

Contract Farming as a Determinant of Promoting Tea Marketing Channels for Small Producers in Phu Tho Province

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Abstract

Contract farming between farmers and firms plays an important role in promoting access to the markets for small producers, especially in the less developed and developing countries. It is shown that contract farming provides farmers with the stable sale of their crops and agro-business firms with a steady supply of agricultural products required by the market. This paper focuses on analyzing benefits of tea producers that sign contracts with companies in term of tea marketing channels. By analyzing the data collected through 110 surveyed farmers in Thanh Son and Doan Hung districts in Phu Tho province, the study found that contract farmers received lower price than non contract farmers did in exchange for higher stability of price and better market access. As a result, it is highly recommended that small tea farmers should participate in contract farming in Phu Tho Province, Vietnam.

Key Words: *Contract farming, tea, marketing channels, small producers, Phu Tho*

1. Introduction

Vietnam has favorable conditions to develop tea production and marketing, especially in the mountainous and midland areas. Tea has long been grown in Vietnam, which are now popularized in 35 provinces nationwide with the areas of 130 thousand ha (Xuan Hai, 2015). Moreover, tea industry has contributed to increase employment and income for tea producers. Besides, it helps farmers eliminate hunger and alleviate poverty of the country (Viet Ha, 2016).

Phu Tho is a province in Northern Midland and Mountainous which is an advantaged region in terms of area, yield and quality of tea compared to the others in our country. Phu Tho is one of five top tea areas and one of four top tea-output-provinces (PhuTho DARD, 2014). Since 2000, tea production has become one of the major agricultural programs in Phu Tho province. Tea is considered as staple crops playing an important role in enhancing income in many localities (Quoc Vuong, 2012). Tea growing position was confirmed on the midland region. Products are exported to many countries around the world.

Contract farming is applied especially for the perishable agricultural commodities that need to be processed, such as vegetables, fruits and dairy (Bijman, 2008). Its applicability and necessity as a rural development tool has been recognized and discussed in many empirical studies in the context of its role in linking producers with agricultural markets, especially in the developing countries.

Following Catelo and Costales, 2008, contract farming can be understood as an arrangement between a farmer and processing and/or marketing firms with strict terms and payment for responsibilities done, usually with specific details, namely quantity, quality and shipment time. Rehber stated that contract farming is a contract between farmers and other enterprises established for a specific conditions of production and marketing which is non-transformable by verbal or written. (Rehber, 2007). As for Binswanger ((Binswanger et al., 1995), with the contract, farmers are assured the sale of crop and provided for technical assistance, credit, services, and inputs by the purchaser.

Contract farming brings benefits of marketing channel to farmers. Farmers can access to a reliable market (Prowse, 2012) because agribusiness firms have advantages in market knowledge and experience, processing technology, financial potential for sustaining international trade relationships (Simmons, 2002). Due to incentivizing the production of high quality, farmers' products meets specific quality requirements (Saenger, 2013), therefore their market is fairly ensured. Besides, firms provide technical assistance, inputs and credit for farmers that assists them to create higher value products and increase productivity (Minot, 1986). Moreover, contract farming reduces the risk of price fluctuations (Setboonsarng, 2008)

because the price is specified in the contracts at the beginning of the growing season (Silva, 2005).

There are many different classifications for contract farming. Eaton and Shepherd (2001) classify contract farming into five models namely centralized model, nucleus estate model, multi-party model, informal model and intermediary model. However, in this study for Phu Tho province, we focused on 2 types including nucleus estate model and intermediary model.

The nucleus estate model is similar to the centralized model in a way that a firm directly signs contract with farmers and provides extensive technical supports, inputs and close control of the production processes to farmers. However, in the nucleus estate model, firm owns farm assets and facilities and contracted farmers just contribute labors and some inputs to the production processes. Firm collects the products and pay farmers for their labor contribution. Farmers in this model are full contract farmers in Phu Tho province.

The intermediary model includes intermediaries (such as representatives of farmer's groups/cooperatives) between firm and farmers. Given the indirect linkage with farmers, firm might face with risks of losing control over quality, quantity and price. There could be also market uncertainties for farmers involved. Farmers in this model are semi contract farmers in Phu Tho province.

According to the Vietnam Tea Association (2014), although still ranked the fifth in the world of the export of raw materials tea but Vietnam tea industry has revealed many shortcomings in all three phases: growing, processing and consumption. In cultivation, due to about 70% in planted area grown by small farmers, fresh tea quality is uneven and difficult to control. Like other major provinces black tea processing in Vietnam, in Phu Tho, the scale of tea production is small, dispersing leading fresh tea quality is uneven and difficult to control. Tea farmers for profit has increased use of pesticides and chemical fertilizers to rise productivity that causing to poor quality material tea, affecting quality black tea quality. In addition, processing of black tea also inadequate. Currently the majority of factories are producing based on the old technology, leading to increasingly poor quality black tea. All above factors make the output of black tea export extremely difficult.

If farmers cooperate with big firms that have strong financial, technological resources and greater market access, they are likely to be assured more stable sale outlets. These firms can invest in improving material quality control and processing technologies to create higher quality products to meet stricter market demand. They also have access to larger and more stable markets such as foreign markets in Europe or North America.

