CHAPTER XI

THE PARTICIPATION OF THE POOR IN LITCHI VALUE CHAINS TO HANOI

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SUMMARY

The present study assesses the participation of the poor in litchi value chains and ways to support more profitable access for the poor to high-value chains, including chains driven by supermarkets and quality shops. Litchi from Yen The district in Bac Giang has been chosen due to the high percentage of poor households in Yen The district (16% in 2003), the income opportunities generated by litchi in the area, and the marketing constraints faced by farmers. The share of different points of sale in the final retail distribution has been appraised through a census of all the litchi retail vendors in two districts, Cau Giay and Hoan Kiem, in the summer of 2004, and then extrapolation to urban Hanoi. Then in-depth and group interviews were conducted on a panel of retailers, wholesalers, collectors and farmers, plus Bac Giang provincial, district and commune authorities. The study demonstrates the importance of street vending in litchi retail distribution (78% in quantity, 53% in employed vendors). Street vending attracts peri-urban farmers limited by access to land, and supplies them with income to feed their family eight months out of twelve (outside the litchi season, street vendors sell a variety of fruits). Shops and market retailers are other important distributors of litchi. Only two supermarkets were selling litchi at the time of the survey, but this number may increase quickly in the next years. While the commodity chains involving street vendors are characterized by spot transactions, with prices being the main determinant for choice of suppliers, fixed market retailers, shops and supermakets are involved in supply chains with regular relationships, and a concern for quality and traceability of litchi. Thanh Ha and Luc Ngan are the most sought-after origins, due to the reputation of their litchi, in particular with regards to sweetness. Yet, in Yen The district, the same variety is grown as in Luc Ngan and Thanh Ha, so opportunities still exist for Yen The farmers to improve the reputation of their litchi. Another advantage of Yen The district is the possibility of selling early litchi in the market. In addition to promotion of quality and early sales, the poor have taken opportunities to increase profits including enhanced technical support to increase their yield, by taking better care of their plantations and making better use of non-chemical inputs. In terms of organization of marketing, the Thanh Ha litchi association is an interesting case of collective action among farmers to label the origin of the litchi and directly supply shops and supermarkets. This chain was generating the highest profits for farmers in the season 2004, but it is also the most fragile due to the high costs at the collection and packaging stages and the product perishability. Recommendations to support the business of the poor as street vendors and as litchi farmers are given in the report conclusion.

INTRODUCTION

Why Litchi?

The reasons for choosing litchi for the study are presented below:

- Litchis are tropical trees, considered as a specialty of Vietnam
- Litchi trees can produce fruits in 200 hours in temperatures under 13 degrees centigrade and adapt to different types of soil, even impoverished soil and areas with poor irrigation.
- Litchi fruits are gaining increasing market share in both domestic and foreign markets, in a diverse array of forms (i.e. fresh, dried, canned, processed as vinegar and drinks). At the moment, 70 to 75% of Vietnamese litchis are traded domestically while 25 to 30% are exported, mostly to China.
- In Vietnam litchi is part of the MARD development programs against poverty. Litchi is one of the major trees used in projects aimed at covering empty land and bald hills with green areas initiated by the government 20 years ago. Growing litchi has generated increasing incomes for peasant households since 1992, especially in the Northern highlands, e.g., Bac Giang (Yen The, Son Dong, Lang Giang, Luc Nam, Yen Dung), Thai Nguyen (Dong Hy), Quang Ninh (Hoanh Bo), Lang Son, Phu Tho, and also Ha Tay. It is also farmed in Dac Lac Province (an experiment of 20 hectares).

In recent years administrators at all levels, including central and local authorities, have implemented several activities to assist litchi growers by applying agriculture tax exemptions and eliminating all kind of taxes relating to litchi trading, providing funds and guiding Chinese traders to big farming areas such as Bac Giang for purchasing and processing.

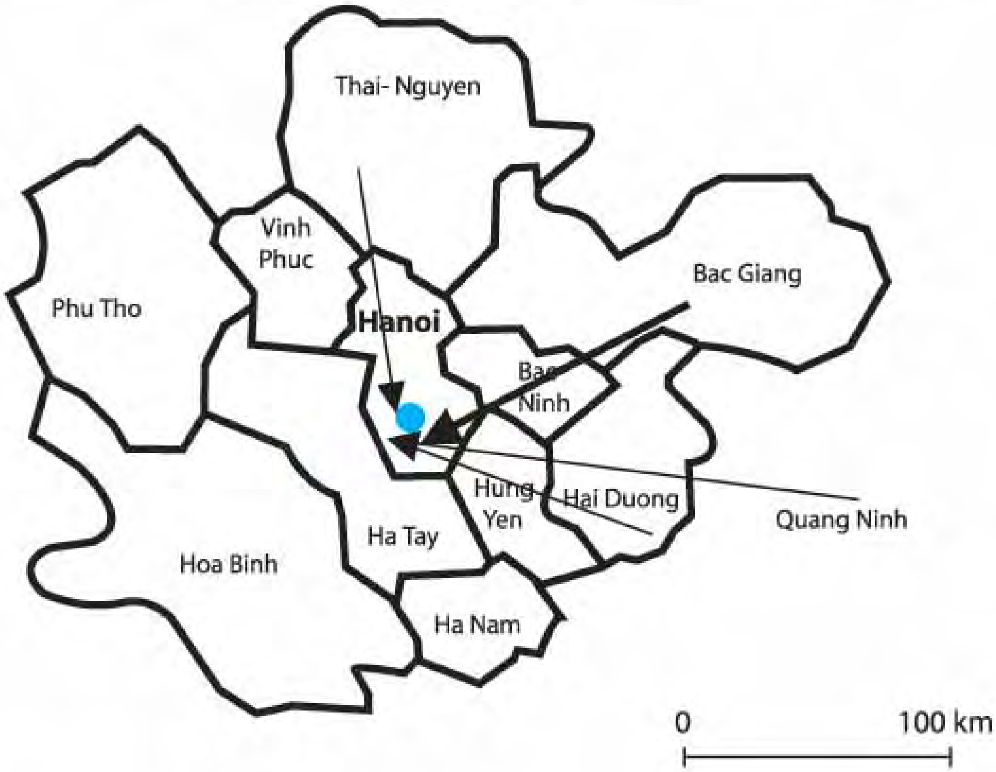
- Litchi production requires a lot of labor; hence it can be termed as a labor-intensive pro-poor activity. Labor is especially needed at harvesting time: litchi, after being collected from the trees, need to be tied in bundles of 2-4 kg each and placed into baskets. As they are perishable fruits, they cannot be loaded in a big volume for transfer unless they are carefully packed. This process requires a lot of workers. Numerous people are needed to take part in the distribution of fresh fruits in big cities, foreign countries and rural places where litchis are not grown. In regards to processing, numerous people are also needed for drying, packing, etc. Litchi harvesting and processing particularly attract farmers from Nam Ha and Hung Yen who come as migrant workers during the litchi season because their land areas are limited (some Bac Giang farmers are also in this situation). This is why development of litchi production is seen as an appropriate route towards employing the rural poor, which is particularly important for the Ministry of Agriculture, the Ministry of Trade and local authorities.

In reality, as we will see in this study, there are still many poor people who are coping with difficulties in litchi production due to the shortage of capital for investing in trade and production. In recent years, litchi prices have dropped dramatically (from 13,000-14,000 VND per kilo in 1990-1997 in production areas, it dropped to 4,500-5,000 in 2001 and 2,500-3,000 in 2004), so farmers need to find new market opportunities. As far as producers are concerned, they have to sell fresh fruits to agents and buyers, who often insist on low prices, or they have to sell fruits as soon as they have dried them at low prices because they need money. For the poor traders, due to low capital, the volume of trading commodity is limited, thus their income per working day is very low or they have no chance to participate in the big markets. The poor have difficulties in approaching the exporters, processors and big volume distributors, especially in the areas of minority people who have difficulty in obtaining information on markets. Supermarkets, for their part, are more and more involved in the distribution of fruits, yet the marketing of litchi is still limited, and this study will contribute to the understanding of conditions for higher supply of supermarkets and other chains interested in the distribution of quality fruits.

In summary, while litchi production and marketing offer much potential for the poor, they may be faced with difficulties regarding access to outlets generating high value, including supermarkets. The present study assesses the participation of the poor in litchi chains and ways to support them in gaining more profitable access to high-value chains.

Why Bac Giang, particularly Yen The?

Bac Giang is one of the main regions supplying litchi to Hanoi, together with Hai Duong, Quang Ninh and Thai Nguyen (see Appendix 1). Bac Giang is the most important province in Vietnam in terms of litchi production: its production of litchi in 2004 amounted to 120,100 tons, i.e. 29% of the nation's litchi production, followed by Dong Nai and Ben Tre in the South, then Hai Duong which represented 36,340 tons, i.e., 9% of total production. The rest of the production is distributed in various districts of Northern Vietnam, the center and the south. The main provinces supplying litchi to Hanoi are Bac Giang, Hai Duong, Thai Nguyen and Quang Ninh (see Map 13).



Map 13- Map of provinces supplying litchi to Hanoi

Bac Giang has been selected as a province with high concentrations of litchi farms and a lower annual income per inhabitant than that of other provinces (see Table 141).

Bac Giang is a mountainous province, adjoining the main economic zone in the North, 50 km north of Hanoi. It contains one town and 9 districts (listed in appendix 1) and covers 382,200 hectares. The provincial transportation system is convenient, including roads, railways and waterways which are distributed rather evenly. Some of the important roads such as National Highways 37, 31 and 279 have been upgraded, particularly National Highway 1. There are three rail routes and three big rivers in the province (Thuong,

Unit: 1,000VND/person/morth

	Entire Country	Urban Areas	Bac Giang	Quang Ninh	Hai Duong
Income	356,08	622,06	270,30	432,37	275,74
Expenditure	293,73	497,48	204,12	322,33	227,91

Table 142 - The level of income and expenditure in Vietnam and some regions growing litchi

Source: "Vietnam living standard survey" 2002, General Statistics Office, Statistics Publishing House, Hanoi, 2004

Cau and Luc Nam rivers). All of these make up a transportation network connecting to all of the big economics development areas, such as Hanoi, Hai Phong, Quang Ninh, Lang Son and China. Bac Giang has 382,200 ha of natural land, including 32.2% agricultural land and 28.8% forest; the rest is urban area and land for special purposes. The topography is diverse, including land with an average altitude of 100-150 meters and mountainous areas more than 300 meters high.

After an exchange of views with the leaders of the Department of Agriculture and Rural Development of Bac Giang, it was commonly decided that Yen The should be selected for an in-depth survey on the participation of the poor in litchi production, because it is the second district in importance for litchi production after Luc Ngan and it has the highest poverty rate among the litchi-producing districts (see Table 142). Luc Ngan district has been chosen for a more general survey.

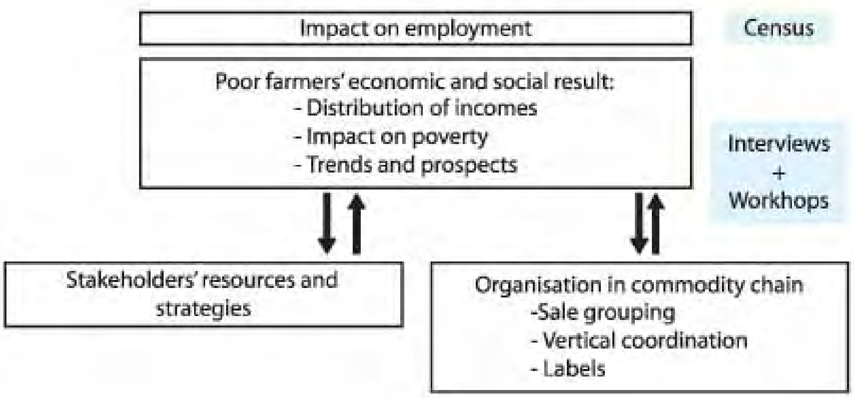
Table 143 - Number of poor households in Bac Giang

	2001		2002		2003	
	Number (households)	Proportion (%)	Number (households)	Proportion (%)	Number (households)	Proportion (%)
Entire province	62,012	100.00	56,870	100.00	44,077	100.00
Out of which:						
1. Luc Ngan	6,489	17.03	6,648	16.74	5,313	13.13
2. Yen The	5,642	26.86	4,374	20.24	3,599	16.42

Source: Bac Giang General Statistics Office,Annual statistics 2003, Bac Giang 2004.

Yen The is in the low mountainous area. In Yen The district the total natural land area is 30,101 ha, covering three small hamlets and 18 communes, including eight communes categorized as being in difficult conditions that are in zone III, mountainous and distant from the roads, where the proportion of poor households still remains at 22.4%, higher than the district average.

Figure 37- Nature of information sought



RESEARCH OBJECTIVES AND METHOD

A. Objective

The research objective is to assess the conditions for increasing the participation of the poor in the litchi fruit value chains through their distribution in supermarkets and other value-added retail chains.

B. General framework

The study follows the general framework for the conduct of case studies of Component 3 (see Chapter 9). The information investigated answers three main objectives (see Figure 37):

1) Estimating the impact on employment of the poor as traders within the different distribution chains (see detailed method below for the census)

2) Evaluating the economic and social results of farmers and traders involved in litchi production and marketing, especially the poor (distribution of incomes, impact on poverty in the past, at present and in the future)

3) Assessing the relationship between economic and social results, stakeholders' strategies and resources, and socio-economic organization (in particular horizontal coordination, e.g., sales grouping, vertical coordination, labels and brands)

The information on the latter two topics was gathered through farmers and traders' interviews; the sampling procedure is detailed below.

Chronologically, the following steps were followed for data collection:

1) Collecting existing documents about litchi, especially the reports available in Bac Giang administrations (provincial, district and commune), scientific reports and statistics of the General Statistics Office – April 2004

2) Organizing a meeting to present the methods for doing surveys on litchi, the different steps and the questionnaires prepared (the participants were from Malica plus Vegsys project) – May 2004

3) Carrying out trial interviews and revising the questionnaires –June 2004

4) Taking a census of the litchi traders in Hanoi during the litchi season – June 2004

5) Interviewing litchi traders in Hanoi – June and July 2004

6) Carrying out a survey on litchi production in Bac Giang with in-depth interviews of litchi producers and collectors – July and August 2004

7) Analyzing the data, creating the report and checking missing information (September 2004 to May 2005).

Traders' census method

A. Objective

The objective of the census is to enumerate all traders involved in the distribution of litchi in Hanoi and compare the level of employment for the following categories of outlets:
- Shops and street stalls
- Litchi wholesale and retail stalls in the markets
- Street vendors
- Supermarkets

B. Definitions

The following definitions were taken for the different points of sale:
- Shops are covered and surrounded by walls. Goods are placed on shelves or tables or baskets, not on the ground. They can be located in market places or be in independent locations.
- Street stalls are shopping places either in the open air or under umbrellas, without surrounding walls. Goods are placed on shelves or in baskets in the street.
- Market retailers are vendors selling fruits in marketplaces, usually in baskets, and in specialized fruit sections. They can be year-round fruit traders or producers from

suburban areas who sell fruits during their leisure time.

