although the physical characteristic of China-fir is just 87–88% the strength of Japanese cedar, China-fir has large crops and a cheaper price. Furthermore, China-fir has a great quantity of anti-termite Serquiterpene Alcohol in the heartwood part. From the viewpoint of reasonable timber with value, China-fir should not be excluded from use."