Through the theory of contract farming, it can be seen that contract farming gives contract farmers many benefits such as easy market access and more stable market. There are various marketing channels for tea farmers in Phu Tho province, consisting of three farmer

groups: full contract farmers (Full CF), Semi contract farmers (Semi CF) and non-contract farmers (Non CF). Full contract farmers sell fresh tea directly to big processing companies. Semi contract farmers sell fresh tea through cooperatives. Non contract farmers sell tea through collectors in the spot market. The question is whether or not contract farmers (full CF and Semi CF) have better and more stable market access than non contract farmers. In this study, we want to clarify whether contract farming could be a factor promoting marketing channels for small producers in Phu Tho.

2. Methodology

This was based on the main surveys which were conducted in 2014 in Phu Tho province which has the tropical monsoon climate with 4 distinct seasons of spring, summer, autumn and winter. In which, the winter, lasting from November to February of the following year with cold and dry weather is not ideal for growth and development of tea. Phu Tho province covers an area of 353,330 ha, of which agricultural land is 282,178 ha, accounted for 79.86 %; of which, 98,370 ha (27.84 %) is the agricultural cultivation land area and 178,723 ha (50.58 %) is forestry land area (PTSO, 2013).

In the period of 2006-2010, Phu Tho had gained many achievements in economic development. The annual growth rate of GDP was approximately 10.7 % during this period. The economic structure has changed significantly towards the industry, trade and services sectors. In 2010, the average GDP per capita reached at 11.8 millions VND (equivalent 636 USD). In 2011, the shares of the industry and construction sector, the services sector, and the agriculture, forestry and aquaculture sector in the provincial GDP were 40.24%, 33.02%, and 26.74 %, respectively. (Phu Tho DARD, 2011). At the end of 2014, the total tea area risen up to 16,301 ha. Output has reached 152, 219 tons of tea leaves, about 52 thousand tons of processes tea (PTSO, 2014).

Main tea production regions in Phu Tho includes 9 districts consisted of Doan Hung, Thanh Son, Tan Son, Thanh Ba, Ha Hoa, Yen Lap, Cam Khe, Thanh Thuy, Phu Ninh. In which, Thanh Son an Doan Hung are two districts chosen for this study because firstly they are one of the most tea production regions in the High Land and Mid-land. Tea is the fundamental crops for socio-economic development in these areas. Secondly, these districts present three main types of the tea productions which included full contract farmers, Semi contract farmers and non contract farmers. Besides, due to the characteristics of tea production type, marketing channels which were reseach's focus are diversified and most adequated.

A survey questionnaires were undertaken with 110 farmers in which there were 70 contract farmers (including full-contract farmers and Semi-contract farmers) and 40 non

contract farmers. The information in the questionnaires regarding overall characteristics of the farms and the benefits obtained from participating contract farming.

110 tea cultivating households which were selected by stratified sampling based on their type of contract production, divided into 3 groups as follows:

Full contract farmers (40 farmers) are tea farmers who receive tea land from companies for up to 30 years and they produce fresh tea follow strict requirement of companies. This is nucleus estate group.

Semi contract farmers (30 farmers) are tea farmers who have their own land and sell fresh tea to Phu Ben Company through Minh Tien Cooperative. Contract is signed between Cooperative and Phu Ben Company. This is intermediary model which cooperated sustainably with Phu Ben Company in the area.

Non-contract farmers (40 farmers) have non cooperation with tea processing company and sell fresh tea on the open market through collectors.

Semi-structured questionnaires was carried out in big companies to collect the information about resource of companies such as labors, capital, assets, production equipments, result of processing and business of the Phu Da, Phu Ben companies in Thanh Son, Thanh Ba districts, Phu Tho province. Contracts were signed between these companies and farmers in term of tea production, tea processing. Besides, in-depth interviews clarified the linkages in production, processing of tea leaf by interviewing managers of the companies.

Three focus groups were conducted focusing in 1) differences among tea production of 3 farmer groups in Thanh Son, Doan Hung districts; 2) types of linkages models in production, processing and distribution of tea; 3) Pros and cons of the marketing channels among three research groups.

The satisfaction of farmers about tea marketing was assessed by five-point LIKERT scale, ranging from (1) Very dissatisfied, (2) Dissatisfied, (3) Neutral, (4) Satisfied and (5) Very satisfied.

- Data analysis: Both descriptive statistics and econometrics were used to analyze the data for the surveyed households. SPSS software version 22.0 was used for data processing using descriptive statistics and analysis of variance (ANOVA). F- Test was used for mean comparison.

3. Results and Discussion

3.1 Overall Characteristics of Tea Farmers in Phu Tho Province

Table 1: Overall Characteristics of Farmers in Phu Tho Province

Indicators	Unit	Full CF		Semi CF		Non CF		P
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
Age of household heads (HHH)	Years of Age	42.9	9.7	46.9	9.8	47.7	10.3	.076*
HHH Schooling Years	Years of Schooling	10.0	2.1	8.9	2.2	8.2	2.4	.002***
HHH Tea Production Years	Years of Tea Production	22.8	8.8	17.0	7.2	16.4	7.7	.001***
Household Size	Persons	4.4	1.0	4.2	0.9	4.3	1.1	0.73
Tea Land	ha	0.64	0.3	0.43	0.3	0.45	0.3	.005***
Tea Productivity	tons/ha	21.4	3.9	16.1	4.0	16.7	3.1	0.000***

Source: Survey result, 2015

*Note: ***, **, * significant at the 1%, 5% and 10% level, respectively.*

For describing main households characteristics, we used some indicators, including HHH Age, Tea production years, Land of tea, Productivity of HHH tea...In order to examination the difference, we used one-way Anova analysis. Results in Table 1 showed that there are 5 statistical significant indicators of which tea production years, tea productivity and tea land indicators had high statistical significant at the 1%.

