

## CHAPTER V

### MAPPING NTFP COMMODITY CHAIN: ACTORS AND ACCESS

Enquiries into the commercialization of NTFP resources touch, not surprisingly, on many issues of economy including production, trade, consumption, efficiency and pricing. However, the theories and methodology of economics, particularly neoclassical economics, are most commonly employed. Commodity chain analysis, of course, is also dominated by neoclassical ideology. However, in current China, even though the market reform has been implemented at national and provincial levels for more than two decades, neoclassical economic theories cannot sufficiently explain recent changes. Therefore, in this chapter, social scientists' and political scientists' perspectives are integrated.

On the other hand, most anthropologists, sociologists and social scientists conduct the fieldwork at the local or community level without sufficient links to the global level. Thus, the commodity chain approach will be applied to link local to regional, national, and global in order to examine how benefits are generated and distributed among actors at each level. In particular, what kinds of access mechanisms are contributed to those benefits are controlled and maintained.

Mapping actors and their access along with the NTFP commodity chain will be adopted in this chapter, with the focus on two varieties of NTFP---bamboo shoots and resin. To construct the commodity chains, I will follow three steps: first, I will attempt to map domestic commodity chain of bamboo shoots and resin; second, international commodity chain of those products will be mapped; third, I examine how each social actor can benefit from commercial NTFP; finally, the multiple-levels of institutions will be explored along with NTFP commodity chain, particularly the access mechanisms among those differentiated social actors. Moreover, this chapter also emphasizes a comparative perspective to examine

different products traded in different commodity chains. Notably, since there are some overlapping social actors between domestic and international commodity chain, the access that differentiated actors controlled and maintained are examined integratively, instead of separately.

### 1.1 Mapping Domestic NTFP Commodity Chain

Huibinhe livelihoods and local economy mainly depend on two NTFP—bamboo shoots and resin. The products are consumed and sold to both domestic and international market. Here, the domestic commodity chain is explored. First, figure 5-1 presents the simplified commodity chain of resin (see figure 5-1).

**Figure 5-1 Domestic Commodity Chain of Simao Resin**

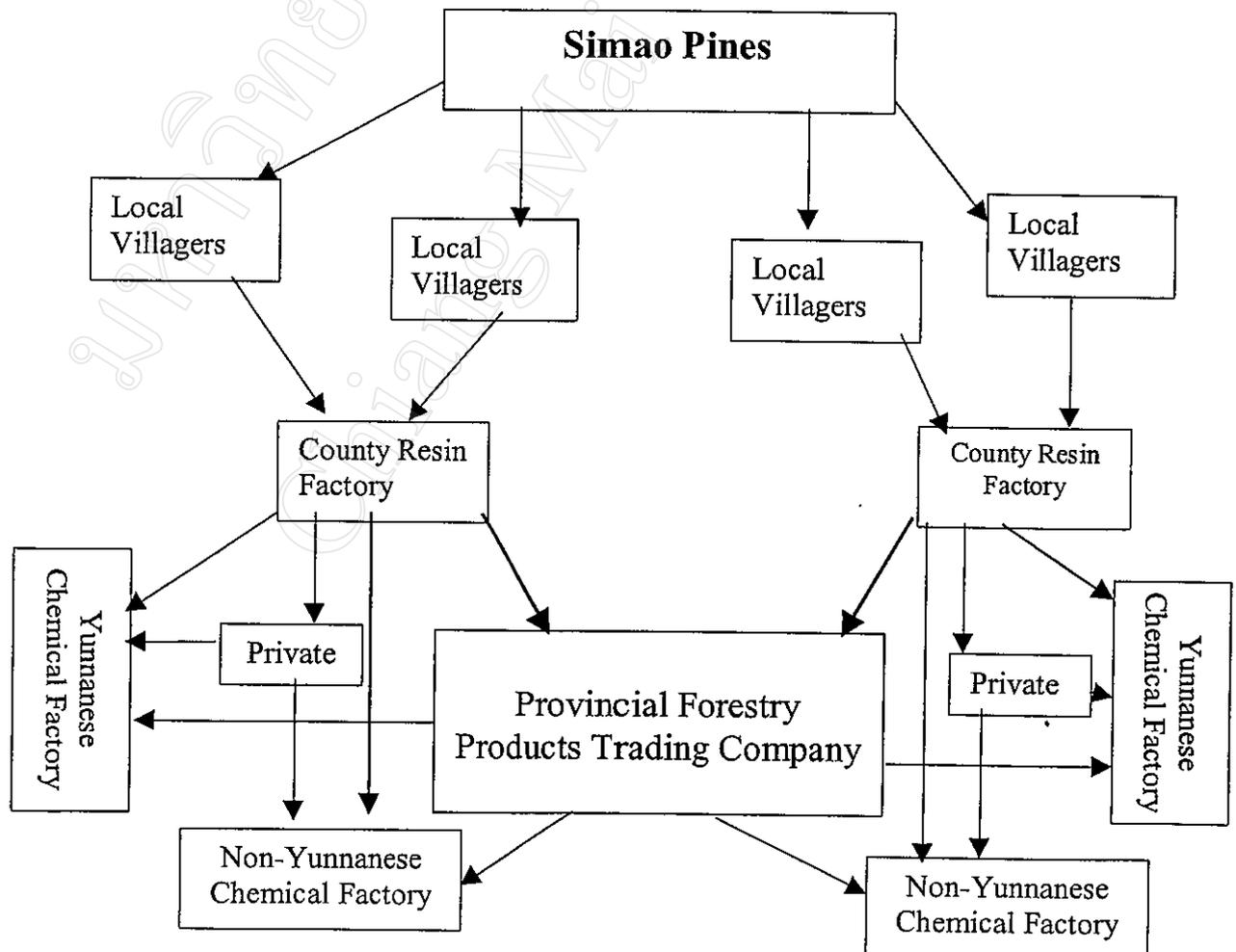


Figure 5-1 presents how resin flows in the domestic commodity chain. At the top, it is the Simao Pine (*Pinus Kesiya var. langianensis*) resource, which is the only pine that can be tap in Simao prefecture. As estimated, the production of resin per Simao pine is 4KG per year. Hence, here is the beginning of the commodity chain. Then, the local people tapped the resin and sell it to County Resin Factories. They produce pine colophony and pine tar by chemical distillation processes. In general, the villagers do not deliver the resin to factories themselves or rent transportation. Instead, each factory operates several collecting points where the villagers come to sell their resin. Therefore, the villagers just carry their products to the sites, then the factories transport the resin monthly, after the volumes in the collecting point are full. A person who employed by the county factory, live at the collecting point to calculate and record the quantities villagers offered.

The County Resin Factories produce pine colophony and pine tar from resin. Those two products are raw materials that supply chemical factories. Therefore, I put chemical factories either in Yunnan or non-Yunnan provinces as the final consumers. They are industrial consumers. Treating them as final consumers are because those materials will be used to produce further some complex industrial products, which may make the commodity chain more complicated, and possibly un-explorable. Three channels of trading pine colophony and pine tar are managed by county resin factories. One is a direct sell to Yunnan or non-Yunnan chemical factories. The second link is to sell to Yunnan Forest Products Trading Company which was set up by Yunnan Provincial Forestry Bureau during the time of the "Central Planning Economy". Then, the Company supplies to Yunnanese or non-Yunnanese chemical factories. The third channel is private individuals purchase the resin from County Resin Factories, and then sell to either Yunnanese or non-Yunnanese chemical factories. This channel emerged after 1993<sup>1</sup>. Thus, this is how resin is established flowing in domestic commodity chain. Next, I will illustrate how

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<sup>1</sup> In 1993, Yunnan provincial government abolished relevant rules of state sectors in monopolizing resin trade (detail discussion of this point in forth section of this chapter).

bamboo shoot is flowing in the domestic commodity chain, by presenting a simplified commodity chain of bamboo shoot (see Figure 5-2)

