

# *The Law and Development Review*

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Volume 5, Number 1

2012

Article 5

SPECIAL ISSUE (2012): MICROTRADE - A NEW SYSTEM OF  
INTERNATIONAL TRADE FOR POVERTY ALLEVIATION

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## Community-Based Microtrade in Support of Small-Scale Farmers in Thailand and Tanzania

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### **Recommended Citation:**

Neef, Andreas; Mizuno, Kei; Schad, Iven; Williams, Pakakrong M.; and Rwezimula, Franklin (2012) "Community-Based Microtrade in Support of Small-Scale Farmers in Thailand and Tanzania," *The Law and Development Review*: Vol. 5: No. 1, Article 5.

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DOI: 10.1515/1943-3867.1148

# Community-Based Microtrade in Support of Small-Scale Farmers in Thailand and Tanzania

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## Abstract

Drawing on two action-research projects conducted between 2007 and 2011, this paper compares the benefits of pro-poor microtrade arrangements for smallholder litchi growers in northern Thailand and small-scale vanilla growers in northwestern Tanzania. The case studies combine various qualitative and participatory research methods with an in-depth analysis of the underlying social, economic and knowledge networks. Theoretically, our research is grounded in the concept of strategic niche management, which emphasizes networking, experiential learning, and the convergence of expectations among producers, exporters, consumers and supporting agencies. Our findings suggest that community-based microtrade with high-value agricultural products can be particularly beneficial for small producers and marginalized groups, such as women and the elderly. Evidence from the comparative study of the two cases further underscores the importance of external knowledge and innovation intermediaries in the formation of community-based and pro-poor microtrade arrangements. We conclude that long-term knowledge and innovation partnerships need to be established to successfully connect smallholder farmers to international markets and to carefully balance the power differentials among all actors along the supply chain.

**KEYWORDS:** strategic niche management, supply chains, high-value agricultural products, certification, partnerships, legal constraints

**Author Notes:** The case study on Thailand was funded by the "Deutsche Forschungsgemeinschaft" (German Research Foundation) under the Uplands Program (SFB 564). The case study on Tanzania was supported by the JSPS Grant-in-Aid for Scientific Research (C) (project code 21510260).

## I. INTRODUCTION

Microtrade has been defined by Lee (2009) as a form of “international trade on a small scale, based primarily on manually produced products using small amounts of capital and low levels of technology available at a local level in [least-developed countries] LDCs”<sup>1</sup> and “as an alternative approach to reduce or eliminate poverty where an LDC economy is not supported by a well-functioning government and effective administrative assistance”<sup>2</sup>. Yet the approach may not necessarily be confined to least-developed countries, but could also be applied to marginalized regions within emerging economies, that have been neglected by state-agencies and/or bypassed by mainstream economic development.

Both Thailand and Tanzania are major exporters of agricultural products and have shown impressive growth rates in recent years, but the more remote rural areas have been left behind as to their socio-economic development. Farmers have faced increasing prices for major inputs, such as fertilizers and pesticides, while suffering from declining and/or fluctuating farm-gate prices for their agricultural produce. This paper seeks to explore how community-based microtrade with value-added agricultural products – supported by a network of private and public actors – may help to alleviate rural poverty and build a more sustainable basis for rural development in these two countries.

In the northern Thai hillsides, smallholders of the Hmong ethnic minority group have been growing litchi – a delicate, perishable fruit of Chinese origin – for more than 30 years. Socially and economically marginalized, their bargaining power and access to high-value markets are limited, forcing them to accept the farm-gate price offered by middlemen who are monopolistic in the local market and tend to exploit their position. In recent years, Hmong growers have gotten low prices for their fresh litchi fruits and some cut down their orchards to plant more profitable crops such as vegetables which require on average twice the amount of pesticides used in litchi orchards.