The average age of household head is lowest of 42.9 years for the Full CF group. The following is for the Semi CF group with 46.9 years; and the Non CF group has the highest average age of 47.7 years. The average ages of the Semi CF group and the Non CF group are similar.

The number of years experienced on cultivating tea of the Full CF farmers is highest of 22.8 years due to the fact that the big companies Phu Da and Phu Ben are former State – owned farms. The Full CF have cultivated tea in these Farms since 1990s. Due to longer experience, these Full CF farmers know well how to take care of tea in a more effective way and they abstracted many experiences during a long period of working with tea. The Semi CF and Non CF households have cultivated tea recently, starting from before 2001 – the time that Tea Development Program has been determined as one of 6 major agriculture programs needed to develop. Then, their experience in tea cultivation is only around 16-17 years.

On the education level, the Full CF have higher education level but the difference is not large, 10 years compared with 8.9 years for the Semi CF and 8.2 years for the Non CF.

The numbers of people per household is quite similar among these groups, around 4.2-4.4.

Full CF have the highest tea land area with 0.64 ha due to land allotment from companies. Tea cultivation area of Semi CF and Non CF are 0.43 ha and 0.45 ha, respectively.

Tea productivity of Full CF of 21.4 tons/ha is the highest than those of the other groups. Non CF ranked the second in having high level of tea productivity of 16.7 tons/ha while Semi CF have the lowest with 16.1 tons/ha. Full CF received the highest tea productivity because they are supported inputs such as fertilizer, pesticide, technique by companies.

3.2 Marketing Channels of Black Tea in Phu Tho Province

Due to the far distance of tea processing firms, 100% non contract farmers sell fresh tea to the collectors. They come to buy on-site if the households have large volume of fresh tea. Most of collectors have collected at a distant of around one kilometer from the households that there is not difficulties for them to transport. Farmers usually cut tea by machine, in the early morning to escape from sunshine or in the early afternoon for limit water exclusion. Tea processing firms all make best effort to export tea themselves to seek for higher profit, while a small numbers of them to export through authorized channels.

