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The Benefit of Fairtrade Coffee to Karen Coffee Farmers Living in National Parks in Northern Thailand

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1. Introduction

Coffee has been introduced into national parks in northern Thailand since 1970s to replace opium plantation and create income for hill-tribe farmers. Because of the cool, shady environment, Arabica coffee produced in this region is widely accepted as good quality (Boonma, 2006). Even though quality and quantity of coffee production is good, the fluctuating market price and demand negatively affect coffee production and creates unstable farm income (Suwanwisolkit, 1999). In 2004/2005, farmers together with the Integrated Tribal Development Program (ITDP) formed a coffee cooperative and started selling coffee under the Fairtrade regime. A study by Bacon (2005) stated that in Nicaragua, Fairtrade leads to significantly higher prices paid to farmers. However, a study by Utting-chamorro, 2005 stated that there are limits to the extent to which Fairtrade can significantly increase the standard of living of small-holder coffee producers in Nicaragua. Therefore, the benefit of Fairtrade remains controversial.

The objectives of this study are to analyze the structure of the coffee market in study area, to analyze factors which influence farmers' decision to participate in Fairtrade and to assess the effects that Fairtrade have on the coffee farmers' welfare within the context of sustainable livelihoods.

2. Methodology

92 farmers from 6 villages living in Doi Inthanon and Ob Luang national park were chosen for the survey. Because the complete list of adopters does not exist, adopters were chosen by snowball sampling and non-adopters were chosen by random sampling. Among these farmers 90 were included in standardized interviews and 9 farmers were chosen for key informant interviews. Questionnaires and PRA tools such as social map, seasonal calendar were used for data collection. Probit model and open-ended question were used for analysis on Fairtrade adoption and descriptive analysis was used for identifying the effects.

3. Coffee Production in the Study Area

The study area of Doi Inthanon National Park and Ob Luang national park is located 100 km southwest of Chiang Mai Province. The high altitude (1,000 to 1,300 m above sea level), cold and moist weather make this area ideal for Arabica plantation. Mean agricultural area including a house is 1.38 ha, average coffee cultivation area is 0.35 ha, and the average percentage of coffee cultivation area to total agricultural area is 27.47%. On average, coffee farmers in the study area have been growing coffee for 17.16 years.

Most farmers do not use water, pesticides or fertilizer. Apart from no input costs for maintenance, there are also very low investment costs in initial investment in coffee. Most farmers received coffee seeds and seedlings from their neighbors or relatives. However, some bought coffee seeds

and seedlings from the Royal Project because they believe that seedlings offered by the Royal Project yield better quality coffee.

Coffee is recognized as a cash crop that needs little to no effort and does not generate as much income as vegetables or flowers. Farmers also earn off-farm income as workers for the Royal Project, engaging in lowland labor market, the sale of forest products or handicrafts, as small business-men, and as government employees.

4. Results

According to Fairtrade adoption, coffee farmers are categorized into 2 groups; adopter and non-adopter. Fairtrade non-adopter group comprises of 55 cooperative non-members and 26 cooperative informal members. Fairtrade adopter group comprises of 9 cooperative formal members. The number of adopter is low because the study area is focused in national park, where coffee is not a main income channel.

Cooperative non-members sell their coffee to various channels such as local middlemen, the Royal Project, cooperative informal or formal members. Informal members are committed to selling cherries to formal members only. Formal members pay membership fee, hence they have the right to attend the meetings, and have access to use coffee processing machines provided by the ITDP. Together with cherries produced on their farm, cherries that are collected from non-members and informal members will undergo the wet processing to get parchment or green beans and then sold to the cooperative

4.1 Probit model on Fairtrade adoption

Table 1: Variable Definitions, Hypothesized Signs of Fairtrade Adoption

* significant at P = 0.10

** significant at P = 0.05

Variable	Definition	Coefficients	Standard errors	dF/dx ^a
Farmer Characteristics				
AGE	Age of the primary decision maker (years)	0.081**	46.46	0.003
EDU_PRIM	Equals one if the primary decision maker finished primary school or zero otherwise	0.699	0.31	0.032
EDU_SEC	Equals one if primary decision maker finished secondary school or zero otherwise	0.417	0.17	0.018
EDU_UNI	Equals one if primary decision maker finished university or zero otherwise	3.454	0.03	0.853
MEM_GOV	Equals one if any household member belongs to a governmental organization before Fairtrade participation and zero otherwise	1.839*	0.07	0.289
ECONGRP	Number of economic groups that household members belong to (other than ITDP)	0.593	1.00	0.019
Farm Characteristics				
LOG_TOT_AR	Log10(Total agricultural area including house)	0.598	0.87	0.019
RATIO_CF_AR	Percentage of total farm planted with coffee	0.015	27.47	0.000
TOTLAB	Total available household labor on farm	-0.424	2.75	-0.014
N		90		
Log likelihood		-13.327		
Likelihood ratio $\chi^2(9)$		31.86		
Mc Fadden's Pseudo R ²		0.545		

^aMarginal change in probabilities evaluated at the sample means.