- Street vendors carry fruits on foot or by bicycle from one street to another. They can be either from the city or from other regions.
- Supermarkets are defined according to the list of the Department of Trade (see Chapter 3).

C. Area selection

a. City selection

Hanoi was selected as it represents one major market for litchi and it gathers all the operators that participate in the litchi channel at wholesale and retail stages: wholesalers (at the wholesale markets) and retailers at the various retail points (traditional markets, shops, street stalls and street vendors). Hanoi receives a large volume of litchi from other provinces. Inside Hanoi we conducted an exhaustive census of all distribution points in two districts, especially to estimate the number of litchi street vendors in Hanoi after extrapolation. We also conducted the census of litchi wholesale and retail traders in the main city markets, which include markets outside the two selected districts.

b. District selection

Among the nine urban districts of Hanoi, we selected one old district (Hoan Kiem) and one newly founded district (Cau Giay). Hoan Kiem district has the biggest fruit wholesale market (Cho Long Bien), a number of longstanding traditional retail

Map 14- Location of selected retail markets

Map by Maximilien Cugnet, CIRAD-MALICA

markets and some recent supermarkets. There are more vendors here than in other-cdistricts, as along the Red River dike there are numerous vendors that come from different provinces. Cau Giay has a large volume of litchi brought from the surrounding provinces via the Son Tay–Hanoi road. There are less markets, shops, street stalls and supermarkets than in the Hoan Kiem district. The number of street vendors here is less than in other urban districts (most of them come from Ha Tay during the day and don't spend the night in the city).

c. Market selection

The following eleven retail markets were selected: Thanh Cong market; Hom Duc Vien market; Mo market; 19/12 market; Buoi Market, Hang Be, Hang Da, Nghia Tan, Trung Hoa, Thai Ha, Nha Xanh (see Map 14). Using the data of the Hanoi Department of

Trade in 2004, we estimate that these markets gather 22% of the total number of traders in urban Hanoi (i.e., 3,733 out of 17,199 – see Son et al, infra on the calculation of the number of urban retailers).

d. Time of census

In 2004, litchi was available in Hanoi for about 10 weeks, from early May through the end of July. The census was conducted twice at the time of maximum litchi quantities, first from June 21 to 23, second from June 28 to 30, to account for possible weekly variations.

e. Calculation method for extrapolation

From the census of the different points of sale (shops, street stalls, street vendors), the averages of the numbers provided by the two censuses, and the estimation of the size in m^2 of the area where they were enumerated, we calculated the density (number/km^2) of the different points of sale in the two districts. These two densities were averaged to reflect the average city density. This average density was used to extrapolate the total number of points of sale in the city using the total city area. In regards to the market retailers, we estimated also a density of litchi retailers/km^2 by estimating the size of the market area; then we extrapolated to the total city by considering the share of the selected markets in the total market area, i.e., 22%.

In-depth interviews of urban traders

1. Information investigated

The interviews were conducted to gather information on: (i) employment generated by litchi vending; (ii) social and economic results; (iii) indicators of poverty; (iv) organization of the marketing chains, in regard to the relationships between suppliers and purchasers; (iv) constraints, opportunities and prospects of the traders; (v) economic costs and profits.

2. Sample selection for in-depth interviews

a. Supermarkets

We selected 13 supermarkets (nine for in-depth interviews and four for rapid interviews. The list is in Appendix 3). But in the end we found that only two supermarkets were selling litchi at the time of the survey.

b. Wholesalers

In 2004, due to the low price of litchi, the business of litchi wholesalers was low and they mostly acted as suppliers of shop space for wholesale transactions carried out directly between collectors and retailers in Long Bien. We interviewed three of these wholesalers.

c. Litchi shops and street stall vendors

The shops selling labeled and packed litchis have been given priority in the interviews as they represent an innovative, value-added way to distribute litchi. The total number of interviewed vendors was six. The interviews were especially difficult because the shops had been subject to interviews by journalists during the summer on problems related to fruit safety, and they were reluctant to answer questions. So in the end we had one detailed interview of a shop, and five quicker interviews.

d. Market retailers and street vendors

A total of six retailers were interviewed. As for street vendors, the number selected for in-depth interviews was two in each district, and for quick interviews, five per district.

Rural participatory appraisal and in-depth interviews

1. Selection of districts

Two districts were selected for the interviews: Yen The and Luc Ngan. In the introduction, we presented the reasons for the choice of these districts in terms of importance of litchi production and, in the case of Yen The, the importance of poor households. Luc Ngan is considered as the "second capital of the litchi trees", just after Yen The. This district was selected to assess the general situation of litchi production in the district so as to evaluate the advantages of litchi marketing when the reputation of this product is recognized.

2. Selection of communes

Yen The has 21 administrative units (including communes and towns). Litchi trees are farmed all over the district but they appeared early in only few communes, including Hong Ky and Dong Vuong, and afterward expanded to the other communes. The following three communes were selected as representatives of commune diversity in terms of age of production, location relative to roads and people's incomes:

(i) Phon Xuong commune: located near Cau Go town, close to big roads. Litchi production, average per capita income and the proportion of the poor households are at moderate levels. (ii) Hong Ky commune is the earliest location of litchi farming in the district. Located far from the big roads, this commune has difficulties in product collection, especially when it rains during harvest time and trucks cannot go into the commune to purchase the products. Incomes are low. The inhabitants are of different minority groups.

Table 144- Data on population and fruit growing in the three selected communes

	UNIT	COMMUNES		
		Phon Xuong	Hong Ky	Dong Son
1. POPULATION	NUMBER	3,956	3,860	7,238
2. TOTAL OF THE HOUSEHOLDS	NUMBER	1,053	900	1,731
4. LAND AREA	HECTARE	640	920	2,472
6. AREA OF FRUIT PLANTS	HECTARE	299.31	275.14	362.33
OF WHICH: LITCHI AREA	HECTARE	273.55	241.73	317.61

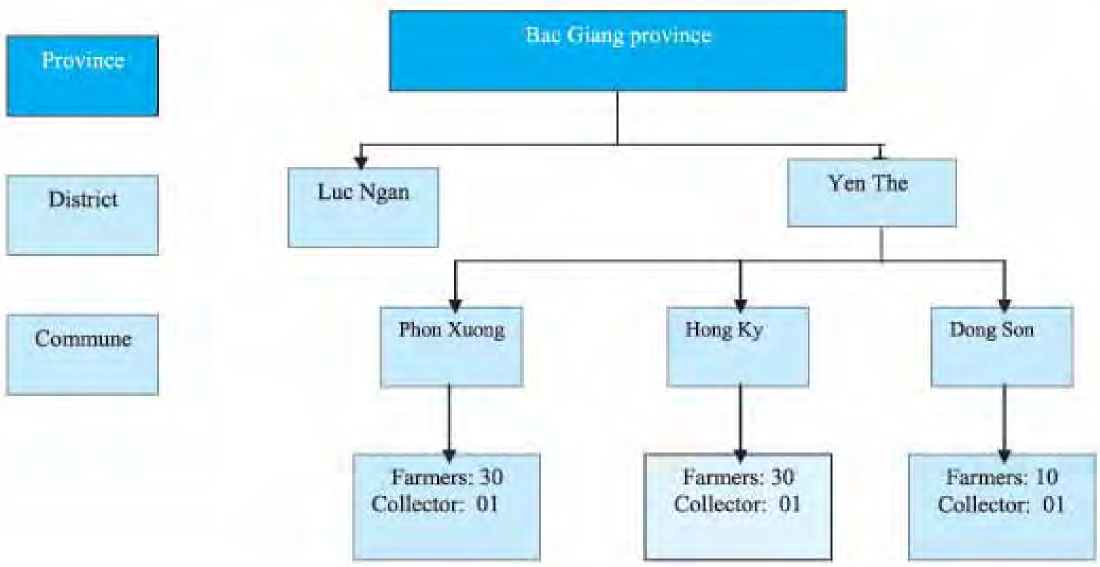
Source: Results of Investigation, 2004

90% of the people in the three selected communes participate in litchi farming.

a. Household selection

In each commune, 10 poor households were selected under the direction of local authorities according to the following criteria: (i) poverty; (ii) participation in litchi farming; (iii) strong will to improve their lives. Additionally, one collector was interviewed in each commune, as well as 20 non-poor farmers in Phon Xuong and Hong Ky (See Figure 38).

Figure 38- Selected areas and samples for surveys in Bac Giang province



3. Nature of interviews

Group interviews were conducted with officials at Provincial, district and commune levels on the following topics: the development and current situation of litchi production and marketing in the area, the living stan dards of the people in the litchi growing provinces and districts, and suggestions to improve marketing, including sale to supermarkets. In-depth interviews were conducted with the selected farmers and collectors; the topics investigated were similar to the topic of traders' interviews.

MAIN RESULTS

A. Involvement of the poor in litchi distribution

1. The diversity of litchi points of sale

Hanoi is a large market for industrial and agricultural products, because of its increasing demographic and administrative importance. Hanoi is the gathering place of all types of trade, i.e., traditional trade, e.g., wholesale and retail markets, and modern trade, e.g., trading centres and supermarkets, to serve the needs of around 2 million residents in the urban district and almost 1 million in the suburban area, plus visitors who temporarily stay in the city.

The city's biggest and most longstanding wholesale market for fruits is Long Bien market in Hoan Kiem district. In markets, we distinguish regular market retailers, who have fixed locations, and irregular retailers, who can change of location from one day to the other and rent tables on a daily basis. Regular retailers sell fruits of better quality and high value (such as mangoes, green oranges, melons, grapes and star apples) which require a lot of capital, while irregular retailers sell seasonal fruits, or fruits of lower quality which require less capital. In the litchi season, litchi accounts for 10 to 30% of all the displayed fruit of fixed retailers, and is of good quality in terms of color, freshness and fruit homogeneity. Fixed retailers have regular customers of different income categories. Among irregular retailers (non-professional traders) who have no fixed location and sell only one or two or three kinds of fruits including litchi and other fruits such as dragonfruit and mangoes, litchi accounts for 65 to 75% of the total quantity sold, and is not as attractive as that of the above mentioned retailers. These vendors don't have regular customers.

Litchi is also sold in fruit shops and stalls along the streets, which all turn to litchi during the harvest season (from June to August). The distribution of shops and street stalls is quite uneven, as trade is forbidden in some streets, e.g., Trang Tien, Dinh Tien Hoang and Le Thai To in Hoan Kiem district; stalls are especially numerous in some passing streets, e.g., Nguyen Huu Huan, Tran Nhat Duat, Hang Da, Tran Xuan Soan in Hoan Kiem, and Cau Giay, Xuan Thuy, Nguyen Khang in Cau Giay, as well as in front of pagodas. Street vendors are scattered all over the urban and suburban districts. They are densely concentrated in the central districts, e.g. Hoan Kiem district, and are less present in new districts such as Cau Giay. Regular selling places are densely populated areas, or areas near markets, e.g., in Hoan Kiem, near Hang Be market and Phan Huy Chu street, and in Cau Giay, vendors often gather around Nghia Tan market while in Gia Lam they go at the places near the office of the Provincial Party's committee, in Ngo Xuan Quang street.

The system of trading centres and supermarkets appeared earliest in the cities compared to other regions in the country. In July 2004 there were nine trading centres and 55 supermarkets (including 13 minimart and big shops) in Hanoi, of which 27 were selling food. Most supermarkets selling food sell fresh fruits or have strategies to supply them, but the variety and quantity of fruits sold in supermarkets is limited. While all supermarkets were selling fruits (local and imported) at the time of the survey, e.g., grapes, apple, grapefruit, orange, lemon, coconut or melon, only Metro and Intimex Hoan Kiem were selling litchi.

2. The importance of street vending in litchi distribution

The year 2004 was characterized by a bumper output of litchi, and litchi retailing activities could be seen everywhere.

The numbers of shops and street stalls, markets retailers and street vendors collected in the two districts and the 11 markets have been extrapolated to the whole city. The number of points of sale equals the number of employees, as there is only one person involved in each point of sale (with occasional family help). The detailed calculation is presented in Appendix 2. Results are summarized below (see Table 145, Table 146 and Figure 39). The employment data correspond to three months of activity – the rest of the year, the working persons sell other fruits.

When considering the urban districts as defined since June 2004 (including the new Long Bien and Hoang Mai districts), street vendors represent the highest share in distribution, in terms of number of points of sale and employment (52%) as well as quantities traded (78%). This is due to the flexibility of this type of distribution, which allows the delivery of litchi, a highly perishable product, quickly from wholesalers in night markets to consumers, even in narrow alleys.

The second point of sale in importance is shop and stall vendors (32% in number, 13% in quantity), followed by market retailers (15% in number, 8% in quantity). While street vendors specialize in the distribution of litchi, shops, stalls and market retailers sell different types of fruits, e.g., peach, plum, mango and melon.

In 2004, two supermarkets sold litchi, in small quantity (about 80- 120 kg/day). We estimate that the total labor equivalent for this sale is one employee per supermarket, i.e., two employees in total. The two supermarkets represented 0.07% of employed people in litchi distribution and 0.2% in quantity traded.