**Figure 5-2: Domestic Commodity Chain of Simao Bamboo Shoots**

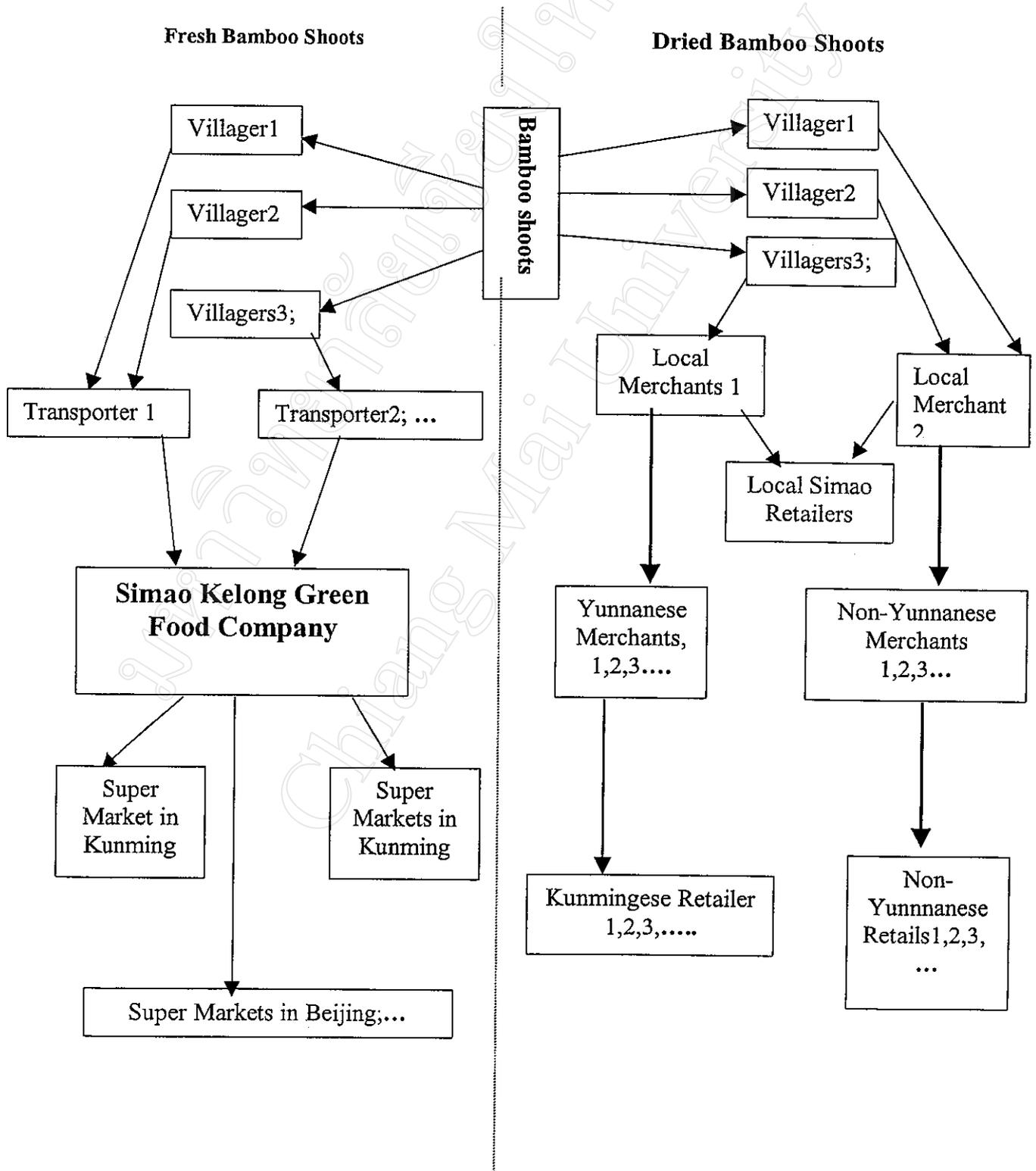


Figure 5-2 shows two networks of commercial bamboo shoots traded. The diagram is explained by classifying the bamboo shoot trade into two categories: fresh shoots and dried shoots. The right part is the dried bamboo shoots trading network. Generally, the drying process are conducted by local villagers. The counterpart is the fresh bamboo shoot trading network. As the figures shows, the fresh bamboo shoots are extracted by local people, and then sold to transporters. The transporters here play a role of both transporter and intermediaries. The Kelong Green Food Company purchases the products from transporters. Then, the bamboo shoots are processed and preserved. Further, the Company puts them in the standard packaging for the super market before selling to the consumers throughout China.

On the right section of the diagram, the bamboo shoots are harvested by villagers. The villagers prefer not to sell the fresh immediately. But, they process the products into dried products by themselves. They do this because the collecting point may far away from the road. Hence, instead of carrying heavy fresh bamboo shoots to sell nearby the road, they would like to process it and sell the dried one. Normally, the villagers boil the products first, then press and dry them. After that, they slide the dried shoots ready to sell to local merchants. These people go to purchase during the time of “*gangji*” in the bamboo season. The local merchants might have three channels for selling the products. First, they can sell to local retailers. An individual who buy the bamboo shoot from local retailers is the final consumer of this chain. Second, the Yunnanese merchants might purchase the products from local merchants, and then sell to the Yunnanese retailers. Further, the people who buy the products are the final consumers of this channel. Third, the local merchants also can sell their products to non-Yunnanese merchants, then the products are purchased by non-Yunnanese retailers. In practice, most dried bamboo shoots flow via this chain. Notably, in contrast to the left section, the transporters in this part do not play double roles in trading rather hired vehicle owners by merchants. Therefore, transport is the cost of merchants; hence I do not treat transporters as actors in dried bamboo shoots trade and put them in the diagram.

In comparison, the commodity chain of bamboo shoots involves a larger numbers and types of actors in its trading and processing than does resin. For the resin trading network, there are more state-owned factories engaged in, since it requires more technology and financial capitals. In contrast, the bamboo shoots marketing network associated with more private merchants. The detail will be discussed in the final section of this chapter.

## 5.2 Mapping International NTFP Commodity Chain

After “Opening and Reforming” policy, more Chinese products are exported to the global market. To present how NTFP are linked to world consumers and markets, the international commodity chain of both resin and bamboo shoots are examined. At first, figure 5-3 presents the international commodity chain of resin (see figure 5-3).