The model for Fairtrade adoption is the same model created by Wollni and Zeller (2007). It is assumed that the household will choose to join ITDP if the utility gained from participation is greater than the utility of not participating. Six farmer characteristics and three farm characteristics were tested (Table 1). The result of probit model showed that age (AGE) and membership of

government since before Fairtrade participation (MEM_GOV) were positively correlated with the adoption of Fairtrade. Age has a significant and positive effect on participation ($P < 0.05$). All other factors held constant, age increases the probability that a household participates in ITDP by 0.26%. Similarly, farmers who have household members participating in governmental organization since before Fairtrade participation are more likely to adopt ITDP. In the study area, households involving in governmental organization have more power in the community than those who do not because they have access to policy implementation. Moreover, they are people who will be contacted first when outside organizations are entering the villages, hence they also have better access to information. All other factors held constant, involvement in government organization increases the probability that a household participates in ITDP by 28.9%.

4.2 Result from open questions

Most adopters referred to good prices and constant demand as the major decision factor in selling coffee to ITDP. Even if formal members produce more than the quota, the excess coffee will be bought at the same price. Most non-adopters are more concerned about social networks rather than price. They prefer selling to friends or relatives even they get lower prices. 13.8% of non-adopters sell coffee to middlemen who pay cash at the time of coffee purchase. However, cash liquidity is not the driving point for adopters.

4.3 Effects on livelihoods

Human Capital

The most obvious contribution Fairtrade has on human capital is in capacity building. Apart from the knowhow on performing wet process, adopters also get information on world coffee price and Fairtrade standards via ITDP.

Physical Capital

There is no significant change in quality of dwelling and transportation between groups. The only prominent asset change that can be observed in both regions is in the coffee section. Depulper machine is provided upon request, but members have to divide the cost amongst each other.

Natural Capital

Coffee cooperative is successful in pursuing farmers to grow environmental friendly coffee. Chemical fertilizers are gradually substituted with organic fertilizers and coffee trees are grown in the forest without deforestation. However, the issue of waste water is still neglected.

Financial Capital

Participation in Fairtrade is correlated with higher coffee income amongst formal members due to access to coffee processing. Formal members have more coffee income, and also have better access to formal credit than informal and non-members. But Fairtrade does not necessarily lead to a disparity in cherry prices between groups. In Doi Inthanon area there are no significant differences in price between groups. However, in Ob Luang area, where formal members strictly follow the rule set by coffee cooperative, Fairtrade adopters do get better price than non-adopters. However, when comparing prices over time, it can be said that Fairtrade helps to increase cherry prices and coffee income over time for every groups.

Social Capital

Meeting held by ITDP creates more opportunities for formal members to talk to each other even they live in different villages. Formal members exchange information on coffee relating issues such as coffee production methods in the meeting. On the other hand, wet processing requested by Fairtrade creates a busy lifestyle which diminishes solidarity in the community. Winter time which was normally used for recreation is substituted by coffee processing which takes a lot of time and effort. However, there is a case in Ob Luang where social premium was invested properly so it could indirectly increase community's solidarity. Construction of water tank by Starbucks in this area helps alleviate the problem of water competition, resulting in farmers' good mood to talk to their neighbors.

5. Conclusion and Policy Recommendations

The adoption model reveals a problem in power and information asymmetry. Farmers who have been engaging in government organization since before Fairtrade was introduced have better access to information, thus have a higher probability of engaging in Fairtrade. Most non-adopters have little idea of what a coffee cooperative called ITDP is doing and how they would benefit from entering the Fairtrade program. This argument by adopters with regards to this issue was that the non-adopters themselves chose not to receive the information by not going to the orientation sessions. That may relate to the fact that the Fairtrade certification was not obtained by a farmer founded cooperative but by a development project which created farmer groups.

Fairtrade is having some positive impacts on the lives and livelihoods of small producers, the capacity building, increasing and stable coffee income, and environmental protection. However, important challenges still persist. Full democratization of cooperative needs to be tangled. As long as farmers are still merely passive producers, they will never get full benefit from Fairtrade.

Despite rapid growth of Fairtrade market, the market for Fairtrade coffee is still quite small (Sick, 2008). Even with Fairtrade partnership agreements, ITDP still must sell coffee to buyers in the conventional market. The low demand for Fairtrade market together with the abolition of coffee import tariff in 2010 are expected to lead to coffee price drop. To reduce farmers' vulnerability to risk, diversification on port folio is necessary.

7. References

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