Table 145- Distribution of litchi retail points in Hanoi (number of vendors)

	Number	Percentage (%)
Street vendors	1483	52.29
Market retailers	447	15.76
Permanent	293	10.33
Irregular	154	5,43
Shop and stall vendors	904	31.88
Supermarket vendors	2	0.07
Total	**2836**	**100.00**

The data is for urban Hanoi as defined after June 2004
Source: census of litchi traders in Hanoi (see Appendix 2 for detailed calculation), MALICA/MMWB4P

Table 146- Distribution of litchi retail selling points in Hanoi (quantities/day)

	Quantities traded (average/vendor in kg/day)	Estimated number	Quantities traded (total in kg	Percentage (%)
Street vendors	51.6	1483	76,523	78.09
Market retailers	18.5	447	8,269	8.43
Shop and stall vendors	14.38	904	12,999	13.26
Supermarket vendors	100.0	2	200	0.20
Total			**97,992**	**100.00**

The data is for urban Hanoi as defined after June 2004
Source: census of litchi traders in Hanoi (see Appendix 2 for detailed calculation), MALICA/MMWB4P

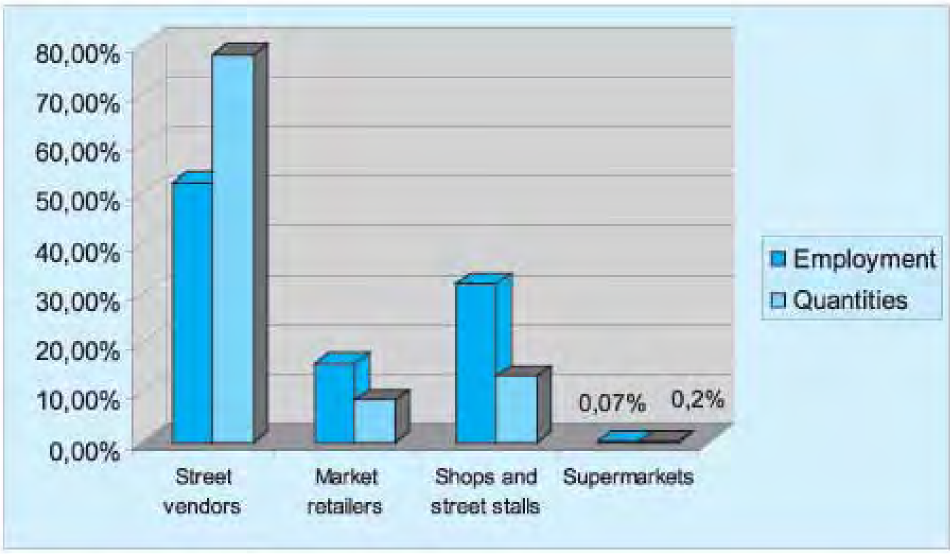


Figure 39- Distribution of litchi retail points in quantity and employment

The data is for urban Hanoi as defined after June 2004
Source: census of litchi traders in Hanoi (see Appendix 2 for detailed calculation), MALICA/MMWB4P

When considering the urban districts as defined before 2004, the distribution is more balanced between street vendors, market retailers and stalls, as the density of markets is higher in the old urban districts than in the new ones (see Table 147, Table 148 and Figure 40): in terms of number of points of sale and employment, street vendors represent 39.8%, market retailers 24.9%, shops and street stalls 35.2%, and supermarkets 0.12%. In terms of quantities, street vendors represent 67.7%, retailers 15.2%, shops and stalls 16.7% and supermarkets 0.39%.

Table 147 - Distribution of litchi retail points in Hanoi (number of vendors, urban districts as defined before June 2004)

	Number	Percentage (%)
Street vendors	670	39.79
Market retailers	419	24.88
Permanent	274	16.27
Irregular	145	8.61
Shop and stall vendors	593	35.21
Supermarket vendors	2	0.12
Total	**1684**	**100.00**

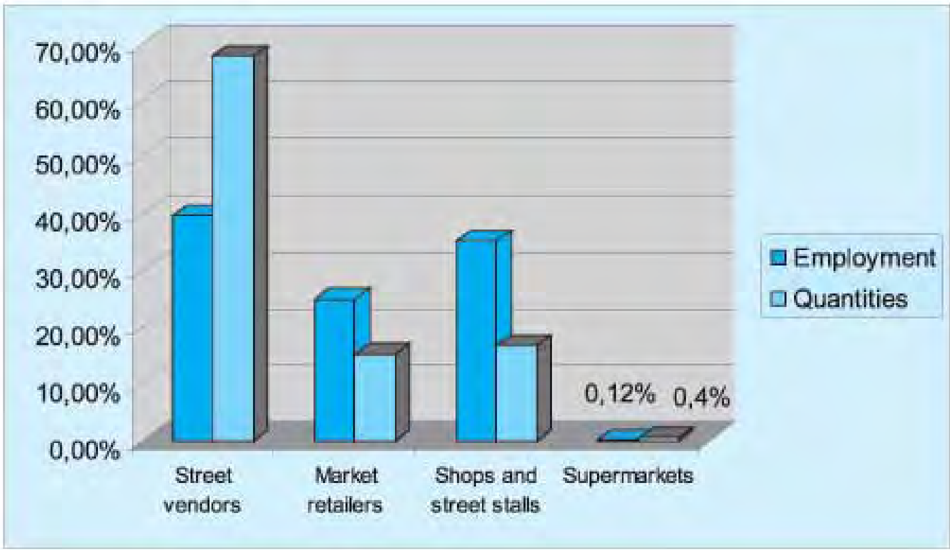
Source: census of litchi traders in Hanoi (see Appendix 2 for detailed calculation), MALICA/MMWB4P

Table 148 - Distribution of litchi retail points in Hanoi (quantity/day)- urban districts as defined before June 2004

	Quantities traded (average/vendor in kg/day)	Estimated number	Quantities traded (total in kg	Percentage (%)
Street vendors	51.6	670	34,572	67.72
Market retailers	18.5	419	7,751	15.2
Shop and stall vendors	14.38	593	8,527	16.7
Supermarket vendors	100.0	2	200	0.39
Total		**1684**	**51,050**	**100.00**

Source: census of litchi traders in Hanoi (see Appendix 2 for detailed calculation), MALICA/MMWB4P

Figure 40- Distribution of litchi retail points in quantity and employment (Hanoi urban districts as defined before June 2004)



Source: census of litchi traders in Hanoi (see Appendix 2 for detailed calculation), MALICA/MMWB4P

3. The social role of street vending

a. The involvement of farming households

Nearly half the interviewed street vendors, i.e., seven out of 15, originate from peri-urban districts of Hanoi, e.g., Soc Son and Gia Lam, while six originate from the peri-urban provinces of Ha Tay (Dan Phuong, Ba Vi, Hoai Duc) and Hung Yen (Van Giang, Kim Dong); one originates from Bac Giang, where she produces the litchi she sells, and one from Nam Ha. One vendor originates from Hanoi, where she could not find any employment.
Vendors from peri-urban districts are farmers, mostly on rice fields, not generating cash. The average land area is 3.4 sao (3.4 x 360m²=1,230 m²). This level is low because these families have children who were born after the state allocation of land and their communes have no spare land for them. The average number of persons per household is 5.33, including 2.33 active persons. Female farmers with low levels of education represented 84% of those interviewed.
While the vendors from Ha Tay buy litchi only once per day and return to do fieldwork after they finish selling, the vendors in Hoan Kiem district often buy litchi twice per day, and sell it for 10-12 hours a day.
Most of the interviewees said that they had been selling litchi for four or five years. They sell not only litchi but also other fruits according to the season, such as dragonfruit, longans, mangoes, pineapples, peaches, melons and plums, but they generally concentrate on one to three fruits during one given season.
Vendors who come from Ha Tay or the suburban districts of Hanoi go back home everyday. Those coming from distant provinces such as Hung Yen and Ha Nam board at lodges near their selling places, e.g., vendors in Hoan Kiem district board at lodges in Phuc Tan, Phuc Xa, Cau Dat communes. They usually share their lodging with people of the same village. Vendors in Gia Lam stay overnight at homes of their acquaintances.

b. A business conducted by the poor for middle-income consumers

The investment in the business is limited to the poles and baskets. Street vendors choose to buy the cheapest litchi from trucks in Long Bien market, so they don't pay too much attention to quality or maintaining regular relations with suppliers. Only three of 21 questioned persons (two of whom sell litchi in Gia Lam) maintain regular relations with their suppliers, as they do not buy litchi from Long Bien market but at the parking place in Trau Quy where trucks from Bac Giang stop. The rest (17 persons, equivalent to over 80%) have no relationships with suppliers. The first criterion for choice of suppliers is price (see Table 149).

	Criteria	Number	Notes
1	Reasonable price	21 (100%)	Related to profit
2	Color	20 (95%)	Attractive to customers
3	Freshness	18 (86%)	Fresh fruit
4	Sweetness	13 (62%)	Important for many customers, who often taste before eating.
5	Origin	9 (43%)	Important, but not easy to recognize
6	Undamaged	1 (5%)	

Table 149 - Street vendors' criteria for choosing litchi

The regular customers of street vendors selling litchi have incomes ranging from 250,000 to 1 million VND/month. Middle-income customers buy other cheap fruits such as dragonfruit, peaches and plums, but very rarely fruits of higher value such as green oranges or mangoes. Street vendors may occasionally sell litchi to poor households, with incomes lower than 250,000 VND/month.

Street vendors adjust the prices to the consumers' income categories. They also take into account the sales prices offered by fixed-location shops and by surrounding vendors when deciding whether to lower or increase their own prices or move to another street. All the vendors questioned said that their prices were lower than the prices of shops and stalls (by around 40%, i.e., litchi was sold for 4,000 VND/kilo by street vendors while it was sold for 5,500 VND/kilo in shops or stalls) because: (1) they do not have to pay location rental and hygiene fees to market managers; (2) their litchi quality is not as good as that of shops and (3) they decrease prices to compete with other vendors. Street vendors are very flexible in terms of setting prices so that they have no commodity left at the end of the day.

Street vendors select areas densely inhabited by high-income people who work at offices or companies and the places near markets where they can become regular suppliers for housewives who go to market everyday.

c. A concern for quality

Even if price is the first concern of purchasers, quality is also an important criteria of choice, especially color and freshness. Regarding the origin of the litchi, in the in-depth interviews, five out of six vendors were aware of theforigins of the litchi they bought via observation and taste, as they had many years of experience in litchi trading. They could also get information on litchi origins from transporters and suppliers.

d. A risky business

The difficulties which street vendors face in their business are mostly related to (i) their low bargaining power due to the limited investment they can put into their business; (ii) the risky environment they face in terms of thefts and violence; (iii) the illegal nature of their business.

1. Limited bargaining power

Nine out of 21 vendors mentioned that they had been cheated by suppliers in terms of quantities sold because they didn't have their own scale. Besides, they are unable to choose the quality they wanted, because they purchase litchi in the early morning when Long Bien market is crowded with retailers as customers, so they have to take what they are given, including old and black fruits. One-third (7/21) of the questioned vendors have been bothered by this problem more than several times.

In Long Bien market, female vendors are commonly harassed by other vendors, and also by market porters who carry their litchi without being asked and request money afterwards.

It is worth mentioning that street vendors sometimes themselves cheat their customers by underweighing the products, and some of them are assaulted by their customers because of that.

2. Losses due to risky environment

Some drug-addicted street children steal products from street vendors.

3. Losses due to illegal business

All interviewed vendors were concerned about being arrested by police as according to Governmental regulation 36CP for traffic order and safety, street vending has been prohibited (see Chapter 3). Their scale (when they have one) or their commodity is often confiscated. More than half (14/21) the interviewees had already lost some or all of their commodity due to confiscation by police. A street vendor from Ly Nhan - Nam Ha had lost all her products twice in a month. She had to stop her selling work for one week before going back into business.

While half the interviewed market retailers felt sorry for street vendors as they had to work very hard and suffered a lot from risks (some of them have indeed started as street vendors themselves), the rest were upset at street vendors and had even induced the market manager to expel them from the market.

e. A significant income generator

The expenses of litchi vendors are almost exclusively made up of the purchase of the litchi; the other costs are mostly for bags and depreciation of material. The income per vendor is estimated at 45,900 VND/day (the minimum in the sample is 30,000 VND and the maximum is 80,000 VND/day), which gives an income of 1,377,000 VND per month (minimum: 900,000; maximum: 2,400,000) – see Table 150).

Table 150 – Estimated income of litchi street vendors

Purchase price/kg	3,000				
Retailers' costs/kg	110				
Retailer's profit/kg	890	Quantity sold per day (kg)	51.6	Income per day	45,924
Retailers' margin/kg	1,000				
Resale price/kg	4,000				

Source: average data of 4 interviewed street vendors

So the income generated per month is above the poverty line; it is obtained during two months, in the other months street vendors can be involved in the marketing of other fruits, yielding similar income. We estimated that street vendors are involved in fruit marketing for about six months per year, and hence can earn around 9 million VND per year, equivalent to four tons of rice. Their families would lose this income and would have to feed one more person if the vending stopped.

The income generated so far by street vendors has been spent for children's education, medical care and buying motorbikes, and has also been a significant contribution to the construction of houses.

f. A need to secure street vendors' future

Although all street vendors would like to continue their business in the future, 15 out of 21 predict that after 2010 Hanoi won't have any street vendors, with dramatic impact for their livelihoods. Five of them plan to go back to work in the rice fields, feed animals and retail dry products at home, while eight said they would try to have a fixed shop or stall in a market in either an urban or suburban area to guarantee their children's education and family's daily expenses, but with little hope of being able to get access to shops or stalls; two interviewed who were under the age of 30 wanted to work as maids for families in the city.

It is worth mentioning that half the interviewed market retailers had originally been street vendors and later obtained fixed places in the market thanks to the help of their friends.

Street vendors express positive recommendations for their ability to conduct business in a legal way, or convert into other activities if street vending is maintained as illegal:

- Organizing training for them not to jeopardize traffic. All those who want to work as vendors should join this course and receive a license for vending. They accept that they will be fined if they violate rules set by the training. This was proposed by 10 vendors;
- Providing support for the poor to get access to market stalls in the city and the suburban areas, e.g. helping in establishing direct contacts between the poor and the market management board (six vendors' proposal).
- Helping them to find a suitable job so that they can make a stable income of about 600,000 VND/month (four vendors).

One interviewed market retailer suggested that the activity could be improved by changing the transport system from poles to carts, and defining certain areas for circulation of street vendors.

1. A limited role for supermarkets so far

Out of 14 visited supermarkets, only two, Metro and Intimex Hoan Kiem, were selling litchi at the time of the survey. The reasons given by supermarkets for not selling litchi are given below:

- Litchi is available anywhere in Hanoi with cheap prices.
- Preserving litchi is extremely difficult; after one day the color changes and it is less easy to sell, so the marketing risks are high.
- The advantage of supermarkets in terms of food safety is difficult to put to the fore: consumers are not afraid of litchi safety as they peel it.

While Metro sells around 20-50 kilograms per day, Intimex sells from 50 to 70 kilograms/day, so the total sold by the two supermarkets is 80-120 kilograms/day.