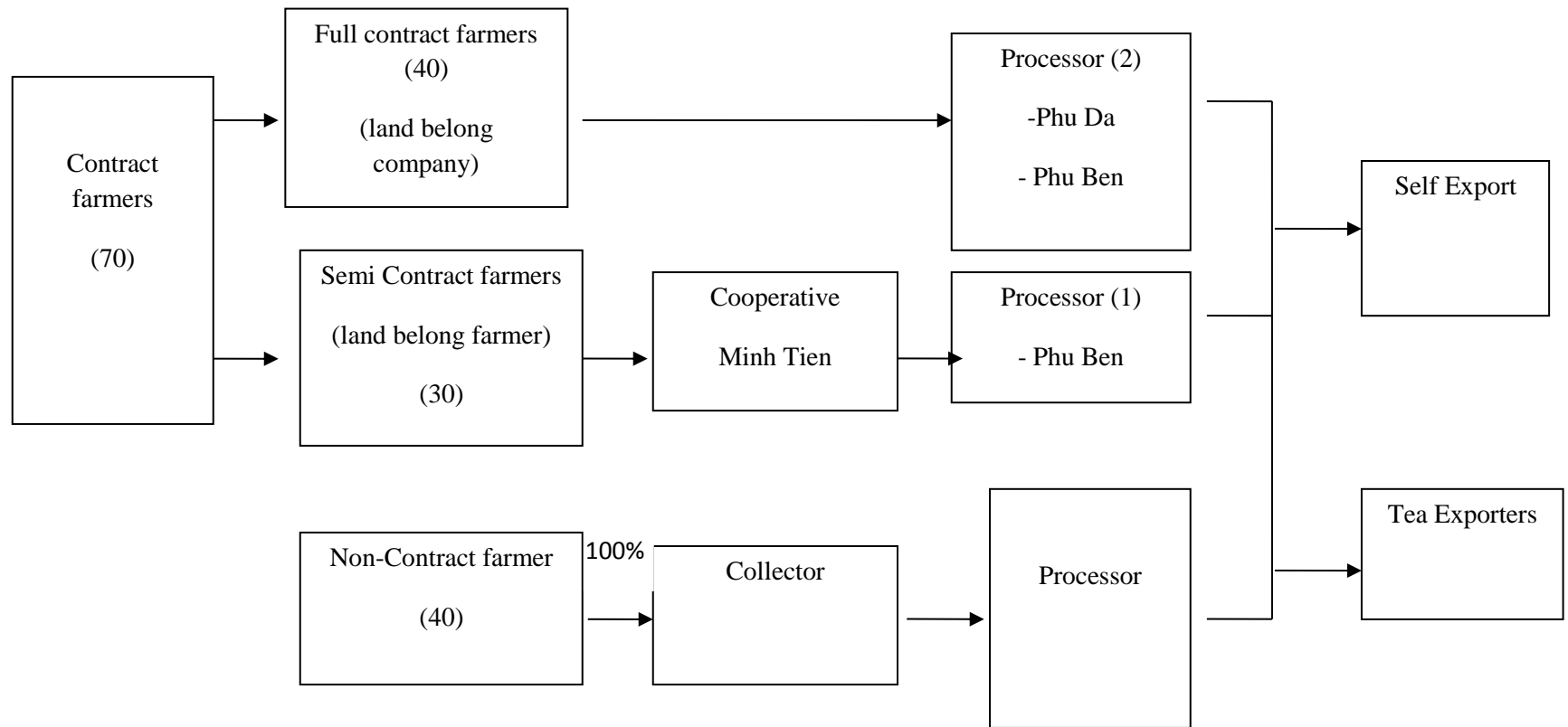


Figure 1: Marketing Channels of Black Tea in Phu Tho Province

3.3 Integration Mechanisms between Tea Producing Households and Tea Companies in Phu Tho

There are two type of signing contract between tea producing households and tea companies in PhuTho:

3.3.1 Contract between Full Contract Famers with Phu Da and Phu Ben Companies

This is a nucleus estate model. In this research, two companies having Full CF are Phu Da and Phu Ben companies. Phu Da Tea Company is a joint-venture company in PhuTho province, having 1,483 ha signing contracts with Full CF. Company's material zones include Thanh Son, Tan Son, and Yen Lap Districts in Phu Tho province.

Phu Ben Tea Company is a 100% foreign invested company with total area of 2200 ha. Material zones of this company are located in Thanh Ba, Doan Hung and Ha Hoa Districts.

According to Decree 135/2005/ND-CP regarding contractual assignment of agricultural land, production forest land and land with water surface for aquaculture in state-run agricultural farms and forestry farms, Full CF have to sign the contract with the company by which they would have a right to use company's land within 30 years and a responsibility to sell products to the company in return.

Land is allocated to Full CF within 30 years with a condition that they have to produce tea and sell all the products for the company. The factories provide materials with defer payment and technical support to Full CF, therefore tea produced by Full CF often have a higher quality than tea produced by a small-size non contract farmers. Many households also produce rice or raise cattles, however most of them focus on tea.

There are some regulations in contract included:

- The land allotment must be conducted based on contract. When conflicts happen, the conflicts would be solved based on civil laws.

- Allotment time is subjected to agreement between Full CF and the company, however with the maximum of no more than 30 years. When the allotment is due date without violating the contract and the full CF still have demand for using land, then the company can continue signing contractual assignment (Government, 2005).

- The company requests that the Full CF must produce only tea in allocated land and are not allowed to produce any other crop, therefore Full CF do not have the right to choose what crossshould be produced like other farmers.

- Based on the economic standard, technique and the reality of the garden, companies start performing the contract.

Full CF receive supports from companies on high quality in-put including fertilizer and pesticide with defer payment and strict technical control process. In return, they have to sell all tea leaf to follow price imposed by the company. (Oanh et al. 2016).

3.3.2 Contract between Minh Tien Cooperative and Phu Ben Company

This is an intermediary model.

For promotion of marketing –based agricultural products, the governments have been institutionalizing contract farming to provide legal framework for private actors engaged into contract. The Decision No.80/QD/TTg (hereafter “Decision 80”) issued in 2002 defined that: “Contract farming is an agreement between a firm and producers (cooperatives, households, estates/plantations and farmers’ representative) for agricultural products (agricultural products, forest products and aquaculture products) and salt products, before production begins (at the beginning of a crop, a year or production process begins), in vertical integration from agricultural production to procession and marketing for sustainable production.”

In Phu Tho Province, there are a few farmers or groups of farmer who have their own tea land signing contract with companies. Manager of Phu Ben Company, Deputy General Director Nguyen Luong Duyen said that in previous time, there were some groups of contract farmer in Phu Ben Company. One group had from 10 to 30 people. The head of group signed contract with Phu Ben Company under supervisor of his village. Under the contract, Phu Ben Company provided fertilizer to farmers and in return, farmers sold all their fresh tea to the Phu Ben Company. However, this model was unsuccessful. It was difficult for the head of group to manage this model because members usually sold fresh tea to other collectors if spot market fresh tea price was higher than price in contract. This group usually broken up the contract between company and group.

In the study sites, there is only group signing contract in a fairly stable manner with Phu Ben Company. This is the Cooperative namely Minh Tien in Minh Tien commune, Doan Hung district. Head of Cooperative signed written contract with Phu Ben Company. This is a moderately close intergration. Farmers in Minh Tien village sell tea leaf to Cooperative through oral contract. However, when tea leaf price of Cooperative is lower than it is of spot market, farmers can sell tea leaf to other collectors. It can be seen that this integration is a relatively stable because almost farmers are closed relatives or neighbours with the Head of Cooperative.

This contract with Phu Ben Company will ensure farmers to consume their fresh tea products. The company also provides them fertilizer with defer payment.