**Figure 5-3: International Commodity Chain of Simao Resin**

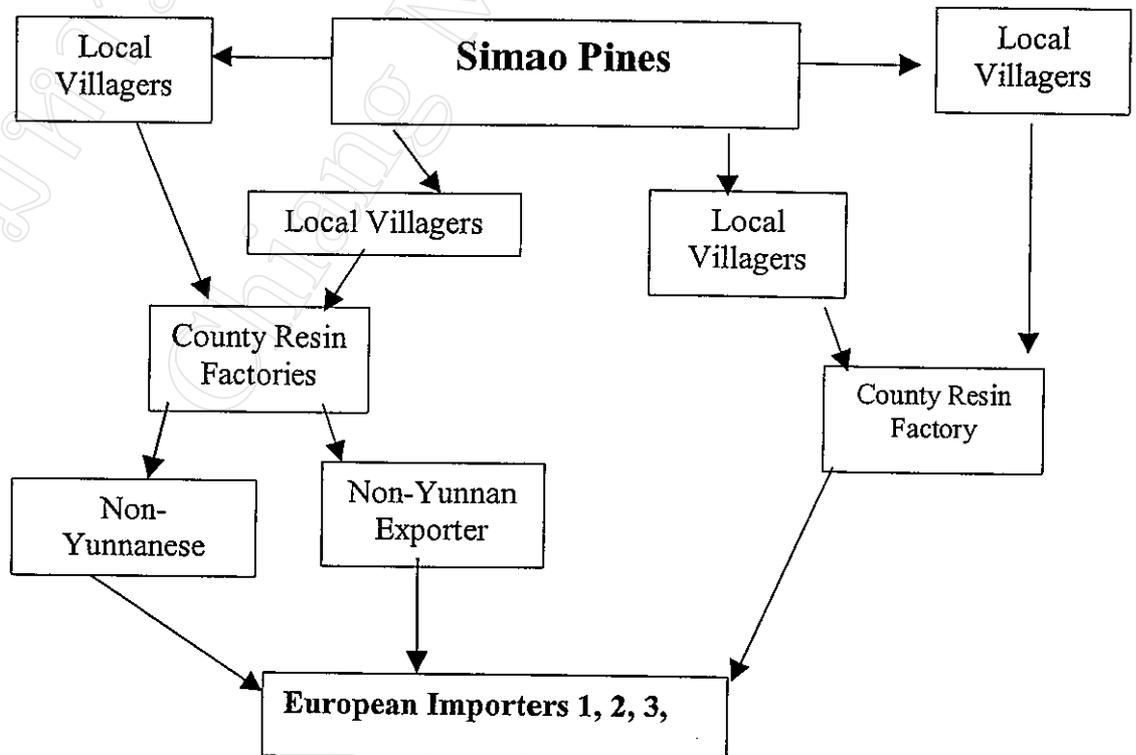


Figure 5-3 illustrates how resin and the processed resin flow in the global market. Yet, since I discussed how resin flow into county resin factories in the previous section of domestic market, it is no need to repeat it. As the figure shows, after the resin is processed in county resin factories, the products are sold to exporters, which are non-Yunnanese enterprises. The exporters are state-owned trading companies, and specialized in international trade. The exporter, such as the Simao Resin Factories traded with, is Beijing Import and Export Company. The interview with Yunnan Provincial Forestry Bureau indicates that most county resin factories only do the trading with Beijing exporters. Further, the products are purchased by European importers. Another channel that resin being globalized is the county resin factories directly sell their products to European importers.

For the social actors, European importers in this diagram, there are two things that should be explained here. 1) The European importer, here, has been treated as monolithic entity, which are by no means that they are undifferentiated. However, since the European Union (EU) had uniform foreign trade regulation among the communities as well as with non-EU members, regarding European importers as one entity is fit to my focus on exploring access mechanisms. Thus, although it may simplify the actual phenomena, my analysis is more focused. 2) In fact, the European importers are not the final consumers of the products. Instead, they may sell products to their domestic demanders, or re-sell to international demanders. One staff in export enterprise explained that the European importers, in general, belong to the private sector.

Moreover, since European importers have long-standing relation with the European demanders, although Chinese exporters know some of the real final consumers, the exporters cannot establish trading relationship with the real final consumers. My study focuses on the impacts of global market links at community level. Hence it is too complex to integrate the real consumers into my analysis at global level, the European importers are treated as the final consumers of this

commodity chain. Next, I will present the international commodity chain of bamboo shoots (see figure 5-4).

**Figure 5-4: International Commodity Chain of Simao Bamboo Shoots**

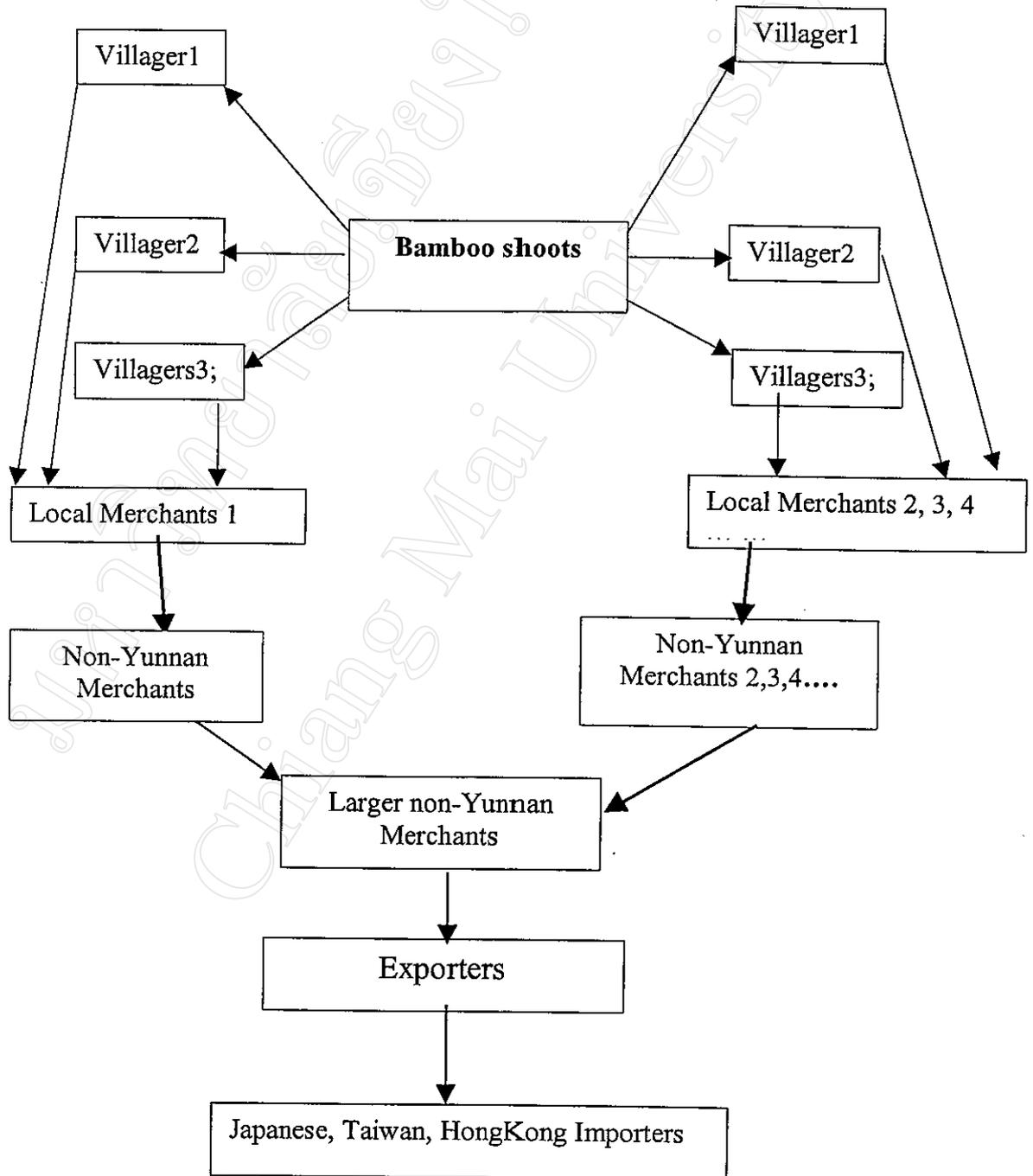


Figure 5-4 presents a simplified international commodity chain of bamboo shoot. Here we should know that there are no villagers' dried bamboo shoots commercialized in the international commodity chain. Again, because there are some similarities with the domestic one at the local level, I do not repeat it. This diagram shows that local merchants can sell the products to non-Yunnanese merchants, who generally come from Zhejiang Province. Later, the large non-Yunnanese merchants purchase the products from several merchants to collect a mass quantity. Then, these large non-Yunnanese merchants sell their product to exporters. They generally are one or two state-owned export companies. Finally, those companies export the product to Japanese, Taiwan and HongKong importers<sup>2</sup>, which treated as the final consumers of this commodity chain. The interviews with some knowledgeable traders showed Taiwan and HongKong importers generally sell the products to the some process factories. They do the packaging of bamboo shoots, and then export to Japan. Japanese importers also sell the products to Japanese process factories. Super markets will buy products from the Japanese processing factories.

To compare actors and access of the international commodity chain, resin products involve more state-owned companies and factories, and the chain of bamboo shoots trade has more access of private individuals and private companies. Bamboo products are flowing in the channel among private merchants before they are exported. Therefore, the private sector plays a key role in organizing the products for exporting. Broadly, there are fewer types of actors in China engaged in the international commodity chain in comparison with the domestic one, in term of both products. And, there are more private actors involved in the domestic commodity chain than international one for both products. Therefore, after

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<sup>2</sup> Taiwan and HongKong are part of China. However, Chinese Foreign Trade Ministry also count the trade with them as foreign trade into statistics, because the four parts of China—Mainland, Hongkong, Marco and Taiwan are implement international trade polices respectively and autonomously. Moreover, they also have their independent Customs.

examining the profit of those actors in the coming section, I will explore why and how this takes place in the final section of this chapter.