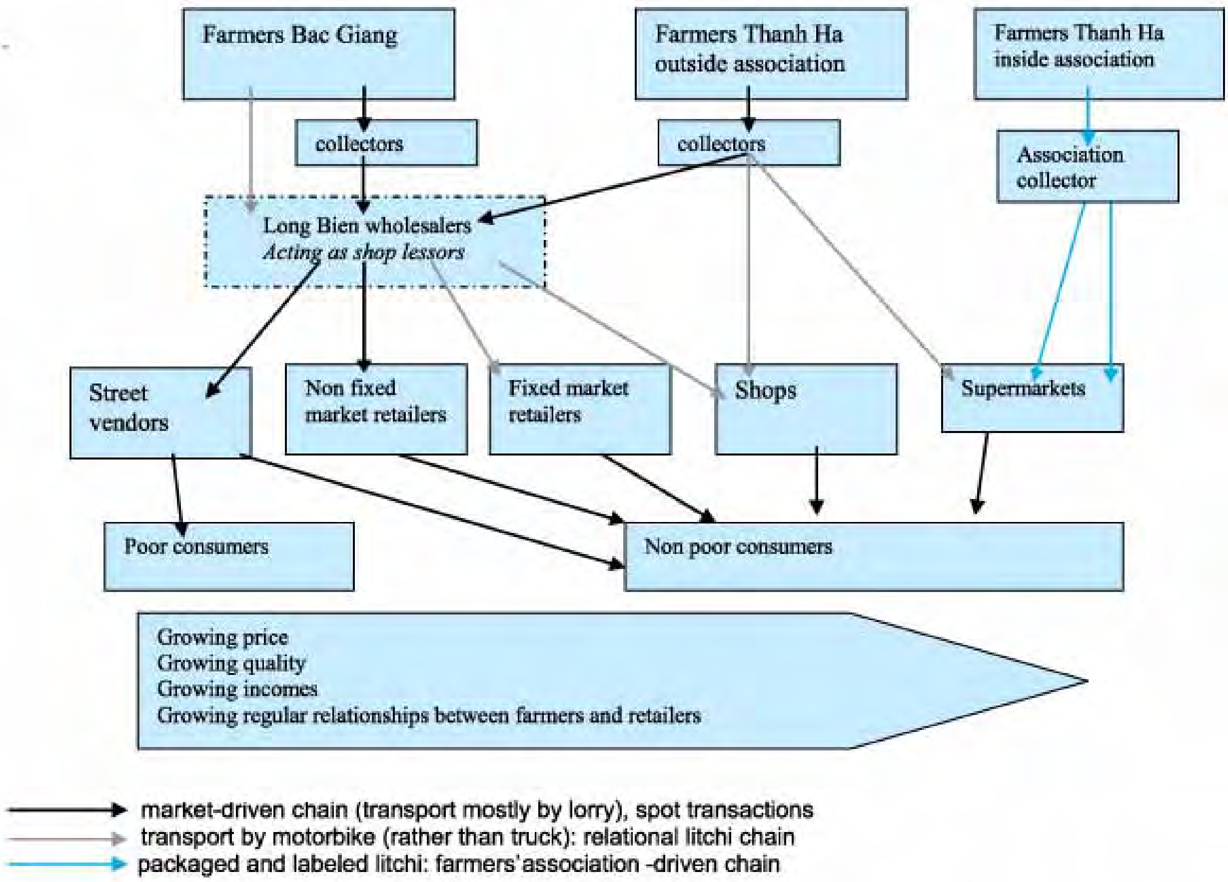
The situation may change in the future. Big C, the supermarket established in early 2005, has started marketing several tons per day of litchi in Hanoi. Among the interviewed market retailers, three said that supermarkets had impacted their trade because many customers preferred to shop in supermarkets where they could buy other things at the same time and enjoy entertainment as well. Three retailers did not have the same idea, as they thought the demand of consumers was very large.

B. Mapping litchi commodity chains

The organization of litchi commodity chains from production areas to Hanoi consumers is summarized in Figure 41. The organization of the chains differs according to the strategy of traders as regards the promotion of litchi quality: hence it is possible to distinguish the following chains:

- Market-driven litchi chains, where transactions are mostly ruled by price and little by quality: this is the case for the bulk of Bac Giang and Thanh Ha litchi transported by truck to Hanoi by collectors and mostly resold to street vendors and non-fixed-market retailers;
- Farmers' association-driven litchi chain: in this chain, litchi is collected and sold to retailers by Thanh Ha farmers' association, which promotes the specific quality of Thanh Ha litchi:
- Relational short litchi chains: in these chains, regular relationships prevail between retailers and farmer/collectors who bring Bac Giang litchi by motorbike to Long Bien market in small quantities.

Figure 41- Litchi commodity chains supplying Hanoi



Around 40% of fresh litchi from Bac Giang is transported by motorbike to Long Bien, usually by farmers acting as collectors, in this case retailers may buy directly from farmers and select the good quality litchi.

Most of the interviewed street vendors (14/21) buy litchi from Long Bien market. Four of them buy litchi from the wholesale points on the road to Son Tay and to Lang Hoa Lac while two vendors selling litchi in Gia Lam buy litchi from trucks which come from Bac Giang to Trau Quy. Only one vendor markets litchi which she produces herself.

Five out of six market retailers buy litchi from Long Bien to resell in the urban and suburban districts, while one retailer sells his own litchi. Besides, some retailers near Ha Dong buy litchi from gathering points near Ha Dong town, which are brought from Hoa Binh and Ha Tay.

In Long Bien, retailers mostly buy from collectors. Long Bien wholesalers act mostly as providers of shop space, not in buying and selling the products. More precisely, there are two types of wholesalers:

- Wholesalers acting as shop lessors. Litchis are actually sold in front of the shops. The litchi owners (collectors or less frequently farmers) use the place and scale of shop owner and pay them 15,000 VND for each transfer of litchi from the motorbike, corresponding to about 200-215 kilograms of product. This means that shop owners can get 70-75,000 VND for every ton of litchi; and they commonly rent the shop to ten litchi owners every day. When litchi is transported via truck, a shop owner can earn 50-70,000 VND for every ton sold. There are many stall owners in the market and the number of litchi owners they work with is variable from one to the other. For instance the stall of Mr. D. is the one used by the most litchi owners, and its transactions amount to 20-30 tons per day and he can earn 150-700,000 VND per day.

- Wholesalers acting as buyers of litchi from farmers and collectors and reselling to retailers or consumers; this type of marketing organization is limited to 40 to 50 wholesalers who buy from collectors or farmers without regular connections with wholesalers. In this case, collectors or farmers have to sell the litchi for 100 to 200 VND lower per kilogram than when they sell directly to retailers. As for retailers, they prefer to buy directly from collectors or farmers at the wholesalers' shops. The wholesalers directly involved in litchi transactions earn 50-100,000 VND per day, and up to 200-300,000 VND per day, but with some risks of losses due to possible falling prices during the day.

When litchi is not too abundant, collectors go directly to the farms to harvest, otherwise, producers harvest and sell litchi to collection points at the commune or province.

The collectors purchase not only litchi from the same area but also from other communes, even from other provinces such as Huu Lung-Lang son, Phu Binh- Thai Nguyen and Bac Thai; e.g. the collector in Phon Xuong commune purchases a big quantity of litchi brought from Bac Thai and Thai Nguyen. They resell litchi to wholesalers from Hanoi, Ho Chi Minh City or China. The means of transport used are bicycles and motorbikes. The producers have to harvest, bundle, and transport by themselves to the collector points.

We now present the strategies of retailers involved in quality promotion, who are mostly supermarkets and some shops, and also some market retailers.

C. Supply strategies of value-adding outlets

1. Supply strategies of supermarkets

a. Type of products

While Metro sells only unpackaged, unlabelled litchi, Intimex sells two types of litchi: unpackaged and packaged/labeled Thanh Ha litchi.

b. Supply organisation for unlabelled litchi

Both Intimex and Metro supermarkets receive litchi from collectors from Thanh Ha – Hai Duong. The commodity is brought to the supermarkets by motorbike. These collectors are at the same time producers. They deliver litchi everyday.

c. Supply organisation for labelled litchi

The Association for Litchi Production and Marketing was founded in mid-2003 with the support of the Vietnamese Institute for Scientific Agriculture (DIALOGS project, funded by European Union). In addition to advertising Thanh Ha litchi, the members of this association are very active in introducing litchi in the supermarkets. The litchi is transported by motorbike or truck. The manager of the fruit division of Intimex says that he prefers to buy litchi from the Thanh Ha Farmers' group because it is packaged and includes full information on the product origin.

For both labeled and unlabelled products, supermarkets have regular relationships with the suppliers. After selling fresh litchi, they sell dry litchi.

The suppliers and the supermarkets are tied by a contract in which a condition of quality guarantee is stated. The price is not fixed, due to high market fluctuations. The collector and supermarket also agree on sharing risks: in case supermarkets cannot sell litchi, the suppliers receive back the unsold products for drying.

d. Mode of payment

Both supermarkets pay their suppliers in cash 15 days after the delivery of commodity.

e. Difficulties in business :

1) Litchi preservation

As mentioned before, the first problem with litchi marketing is litchi preservation, as its color changes quickly in several hours, and when it turns from pink to brown, its price drops. One solution to this problem, according to the supermarket managers, is the packaging of litchi in polystyrene bags rather than net bags, with an additional cost of about 862 VND to pack 2 kilograms of litchi.

2) Product differentiation

While Metro supermarket has no difficulty with their customers, Intimex has to face questions from consumers regarding their offering of supply two kinds of litchi with different prices: when the labeled Thanh Ha litchi was sold 11,000 VND/kilo, the unlabelled litchi was sold at half this price: 5,500 VND/kilo.

f. Prospects

1) Business expansion

All nine supermarkets interviewed had plans to develop their business in Hanoi and the surrounding provinces. For example the Intimex chain planned to open seven new supermarkets in Hanoi, Hai Phong, Lao Cai.

2) Product diversification

All nine of the supermarkets interviewed had plans to diversify their food product selection to meet the increasing demand of consumers. Fresh fruits were one of the products in the development plans of the interviewed supermarkets. They all wished to sell the fruits of specific origins that were produced in Vietnam.

3) Relations with suppliers

The interviewed supermarket vendors want to develop stable relations with producers via long term contracts to create favorable conditions for producers, so that they can pay more attention to the quality of their production.

According to the interviewed supermarket vendors, farmers could have direct access to supermarkets if they could fulfill the following conditions:

- Guarantee of quality and stable quantity of their products
- Giving information on their products, in particular as regards food safety, by displaying a safety certificate
- Install equipment for exchange of information, e.g., telephone and fax.
- Have a bank account
- Be able to deliver their products directly to supermarkets

Farmers are encouraged to meet with supermarket managers to present their products.

The interviewed suggested also that the poor should gather in cooperatives or associations to increase their power in production and supply.

2. Supply strategies of quality shops

a. Commodities

Litchi represents only a small proportion of the total fruits sold, e.g., melons, watermelons, green oranges, mangoes, peaches, grapes, custard apples, apples, durians, grapefruit, star apples; and its value is lower than the other fruits.

The involvement of the vendors in litchi trade dates from six to nine years, while their involvement in fruit trade dates from more than 10 years for five interviewed vendors out of six. Before 1996, the quantities of litchi sold fresh were small and the prices were high (around 15,000 VND/kilo).

b. Source of litchi

While 5 shops buy litchi in Long Bien wholesale market, one shop receives "Thanh Ha Litchi" right at the shop from a member of Thanh Ha Litchi Association.

c. Relationships with suppliers

The shops have regular relationships with Long Bien wholesalers.

d. Methods of payment

Given the small quantities purchased everyday, payment is made in cash.

e. Preferences

The shops like buying litchi in Long Bien because: (i) they can buy all kinds of fruits there; (ii) they have a large choice; (iii) transport is not a problem as they can have litchi delivered to the shop by paying 15,000 VND per transfer, representing around 100 kilograms, that is 150 VND per kilo. But they are also interested in having litchi delivered by Thanh Ha Association, packed and unpacked.

The criteria for choice of suppliers in Long Bien, apart from regular relationships, are (1) reasonable price; (2) good quality: fresh, nice, sweet and of uniform size.

All the six interviewees were able to distinguish the origins of litchi via observation and taste. Also, they had been experienced traders for many years and therefore had good relationships with wholesalers, from whom they could get full information on the product.

f. Pricing strategies

All the questioned shops said that their selling prices were higher than those of street vendors, by around 40%. The reason was their litchi quality was better, especially in terms of freshness, as their litchi is protected with a wet piece of cloth.

Regarding the price for litchi from wholesale markets, the buying price was based on the prevailing price at the wholesale market and the quality of the fruits. The selling price was the buying price plus 1,000 - 3,000 for 1 kilogram depending on the time and the number of customers.

For the points selling Thanh Ha litchi, the Farmer's group determined the buying price. The sellers commonly added 1,000 - 2,000 VND/kilo to this price for their margin, and up to 3,000 VND/kilo. The fact that the product has already been packed and labeled cuts the marketing costs.

The total income of fruits shops and stalls was estimated at 80,000 – 300,000 VND per day for the urban shopping points, and 50,000-200,000 VND per day for the suburban shopping points (see average data in Table 151).

Purchase price/kg	3,500				
Transport cost/kg	150				
Market tax/kg	5				
Cleaning cost/kg	5				
Packing cost/kg	250				
Other cost/kg	10				
Retailers' costs/kg	455				
Retailer's profit/kg	1,545	Quantity sold per day litchi (kg)	15	Income per day (litchi)	23,175
Retailers' margin/kg	2,000	Quantity sold per day (other fruits)	85	Income per day (other fruits)	131,325
Resale price/kg	5,500			Total estimated income per day	154,500

Table 151 – Estimated income of fruit shops and stalls

Source: average data of six fruits shops and stalls, RIFAV surveys for MALICA/MMWB4P, 2004

g. Nature of customers

The customers of shops and street stalls belong to all income categories; even the poor may come to buy litchi as gifts, as they look nicer than the fruits of street vendors or market retailers. But the more regular customers are of high or middle income (see Table 152).

Regularity of purchase	Customers sorted by income level		
	High income (>1,000,000 VND/m)	Middle income (250-1,000,000 VND/m)	Low income (< 250,000 VND/m)
1. Weekly customers	++	+	-
2. Daily customers	+	+	-
3. Irregular customers	-	+	+

Table 152- Nature of customers of shops and street stalls

++, +, - give a ranking of the number of customers according to the categories

All the interviewed declare that the number of customers keep increasing despite the increasing number of shops because the people's living standard is improving. The high-income customers tend to eat more fresh fruits because they pay more attention to nutrition.

h. Difficulties in business

The shop managers declared no special difficulty in their business, apart from competition with street vendors close to their shops. Hence the quantities of fruits sold by shops tend to decrease (despite increasing number of customers), and they have to diversify the fruits sold (while street vendors are more specialized), especially with fruits of high value, including mango, green orange, yellow melon and grapes.

i. The role of quality in retail fruit distribution

All the interviewed stressed the importance of quality in increasing fruit sales and resale prices, both in terms of appearance and of safety.

To illustrate this, the prices of fruits with bad reputation in terms of safety, e.g. those from China, are much lower than the prices of fruits from Vietnam and regions with good reputations in terms of safety, e.g. Thailand, New Zealand or the USA. Yellow oranges from China cost 6,000-7,000 VND per kilogram in June, while the prices of Vietnamese green oranges ranged from 15,000 to 20,000 VND per kilo. Fruits from Thailand, New Zealand and the USA were two to three times, even five or six times as expensive as the same kinds from Vietnam, e.g, Thai custard apples cost 34,000 per kilo while this fruit from Vietnam cost only 6,000-7,000 per kilo. These price differences come from superior appearance, and also consumers' perception that these fruits are grown without chemicals. These fruits are affordable by high-income customers only.

