

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of the Findings

Coffee is the most important agricultural product of Vietnam. Recently, coffee production has been not only significantly contributing to the national economy but also enhancing the rural development in the remote regions in the central highland of Vietnam. In the past decade the development of coffee industry is one the main factors that has made the Vietnamese agricultural economy prosperous. The establishment of coffee plantations and coffee processing firms was very rapid throughout the country during the last decade. Although Vietnam has become the forth-largest coffee- producing country, in the present development of coffee processing systems, especially, in coffee processing firms confronts an imperative problem such as Vietnamese coffee is still in low quality. Many Vietnamese coffee companies have been seeking new technology, acquired and adapted it in their conditions, and used it as major method to improve their coffee quality and profit.

The economic efficiency of coffee processing firms and its effects to the coffee processing systems are still need to discover. This study focused mainly on analyzing coffee processing systems in the Central Highlands which has 59.3 % of the total area and 72 % of the coffee output of the whole country. It was carried out from December 1999 to February 2000 in Daklak and Gialai provinces. Random sampling methods were used to select forty-five coffee processing firms, descriptive statistics, gross margin and liner programming method were used for analyzing the data.

Coffee processing systems in Central Highlands include close integration of producers, intermediaries, processors, and traders. There are six main components in the coffee processing systems in the study area, *viz.* coffee farms,

state coffee plantations, coffee merchants, village collectors, state processing firms and traders.

Private and state coffee plantations have two main components, which have changed greatly in recent years. The roles of these components have been much change. Before 1990 the state coffee plantations occupied about 66 % of the total coffee area and 72 % of the total production. Now private coffee farms have 75 % of the sown areas and 77 % of the total coffee production in Vietnam. The Vietnamese government has continuously implemented the privatization policies. Many state coffee plantations have become the semi-state firms or private plantations. This is a main reason why the Vietnamese coffee industry has developed very rapidly in last 20 years.

Coffee merchants are involved village markets and collected small amounts of coffee from farmers and then sold to state coffee companies. These middlemen played a major role in instant coffee markets where the infrastructure is poor. State coffee processing firms are the largest individual producers and largest individual buyers and sellers in coffee markets in this area. Because these companies have high financial potential and some of them have rights to export coffee directly to foreign markets.

State coffee processing firms are one of the main components in coffee processing systems in this area. There are three types of coffee processing firms which are all state firms: wet, dried, and mixed processing firms. These firms differ slightly in their scales of processing. There are some differences in coffee processing technologies between wet, dried, and mixed processing firms.

Primary coffee processing technology is a basis and most Vietnamese coffee companies have weak or unstable competitive positions in the market so technological improvement can help them exploit their existing operative capability to concentrated on cost and quality as the main competitive factors.

The wet processing firms have better machine lines than in mixed and dried ones, because most wet processing firms are new or have upgraded their equipment in recent years. One reason that causes wet processing firms to have high processing costs are depreciation costs from waste treatment. Environmental contamination from wet processing is a big problem for all every coffee producers in the world. In recent years the Vietnamese government has provided new environment law and every firm must follow these laws. Expenditures for waste treatment are very high. The survey data shows that the costs for pollution treatment about one fourth of the total investment for each new wet processing firm. Another consideration is that before building wet processing plants, it is necessary to build coffee planting areas so that these plants can collect enough raw materials for operational capacity. These coffee processing plants also have to satisfy the technological requirements for the wet processing.

Government policies and world coffee markets had strong effects on the coffee processing systems of the Central Highlands region. The Vietnamese government has given much to support to the specialization development of this region. Since the Central Highlands still has the lowest quantity of transported goods. Road quality there is poorer than other regions. This has had a negative effect on the development of coffee industry in this area.

Up to now Vietnamese coffee has not had stable world market. This has resulted in the profit loss of all aspects of the coffee industry. This problem needs to solve so that the Vietnamese coffee can achieve a better position in wold coffee markets.

There are differences between coffee processing firms in terms of scale and production technologies. The scale of wet processing firms is larger than that of dried and mixed ones. In total, dried processing firms produce about 51.1% of all processed coffee followed by wet processing firms with about 32.1 % and mixed processing firms with about 16.8%. Processing costs were highest in mixed processing firms and lowest in dried ones. The net return per ton of processed coffee is highest in mixed processing firms and lowest in wet processing firms.

This finding is inverse with some hypotheses and some experimental tests that the wet processing method is best. In economic terms this can be explained since most all of wet processing firms are new or upgraded firms. Their experience in wet processing is limited. Some wet processing firm do not have enough raw material inputs for their plant therefore full capacities were not utilized.

One other reason is that wet processing firms only buy raw materials in fixed period of the year. But the 1997-1998 prices of coffee in Central Highlands markets were declined during this time. Therefore, wet processing firms paid higher prices of raw materials than dried and mixed ones. Wet processing firms, therefore, lost part of their profit.

Results of nonparametric approach using liner programming under bounded-technology condition shows that all three processing groups were binding by expenditure constraints. The proportion of constrained firms in wet, dried and mixed groups were 33.3%, 59.2%, and 55.6%, respectively, in comparison with the total of all firms of each group.

The wet processing group had a higher proportion of actually efficient firms (33.3%), financially efficient firms (66.7%), and overall efficient firms (33.3%). These proportions were 29.6%, 40.8%, and 18.5% for the dried group and only 44.4 % of the mixed group were financially efficient firms. Profit losses from expenditure constrained firms under *technological-bound* in wet, dried, and mixed processing groups were 22%, 29%, and 8%, respectively.

On the other hand, the average profit losses from expenditure constrained firms under *technological-unbounded* condition were 21% in the wet, 29.3% in the dried and 34.2% in the mixed ones. Finally, the wet processing firms were the best in managing resources. Interestingly, the mixed group managed better than the dried one, though it faced serious expenditure constraints under technological-unbounded conditions.

In summary, the wet processing firms operated at the highest overall efficiency level under unbounded technology condition, followed by dried and the mixed processing firms.

6.2 Recommendations

Based on the information and analysis of my study, the following areas of development are have been recommended:

1. The coffee industry needs more support from the Vietnamese government, especially in information network, new markets, infrastructure, privatization policies, and new technology.
2. To increase the economic efficiency of coffee processing wet processing firms need to consider in water expenditure, expendable inputs, and processing time.
3. Dried processing firms should improve & upgrade their technologies towards the wet processing methods, and replace old machines.
4. To increase profits the unconstrained firms need to decrease variable expenditures, especially marketing costs.
5. Constrained firms need to adjust variable input costs *viz.*, decrease water and marketing expenditures and increase expendable costs and labour costs.
6. Pollution control is necessary for all firms, especially wet processing firms, so finding way to use waste products from coffee processing could be a profitable solution.
7. Coffee products such as instant coffee and candy can be produced in Vietnam provided the industry has sufficient support & expertise.
8. For building new coffee processing plant, wet processing method should be given priority.