### 5.3 Who Benefit from Commercial NTFP? Income, Profit and Distribution

A highly skewed picture of the distribution of the benefits from commercial NTFP emerges from combination of both quantitative and qualitative analysis of price, expenses, and quantities handled by different actors in the NTFP commodity chain. This section examines price structures and income distributions. It examines profits along the chains as they constituted between buying and selling prices, and integrated domestic and international chains together.

#### 5.3.1 Vertical Distribution of Benefit along with NTFP Commodity Chain

##### A. Rison

Table 5-1 presents the selling price of different actors in resin trading. For villagers, the price of RMB1600/ton is not derived from their negotiation with county resin factories. Instead, this price is set as fixed price by Simao Prefecture Forestry Bureau. Therefore, villagers generally understand how price of resin derived from. The government has controlled and monopolized the market and pricing. This practice continues during this market reform decades. In actual practice and relationship of the villages and buyers, there are no such terms—fair or unfair—at local level. Rather, the villagers use the terms “good” (*hao*) or “just so so” (*yibang*), “not okay” (*buxing*) to express their feeling in price fluctuation.

**Table 5-1: Vertical Price Structure along Resin Commodity Chain**

Unit: RMB/Ton

Actors	Selling Price
Villagers	1600
County Resin Factories	2914 (Domestic); 3410 (Export)
Provincial Forest Product Company	3350
Private Sectors	3320
Exporters	3410

Source: Field Survey 2001

Note: One tons of resin can product 740KG pine colophony and 230KG pine tar. And the prices of pine colophony and pine tar are almost same.

For county resin factories, it seems that they can benefit about RMB 1341/ton in the domestic market and RMB1810/ton in the international one. However, we should take their expenses into consideration. In domestic market, they have to pay about RMB100 in transportation and RMB 200 in package per ton. Therefore, a total cost should be over RMB1900/ton. Furthermore, the factories burden operation, processing cost and taxes. The leader of Simao Rison Factory indicated another enormous cost is the maintenance of roads to villages, which is about RMB 210,000 annually. The tax is paid about RMB 2 million every year. For the international market, only one factory can get access to it directly; however, shares of export quota are also small for this factory. Most factories do not have export rights to engage to a global market directly. And, most factories just have about 4000 tons capability in production a year. At present, most factories are in debt. Fortunately, with the subsidies of government for the factories' contribution to rural economy, their income can be said to be at a level of subsistence.

However, the factories think the government intervenes too much in resin industry, particularly, in the export quota system and price system. As a factory leader said, the price made by the government is to benefit the local community at the expense of the factories. Moreover, they expect that entry WTO can be an opportunity to gain export rights and a better distribution of quota should be made or the quota system can be abolished. Therefore, they expect more market mechanisms to guide this industry.

Regarding the Provincial Forestry Products Company, as table 5-1 shows, there are some opportunities for earning profits. Generally, their cost combines transportation to final consumers and their operation cost. This company was established in the "Central Planning" era, which could reap great benefit from government intervention<sup>3</sup> at that time. Owing to it is the state-owned company, the

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<sup>3</sup> Before 1993, provincial government controlled resin market channel between Yunnan and outside by issuing the trade license to state-own enterprises in Yunnan, which aimed to prohibit involvement of private sectors and outside business entity. In this case, Provincial Forest Products Company was the only enterprise who bears the license before 1993.

company almost monopolized resin business in Yunnan. Nonetheless, after 1993, the rule was abolished. Many private sectors are engaged in this business. This company experienced a big loss, and found it is incapable to compete in the market. Moreover, overstaffing has become main obstacle. Thus, the company's income in the chain is a little bit above subsistence level, at present time.

For the private sectors, after abolishing the resin trading license, a large number of private individuals became to be involved in this trading. Table 5-1 indicates that the private sector's price is lower than that of a trading company. Hence, they have a considerable amount customers. However, in addition to transportation cost and very low cost for them, they have high expense in operation. These buyers use credit money with interests, and they have to pay a tax. Moreover, their social activities maintain their social ties with both sellers and buyers, as well as with authorities cost a great amount. Thus, generally, their profit from resin is above subsistence, but not so great.

Final actors in this chain are exporters. Normally, they do not buy the products directly from resin factories. The exporters require the factories to deliver the commodity at the port, and act as the export agent of factories. Thus, they may transit the payment to factories after the payment by foreign importers. As a result, there are no interests burdened by the exporters. Besides, although the exporters sell the cargo as the price that factories offered—RMB3410/ton, their profit can be reaped from export agent-fee which normally is 10% of the cargo's value. Moreover, they can also get a tax return<sup>4</sup> and other subsidies or reward in export. Besides, in order to encourage export, there is no tax at the export point. Thus, in addition to a very small inspection fee, there is no any cost to the exporter. Thus, in the chain, exporters are the greatest profit reapers.

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<sup>4</sup> The returned tax here is value-added tax, which is paid by factories, however, would be returned to exporter after cargo exported and foreign traders paid.

## B. Bamboo Shoots

Table 5-2 below shows the selling price of different actors in their own trading chains of bamboo shoots. For the villagers, they sell both dried and fresh bamboo shoots. Even though drying bamboo shoot would cost labor and fuel wood, some villagers tend to dry some, because collecting sites are far from the road. According to the field survey, there are some negotiations taking place between the villagers and the local merchants. Nonetheless, the consequences of negotiation are not more than RMB 0.1 in dried shoots and RMB 0.02 in fresh one. In most cases, the villagers decide to sell the products to the local merchants who they have friend relationship and kinship. In particular, regarding the chain going through, the peasants choose to sell their products to transporters, who is their relatives or the friend's relatives in the village. Therefore, a practice of negotiation is rare. During an interview, a villager told me: "it is better to trade with the friends and relatives so as to benefit the whole 'family' from the products, and they would not cheat on each others." When I inquired of their feeling on price, most of them expressed the trade is fair or Okay (*Keyin*).

**Table: 5-2 Vertical Price Structure along with  
Bamboo Shoots Commodity Chain**

Unit: RMB/KG

Domestic Fresh B.Shoots		International Fresh B.Shoots		Domestic Dry B.Shoots	
Actors	Selling Price	Actors	Selling Price	Actors	Selling Price
Villagers	0.35	Villagers	0.35	Villagers	3.5
Transporters	0.5	Local Merchants	0.5	Local Merchants	3.9
				Local Retailers	6
Green Food CO.	5	Non-Yunnan Merchants	6	Yunnan Merchants	5.5
				Non-Yunnan Merchants	5.7
Super Market	6	Larger Non-Yunnan Merchants	8	Yunnan Retailers	8
				Non-Yunnan Retailers	9
		Exporters	10		

Source: Field Survey 2001

Note: ten kg of fresh bamboo shoots can dried into one kg dry shoot normally.

In the second section of table 5-2, I identified the transporters, local merchants and local retailers as the same level, because there are some similarities among them. First, their traded activities are conducted locally, and they all have the “social and geographic identities” as Simaoese (Green Food Co. also has this identity). Second, as table 5-2 shows, they do not have a great adding in the value of the products. Third, the trading also has been done as the seasonal part-time job. Most local merchants and transporters are unemployed. The business does provide them some opportunities to earn money. For local retailers, they are the individual sellers in the town, who may earn money from various rural products including dried bamboo shoots.

I had examined the relationship between villagers and transporters as well as local merchants. Here, I link them further with their trading patrons. For the transporters, they do not have a special relationship with Green Food Company. As a result, the market activities between them are fundamentally based on price-based mechanisms. However, the transporter’s main earning is transportation income. Trading bamboo shoots is the extra-income. Therefore, they do not care much about price. The principle of them is if a little profit is fine. Besides, since the fresh products occupy considerable space in vehicles, they cannot trade much in one season. In addition, their transportation is a short-distance, without passing the forestry inspection station, which means they need not to pay a tax. Therefore, they indeed have some profit. Combining both factors, the transporters’ profits are a bit above subsistence level and with little risk.