The interviewed suggested that the quality of Vietnamese fruits could be improved thanks to: (1) the application of advanced techniques for multiplication of fruit plants; (2) orientation of producers towards crop intensification and fruit safety to meet the demand of customers; (3) import of some new fruit plants.

j. The role of product labelling

The interviewed also reflected that many customers enjoy Vietnamese fruits that indicate the producer's address and the cultivation process applied.

Out of six interviewed persons, the four vendors in the urban area intend to sell many imported fruits or Vietnamese fruits with trade labels such as Thanh Ha litchi in the North, Nam Roi grapefruit in the south and Phuc Trach grapefruit in the center.

The two vendors in the suburban area intend to sell various fruits including ones of high value to serve high-income customers or those who want to buy gifts. The bigger proportion would be popular fruit and Chinese fruit, as in this area there are many customers of middle and low income.

3. Supply strategies of market retailers

Among the market retailers, there is a differentiation according to supply strategies:

- Retailers getting their supply directly from producers in Long Bien market, with whom they have regular relationships; in this case they know the production zone (three retailers out of six). They can tell their customers the advantages of Thanh Ha and Luc Ngan litchi in terms of color, sweetness and fruit size.
- Retailers buying litchi from wholesalers in Long Bien, without regular relationships with suppliers, and without knowledge of the production zone (two retailers out of six). These retailers are commonly cheated in terms of weight.
- One retailer is himself a litchi producer.

Three interviewed market retailers assumed that the poor litchi growers in Bac Giang could hardly increase their income from marketing as they needed to have means of transport. And the other three persons thought that the poor would be able to join if they could organize transport.

D. The impact on the poor of litchi production

1. Trends in poverty reduction

The growing of litchi in Bac Giang began in the 1960s when several farmers from Hai Duong, Hung Yen, Thai Binh and Ha Nam provinces migrated to Bac Giang and brought some species from their homeland including longan and litchi. Before 1980, the growing of litchi was limited to 100 hectares (including 42 hectares in Luc Ngan district). Most of the agricultural land was for rice cultivation, and some was used for soya bean planting, while cassava was grown in hilly areas. Following the Direction 100/CT–TW dated 13/1/1981 of the Secretarial Committee of the Party, the Province authorities have promoted cassava, soya bean and peanuts. The Bac Giang People's committee started promoting litchi in 1982 with the strategic determination to shift the capital of the Vai Thieu variety, the most famous litchi variety in Vietnam, from Thanh Ha to Luc Ngan. After experiments, it was recognized that litchi grown in Luc Ngan was as good as Thanh Ha and brought better economic efficiency than other plants and it was declared that "Luc Ngan is the second capital of litchi", after Thanh Ha district.

The boom in production occurred in 1998 with the Resolution No. 10, through which land for cultivation was allocated to individual households, acknowledging farmers as self-independent economic units. The combination of agro-forestry cultivation and fruit trees was encouraged. Farmers benefited from credit for their production and for doing business. In 1998, the total litchi area had reached 6,038 ha, with an output of 10,072 tons and revenue of approximately 101 billion VND.

Since 1998, litchi production has increased at a steady pace of 3,500 hectares per year. In 2004, litchi output was 12 times higher than in 1998, amounting to 120,100 tons, while the production area had increased six times, amounting to 35,430 ha of litchi in which there are 30,028 ha that can be harvested; the litchi revenue in the Province amounted to 300 billion VND. The yield has doubled in six years, from 1.7 to 3.4 t/ha. At the moment, 85% of the output is made up of Vai Thieu variety; the rest is early ripening varieties. Between 2000 and 2004, the litchi area increased 2.4 times and the litchi output 3.97 times. However, the income generated from litchi has only increased by 1.41, due to falling prices in 2004.

In Luc Ngan, the litchi area increased by 2.4 times between 2000 and 2004, while the output increased by 4.23, and productivity increased from 2.77 tons/hectares to 4.88 tons/hectare (see Table 153).

YEAR	1982	2000	2001	2004
AREA FARMED WITH LITCHI (HA)	42	6,643	12,673.4	16,000
OUTPUT OF FRESH LITCHI (TON)	100	18,414	22,698	78,000

Table 153- The increase of litchi area in Luc Ngan district (1982-2004)

Source: Department for Administrative Land & Agriculture, Luc Ngan, 2004

More generally, there has been a steady increase in the fruit area between 2000 and 2004 in the province (see Table 154).

In Yen The, in 2004 the litchi area was 5838.31 hectares, mostly made up of plants more than five years old (4,309.78 ha), and plants three to four years old (1,286.60 ha). The year's output was estimated at 3,000 tons, worth 60 billion VND.

	2000	2001	2002	2003	2004	2004/2000
Natural land	382,200	382,200	382,200	382,200	382,200	***100.00***
Agricultural Land	123,732	123,732	123,732	126,739	126,739	***102.43***
Cultivation Land	80,626	80,626	80,626	79,526	79,526	***98.63***
Land For Annual Plants	178,648	181,026	182,663	181,887	186,474	***104.38***
Land For Perennial Trees	34,710	41,010	44,469	45,933	46,230	***133.19***
Land For Fruits	33,850	40,174	43,369	44,811	45,052	***133.09***

Table 154 - Trends in land use in Bac Giang province (2000-2004) (Ha)

Table 155 - Fruit area distribution of Bac Giang province from 2000 to 2003

	2000	2001	2002	2003
Total of the fruit area (ha)	33,850	40,174	43,369	44,811
Harvesting fruit area (ha)	17,528	24,302	28,992	32,257
Of which: - area of litchi and longans (ha)	12,993	20,058	23,482	26,405
Output of litchi and longans (tons)	29,027	33,810	59,774	60,551

Source: Annual Statistic Data 2003, Bac Giang province, April, 2004

The population of the province amounted to 1,551,197 in 2003 (763,122 men and 788,075 women). There are 11 different ethnic groups including Tay, Nung, Dao, Cao Lan, Son Taý, Son Du and Kinh. 93% of the population works in the agricultural sector (1,448,816 persons, composing 335,301 households). Around 190,000 households, i.e. 60% of agricultural households, grow litchi (source: Dard Bac Giang, 2004). At the end of 2003 Yen The district's population was 91,459 (44,421 men and 47,038 women). There are 23,375 households in the district. Of 38,677 working people, 36,259 people work in agriculture. There has been an increase in the GDP of Bac Giang province between 2000 and 2003, based on increases in the GDP of agriculture, as well as industry and services. The share of industry and construction in the GDP has actually increased, while the share of agriculture and services has slightly decreased.

In Yen The district the average growing rate of

Table 156 - Trends in the GDP of Bac Giang province (2000-2003)

	Unit	2000	2001	2002	APRX. 2003
GDP (fixed value, 2004)	Mill. Vnd	2,642,689	2,831,397	3,042,693	3,311,074
- agricultural, forestry, aquaculture	"	1,428,306	1,498,652	1,574,988	1,650,687
- industry – construction	"	360,889	419,757	495,347	614,230
- s ervices	"	853,503	912,988	972,358	1,046,257
GDP (present value)	Mill. Vnd	3,536,037	3,926,478	4,358,716	4,872,636
- agricultural, forestry, aquaculture	"	1,763,437	1,913,785	2,090,398	2,251,158
- industry – construction	"	518,994	595,198	707,444	979,400
- services	"	1,253,606	1,417,495	1,560,874	1,642,078
GDP (present value)	%	100.0	100.0	100.0	100.0
- agricultural, forestry, aquaculture	"		48.8	48.0	46.2
- industry – construction			15.2	16.2	20.1
- services			36.0	35.8	33.7

Source: Annual Statistics Of Bac Giang Province

income in the period of 2001 - 2003 was 7.62%. Thanks to the increasing income from litchi, the poverty rate has been reduced from 36.42% in 2000 to 16.42% by 31/12/2003 (equivalent to 3,599 households out of poverty). The average income per capita has increased from 1.605 million VND in 2001 to 1.670 million in 2002 and 1.732 million in 2003. The socio-economic living standard of the people has much improved, e.g., the number of people who benefited from medical insurance at the hospitals and the communes' medical clinics has increased compared to four years earlier. By the end of July 2004, the number of households with telephones in the district reached 14.6% (equivalent to 4.05 phones/100 persons) and the entire district had been covered by SGM network.

In Luc Ngan, the average growth rate in 1991-1995 was 9.7% per year; in 1996-2000 it reached 23.12% per year. The proportion of the poor has decreased from 17.03% in 2001 to 13.13% in 2003. The average income per capita has increased from 1.316 million VND in 1996 to 3.3 million in 2003. 100% of the communes have now roads in good condition.

Table 157 - Trends in poverty in Bac Giang (2001-2003)

	2001	2002		2003		
	No. of poor households	%	No. of poor households	No. of poor households		%
Entire province	62,012	100.00	56,870	100.00	44,077	100.00
Out of which:						
1. Luc Ngan	6,489	17.03	6,648	16.74	5,313	13.13
2. Yen The	5,642	26.86	4,374	20.24	3,599	16

Source: Bac Giang General Statistical Office, Annual Statistics 2003, Bac Giang 2004.

2. Basic characteristics of poor farmers in Yen The

Poor households in Yen The can be divided into three groups: (1) New married couples with one or two children, living on their own; (2) elderly parents with grown children who are at school age or have finished school but not found employment; (3) those with one person in the family who is ill or disabled.
The average education level of the household heads in Phon Xuong, located near Cau Go town, is higher than in the two other, more remote communes (see Table 158).

	COMMUNES			
	Phon xuong	Hong ky	Dong son	Average
Average age of the Household Head (Years Old)	45.0	51.9	49.2	48.7
Education (School Level)	5.5	4.9	5.0	5.13
Average number of persons/household	3.9	3.8	4.6	4.1
Under 13 years of a	1.0	1.0	1.6	1.2
Fulltime family workers	2.0	1.8	1.7	1.8
Occasional Family Workers	0.7	0.8	0.8	0.77

Table 158- Basic characteristics of interviewed poor households in Yen The

Source: RIFAV surveys for MALICA/MMWB4P, 2004

the poor has decreased from 17.03% in 2001 to 13.13% in 2003.
The socio-economic living standard of the people has much improved, e.g., the number of people who benefited from medical insurance at the hospitals and the communes' medical clinics has increased compared to four years earlier. By the end of July 2004, the number households with telephones in the district reached 14.6% (equivalent to 4.05 phones/100 persons) and the entire district had been covered by SGM network.

Total	Communes			
	Phon xuong	Hong ky	Dong Son	Average
I. Composition of land used (m^2)	4,858	6,628	7 934	7 071
1. Garden area (m^2)	1,998	2 054	1 294	1 782
2.Hill area (m^2	1,420	3 070	4 700	3 600
3.Cultivated area (lower area)	1,439	1 504	1 940	1 628
Ii. Area of main crops				
1. Area of fruit plants	2 249	4,774	2 944	3,322
In which: area of litchi (m^2)	2 249	4 774	2 689	3 327
2. Area of rice (m^2)	1 439	1 504	1,782	1 576

Table159 - Land use by poor Yen The households

Source: RIFAV surveys for MALICA/MMWB4P, 2004

	Phon xuong	Hong Ky	Dong Son	Average
AVERAGE NUMBER OF LITCHI PLANTS/HOUSEHOLD (PLANT)	85.8	139.0	140.0	121.6
BY AGE OF PLANTS				
<= 3 YEARS OLD	0	5.6	24.0	9.87
4 10 YEARS OLD	82.0	130.3	109.0	109.6
> 10 YEARS OLD	3.8	3.1	7.0	2.13
BY NUMBER OF FRUITING TREES				
AVERAGE NUMBER OF THE FRUITING TREES	65.6	122.2	82.5	90.1
PERCENTAGE OF THE FRUITING PLANTS (%)	76.45	87.91	58.92	74.09

Table 160 - Characteristics of litchi fruits of poor Yen The household

Source: RIFAV surveys for MALICA/MMWB4P, 2004

3. The importance of calendar and quality for farmers' income

a. Various litchi outlets

In 2004, 70% of litchi produced in Bac Giang was dried, and sold mostly to China (90%) and to urban Vietnam markets (10%). The rest (30%) was sold fresh in the following way:

- One third by truck to China
- One third by truck to Ho Chi Minh City
- One third to Hanoi (60% by truck, 40%

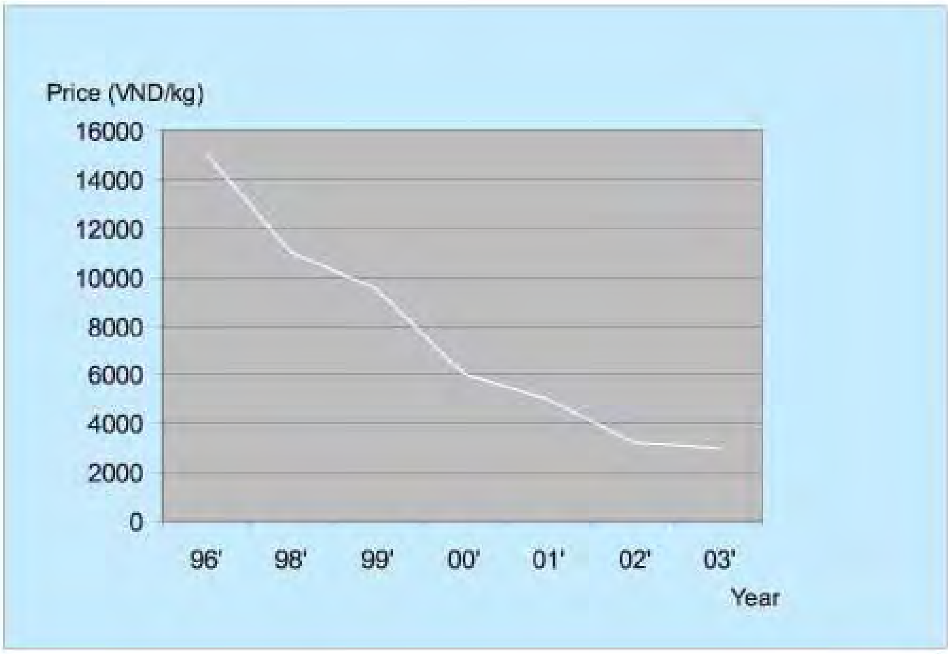
by motorbike).

b. Marketing constraints

At the moment Bac Giang farmers face various constraints for litchi marketing:

- Falling sales prices due to a bumper harvest in 2004, and more generally falling prices due to growing production from 1996 to 2004 (see Table 161)
- Problems with export to China
- Difficulties for trucks in accessing villages due to heavy rainfall
- Low prices for dried litchi. In 2004 dried litchi could be sold at the farm gate for just 6,000-7,000 VND/kilo, while it takes 3.8-4.0kg of fresh litchi to make 1kg of dry one. The price of fresh litchi was 1,500-1,700d/kg; coal and labor cost 800-100VND per kilo of dry litchi.