Head of Cooperative always guarantees to buy fresh tea with reasonable price for farmers as the way to compete with other collectors. Because he used to be fresh tea collectors for long time so he can ensure benefit for farmers. Farmers can sell fresh tea to other collectors when fresh tea price of Cooperative is lower than that of spot market. Similarly, Cooperative can sell fresh tea to other companies when Phu Ben Company give fresh tea price at low level. It means that the integration between Cooperative and company is not close. However, Phu Ben company still keep linkage with Cooperative for a long time hence they can built

material zone stably, and they could partly control the quality of input products for their processing process. This is foundation to built material zone with higher quality to promote exporting into strict market. (Oanh et all. 2016).

Content of written contract for Cooperative and Phu Ben Company:

- Cooperative provides tea leaf for Phu Ben Company following quality and quantity terms in contract.
- Price and quantity of tea leaf regulation follows to discuss between company and Cooperative.
- Phu Ben company provide fertilizer with defer payment base on total quantity tea leaf of Cooperative.
- Phu Ben make an immediate payment for Cooperative by cash or transfer

3.4 Benefit of Contract Farming on Exported Black Tea Marketing Channel in Phu Tho Province for Small Producers

Table 2: Outcomes of Tea Production in 2014 in Phu Tho Province

Indicators	Unit	Full CF	Semi CF	Non CF
Productivity	Tons/ha	21.4	16.1	16.7
Fresh tea price	VND/kg	3922	4041	4237
Gross Output	million VND/ha/year	83.999	65.059	70.715
IC (Intermediate Cost)	million VND/ha/year	31.034	26.258	26.437
1. Fertilizer	million VND/ha/year	19.395	13.696	14.102
2. Pesticide	million VND/ha/year	5.507	6.784	6.789
3. Other costs	million VND/ha/year	6.132	5.778	5.546
VA (Value Added)/ha	million VND/ha/year	52.965	38.801	44.278
VA /kg	VND/kg	2473	2410	2653

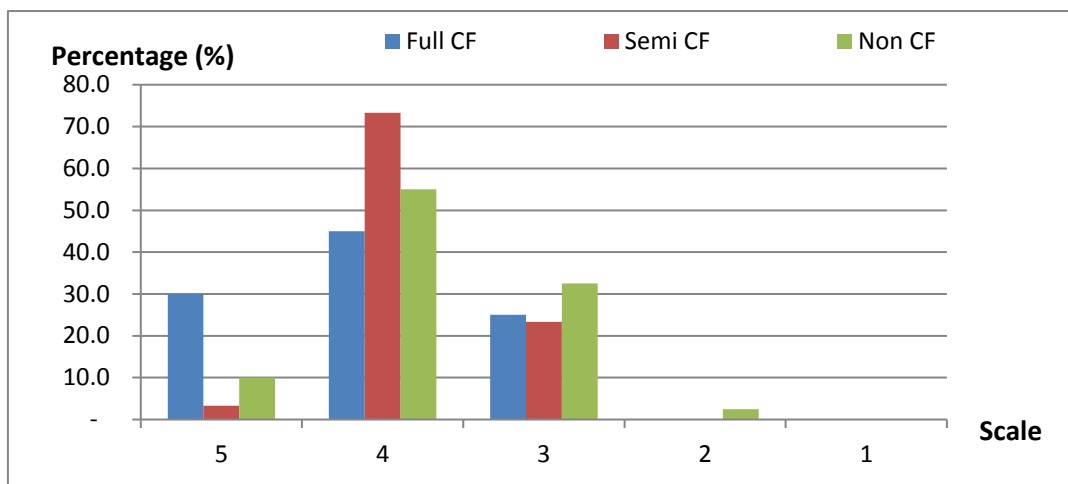
Source: Survey result, 2015 and Oanh et all.2016

Contract farming includes 2 groups: full contract and Semi contract farmers. There are some benefit of these groups on tea marketing channel following:

We used five-point LIKERT scale, ranging from (1) Very dissatisfied, (2) Dissatisfied, (3) Neutral, (4) Satisfied and (5) Very satisfied to assess the satisfaction of farmers about tea marketing.

3.4.1 Satisfaction of Farmers on Outlet Stability

Figure 2: Satisfaction of Farmers on Outlet Stability



Source: Survey result, 2015

30% of surveyed Full CF reported that they highly evaluated outlet stability of fresh tea with scale of 5. 45% of farmers evaluated at 4 point, while 25% of farmers evaluated at 3 point.

Semi CF were also generally satisfied with outlet stability. 73% of surveyed farmers evaluated at 4 point, 3.3 % of farmers evaluated at 5 point and 23.3% evaluated at 3 point.

Phu Ben Tea company, Ltd is a 100% foreign invested company which invested by Borelli Tea Holdings (BTH) - The UK. BTH is subsidiary of MeLeodRussel India Co.,Ltd belong to Williamson Magor Corporation which is the company producing the largest amount of tea in the world, with 52 factories in India, 4 factories in Vietnam, 5 factories in Uganda and 1 factory in Rwanda. Therefore, output of Phu Ben Tea Company is considerably steady. Consequently, Full CF and Semi CF sell fresh tea to Phu Ben really stably.