In inland eastern Africa, farmers have grown vanilla – an orchid that grows as an evergreen, perennial vine – often in association with their staple food, banana. A typical example is found in the home garden system called *kibanja* which is widely practiced by the Haya people in northwestern Tanzania. The crop can grow without agro-chemical input, but requires high labor input for producing the highly priced “vanilla beans”. Having almost no local market, export channels are very important for producers. However, since the mid-2000s, the world market price of vanilla has dropped drastically due to expanding production in

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<sup>1</sup> Yong-Shik Lee, *Theoretical Basis and Regulatory Framework for Microtrade: Combining Volunteerism with International Trade towards Poverty Elimination*, 2 The Law and Development Review, no. 1 (2009), 1.

<sup>2</sup> *Ibid.*

other countries. Faced with declining prices, some farmers gave up vanilla production.

Interdisciplinary teams of foreign and domestic researchers in the two countries joined hands with local farmers and various other stakeholders in the two countries in an effort of reviving the economy of the litchi and vanilla production systems respectively, which were considered beneficial from an ecological and social perspective in the specific local context.

The remainder of the paper is organized as follows. In section II, we discuss our methodology and theoretical framework. The results from the two case studies are presented in section III, along the main principles of 'strategic niche management'. Section IV synthesizes the findings and concludes the paper.

## **II. METHODOLOGY AND THEORETICAL FRAMEWORK**

### **A. Methods**

The partnerships on which the two case studies are based have been developed in an action-research context. Data is derived primarily through dense participation, direct observation, field notes from encounters with producers, processors and marketing agents, semi-structured interviews with key informants, and short reports from group discussions. The action-research approach enabled us (1) to get a first-hand insight into network building processes, (2) to understand processes of communication, collaboration and mutual learning among the various actors involved and (3) to get access to tacit and 'secret' knowledge, such as product specifications, price negotiations and profit margins.

### **B. Strategic Niche Management as a theoretical framework**

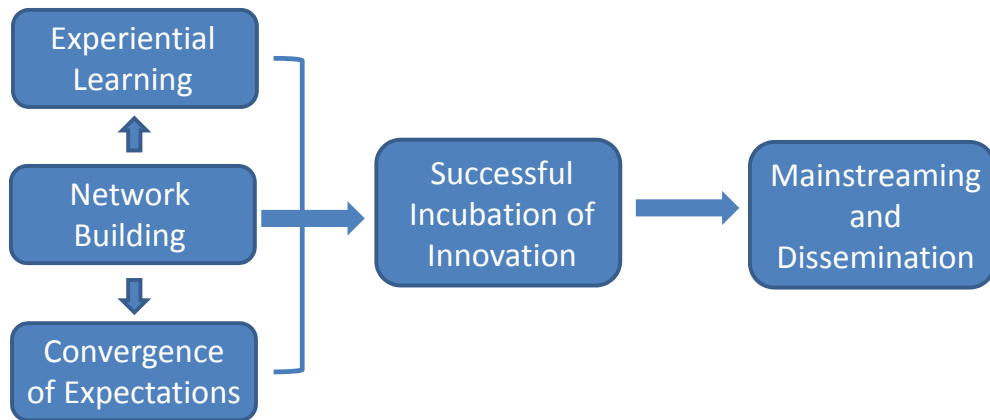
Theoretically our research is grounded in the emerging literature on "Strategic Niche Management"<sup>3</sup>. Strategic Niche Management (SNM) advocates the creation of socio-technical experiments in protected spaces – so-called 'niches' – where innovation agents are encouraged to cooperate and exchange information,

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<sup>3</sup> See M.C. J. Caniels and H. A. Romijn, *Actor Networks in Strategic Niche Management: Insights from Social Network Theory*, 40 *Futures* (2008a), 613-629 and R. J. Shot Kemp and R. Hoogma, *Regime Shifts to Sustainability through Processes of Niche Formation: The Approach of Strategic Niche Management*, 10 *Technology Analysis and Strategic Management* (1998), 175-195.

knowledge and experience, without being subject to immediate market pressure as long as the innovation is still in an experimental stage<sup>4</sup>. The concept of strategic niche management builds on three basic principles, namely network building, experiential learning and convergence of expectations, that – if managed carefully by intermediary actors – could trigger a successful ‘incubation’ and subsequent mainstreaming and dissemination of the innovation (Figure 1).