Table 161 - Litchi prices in Bac Giang Province (1996-2003)



c. A public concern for marketing

The provincial people's committee has established a guidance board to assist people in litchi marketing, in coordination with the people's committee of the communes, for local authorities to make plans for assisting the farmers in litchi marketing, to create favorable conditions for sellers and buyers as well as for processing units in the province; and to promote trading and marketing before harvesting time. The State maintains tax exemption for litchi circulation, and at the same time it creates favorable conditions for the companies, enterprises and individuals both in and outside of the country who come to collect and process litchi in the province.
The strategy of the province for the coming years is to diversify fruit varieties, and, with regard to litchi, pay more attention to the quality of the fruits, especially as regards fruit safety and labeling the fruits "Luc Ngan litchi".

d. Price differences according to calendar

In 2004, the average price of litchi in the province was 2,500 VND/kg. It could reach 3,500 VND/kg for the early litchi and 2,200 VND/kg for the main crop.
At the retail level, prices were highest before June, 10-15 times higher than that of litchi in the main crop. The period of June 19-22 was when the price was the lowest (see Figure 42).

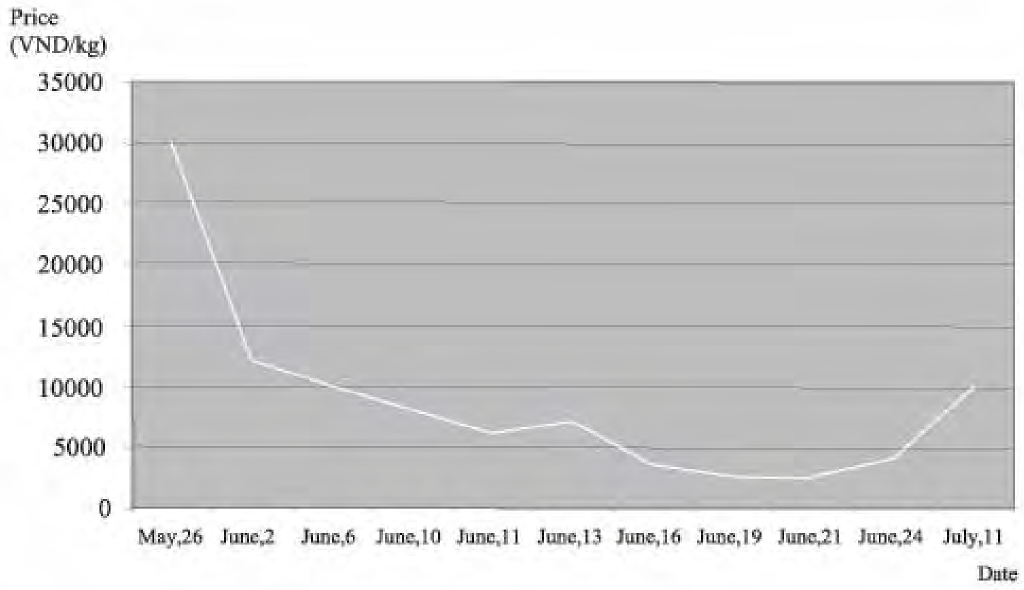


Figure 42- The fluctuation of litchi prices in the Hanoi market in 2004

According to the assessment of Bac Giang Agricultural Department, the area of cultivation of early litchi has increased in the recent years. It is now estimated at 850ha (out of 16,000 hectares) and the average price at 4,000 VND/kg. The farmers have successfully applied the method for protection of fruits on the trees, which has helped them to extend the crop and the harvest period to 60 days. So the harvest period (including both earlier and later litchi) presently lasts 2.5 months.

e. Price differences according to quality

In Luc Ngan the litchi price is always 500 to 1,000 VND/kg higher than in other districts due to reputation of higher quality. This is why litchi from other districts is sometimes brought to Luc Ngan collectors to be sold at a higher price.

In Yen The, the quality of litchi is heterogeneous due to some problems in the access to good quality seedlings, which have a high price (7,000–15,000 VND/seedling according to quality).

f. Variable incomes according to sites

We calculated and compared costs, added value and incomes from litchi in the following situations: in Yen The, for the poor and the non-poor, and in Luc Ngan. Some specifications for calculating economic results are indicated below:

+ Production value (or revenue): the production value per unit of litchi area is the total value of the output of the litchis and any other plants intercalated (it is difficult to disentangle the input costs as regards the different types of crops grown on the same plot)

+ Input cost: the cost of all inputs used during the production process e.g. seeds, fertilizers and pesticides

+ Added value: the difference between production value and input costs.

+ Gross Income: the balance between the production value, the input cost and expenditure for hiring labor (if any).

+ Net income: Gross income minus depreciation costs of the plantation.

The cost of setting the litchi plantation was estimated at 180 million VND, depreciated over a 15-year period.

The prices of the inputs and outputs used are those of the market in 2004.

The results are indicated in Table 163:

- The incomes per hectare and per farm are increasing between Yen The poor households, Yen The non-poor households and Luc Ngan non-poor households;

- The higher the input costs, the higher the yield, sale prices and incomes per hectare. Yen The and Luc Ngan non-poor farmers apply recommendations in terms of quality seedlings and manure, which enable them to have better quality fruits than Yen The poor farmers, and hence higher sale prices. Despite the higher reputation for quality in Luc Ngan, prices in Yen The are slightly higher for non-poor farmers because the fruit is sold at an earlier time. While the non-poor use good quality plants costing around 15,000 VND, the poor use plants worth 7,000 to 10,000 VND.

Yet, while the quality of the fruit in the field is generally lower for the poor than for the non-poor, the poor have an advantage in terms of fruit quality, according to the interviewed collectors: the poor families do not have much product to sell, so they can spend time in carefully sorting and bundling the litchi. Therefore their litchi baskets look more beautiful than those of the rich farmers who rent laborers to work for them (paid by weight):

- The poor in Yen The are more efficient than the non-poor in terms of income per unit of input costs, it means they are better able to save on input costs and spend a lot of family and paid labor in the field.
- The incomes per day of labor are above the poverty line (more than 40,000 VND/day), but for the poor, this is obtained during 43 days only due to smaller land area (around 3,200 m^2, half the size of the non-poor farmers). The rest of the year, farmers are involved in crops mostly grown for consumption, e.g. rice.

The comparison of yields between the three communes of Yen The shows that the yield is the lowest in Hong Ky (3,730 kg/ha), despite the higher percentage of fruiting plants. This is because Hong Ky farmers here are inexperienced in taking care of litchi, e.g., trimming to avoid insects or arranging the leaf canopies to take advantage of light.

E. Distribution of costs and profits in the litchi value chains

We considered the following chains to compare costs and profits in litchi value chains characterized by different governance mechanisms:

- The market-driven commodity chain of Yen The litchi (where poor farmers are dominant), selling litchi of ordinary quality to collectors and street vendors or market retailers, without indication of origin, and with dominant spot market relationships;
- The relational commodity chains of Yen The, Luc Ngan and Thanh Ha supplying shops and stall vendors
- The Thanh Ha association-driven chain, selling labeled litchi directly to supermarkets and quality shops.

The results are indicated in Table 163, Appendix 4, Figures 43-46.

Given the high fluctuations in price and the small sample, we should consider these data with a 20% error margin, and mostly use them for comparison rather than in absolute terms. For supermarkets, we give the margin, not the profit, given the difficulty of gathering data on supermarket costs disaggregated by commodity. In the chains presented, we did not indicate the wholesalers, as the most common situation is their involvement in shop rental only, the cost of which is included in the collectors' costs.

Table 162- Economic results of litchi farmers in Yen The and Luc Ngan

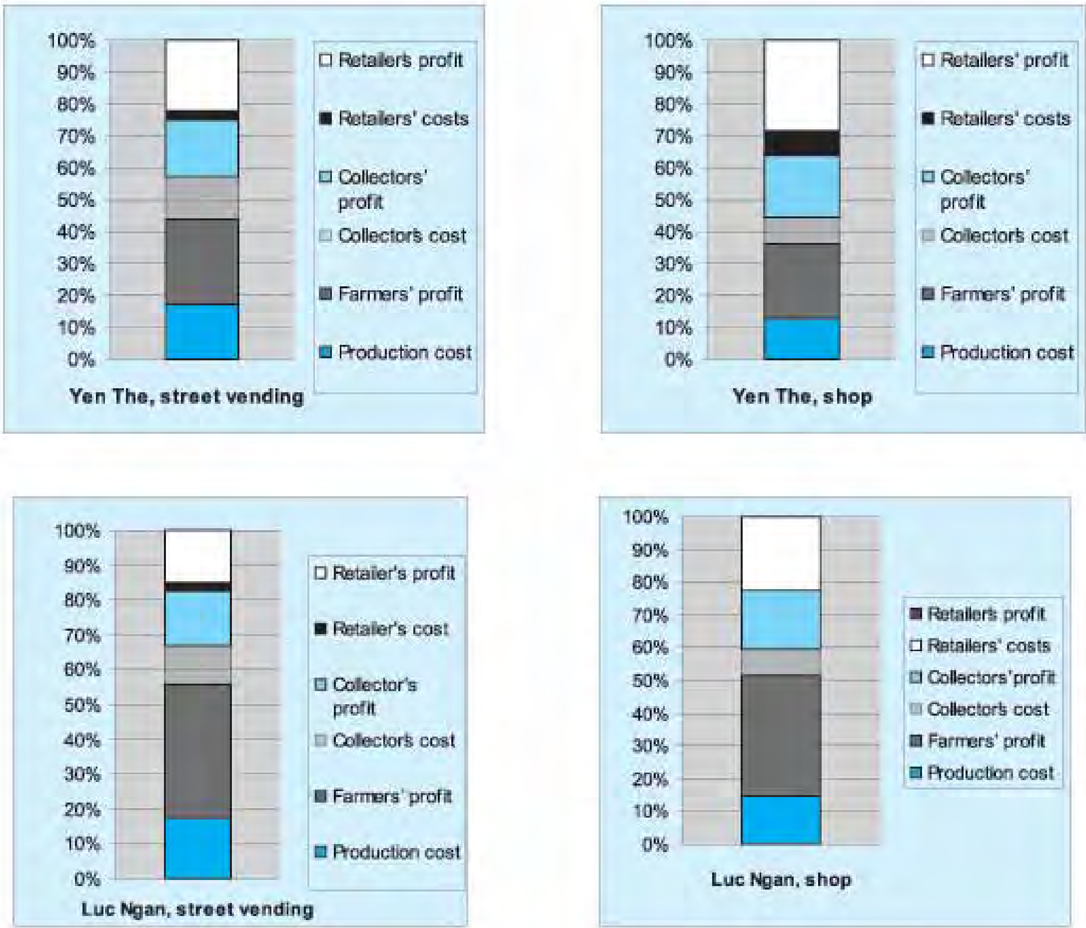
		YEN THE Poor households	Non-poor households	LUC NGAN Non-poor households
YIELD	KG/HA	4,318	6,035	9,410
AVERAGE PRICE	VND/KG	1,766	2,235	2,200
FOR 1 HA REVENUE LITCHI	VND	7,625,588	13,489,000	20,702,000
REVENUE INTERCALATED CROPS	VND	1,049,412		
TOTAL REVENUE	VND	8 675,000	13,489,000	20,702,000
INPUT COSTS	VND	1,580,000	2,985,000	6,660,000
ADDED VALUE	VND	7,095,000	10,504,0	14,042,000
LABOUR COSTS	VND	188,998	98,974	132,963
GROSS INCOME	VND	6,906,000	9,205,000	13,909,036
DEPRECIATION COSTS	VND	1,200,000	1,200,000	1,200,000
NET INCOME	VND	5,706,028	8,005,000	12,709,073
FOR 1 KG OF LITCHI				
INPUT COSTS	VND	365.91	494.61	707.78
ADDED VALUE	VND	1,400.09	1,740.38	1,492.24
LABOUR COSTS	VND	43.77	16.4	14.13
GROSS INCOME	VND	1,356.32	1,723.98	1,478.11
DEPRECIATION COSTS	VND	277.90	198.84	127.52
NET INCOME	VND	1,078.42	1,525.14	1,350.59
FOR 1 VND OF INTERMEDIARY COST				
REVENUE	VND	5.49	4.52	3.11
ADDED VALUE	VND	4.49	3.52	2.11
LABOUR COST	VND	0.12	0.03	0.02
GROSS INCOME	VND	4.37	3.49	2.09
DEPRECIATION COST	VND	0.76	0.40	0.18
NET INCOME	VND	3.61	3.08	1.91
FOR 1 DAY OF LABOR				
REVENUE	VND	64,550	71,766	110,110
INPUT COSTS	VND	11,791	15,881	35,425
ADDED VALUE	VND	52,950	55,885	74,690
GROSS INCOME	VND	42,580	48,974	67,600
LABOUR COST	VND	1,410	526	707
DEPRECIATION COST	VND	8,955	6,384	6,383
NET INCOME	VND	42,582	42,589	61,217
FOR 1 FARM				
LAND AREA	M^2	3200	7640	9950
NUMBER OF LABOUR DAYS		42.88	143.60	187.06
REVENUE	VND	2,776,000	10,305,596	20,598,490
INPUT COSTS	VND	505,600	2,280,540	6,626,700
ADDED VALUE	VND	2,270,400	8,025,056	13,971,790
LABOUR COSTS	VND	60,479	75,616	132,298
GROSS INCOME	VND	2,209,920	7,032,620	13,839,491
DEPRECIATION COST	VND	383,991	916,799	1,193,963
NET INCOME	VND	1,825,929	6,115,820	12,645,528
OUTPUT	KG	138176	461074	936295

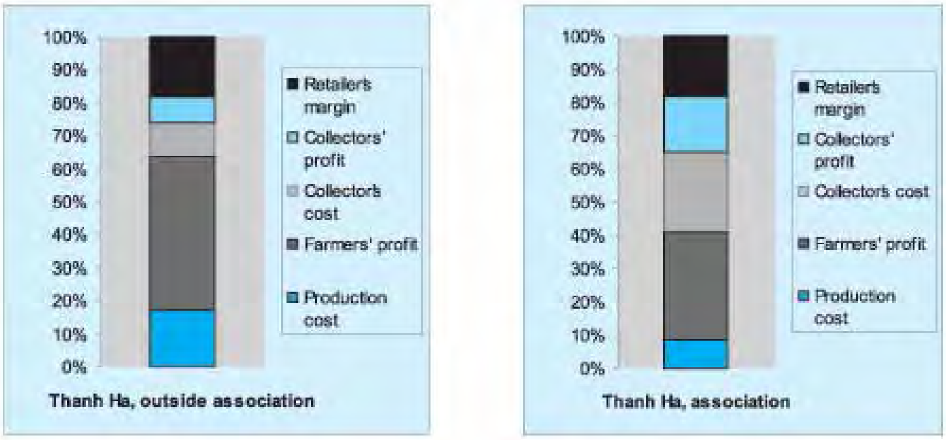
Table 163- Breakout of the final retail price in different actors' costs and profits (VND/kilo)