Regarding local merchants, they are subjected to pay a forestry tax<sup>5</sup>, which is RMB 20/ton in fresh products, and the dried one will be calculated as fresh bamboo shoots. This is generally an estimation of moisture loss during the drying process (see the note in table 5-2). Local merchants have special long-standing relationship with the non-Yunnanese or Yunnanese merchants. Besides, the merchants at a

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<sup>5</sup> It called as “forestry conservation fee”, which are collected by nature reserve station for improving the forest condition inside of nature reserve.

higher level in the trade chain also provide the credit for local merchants to organize the products. Therefore, they cannot make a great adding-profit in the trading. They act more or less like the employed labor for organizing products, instead of merchants. Thus, the more quantities they collect the more they earn. Some who can have a good relationship with authorities might not only gain the flexible access to trading, but also might easily cheat the weight in taxation. Local retailers in this category are also subjected to taxation in local market. They also derive the profit from cheating weight on scaling of dried bamboo shoots. They are the actors who make benefits above subsistence, but not the greatest in this chain.

In this chain, third section in Table 5-2, which is composed of the Green Food Company, Yunnanese merchants and non-Yunnanese merchants are the actors who the make greatest benefit in this chain. Even though they have to pay a tax, and cost of processing, or they had to bear the great cost in fresh bamboo shoots woodization<sup>6</sup>, it is the actor who earn the greatest profit. As Table 5-2 shows, there is a great deal of adding value in this level. However, their process aims to keep products in fresh, which is not quite costly. According to field survey, since they are links between locality and outside for promoting the demands of the products; they have to have good ability of access to authorities and local merchants. Moreover, they are also those who clearly understand national and international information of price. In addition, due to their ability to associate with super market, large merchants as well as retailers, most of them can sell their products with low risk.

For the fourth category, the supermarket and non-local retailers also earn benefits from this business. For most of them, trading bamboo shoots is the strategy to diversify their commodity structure to meet different demands, rather than aiming to gain high returns from this product. Therefore, a final price in their hand is generally reasonable. In fact, the profit they earn is higher but not quite higher than subsistence, owing to various operation cost and tax. For the larger non-Yunnnanese merchants, they are playing a crucial role in globalizing the products, and they are

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<sup>6</sup> 50 % of fresh bamboo shoots will be woodized in 8 hours after it is collected.

mostly the coastal residents and have long experience in international trade. Therefore, their understandings in variation of foreign demand support those actors' well access the commodity chain. Besides, they are also obligated to deeply process the products meet the demand by water soaked and salinised. Taking their contribution and cost into account, even though they may earn a great profit, as the table 5-2 shows, it is reasonable and less than the actors in the third section of the table.

The final actors, are the exporters. However, they cannot gain benefit from value-adding-tax return claims, because their products are mainly collected from private individuals, who normally can not have value-adding tax invoice. Besides, in this chain, exporters do not play the role as exporter agent. Instead, they are the cargo owner who purchases the goods from the large non-Yunnanese merchants. Therefore, there are interests in credits and a risk to store the products for them. Moreover, some of them have to collect products at a high price in order to fulfill export order. However, since they have export rights, their profits from this business are a bit above subsistence level.

### **5.3.2 Horizontal Distribution of Benefit along with NTFP Commodity Chain**

While table 5-2 shows stratification among different groups in the NTFP trade, they do not reveal intra-groups stratification. The table below, hence, attempts to show group sizes in resin and bamboo shoots trading and distribution within groups (see table 5-3).

Table 5-3 Horizontal Distribution of Income from NTFP Production

Resin		Domestic Fresh B. Shoots		International Fresh B. Shoots		Domestic Dry B. Shoots		
Actors	Groups Size	Distribution with groups	Actors	Groups Size	Distribution with group	Actors	Groups Size	Distribution with group
Villagers	32	even	Villagers	15	even	Villagers	15	even
County Resin Factories	3	Skewed	Transporters	8	even	Local Merchants	10	Skewed
Provincial Forest Products Co.	1	-----	Green Food Co.	1	-----	Non-Yunnan Merchants	5	Skewed
Private	10	Skewed	Super Market	-----	-----	Bigger Non-Yunnan Merchants	3	Even
Exporters	2	Skewed				Exporters	2	Even
						Yunnan Merchants	5	Skewed
						Non-Yunnan Merchants	3	Skewed
						Yunnan Retailers	-----	-----
						Non-Yunnan Retailers	-----	-----

Source: Field Survey 2001

Note: In this table, group size of several actors who involved in NTFPs trading are unknown and even difficult to be estimated. Thus, I mapping the actors who involved in NTFPs collected in Niozhadu Nature Reserve to reduce complexity. For villagers in this table, they are officially counted as the member of Huibinhe community, which is my studies site. Therefore, although there are great deals of villagers' products go through this commodity chain, I do not take them into count in my analysis.

Income among villagers and transports is relatively evenly distributed<sup>7</sup>. And the distribution as well as the group size among super market in fresh bamboo shoots, local Yunnanese and non-Yunnanese retailers may be skewed, but the data gathered is insufficient to evaluate this.

Regarding the resin chain, within County Resin Factories income distribution is not highly skewed. Generally, it should be even without considering directly exporting. However, as I mentioned above, there is only one factory in Simao prefecture that has export rights. They may have better benefit from this. Nonetheless, they cannot be allocated great amount of quota. Hence, income distribution is not highly skewed. With regard to private traders, their incomes are a bit skewed. After 1993, the year resin trading licenses were abolished, some private individuals who can respond and have the good relation with both county resin factories and chemical factories earn more profit than the individual trader who came later. The final actor's income distributions are highest skewed in this chain, although there are only two actors involved. One of them is a Beijing Chemical Import and Export Company. Another is Guangzhou Chemical Import and Export Company. Even though both of them have export rights, the former can be allocated more quota than the latter. As a result, at the same price, the quantities that the former can traded are more than the latter. Consequently, export agent fee, a sum of tax return and other subsidizes related to export value that the former gained are much more than the latter. According to my survey, quantities that the former exported are twice as much as the latter, which imply the former benefits are twice as much as the latter with regard to resin international trade.

Regarding to bamboo shoots commodity chain, the skewed income distribution occurred among the groups of local merchants, non-Yunnanese merchants in fresh bamboo shoots trading, and local merchants, Yunnanese merchants and non-

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<sup>7</sup> Here, income distributions among villagers refer to the income derived from the different products respectively. If we examine the combination of those two products extracted by residents, the situation may be different, which I will explore later.

Yunnanese merchants<sup>8</sup>. As mentioned above, for local merchants in both fresh and dried bamboo shoots trading, they do not earn much benefit in price-adding per unit. Rather, their benefit is based upon the quantities they can collect. The more quantities they can gain, the more benefit they can earn. Therefore, the differentiation of income distribution among this group depends on quantity of the products. According to my survey, there are only 2-3 persons in this group that can gain a considerable amount, which is twice or three times than others. The result might be that they have adequate investment capital to collect a large quantity. Investment capital partially comes from the load from large buyers—non-Yunnanese merchants and Yunnanese merchants. On the other hand, the long-standing relationship with higher-level traders also guarantees their selling with low risk. Both of those factors are denoted that they may reap more amount of product than the others, which eventually results in the differentiation within this group. Therefore, this group is the highest skewed income distribution group.

For the non-Yunnanese merchants, Yunnanese merchants, the skewed are not as high as local merchants; And each merchant will have his/her own links with the local merchants at different regions. Since they act as a bridge to commercialized NTFP from locality to outside, their abilities to intermediate local groups and outside groups determine their benefit distribution. In addition, the traders who have special known-how techniques to maintain freshness of the products and goods color in dried products can sell quality dried products and reduce spoilage. Since it require only simple technique, the products of different process are almost the same quality. As field survey, differences in income distribution are not more than twice.