Phu Da Tea Company is a joint venture company between Vinatea Vietnamese Tea Company and Foodtuff Trading Baghdad Corporation of Iraq. Iraq requires a high quality of tea therefore Iraq's importing tea price is quite high. However, due to the unstable politic and the war, Iraq is quite a harsh market. Because of good raw materials, modern facilities, and good technical skills of worker farmers, Phu Da tea quality is quite good and being able to export to another high requirement market at high price. Accordingly, Full CF sell fresh tea to Phu Da considerable steadily.

Moreover, the quality of black tea is high therefore it is much easier and stable to sign contract with some big company. The raw materials of the company which are produced by Full CF have a very high standard due to enough of materials and good producing method. Furthermore, not only does the facilities and technologies are modern but the processing workers are also well-trained, which allows to improve the black tea's quality.

Black tea is the biggest tea exporting sector of Vietnam, contributing to more than 70% of total Vietnam's tea exports. The black tea are produced by 2 technologies:

- OTD Technology and its facilities come from Russia. Phu Da Company produced tea based on this technology. Although it is old technology, the facilities are imported comprehensively by Russia which are still good in comparison with others in the world. Besides, Phu Da Company always renovate facilities and import new one from Japan and Russia.

- Black Tea Processing Technology CTC was imported by India and used when Vietnam join in WTO in 2007. Phu Ben Company produced black tea based on this technology. Being a subsidiary of the famous India Tea Company in the world, Phu Ben Company has facility system and tea processing technology which are the most modern in Vietnam.

For non-contract farmers, most of farmers (55%) assessed with scale of 4, 10% of surveyed households assessed outlet stability with 5 point, and 32.5% assessed at 3 point. Also, 2.5% of households were dissatisfied with outlet stability while no Full CF or Semi CF evaluated outlet stability that low.

Non CF sell fresh tea for private company by collector, which make the households face with many difficulties. Most of private company do not have raw material areas therefore they have to buy fresh tea in the spot market which have lower standard. Moreover, facilities and tea production technology of private company is not as good as others. As a result, their black tea quality is not good. Consequently, consumption of this marketing channel is not stable.

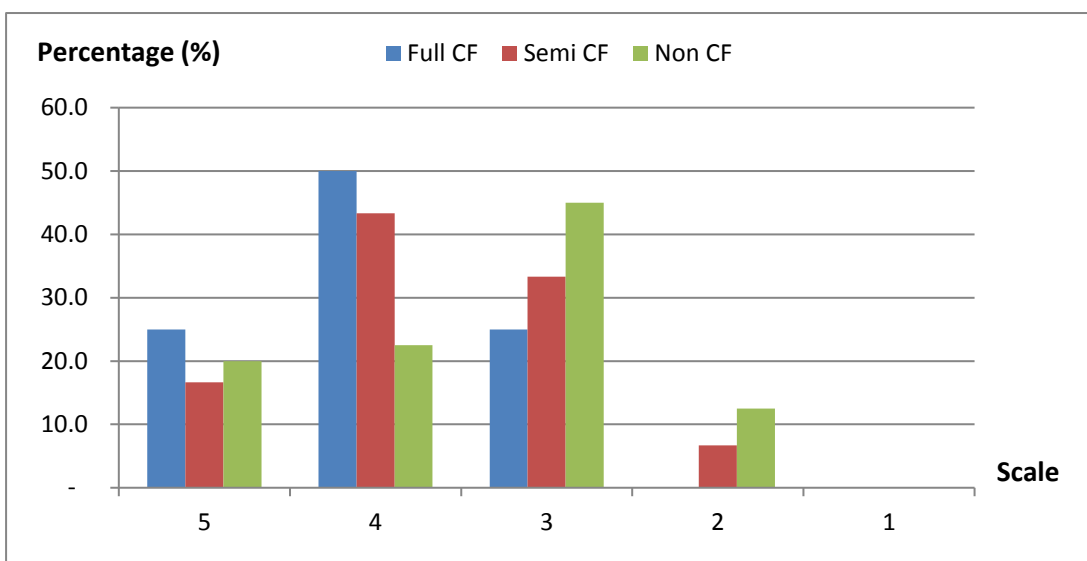
Facilities of OTD Black Tea Processing Technology are not being maintained or replaced with an appropriate way makes the tea quality and the price are decreased.

For facilities of CTC Black Tea Processing Technology, although it is an imported modern facility and technology with the good standard compared to others in India, Kenya, private companies are bad at management, processing worker's level, controlling quality method, therefore Vietnam CTC Black Tea's quality is as not good as black tea quality in the world.

3.4.2 Satisfaction of Farmers on Fresh Tea Price Stability

In general, Full CF highly appreciated fresh tea price stability. Based on the conducted survey, 25% of households asked gave a point of 5 for price stability, 50% evaluated at 4 point, and 25% evaluated at 3 point. Semi CF were also fairly satisfied with price stability of fresh tea: 43.3% evaluated at 4 point, 16.7% of households evaluated at 5 point, 33.3% evaluated at 3 point, and 6.7% evaluated at 2 point.