	Yen The litchi by truck, street vending		Yen The litchi by motorbike, shop		Luc Ngan litchi by truck, street vending		Luc Ngan litchi by motorbike, shop		Unlabelled Thanh Ha litchi		Association Thanh Ha litchi	
Production cost	688	17%	712	13%	849	18%	849	14%	933	17%	955	10%
Farmers' profit	1078	27%	1288	23%	1851	38%	2151	34%	2567	47%	3545	35%
Farm price	1766	44%	2000	36%	2700	56%	3000	48%	3500	64%	4500	45%
Collector		0%		0%		0%		0%		0%		0%
Collector's cost	517	13%	446	8%	546	11%	455	7%	574	10%	2690	27%
Collectors' profit	717	18%	1054	19%	754	16%	1045	17%	426	8%	810	8%
Collector's margin	1234	31%	1500	27%	1300	27%	1500	24%	1000	18%	3500	35%
Collector's price	3000	75%	3500	64%	4000	82%	4500	72%	4500	82%	8000	80%
Retailer		0%		0%		0%		0%		0%		0%
Retailers' costs	110	3%	455	8%	110	2%	455	7%		0%		0%
Retailer's profit	890	22%	1545	28%	740	15%	1295	21%		0%		0%
Retailers' margin	1000	25%	2000	36%	850	18%	1750	28%	1000	18%	2000	20%
Retailer's price	4000	100%	5500	100%	4850	100%	6250	100%	5500	100%	10000	100%

Source: RIFAV surveys for MALICA/MMWB4P, 2004, and for Thanh Ha, VASI (2004)

Figure 43- Breakout of the final retail price in different actors' costs and profits in different litchi value chains (%)





Source: RIFAV surveys for MALICA/MMWB4P, 2004, and for Thanh Ha, VASI (2004)

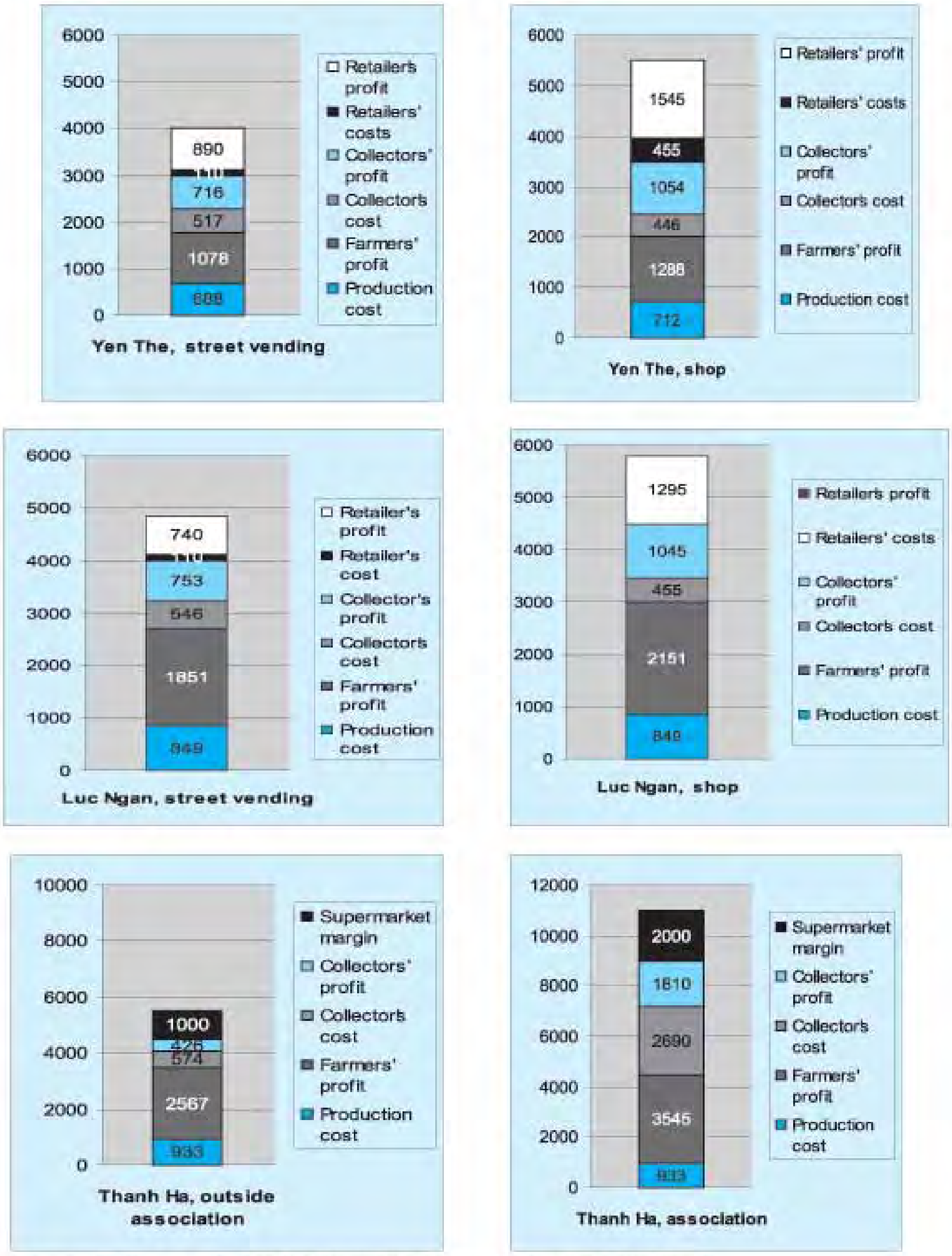
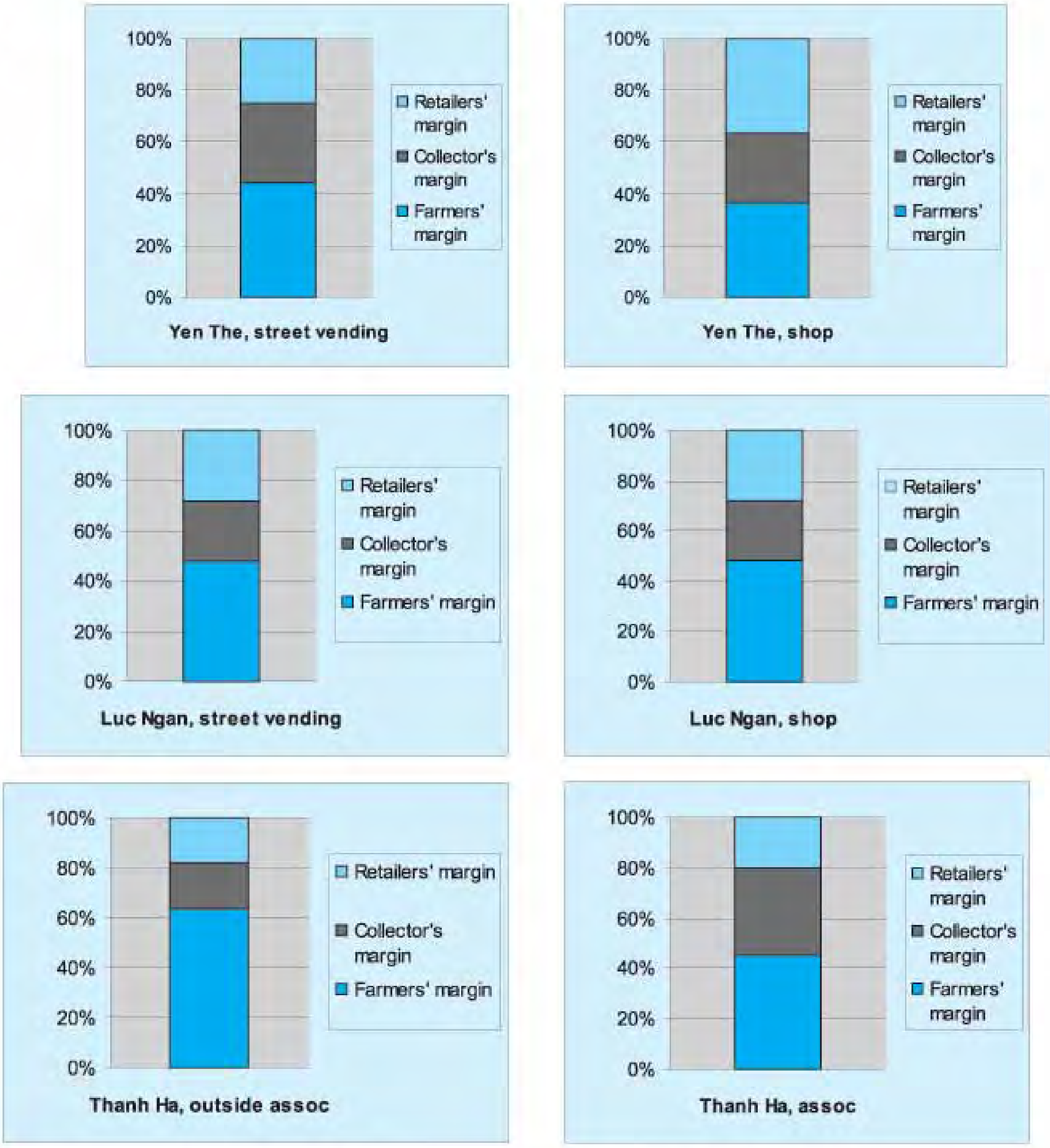


Figure 44- Breakout of the final retail price in different actors' costs and profits (values VND/kilo) in different litchi value chains

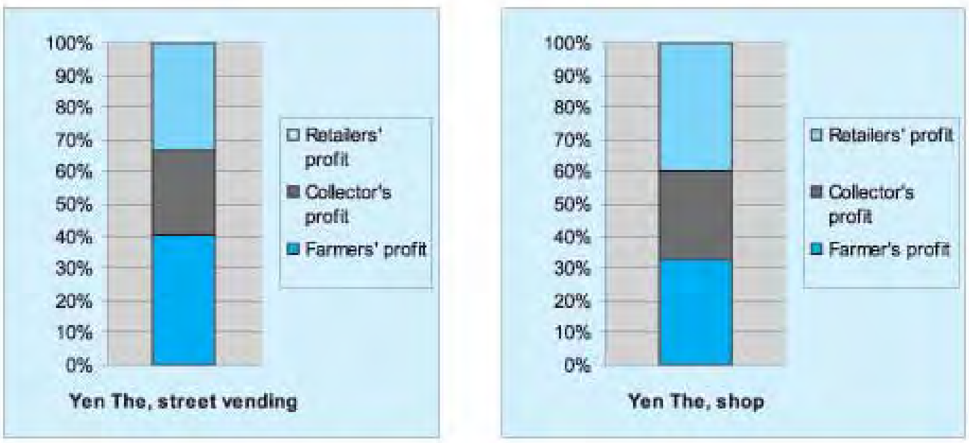
Source: RIFAV surveys for MALICA/MMWB4P, 2004, and for Thanh Ha, VASI (2004)

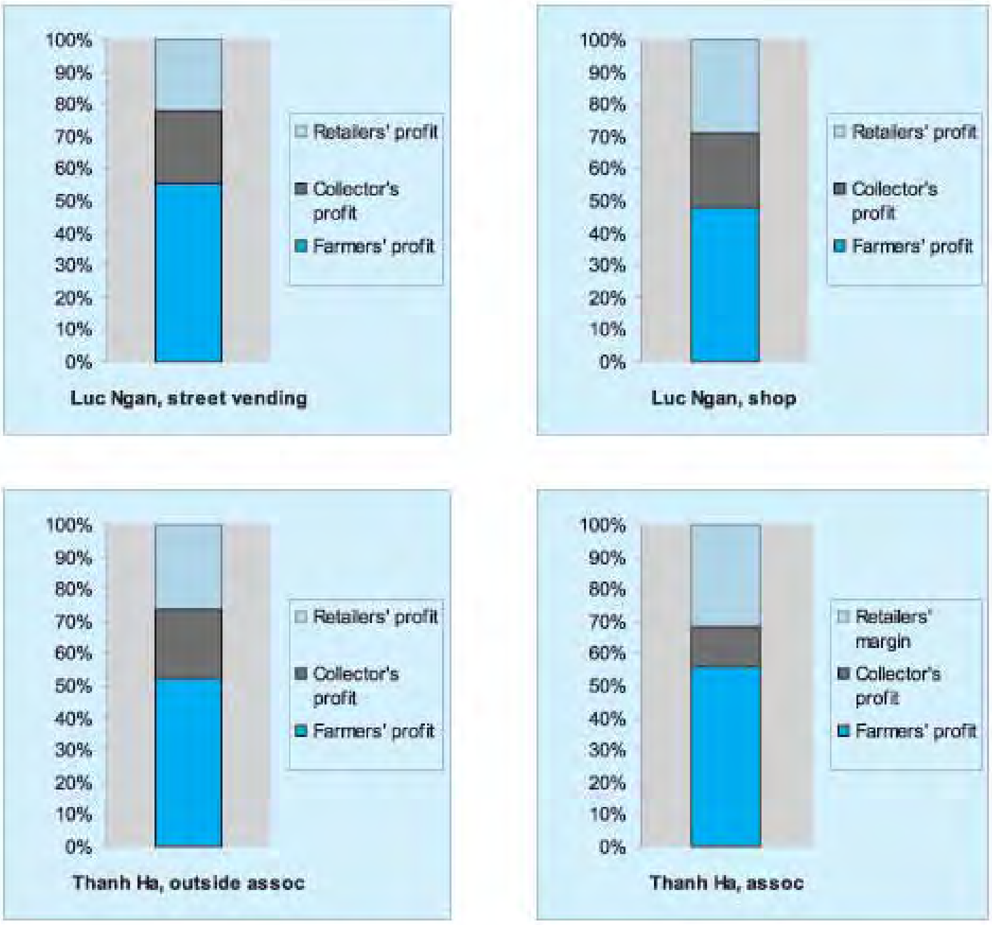
Figure 45- Distribution of margins among different actors in different litchi value chains (%)



Source: RIFAV surveys for MALICA/MMWB4P, 2004, and for Thanh Ha, VASI (2004)

Figure 46- Distribution of profits among different actors in different litchi value chains (%)





Source: RIFAV surveys for MALICA/MMWB4P, 2004, and for Thanh Ha, VASI (2004)

The comparison of the economic data between the different value chains shows the following:

- In general, profits per kilo are quite balanced between farmers, collectors and retailers;
- The main differences between the actors' results come from differences in final retail prices, mainly due to quality in terms of sweetness and freshness, and knowledge of product origin, Luc Ngan and Thanh Ha being the most preferred origins;
- The chain of distribution by motorbike generates higher profits than the chain of distribution by truck: it is in fact the shortest chain, where farmers (usually located less than 300 km from Hanoi) sell directly in the Hanoi wholesale market, or to collectors (themselves farmers), who come directly in the field to collect litchi; in this case, collectors choose the best quality litchi, and they regularly inform farmers of the demand of the market. In the case of marketing by truck, farmers move to collection points near the roads to sell to collectors, and their relationships with collectors are not regular.
- Farmers involved in the association chain from Thanh Ha and selling to supermarkets are those who earn the highest profits per kilo. Yet, the situation of the association is fragile, as the collector is also the one with the highest costs (2,690 VND/kilo for collection costs and 4,500 VND/kilo for purchase price), and litchi is a highly perishable product, so losses can be high at retail and wholesale level: collectors lose income when product losses are higher than 10% (which commonly happens twice a month). In 2005, due to high losses at the retailing stage, supermarkets could only pay the association 7,000 VND/kilo (instead of 8,000 VND/kilo), and the collector purchased the litchi at 3,000 VND/kilo (compared with 4,500 VND/kilo in 2004) – which is still higher than the price of farmers outside the association (2,500 VND/kilo) .