In table 5-3, I treat the benefit distribution within villages are even, in term of a simple product. However, there are 8 large households who are involved in the harvests of both products. Those households have included at least three

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<sup>8</sup> There are no any overlapping between local merchants in fresh bamboo shoots trading and the one in dry bamboo shoots trading. Similarly, between non-Yunnanese merchants in fresh bamboo shoots and the one in dry products also do so. Since each actors have their specialization and particular relationship to maintain their trading (detailed discussion in next section).

generations. Since there are 15 households and 32 households engaged in bamboo shoot and resin gathering respectively, therefore, there are 24 households that depend on resin and 7 households that rely on bamboo as simple products they can collect. For the latter (bamboo shoot collectors), they are large families divided, after the youth generation marriages (this arrangement discussion in next section). Hence, although there may be a skewed income distribution with villagers in the combination with both products collected by the same household, it benefit sharing is relatively equitable, if we take the population issue into consideration. Therefore, regardless of ethnicity the income distribution is relatively even in Huibinhe.

On the other side, if we take gender issue into consideration, for the households who harvest both resin and bamboo shoots, women are more involved in bamboo shoot collection, processing and marketing, but men tend to gather resin. That pattern also happened in the households who extract the single product as well. However, mostly the incomes are shared equally intra-household, and the expenses of incomes are based upon the discussion intra-household.

### **5.3 Institutions along with NTFP Commodity Chain**

In the above section, income distribution was examined through vertical and horizontal dimensions. In this section, I am going to examine the underpinnings of those distributions. Clearly, the access to commercial benefit from NTFP commodity chain is controlled and maintained by various mechanisms at each level of the chains. Therefore, to map the access along with NTFP is to map the multiple mechanisms. These underpin the access of those differentiated social actors who are involved in NTFP trading. In this section, firstly, different actors means of access control and maintenance would be examined briefly. Secondly, a simplified figure would be presented to illustrate the mechanisms of access maintenance and control.

### A. Villagers

For the resin, after 1992, villagers have fully controlled access to tap resin from pine, in both state forests and collective forest, as well as free hold forest land. These forest zones are now designated as nature reserve. Notably, the freehold forest land in this community is mostly agriculture land. However, as discussed above, the farmers who can control the access to resin must bear licenses of resin tapping. The licenses are issued by the Prefecture Forestry Bureau. This practice is a way to prevent overtapping as well as to ensure that farmers have knowledge to use resources efficiently.

According to the access arrangement, the villagers' access locally depends upon "haoshu"<sup>9</sup> arrangement within the community. Therefore, regardless of nature reserve or collective forest, the access to tapping resin will be controlled by individual households as long as the tree is marked. All the residents in the community recognize the marked trees. Due to the capacity of labor supply, it is impossible that one household can mark a larger area than others. In most case, the trees one household can mark is about 500 to 900.

Additionally, the government also has zoning activities in the nature reserve for resin tapping allocation, and to regulate the marked activities. These can reduce inter-communities conflict. In general, the zoning activities follow traditional inter-community boundary. Therefore, the villagers can control the access to tapping resin following their social norm of tree marking, and in cooperation with the officials to enforce property rights. The maintenance of access is based upon their continuities in tapping. The mark they made is various collecting tools on the tree. Therefore, in case one household might stop tapping, the mark will be taken back. Others would replace the marks by their own tools. In practice, villagers generally tend to give their marked trees to their family members, when they abandon tapping temporarily.

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<sup>9</sup> "hao" means mark.; "shu" is tree.

Regarding bamboo shoots harvest, there are 15 households that heavily produce for commercial purpose, but the other households also collect a small amount for self-consumption. Within the 15 households, there are 9 households have access to both resin and bamboo shoots. This means there are 7 households highly dependant on bamboo shoots as the single commercial products. These households are young newly married couples who have no access to resin tapping from their parents. There are no zoning activities to claim access to bamboo shoots inside the community. Hence, all the community members have access. However, due to labor capacity supply, there are only 15 households highly dependant on its commercial activities. On the contrary, the officials conduct the inter-communities zoning activities in bamboo shoots collection area. These include both state forest and collective forest in the nature reserve. In terms of state forest delineation, the government recognizes and acknowledges local traditional boundaries; and the collective forest followed “Two Mountain System” policies. Therefore, the in nature reserve in terms of access to harvest bamboo shoots are following tradition. Both of them are the warrant for villagers’ control and maintenance of access to bamboo shoot collection. Hence, the bamboo shoots and resin collection area in the nature reserve in terms of state forest is absolutely overlapping, because the government zoning activities in both products is based upon community traditional boundaries.

In short, local institutions of co-management (detail about how it set up is discussed in Chapter VI) assure people’s access control and maintenance for both products. In resin tapping, continuity and regularity of resin tapping maintain their access to NTFP in terms of individual household. In addition, size and capacity of household labor supply is the mechanism to reduce the differentiation in NTFP collection access among community members. All of those factors contribute to villagers’ access to benefit from NTFP collection.

### **B. County Resin Factories in Resin Trading**

Based upon the principle of “one county, one factory”, the factories can control and maintain their access to resin collection from local villages. Moreover, the road

that the factories maintain is also the access to resin. Knowledge and facilities that they own could assure their access to processing resin to add value from the raw products process. Besides, because the prices of resin collection are set by the government, the officials also provide the factories in advantages access to credit. Hence, access to authority can gain sufficient capital support in collecting resin from farm, but that credit cannot be used in improving facilities. In term of resin selling, their long-standing relationship and social ties with Chemical Factories and Provincial Forest Products Company ensure their products can be sold. Besides, their social ties with exporters can also maintain their access to benefits. This kind of social ties should be maintained based on their adequate supply to exporters' demands. In addition, one factory in Simao which has export rights can derive benefit by directly exporting their products. The export rights are gained based upon their long-term high production abilities and their human resource with their specialization in international trade. However, due to few quota are allocated<sup>10</sup>, there are few products traded directly to international market by this factory.

Therefore, factories access control and maintenance of benefit come from their access to knowledge, facilities, authorities, social ties and export rights. In particular, they may control and maintain access to raw materials through their "social and geographic identities" (one county, one factory). All of those access offered their access to profit.

### **C. Provincial Forest Products Company in Resin Trading**

The Provincial Forest Products Company has been involved in resin business for two decades. As mentioned above, before 1993, the company is the only enterprise who has the license of resin trading with outside Yunnan provinces. Those licenses in fact are the permission for transporting resin to other provinces. That implies that the company can monopolize the product trading in Yunnan. As the state-owned company with access to authority, the company has advantage in resin trading with non-Yunnan customers.

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<sup>10</sup> Quota allocation mechanism will be detailed discussed in exporters part.

Of course, this regulation with “Central Planning” economics characters was abandoned after 1993 in order to promote the flexibility in trading. However, the elimination of regulation is not the elimination of social relations and ties. Due to a long-standing relations with the supplier (county factories) and customers (demanders), the company maintain and control the benefit access from commercial resin. These social relations and ties are not based on the kinship or ethnicity or price-based mechanisms, rather it is the historical consequences and products of “Central Planning Economy”. Therefore, an access to authority and the historical consequences is the way the company to control and maintain their social ties. This eventually contributed to access control and maintenance, and their benefits from this commodity chain.

#### **D. Private Individuals in Resin Trading**

Private individuals were engaged in resin trading after 1993, the year licenses were abolished. In general, the persons are those who used to work in chemical factories. Thus, they have knowledge in the resin trading and understand the marketing process. Based upon their social relation and ties with other chemical factories, they can sell their products. Table 5-1 shows the price they sold is a bit lower than that of the state company. It is due to their low operation cost. Thus, the knowledge and understanding of resin trading plus social ties as well as comparative cost advantages are mechanisms to ensure their profit from commercial resin.

#### **E. Exporters in Rison Trading**

The exporters in resin trading could benefit from access to quota and export rights. For the latter, it is the institutional arrangement to regulate the enterprises' access to international market, which was set by the Ministry of Foreign Trade. This arrangement thus contributed to the profit uneven distribution between the resin factories and exporters. The enterprises which attend to gain export rights should have specialized human resource in foreign trade. Besides, the enterprises ability in organizing export also is a key indicator to receive export rights.

