

学 位 論 文 要 旨

Development of Rubber Plantation in Upper Basin of Mekong River

—A case study in Xishuangbanna, China—

メコン河上流域におけるゴム園の展開過程

—中国・西双版纳地方を対象として—

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Rubber is an industrial material, but it is initially an agricultural product. Rubber has long been regarded as the most important international strategic commodity. China is the biggest rubber consumer in the world, but its self-sufficiency rate is only about 20% nowadays, was lower than the international safe line. More than 70% rubber needs to be imported from other countries, which makes China very passive in the rubber industry and relative industry such as automotive manufacturing.

Rubber plantation in China mainly consists of state farms and smallholder farmers, which respectively belong to the agricultural reclamation system (state owned) and private rubber plantation (collective land ownership). Xishuangbanna Prefecture is located in the upper basin of the Mekong River and had long been poor and desperate for development. It is also the highest quality and the second biggest area rubber production base in China. The rubber plantation had brought new wealth to the local people and affected the agricultural economy and other aspects of Xishuangbanna, which will further affect the whole GMS area. Nowadays, this area is attracting more and more attention of researchers all over the world.

Since the beginning of the 21th century, compared with the control of the increase by the state farm, rubber plantation area by smallholder farmers rapidly expanded. When people, even the local government are cheering for the significant benefits brought by the rubber plantations, only a few people worry about the long-term interests of local farmers and the development of entire rubber industry. On the other hand, by the end of 2009, Xishuangbanna State Farms began the new round of reform, and achieved initial results in territorial management, contracted to households and so on. However, although the managers of state farms and government are reluctant to admit, this reform has caused many adverse effects on the rubber plantations of state farms.

This study attempts to review the history of rubber plantation in Xishuangbanna and to investigate the current situation of rubber plantation by smallholder farmers and state farms. We carried on twice field survey in 2012

and in 2014, collecting the firsthand data of rubber plantation in Xishuangbanna, especially the data about state farm contractors, of which little information was available after the reform. This study tries to identify the rubber productivity and profitability of smallholder farmers; to judge the impact of reform to the rubber plantation of Xishuangbanna State Farms; to reveal the underdevelopment of the rubber industry in Xishuangbanna from the view of world system theory.

The main outcomes of this study are as follows. First, the income of rubber is high compared with other traditional crops in the same area of land. The rubber industry has also attracted a number of external capitals, which pulled the rapid increase of the local economy and improved the whole living conditions of local residents.

Second, the per capita area of rubber plantation is generally small and cannot be expanded any more. The economies of scale of the big-scale rubber plantation do not work for both smallholder farmers and state farm contractors.

Third, the results show that the cropping system in Xishuangbanna has become more simplified and the planters are highly dependent on a rubber plantation, the income risk both of smallholder farmers and state farm contractors is high, especially when the rubber price fluctuates wildly and natural disaster comes. And the monoculture is also a double threat of agro-biodiversity and food security.

Fourth, rubber is a long-term cash crop, scientific cultivation technologies and high productivities severely affect the output and longevity of the rubber tree. However, the productivity of smallholder farmers has always been low for the reasons of education level, etc. Even worse, affected by the reform, the productivities of contractors rapidly decreased and irreparable damage occurred to the rubber plantation of state farms.

Fifth, in addition to the destruction on high-quality rubber plantation, the reform brought other adverse impact to the state farms. The difficulty of charging the contracting fee maybe cause the financial deficit.

The results of this study showed the weak status of the rubber planters and the whole rubber industry in Xishuangbanna behind the seemingly prosperous growth of the rubber plantations. The theory of the world system and the periphery theoretically can explain the current situation of rubber plantation in Xishuangbanna, and the unequal role in the world rubber industry. The economic growth pattern of Xishuangbanna, which focusing on the raw material production, will make the situation of underdevelopment in this periphery area worse in the future.

Therefore, to enhance productivity based on the existing scale of rubber plantation is considered to be a feasible way, and there is still a great space of rise to improve the cultivation technology. The government should improve the land policy to encourage the merger of small-scale and low-yielding rubber plantations for large-scale cultivation by professional person or organizations. Also the government needs to strengthen legislation to protect the long-term management rights of rubber plantation. In addition, for the planters, the government should increase investment in education and training for rubber cultivation, etc. Furthermore, to improve the unequal situation in the world system, Xishuangbanna should develop the other productive sectors of the rubber industry chain, such as the deep processing, the high-level of rubber products and even the automotive industry. It also can supply more employment opportunities and absorb the labor surplus from the merged rubber plantation. Through above approach, the rubber plantations can become advantageous resources to bring real development to the Xishuangbanna area.