**Figure 1.** Principles of Strategic Niche Management



Source: Modified after Caniëls and Romijn (2008a)

### III. COMMUNITY-BASED MICROTRADE WITH HIGH-VALUE AGRICULTURAL PRODUCTS: CASE STUDIES FROM THAILAND AND TANZANIA

#### A. The case of cooperative litchi processing and marketing in northern Thailand

##### 1. History and context of the litchi processing and marketing initiative

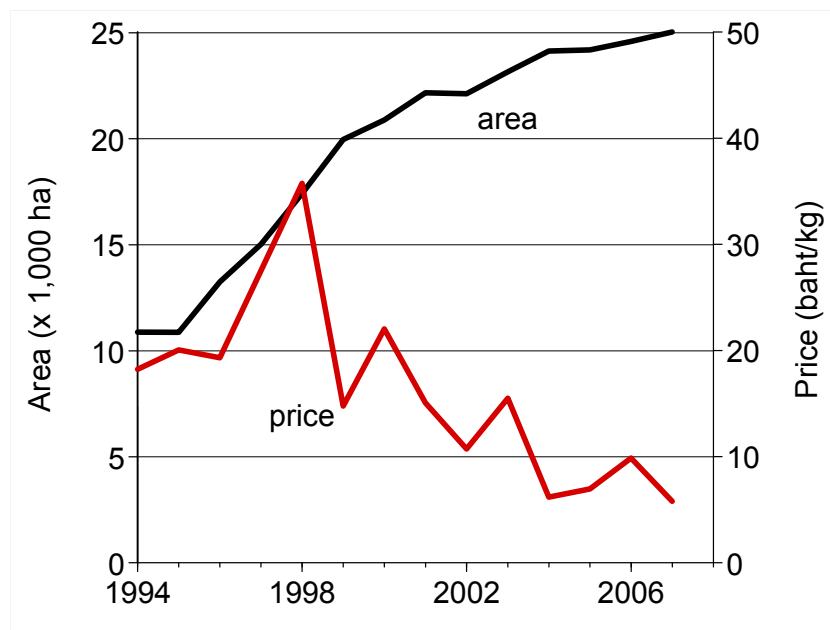
Since the year 2000, the Uplands Program – a Thai-Vietnamese-German collaborative research network has worked closely with Hmong ethnic minority

<sup>4</sup> M.C. J. Caniëls and H. A. Romijn, *Supply Chain Development: Insights from Strategic Niche Management*, 15 The Learning Organization (2008b), 336-353.

farmers in the Doi Suthep-Pui National Park, Chiang Mai province, northern Thailand, to reduce the environmental impact of intensive farming on steep hillsides and to find ways to improve highland communities' livelihoods. Due to the economic importance of litchi production for upland farmers, this fruit has been the major focus of various technical and socio-economic subprojects of the Uplands Program. On the steep hillsides of the area, fruit-based agroforestry systems are considered beneficial in minimizing soil erosion and in protecting adjacent forests of the Doi Suthep-Pui National Park.

Yet the hundreds of small-scale litchi growers in northern Thailand have little influence on determining prices and adding value to their products. Most fresh litchis are traded via middlemen (local and district assemblers) and only a small fraction is sold by farmers directly to consumers or retailers. Contract farming arrangements with big agro-processing companies, e.g. for canning, reduce farmers' marketing risks, but at the expense of relatively low prices. Farmer-led processing and marketing cooperatives are virtually non-existent in the northern Thai highlands. Since the late 1990s, the average price of litchi has shown a declining trend due to an increase of litchi orchards and – more recently – competing fruit imports from China (Figure 2).