The quota system is set up by a foreign trade entity. In this case, it is a quota set by the European Union (EU), which aims to control imported products. Based upon negotiation with Chinese Ministry of Foreign Trade, European Union generally allocates a quota to China. An extra product exporting will be subjected to extra tariff, which subsequently impact on the trade relation between China and EU. Therefore, the distribution of quota among Chinese enterprises is treated strictly by central government. Each year, the quota are principally distributed among in accordance to the quantities that enterprise export last year. However, in practice, Beijing Exporters are allocated a larger quota than that of Guanzhou Exporters. It is because Beijing Exporters geographically have an easier access to central authorities, it also can be viewed as their advantage “social and geographic identities” determine more quota allocated to them, and subsequently contributed to their great business last year.

Therefore, the bearing export rights determine vertical differentiation in profit distribution; quota system is contributed to horizontal uneven income distribution. In practice, the underlying “social and geographic identities” and knowledge are generally mechanisms that support exporters can control and maintain their access to benefit from commodity chain.

#### **F. Transporters in Bamboo Shoots Trading**

Those transporters mostly have kinship ties or an established friendship with villagers. Moreover, their “social and geographic identities” as Simaoese also provide opportunities to collect bamboo shoots from local farmers. This identity allows them to mobile in Simaoese without concerning transportation permission or other regulations, which launched out by local conservation station. The kinship and friendship ensure that they may buy the bamboo shoots from their relatives or friends without payment immediately. Further, they can pay villagers after the products are sold. As mentioned above, in most cases, the transporters are unemployed or the farmers without sufficient land. Thus, the bamboo shoot harvesters as their relatives or friends are apt to help them by selling the product to

transporters. In turn, the transporters also offer free transportation to their relatives or friends sometimes. This kind of service exchange rather than gift exchange assures them to maintain relationship with relatives and friends. In addition, owned vehicles offer the transporters the possibilities to maintain their relation with kin and friends, and involvement in bamboo shoot trading as well. The vehicles they have are the tractors, which can transport people, product and livestock. Moreover, they also have to have skill in driving and possess a driving-license.

In short, transporters can maintain their access to profit from commercial bamboo shoots, through “social and geographic identity”, kin and friendship, and owning vehicles as well as the skill in driving. In particular, a service exchange mechanism allows them to maintain the kinship and friendship, which further support their access in trading.

### **G. Kelong Green Food Company in Bamboo Shoots Trading**

The Green Food Company, a state owned company, for bamboo shoot marketing and processing is a new enterprise. As mentioned above, the starting of commercial bamboo shoots trading was organized by non-Yunnanese, after the years of market reform. At that period, the non-Yunnanese dominated all the process of fresh bamboo shoots trading. In this case, there were two persons from Zhejiang Province monopolized the business from transportation to final selling. After the Green Food Company engaged in, the two persons through their economic ties with outside still play a key role in local business, even though the company increased purchasing price. Concerning the local economic development, the Green Food Company had discussed with authority to give them prime right in purchasing bamboo shoots. The company carried “social and geographic identity” as Simaonese; therefore, the authority gave them this rights. Now, the company start to dominate this business, and there is almost no space for non-Yunnanese merchants to play in local market. Therefore, an access to authority to justify their “social and geographic identity” play the key role in the company engaging in bamboo shoot trading.

Besides, the company also has knowledge in processing the products, and owns facilities. Information also has a major role to manage purchasing and processing so as to respond to market demand rapidly. Both of those factors contributed to maintain their economic ties with supermarket.

In short, “social and geographic identity”, in this case, plays a key role to eliminate some non-Yunnanese traders, but to facilitate Simaoese enterprises development. The underlying access is the access to authority. However, “social and geographic identity” is the social capital to access to the authority. Hence, the company reaps market by maintaining an access to authority, the facilities, knowledge and information. Maintenance of “social geographic identity” is devoted to the control access of the chains.

#### **H. Local Merchants in Bamboo Shoots Trading**

An effort to localize trade of bamboo trading is conducted by local merchants associated with other actors. This group has “social and geographic identities”, as Simaoese. Previously, there were some traders coming from non-Yunnan provinces to trade bamboo shoots by themselves in Simao for eliminating the local intermediaries which aims to reduce cost. However, the local merchants cooperate with each other, in cooperation with villagers as well as authority to resist outsiders trade locally as the dominant role. Currently, the outsiders had realized “social and geographic identity” become the barriers for them trading directly. Hence, most of them would like to establish economic ties and long-standing relations with local merchants. It is because, on the one hand, it may reduce the outsiders’ travel cost, and they also can put their concentration on other sessions of chain. On the other hand, the most important is that local merchants can deal with some complicated problems on the local level, which is impossible to be done by outsiders easily<sup>11</sup>.

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<sup>11</sup> For instance, the transportation of bamboo products are required to provide taxation receipt in inspection station. However, the inspection staffs are supposed to re-check the weight and the tax they paid, which would spend a lot time and very trouble, consequently might contribute to more woodization of fresh bamboo shoots. But, for local merchants authorities tend to believe

Moreover, long-standing economic ties and social ties with outsiders are significant to maintain their access to outside traders. In most case, the non-local traders offer the advanced fund or payment for local merchants to collect the bamboo products. However, some local merchants run away with the money. The honest in business thus ensure the local merchants to maintain social and economic ties with the outsiders. The honest local merchant may collect greater amounts than others. Combining with their ability in organizing products, it contributes to skewed income distribution within this group.

In short, local merchants control and maintain their access to benefit in bamboo shoots commodity chain through “social and geographic identity”, access to authority, their ability in organizing products and the social ties with outside traders.

#### **I. Non-Yunnanese and Yunnanese Merchants in Bamboo Shoots Trading**

I treat these groups as a whole, because they are all outsiders in the bamboo shoot commodity chain with regard to Simao as a local community, which is considered as local “social and geographic identity”. Therefore, all of them should maintain their social ties with local merchants in order to obtain the products that they want. And to organize a great deal of quantities, they also should have the access to adequate capital for providing the advance fund to local merchants. As a result, access to financial credit from the bank or other resources, for instance friends, assures their adequate capital investment in season of bamboo shoot collection.

An access to information is critical for them to determine the quantities, qualities, and prices. Even though I do not have sufficient data to evaluate intra-group differentiation of income, an available information is major elements to determine the stratification of income within this group, according to my survey. Moreover, the knowledge of keeping freshness of products defines the profit margin. In sum, those two groups can derive benefit from access to social ties, knowledge in

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them; therefore authorities did no re-check the weight.

persisting and market information to maintain their role in the bamboo shoot commodity chain.

#### **J. Large Non-Yunnanese Merchants in Bamboo Shoots Trading**

This actor does not have special access mechanisms to service their control and maintenance in commodity chain. However, the function they provide in this chain is important. Exporters generally do not prefer to do business with small merchants in small quantities. It is costly for them to manage export business. Hence, exporters prefer to purchase large amount from one or two large merchants. Therefore, the large non-Yunnanese merchants play a key role to supply a large supply to the exporters. Due to the function they have, in a long-running communication with exporters, they also established social-economic ties with the exporters to maintain their benefit from this chain. The adequate capital investment is also the factor to insure the quantities they can collect to meet the requirement of exporters. Furthermore, information they can obtain is important for them to respond the oversea demands so as to sell their product to exporters. The knowledge in processing the product provides their maintenance access to attain exporters' requirements. In short, due to the function they offered, the large non-Yunnanese merchants can maintain access to benefit through socio-economic ties, access to capital and information as well as knowledge of processing.

#### **K. Exporters in Bamboo Shoots Trading**

The exporters are key actors in selling bamboo shoots to the global market. Thus, they have to maintain their relation with oversea customers through economic ties. The export rights are mechanisms to enable an initial step in globalizing the bamboo trade. Human resource is the assurance to do international trade as well. Economic ties with large non-Yunnan merchant maintain the supply of the product, and then further maintain the business. In sum, the access to export rights, economic ties and knowledge in exporting contribute to their control and maintenance in access to benefits from bamboo shoots trade in export and global market.

### **L. Local Retailers, Yunnanese Retailers, Supermarket, Non-Yunnanese Retailers**

Three groups are sharing the same characteristics as final actors in the commodity chain. However, their access to profit are all subjected to be structured by various mechanisms. In general, economic ties with merchant are the warrant to gain the products continuously, to maintain and diversify their cargo structures. Besides, the patronage relation with the actors, who offer the market or shop for them would maintain their business. Besides, the information is also crucial for urban market. The facilities like storage, financial capital are critical for them to maintain benefit. Moreover, the supermarket and some retailers tend to have their brand name to create long-standing relation and business reputation.