Figure 3: Satisfaction of Farmers on Fresh Tea Price Stability



Source: Survey result, 2015

Infact, Phu Da and Phu Ben companies always try to keep a stable fresh tea price for Full CF. Prices are being able to adjust according market change. However, fresh tea prices of these companies are always lower than market price because companies have to pay high investment fees for raw material areas such as investment fee for tea farms in the first 3 years or interest charge of defer payment of materials. Fresh tea price fluctuation level in one year of Full CF are lower than those of non contract farmers. When the tea market price are raising, the company will adjust tea price in order to guarantee the different gap between tea price of Full CF and tea market price are reduced, which also guarantee a stable spychology and a fair economic benefit for Full CF. When the tea market is decreased, the company still try to maintain tea price for Full CF in order to make them feel less stress and still take care of tea gardens. Because tea gardens are assets of the company, the company always maintain, reverse and enhance tea gardens from the beginning to the harvested time. They try to extend the life cycle of tea gardens by reinvestment for the tea farms after harvesting by putting more manure (In depth interview of company' managers).

For non-contract farmers, 45% of surveyed farmers evaluated with scale of 3, 22.5% of surveyed households assessed at 4 point, and 20% assessed at 5 point. Also, 12.5% of households were dissatisfied with fresh tea price stability (2 point) while no Full CF evaluated at that point and only 6.7% of Semi contract farmers evaluated with scale of 2.

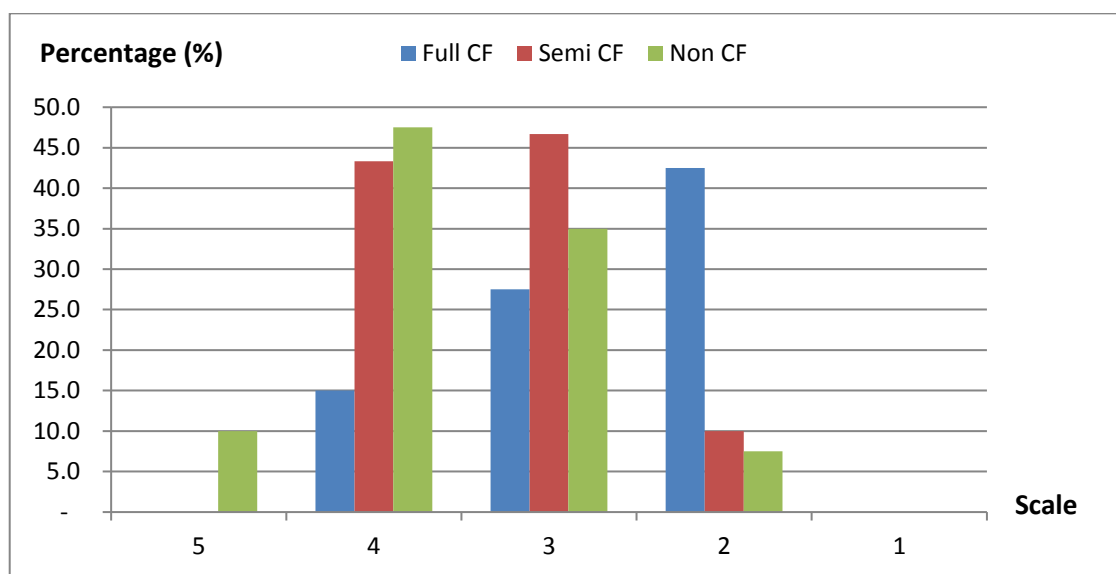
Private companies will buy fresh tea with a high price when they need the material to produce black tea. When occurring problems with output, or when they're in the main tea season and the tea yield is high, they'll push the price of non-contract farmer to an all-time low and buy fresh tea with an extremely low price. Besides, during the production process, non-contract farmers used unsafe fertilizers and pesticides and did not follow a strict process like Full CF do, leading to low quality fresh tea. This was the reason fresh tea price plunges

drastically whenever the tea yield was high. From all the factors above, the fluctuation of the price of fresh tea produced by non-contract farmers was very dramatic, which lead to low satisfaction of this group's tea price stability.

3.4.3 Satisfaction of Farmers on Reasonable Fresh Tea Price

The majority of Full CF were not satisfied with the tea price they received from big companies like Phu Da, Phu Ben. 42.5% of households gave 2 point; 27.5% assessed with scale of 3. Only 15% of households were satisfied (4 point). Based on Figure 4, the average fresh tea price of this group in 2014 was 3922 VND/kg, lowest among the three groups.

Figure 4: Satisfaction of Farmers on Reasonable Fresh Tea Price



Source: Survey result, 2015

Semi contract farmers were temporarily satisfied with the tea price received. However, the satisfaction level was not as high as non-contract farmers. Based on Table 2, the tea price of this group ranked second at 4041 VND/kg, higher than Full CF and lower than non-contract farmers. 46.7% of households asked gave 3 point – Neutral. 43.3% evaluated at 4 point – Fairly satisfied. 10% evaluated at 2 point – Dissatisfied.

Non-contract farmers was the group with the highest satisfaction level when it came to the price they sold to collectors. The average fresh tea price of this group in 2014 was 4237 VND/kg, highest among the three groups. 47.5% of households evaluated at 4 point and 10% of households were very satisfied with their price (5 point); 35% evaluated at 3 point and 7.5% evaluated at 2 point.