**Figure 2.** Development of litchi production area and average farm-gate price of litchi from 1994-2007



Source: Schreinemachers (2009) based on data from Office of Agricultural Economics

Against the backdrop of a steady fall in prices, coupled with the little bargaining power of Hmong farmers and the trend of cutting down litchi orchards in the major research area, the Doi Suthep-Pui National Park, a team of German and Thai researchers cooperated with Hmong litchi growers to initiate coordinated litchi processing and marketing activities. We concluded that our research work needed to focus on the potential for collective action and enhance social capital among mountain farming communities to make them play a more active role in the post-harvest and marketing sector rather than just being passive suppliers of agricultural raw materials<sup>5</sup>.

## 2. Network formation: new business opportunities with a diverse set of actors

In cooperation with Hmong smallholder farmers in the Doi Suthep-Pui National Park and with various local and international organizations, scientists of the Uplands Program have actively searched for sustainable strategies that address the challenges faced by litchi growers in the northern uplands. In the first step, an interdisciplinary group of scientists developed an action-research experiment with a fruit processing facility in the villages of Mae Sa Noi and Mae Sa Mai in 2007. A conventional gas dryer was installed in cooperation with a local manufacturer and made available for farmers under technical and economic guidance by researchers. Workshops on litchi drying, litchi jam making, packaging and accounting were organized for villagers by lecturers from Chiang Mai University (CMU), one of the partner universities of the Uplands Program in Thailand. Various sub-projects of the Uplands Program contributed to the process by conducting surveys about the taste preferences of Asian and Western consumers for dried litchi, a comparative market study of dried litchi from highland and lowland litchi producers, and an economic assessment of the fruit drying operation. The local drying-oven manufacturer agreed to cooperate towards optimizing the dryer.

In 2007, 90 kg of dried litchi were produced from 1,670 kg of fresh litchi, whereby six households actively participated in the drying activities. In 2008, a processing cooperative comprising villagers from two Hmong villages was established. More than two third of its 32 members are women, who traditionally tend to be marginalized in the patriarchal Hmong society. The cooperative produced 70 kg of dried litchi and more than 200 kg of litchi jam in the 2008 season. More than half of the dried litchi production was traded locally via small retailers and tourist facilities, while around 32 kg were sold in a small trial export to a German development expert organization, which distributed them as

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<sup>5</sup> A. Neef and F. Heidhues, *Sustainable Rural Development in Mountainous Regions of Southeast Asia: The Case of Thailand and Vietnam*. Geographische Rundschau – International Edition (2008), 28-33.

Christmas gifts to their employees. To avoid having to pay import duties, the coordinator of the Uplands Program signed a letter confirming that the shipment was a trial export linked to a non-profit research project. Microbiological tests and checks of the moisture content were commissioned to colleagues at Chiang Mai University to ensure that the dried litchis were safe for consumption.

Production and sales of dried litchis have remained at a relatively low level and were characterized by annual fluctuations (see Table 1), due to competition for labor during the extremely short harvesting season in May/June and low profit margins for sales in the local market, particularly when the price of fresh litchi is relatively high<sup>6</sup>. The Uplands Program therefore aimed to explore marketing opportunities abroad and sent samples of dried litchis to a large European food fair in 2008. This promotion led to a number of promising new contacts, the most notable one with a French natural food retailer that later ordered several shipments of both fresh and dried organic litchi.