To summarize, there are various mechanisms of access control and maintenance, which enable the access of traders to benefit from commercial NTFP. It is composed of 1) access to resource in cooperation with authorities, 2) access to authorities, 3) access to information, facilities, 4) access to knowledge, 5) social ties and friendships, 6) exports rights and quota, 7) particularly “social and geographic identity” and so forth. Those factors are eventually contributed to the actors’ access to benefit at the multi-level of NTFP commodity chain. This access in turn supported by differing repertoires of mechanisms operating on price and market shares at each level of the chain.

Below, I present a simplified diagram to map access mechanisms of access maintenance and control in the NTFP commodity chain with respect to those differentiated social actors. The diagram is a summary to present and clarify what structures, relations and mechanisms that different actors utilize to support their access to commercial NTFP profit. The diagram is used to understand how those structures, relations and mechanisms embedded in the NTFP commodity chain (see Figure 5-5).

Figure 5-5 Access Map: Mechanisms of Access Maintenance and Control

Resin	Bamboo Shoots
<p><b>Villagers</b>.....<u>Control and Maintain access to Resource</u>            -----<i>Joint management</i>            -----<i>License of Tapping</i></p>	<p><b>Villagers</b>.....<u>Control and maintain Access to resource</u>            -----<i>Joint management</i>            -----<i>labor arrangement</i></p>
<p><b>County Resin</b>.....<u>Control access to facilities and knowledge, and Maintain access to authorities</u>            -----<i>Social ties/Export right</i>            -----<i>Social and geographic identity</i>            -----<i>Credit/Capital/Quota</i>            -----<i>Technical Skills</i></p>	<p><b>Transporters</b>.....<u>Maintain access to Market</u>            -----<i>owned vehicles/skill of driving</i>            -----<i>kinship/friendship with villagers</i>            -----<i>Socio-geographic Identity</i></p>
<p><b>Provincial Forest Product Company</b>.....<u>Maintain access to information market and authorities</u>            -----<i>Social Ties</i>            -----<i>Credit and Capital</i>            -----<i>Historical Consequences of "Central Planning Economic"</i></p>	<p><b>Local Merchants</b>.....<u>Maintain access to market And authority</u>            -----<i>Social and geographic identity</i>            -----<i>Social ties/ credit/capital</i>            -----<i>Ability of organizing products</i></p>
<p><b>Private Individuals</b>.....<u>Maintain access to market</u>            -----<i>Social ties/economic ties</i>            -----<i>Credit and Capital</i>            -----<i>Knowledge of demand</i>            -----<i>Comparative cost advantage</i></p>	<p><b>Green Food Co.</b>.....<u>Control access to knowledge Maintain access to market/felicities</u>            -----<i>Social and geographic identity</i>            -----<i>Social ties/ Credit/capital</i>            -----<i>Technical skill in processing</i></p>
<p><b>Exporters</b>.....<u>Control access export part Market and maintenance access to authority</u>            -----<i>Exporter rights</i>            -----<i>Knowledge of Export Quota</i>            -----<i>Social and geographic identity</i></p>	<p><b>Yunnanese/ non-Yunnanese Merchants,</b>            .....<u>Maintain access to market, knowledge and information</u>            -----<i>Social ties/Credit/ Capital</i>            -----<i>Skill in keeping freshness</i></p>
	<p><b>Large Non-Yunnan Merchants</b>            .....<u>Maintain access to market</u>            -----<i>Social and economic ties/capital</i>            -----<i>Skill in storage/processing</i>            -----<i>Ability in organizing products</i></p>
	<p><b>Exporters</b>.....<u>Control export market and Knowledge and information</u>            -----<i>Social/economic ties/ capital</i>            -----<i>Export rights/knowledge/information</i></p>
	<p><b>Supermarket; Local/Yunnan/non-Yunnan Retailers</b>            .....<u>Access to market</u>            -----<i>Social ties/capital</i>            -----<i>knowledge of demands</i></p>

## Summary

Through mapping access and actors along with NTFP commodity chain, I examine who are the actors involving in the chains, and income distribution along with the chain. The chapter also explains the structure as well as mechanisms which support the actors' access in the chain. Firstly, the maps of the domestic chain of resin and bamboo shoots are presented, which aims to give an insight into how the products are flowing in domestic market, and who are the actors involved. Further, the maps of international chain of both products are illustrated. In comparison, the chain of resin involves less actors than that of bamboo shoots. The actors in resin are mostly the state companies. Bamboo products trade involves more private sectors or individuals. As a result, whatever international chain or domestic one, the resin is generally less complex than bamboo shoots trading. Government involvement in resin is more active than bamboo shoot trade at each level of the chain. The government involvement shaped the chain and the network of how the chain organized.

Secondly, combining both quantitative and qualitative methods, the income, profit and distribution of the actors are examined from vertical and horizontal dimensions. Clearly, the differentiation of income distribution exists in both vertical and horizontal dimensions. Through analyzing differentiation of the actors, it is evident that defining various traders as monolithic "middleman" causes many problems. Rather, traders are so diverse, in term of benefits they reap, functions they provide, and relationships with other actors, as well as their social identities. Therefore, the concept or term of "middleman" is problematic. Furthermore, the analysis also prove that traders or middleman are not always parasitic intermediaries who accumulate wealth at expense of poor forest-dwelling extractors. The incomes gained by some of them are quite minimum, slightly high than their cost, and some are even also in debt. In comparison between resin and bamboo shoot, the government again plays an active role in price determination in the resin chain. Subsequently, while a trade deal benefit the poor forest-dwellers, the costs the factories have to carry are increasing.

To understand clearly how the chain is organized and what structures and mechanisms are supporting the actor's access, what leads to create differentiated income distribution. In the third section of this chapter, I examine the multi-level institutions of commodity access. The institutions supporting actors' access to NTFP trading are varied at each level of the chain. It is composed of 1) access to resource in cooperation with authorities through joint management, 2) access to authorities via "social and geographic identity", 3) social ties of kinship, friendship and partnership, 6) exports rights and quota systems, which may be set up by national authority with the effect by international agency and so forth. Those factors are eventually contributed to the actors' control or maintenance of access to benefit at the multi-level of NTFP commodity chain. Those access in turn supported by differing repertoires of mechanisms operating on price and market shares at each level of the chain.

Local institutions not only shape the organizing chain but also guide social differentiated actors' economic behaviors and decision. Therefore, the commodity chain and actors' economic behaviors are affected by the articulations of cultural, political and economic factors. Neo-classical commodity chain analysis failed to explain the complexity. Local terms as well as observation assist me to understand how price and non-price mechanisms affect the commodity chain, how differentiated actors are articulated, and how the access is controlled and maintained by different actors at each level of the chain. Clearly, the networks of commodity chain are the networks of institutions supporting, guiding, and shaping actors' articulation, and eventually contributing to access to benefit differentially. In particular, "social and geographic identity" are playing a major role in many part of the chain to support the involvement, control and maintenance of access in the chain (the concept of "social and geographic identity" would be discussed in detail in last chapter). Thus, this study support the conclusion that the access is defined by "ability" rather by "right" (Ribot and Peluso, in press).

As compared, the chain of resin is more highly affected by international agency in guiding the organization of the chain than the benefit distribution than bamboo shoots. Moreover, there are more institutions to support and guide each actor in resin trade. In the other words, each actor in the former chain on the one hand is supported by more institutions for their access, on other hand, provides more function. Furthermore, even though it seems that there are more political factors affecting in the former chain and more economic factor impact on the latter, both of them are cultural embedded at each level of the chains.

This chapter, mapping access and actors along with NTFP commodity chain, is main part of the thesis. The chapter analyzed various institutions of access to benefit from commercial NTFP. In the next chapter, I attempt to explore the dynamics aspect of local institutions. It is aimed to understand the local actors' response to the commodity chain, and the network of institutions.