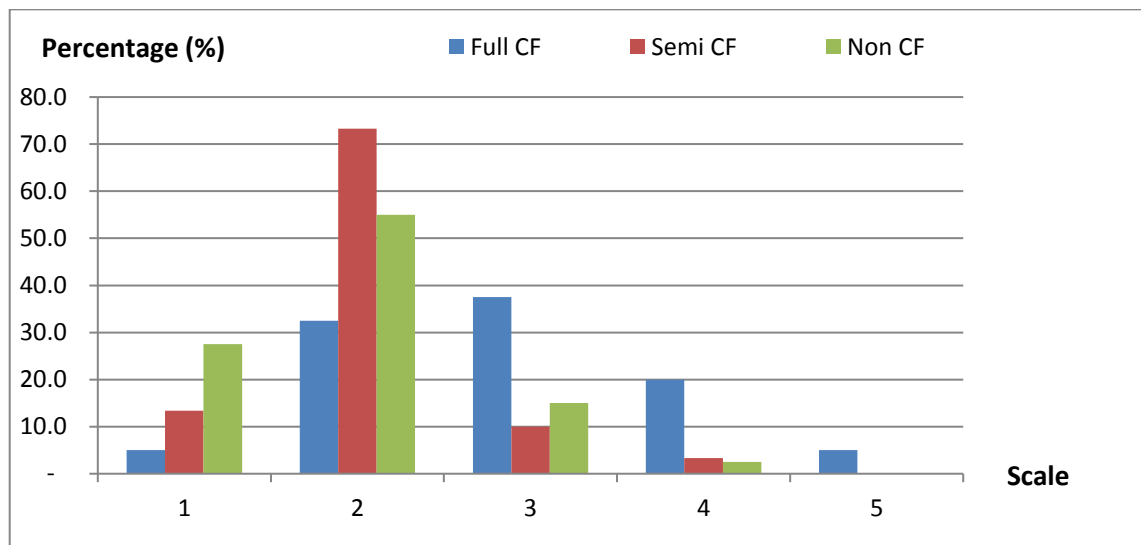
3.4.4 Satisfaction of Farmers on Payment of Buyers

Non contract farmers were most satisfied with payments of tea purchasers. 27.5% of the households were very satisfied at point 5. 55% of the households assessed with 4 point. Only 15% and 2.5% of the households were neutral and dissatisfied. Due to the lack of fresh tea

since there is no resources, private companies focused on paying farmers, therefore attracted tea transactions from farmers.

Semi contract farmers were quite satisfied with Minh Tien cooperative's payment. 13.4% of the households were very satisfied (5 point) with the cooperative's payment when purchasing their tea. 73.3% were satisfied (4 point). Only 10% of the households evaluated at 3 point (neutral) and 3.3% evaluated dissatisfied (2 point). Phu Ben Company really focused on paying Minh Tien cooperative, therefore the cooperative paid the Semi CF afterwards.

Figure 5: Satisfaction of Farmers on Payment of Buyers



Source: Survey result, 2015

Full CF were not very satisfied with payments of Phu Da, Phu Ben company. Only 5% of the households assessed very satisfied (5 point) about the company's payments. 32.5% of the households assessed satisfied (4 point) while 37.5% assessed neutral at point 3. Up to 20% of the households were dissatisfied (2 point) and 5% were very dissatisfied (1 point) with the company's payments. This could be explained by the fact that Phu Da and Phu Ben Company only pay for tea transactions at the latter period, or offer partial payment at the time the Full CF had just sold tea for the company.

4. Conclusions

Contract farming is proven to be beneficial to small tea farmers. Contract farmers enjoy more stable sale volumes and prices (based on the ranking results) because they have guaranteed access to companies which have strong resources (large size, cooperation with foreign companies, have wide raw material areas, good financial position, and advanced technology.) Fresh tea quality of full contract farmers is much higher as the result of stricter production process and quality control. When faced with uncertainty on the tea world market, tea processing companies try to stabilize their tea input price to ensure contract farmers'

interests which make farmers feel more secured and allow farmers to focus on growing their crops even when the market is in distress.

For non contract farmers, although price is higher, payment is faster, and their economic benefit (VA/1 kg fresh tea) is the highest, their outlet stability is less than that of contract farmers, mainly due to bad tea quality and their limited marketing channels. Most tea farmers are capable of following safe production guidelines, however when it comes to applying fertilizers, pesticides, etc... they often rely on their habits rather than adhering to technical requirements, thus affecting tea quality greatly. Besides, non contract farmers sell tea to private companies with no purchasing commitments.

The Vietnam tea industry has experienced difficulties during 2015 (Tien Anh, 2015) and 2016 (Minh Phuong, 2016) in terms of decrease in black tea price and sales. Reasons of difficulties are unsteady product quality, pesticide overuse, excessive inventory, and the effects of economic depression.. Dealing with uncertainty on the tea world market, private companies reduced exports of black tea due to poor quality tea and limited market. Non contract farmers had to sell tea at very low prices. This, coupled with low productivity lead to significant drop of their incomes. They were more affected by tea market changing than contract farmers.

Therefore, linkage between famers and processing companies should be encouraged in order for farmers to have stable and sustainable outputs. Non contract farmers should formed organizations such as cooperatives that are more favorable to companies to sign contract with, as a result, consumption of farmers would be steadier. However, the most difficulty of this model is the contract breaking-up due to the fact that contracted price is normally lower than market price. To mitigate this problem, companies should deal with these by improving management, reducing costs, increasing revenues to ensure economic benefits for contract farmers.

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