**Table 1.** Sales of dried litchi from the processing cooperative in Mae Sa Mai/Mae Sa Noi

Year	Quantity (in kg)	Major marketing channels
2008/2009	98	Direct marketing, retailers, tourist facilities, trial export to German Development Expert organization
2009/2010	255	Retailers, tourist facilities, trial export to French natural food retailer
2010/2011	75	Retailers, tourist facilities

In connection with the enhancement of the litchi processing activities in the Doi Suthep-Pui area, fruit growers also expressed their intention to step up their efforts in marketing fresh litchis as a loosely organized producer network. Mediated by researchers from the Uplands Program, the agricultural regional offices provided assistance with Good Agricultural Practice (GAP) certification for litchi growers in four Hmong villages, starting from 2008<sup>7</sup>. German and Thai scientists established contacts with a large European-based hypermarket chain which operates more than 400 branches across Thailand. After a bumpy start of

<sup>6</sup> P. Schreinemachers, C. Potchanasin, T. Berger and S. Roygrong, *Agent-based modeling for ex ante assessment of tree crop innovations: litchis in northern Thailand*, 41 *Agricultural Economics* (2010), 519-536.

<sup>7</sup> GAP certification is officially required by most supermarket operators in Thailand, although enforcement of regulations tends to be lax (Schreinemachers et al., on file with editor).



the business relations (see subsection III.A.c. below), many litchi growers sold a considerable share of their fresh fruit via a local Thai cooperative<sup>8</sup> (*Prathupa*) to the hypermarket chain from 2009 onwards. *Prathupa* offered prices that were slightly above the wholesale market price level.

The declining trend over the three years has been due to a variety of factors. First, total litchi production in the area fluctuates owing to the natural phenomenon of alternate bearing. Second, some farmers returned to their previous business partners (i.e., middlemen) in 2010 and 2011 when offered better prices. Third, the success of the first year appears to have made some farmers confident enough to explore their own, new marketing channels. Several litchi growers have started to engage in direct marketing activities and participated in trade fairs and litchi promotion events.

Prior to the 2009 season, the Uplands Program was contacted by a French natural fruit retailer that had learned of the litchi marketing activities through the European food fair. Since this retailer emphasizes certified organic or at least chemical-free products, Uplands researchers linked it with a small organic litchi grower in another district. This business contact resulted in two shipments of fresh organic litchi (265 kg in total) and two shipments of dried organic litchi (9 kg<sup>9</sup> in total, divided into 80 packages of 50, 100 and 150 g) to France in the 2009 season. Since Thai consumers are still reluctant to pay a price premium for organic produce, the litchi grower could obtain a three-fold farm-gate price as compared to the local market price through this microtrade arrangement (cf. Table 2).

**Table 2.** Fresh litchi microtrade to European markets:  
Experience of two ‘model’ farmers

Year of trade	Production system	Litchi variety	Quantity sold in kg	Farm-gate price in Baht/kg (Hong Huay var.)	Max. price in alternative (local) market
2009	Organic (locally certified)	Hong Huay & Jakkrapat	265	32 Baht	10 Baht
2011	Non-organic (GlobalGAP certified)	Hong Huay	350	80 Baht	50 Baht

<sup>8</sup> The Thai cooperative was needed as an intermediary for collecting and shipping the fresh litchi because the Hmong marketing network did not have its own packing facility and could not guarantee a continuous supply of fresh litchi at the desired daily quantity over the entire season.

<sup>9</sup> This is equivalent to about 160 kg of fresh litchi, since peeling, de-stoning and drying reduces the weight of the produce by more than 90 percent.

In 2009, the Uplands Program also established contacts with a Thai export company that had long-standing business relationships with European fruit importers. The export company suggested working with a few large orchard owners in the area towards obtaining a GlobalGAP certification required for exports to European and Middle East countries. After a severe setback in the 2010 season (see sub-section III.A.c.), the company decided to work with an individual, trustworthy farmer from another village in the 2011 season. Litchi fruits in his orchard were wrapped with paper bags to increase fruit quality and to reduce the need to spray high doses of insecticides<sup>10</sup>. Monitoring was done jointly by staff from the Thai export company and researchers from the Uplands Program. They also assisted the farmer in grading the litchi fruits after harvesting. For the 350 kg sold to the export company, the farmer could get a price premium of 60% as compared to the next best local marketing alternative<sup>11</sup> (cf. Table 3).