Collectors are the actors in the chain who receive the highest incomes: in one litchi season, they work an average of ten days and can earn more than 2.8 million VND (see Table 165). Their profits are spent on housing, buying motorbikes, building drying ovens, improving or building new yards for their business, and installing telephones and other house appliances. The high incomes at the collection point suggest the interest for farmers' groups in getting involved in collecting activities and resale in Hanoi.

Table 164– Estimated income of Yen The truck collectors

Purchase price	1766					
Transport cost	114					
Shop rental	70					
Collection cost	100					
Loading cost	15					
Unloading cost	20					
Market tax	7					
Cleaning cost	1					
Packing cost	10					
Loss cost	180					
Collector's cost	517					
Collectors' profit	716	Quantity 4000kg/day	Income/day	286,800	Income/season	2,868,000
Collector's margin	1234					
Collector's price	3000					

Source: average data of three interviewed collectors

CONCLUSION

In the last six years, litchi has been a major provider of incomes for the poor, in the production areas of Bac Giang as well as for street vendors and other market retailers in Hanoi. Yet this generation of incomes is subject to various threats:

- As regards street vending, the activity is illegal and subject to penalties by the police;
- As regards production, the prices have been steadily decreasing for the last six years.

Avenues for higher income generation have been suggested by the comparison of the various litchi value chains, and stakeholders' individual and group interviews:

- As regards street vending, the proposition by street vendors to make legal the business of street vendors committed to "good practices" in terms of traffic safety should be considered by the municipal authorities, as well as credit programs to help them access stalls in market places;
- As regards farmers, the example of Thanh Ha association, and farmers moving by motorbike to sell in Long Bien markets shows the interest in improving the tracability of the litchi chain and the direct sale from farmers' groups to adding-value outlets, e.g., shops, supermarkets and fixed market retailers; at the moment the reputation of Thanh Ha enables a premium in terms of retail price, but it would be worthwhile to investigate whether Luc Ngan and Yen The litchi, which is commonly of the same variety of Thanh Ha litchi (Vai Thieu) benefits from similar quality characteristics and can be promoted by a better communication strategy;
- Getting higher prices through earlier sales is another option for increased farmers' benefits which has been investigated by the Yen The farmers' fieldtrip in Xuan Binh (Village) – Binh Khe (Commune) – VND Trieu (District) – Quang Ninh (Province), organized by RIFAV, Malica and Markets4poor in 2005.
- The proposal of Yen The farmers to develop and market organic litchi is particularly adapted to the context of cash constraints and the opportunities generated by labor availability of Yen The farmers and

should be investigated from a marketing point of view;

- As regards sales in supermarkets, a major constraint relates to the problems of packaging and preservation: combining two types of litchi presentation in supermarkets, unpackaged litchi, and packaged litchi in punnets under plastic at higher prices (like Thai litchi sold in supermarkets or exported), could be investigated.

Appendix 1-The production of litchi and longan in Vietnam regions in 2004

	2004			
	Cultivated area (ha)	Area in production (ha)	Yield (t/ha)	Output (t)
National	**111260**	**82722**	**50.0**	**413500**
Red River Delta	**21900**	**17160**	**41.9**	**71913**
Hanoi	308	150	99.4	1491
Hai Phong	741	588	90.1	5298
Vinh Phuc	2961	1014	89.3	9056
Ha Tay	1708	1158	55.0	6370
Bac Ninh	98	83	72,9	605
Hai D¬uong	14018	12457	29.2	36340
H¬ng Yen	520	460	110.0	5060
Ha Nam	469	420	42.9	1800
Nam Dinh	108	95	92.1	875
Thai Binh	476	322	118.1	3802
Ninh Binh	493	413	29.4	1216
Northern Provinces	**61060**	**46641**	**34.5**	**160837**
Ha Giang	1070	417	21.0	874
Cao Bang	174	86	30.2	260
Lao Cai	762	289	38.3	1108
Bac Kan	210	110	26.8	295
Lang Son	7290	5414	16.9	9141
Tuyen Quang	1168	538	40.6	2183
Yen Bai	353	242	20.0	484
Thai Nguyen	6873	4580	19.1	8757
Phu Tho	1696	1256	67.2	8435
Bac Giang	35143	30028	40.0	120100
Quang Ninh	6321	3681	25.0	9200
Western Provinces	**2050**	**703**	**33.0**	**2323**
Dien Bien	35	10	35.0	35
Son La	683	163	22.0	358
Hoa Binh	1332	530	36.4	1930
North Central Provinces	2670	1278	43.4	5549
Thanh Hoa	1709	950	40.0	3800
Nghe An	620	200	55.0	1100

Ha Tinh	109	51	76.9	392
Quang Binh	94	45	38.4	173
Quang Tri	21	2	50.0	10
Thua Thien – Hue	117	30	24.7	74
South Central Provinces	**658**	**232**	**39.2**	**909**
Da Nang				
Quang Nam				
Quang Ngai	30	7	15.7	11
Binh Dinh	449	143	33.0	472
Phu Yen				
Khanh Hoa	179	82	52.0	426
Tay Nguyen	**855**	**630**	**747**	**4709**
Kon Tum				
Gia Lai				
Dak Lak	242	160	50.5	808
Dak Nong	103	80	65.9	527
Lam Dong	510	390	86.5	3374
Southern Provinces	**15756**	**11198**	**80.3**	**89926**
TP Ho Chi Minh	300	230	90.0	2070
Ninh Thuan	42	30	70.0	210
Binh Ph¬uoc	1165	883	35.6	3141
Tay Ninh	1411	1031	34.8	3585
Binh D¬uong	698	584	33.6	1961
VND Nai	11360	7781	98.2	76447
Binh Thuan				
Ba Ria - Vung Tau	780	659	38.1	2512
Mekong Delta	**6311**	**4880**	**158.5**	**77334**
Tien Giang	227	203	136.2	2765
Vinh Long	1103	1061	148.7	15780
Ben Tre	4222	3104	179.1	55588
Kien Giang				
Can Tho	272	96	50.3	483
Hau Giang				
Tra Vinh	283	228	91.8	2094
Soc Trang	204	188	33.2	624
Bac Lieu				
Ca Mau				

Appendix 2-Results of census of litchi vendors in Hanoi
CALCULATION WITH NEW URBAN DISTRICTS

Table 166 - Estimated number of litchi street vendors (with new urban districts)

	Hoan Kiem	Cau Giay
Number of counted street vendors	60.00	56.50
Area in km²	5.29	12.04
Density (nr/km²)	11.32	4.69
Average density (nr/km²)	8.00	
Urban Hanoi area * (km2) (Except all big market areas)	185.32	
Extrapolated number	1,483	

** Urban Hanoi area = 185.62 km2; total market area in Hanoi = 0.3 km2*

	Hoan Kiem	Cau Giay
Number of counted shops and stall vendors	20.5	18.5
Area in km²	5.29	12.04
Density (no./km²)	3.87	1.54
Average density (no./km²)	2.70	
Urban Hanoi area * (km2) (Except all big market areas)	185.32	
Extrapolated number	501.3	

Table165 - Estimated number of isolated litchi shop and stall vendors (with new urban districts)

	Selected markets
Average number of counted shop and stall vendors	62.5
Area in km²	0.046
Density (no./km²)	1358.69
All big markets area in urban Hanoi (km2)	0.3
Extrapolated number	402.2

Table 166- Estimated number of litchi shop and stall vendors in big markets (with new urban districts)

Estimated number of litchi shop and stall vendors in urban Hanoi = 501.3 + 402.2 = 904

	Total number (average of 2 census)	
	permanent	irregular
Thanh Cong	9.5	6.5
Hom	2.5	5
Mo	7	1.5
19-12	5	1.5
Buoi	2	3.5
Hang Be	6	0
Hang Da	10	4
Nghia Tan	8.5	4.5
Trung Hoa	4.5	1.5
Thai Ha	8	0
Nha Xanh	0.5	5.5
Total	63.5	33.5
Number of traders in surveyed markets	3,733	
Total number of retailers in urban Hanoi	17,199	
Share of selected markets	21,2%	
	Permanent	**Irregular**
Extrapolated number of litchi market retailers	293	154
Total	**447**	

Table167 - Estimated number of litchi market retailers (with new urban districts)

Thanh Cong market is the market where most fruit vendors can be found, due to proximity of embassies and various administrations. Few vendors sell in 19-12, Mo and Buoi, due to the presence of street vendors around the market.

CALCULATION WITH OLD URBAN DISTRICTS

Table 168 - Estimated number of litchi street vendors (without new urban districts)

	Hoan Kiem	Cau Giay
Number of counted street vendors	60.00	56.50
Area in km²	5.29	12.04
Density (nr/km²)	11.32	4.69
Average density (nr/km²)	8.00	
Urban Hanoi area * (km2) (Except all big markets area)	83.79	
Extrapolated number	670	

* *Urban Hanoi area = 84.06 km2; total market area in Hanoi = 0.27 km2*

Table 169 - Estimated number of litchi isolated shop and stall vendors (with new urban districts)

	Hoan Kiem	Cau Giay
Number of counted shop and stall vendors	20.5	18.5
Area in km²	5.29	12.04
Density (nr/km²)	3.87	1.54
Average density (nr/km²)	2.70	
Urban Hanoi area * (km2) (Except all big markets area)	83.79	
Extrapolated number	226	

Table 170 - Estimated number of litchi shop and stall vendors in big markets (with new urban districts)

	Selected markets
Average number of counted shop and stall vendors	62.5
Area in km²	0.046
Density (no./km²)	1358.69
All big markets area in urban Hanoi (km2)	0.27
Extrapolated number	367

Estimated number of litchi shop and stall vendors in urban Hanoi = 226+367= 593

Table 171 - Estimated number of litchi market retailers (without new urban districts)

	Total number (average of 2 census)	
	permanent	irregular
Thanh Cong	9.5	6.5
Hom	2.5	5
Mo	7	1.5
19-12	5	1.5
Buoi	2	3.5
Hang Be	6	0
Hang Da	10	4
Nghia Tan	8.5	4.5
Trung Hoa	4.5	1.5
Thai Ha	8	0
Nha Xanh	0.5	5.5
Total	63.5	33.5
Number of traders in surveyed markets	3,733	
Total number of retailers in urban Hanoi	16,113	
Share of selected markets	23,17%	
	Permanent	**Irregular**
Extrapolated number of litchi market retailers	274	145
Total	**419**	

Appendix 3- List of selected supermarkets

TT	Name of supermarkets	Address
1.	Metro	Nam Thang Long
2.	Intimex Bo Ho	26 Ly Thai To – Hoan Kiem
3.	Marko II	379 Tay Son – Nga Tu So - Dong Da
4.	Citimart	49 - Hai Ba Trung – Hoan Kiem
5.	Minimax	66 - Ba Trieu – Hoan Kiem
6.	Fivimart 3	163 A - Dai La – Hai Ba Trung
7.	Seiyu	So 8 – Pham Ngoc Thach – Kim Lien
8.	Ha Noi Coop. Mark	1E- Duong Truong Chinh - Dong Da
9.	Big C	222 – Tran Duy Hung – Cau Giay
10.	Intimex Hao Nam	131 - 135 Hao Nam - Dong Da
11.	Intimex Lac Trung	27 Lac Trung – Hai Ba Trung
12.	Fivimart 1	17 - Tong Dan/ 210 Tran Quang Khai
13.	Fivimart 2	So 10 Tran Vu - Tay Ho

As Nr 10 to 13 have the same characteristics of supply than Intimex Bo Ho and Fivimart 3, we conducted observations and rapid interviews in these supermarkets, while the other were subject to in-depth interviews.

Appendix 4-Detailed disagregation of costs and profits between actors of different litchi value chains (VND/kilo)

	Yen The litchi by truck, street vending	Yen The litchi by motorbike, shop	Luc Ngan litchi by truck, street vending	Luc Ngan litchi by motorbike, shop	Unlabelled Thanh Ha litchi	Association Thanh Ha litchi
Input costs	366	497	708	708	497	542
Depreciation costs	278	199	127	127	426	403
Labor cost	44	16	14	14	10	10
Total=Production cost	688	712	849	849	933	955
Farmers' profit	1078	1288	1851	2151	2567	3045
Farm price	1766	2000	2700	3000	3500	4500
Collector						
Transport cost	114	166	143	175	217	500
Shop rental	70	100	70	100	100	200
Collection cost	100	-	100	-	100	150
Loading cost	15	-	15	-	20	25
Unloading cost	20	20	20	20		
Market tax	7	20	7	20		
Cleaning cost	1	20	1	20		
Packing cost	10	20	10	20	25	1200
Label cost		-	-	-		250
Loss cost	180	100	180	100		
Communication costs					12	50
Other costs					100	315
Collector's cost	517	446	546	455	574	2690
Collectors' profit	717	1054	754	1045	426	810
Collector's margin	1234	1500	1300	1500	1000	3500
Collector's price	3000	3500	4000	4500	4500	8000
Retailer						
Transport cost		150		150		
Market tax		5		5		
Cleaning cost		5		5		
Cost for police	30	-	30	-		
Packing	40	250	40	250		
Packing cost	30	35	30	35		
Other costs	10	10	10	10		
Retailers' costs	110	455	110	455		
Retailer's profit	890	1545	740	1295		
Retailers' margin	1000	2000	850	1750	1000	2000
Retailer's price	4000	5500	4850	6250	5500	10000

Source: RIFAV surveys for MALICA/MMWB4P, 2004,and for Thanh Ha, VASI (2004)