Recently, a researcher associated with the Uplands Program brokered a business contact with the largest European fair trade company. After testing the products from the litchi cooperative, the company showed interest in developing a new production line of dried litchi. Negotiations for the 2012 season are on-going as this paper is written.

### 3. Experiential learning: Iterative learning processes marked by trial and error

The second principle of the strategic niche management concept is experiential learning. In the case of the litchi processing and marketing network in the Doi Suthep-Pui National Park, the major actors went through different learning stages in an iterative process marked by trial and error. In the early stages of the network formation, Hmong litchi growers adopted several new socio-organizational and technical practices. In the case of fresh litchi marketing through the hypermarket chain, the prospect to gain higher financial benefits from marketing safe, high-value litchi motivated 25 litchi growers to comply with Good Agricultural Practices (GAP) guidelines supporting proper farming practices to satisfy food safety standards by imposing limits on pesticide residues. They organized themselves, coordinated their efforts, modified their agricultural practices and adapted their post-harvest handling techniques despite the large degree of

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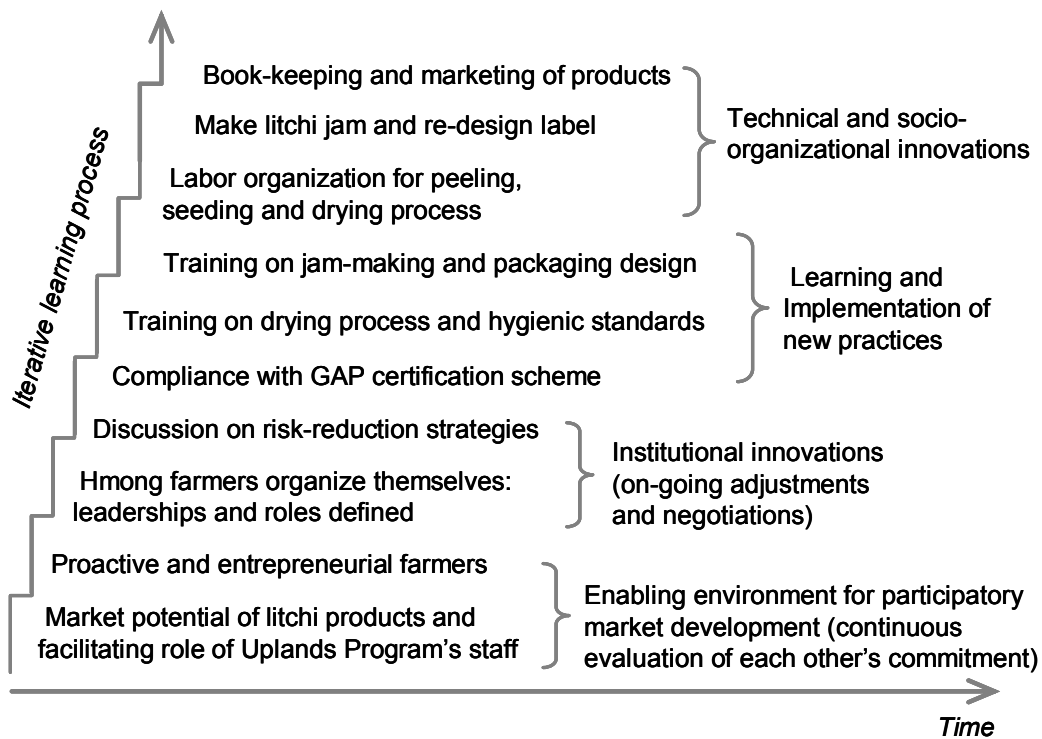
<sup>10</sup> Litchi wrapping with reusable paper bags was piloted within the inter-village litchi network in 2010 and – after promising results from the first trials – proposed to growers as an environment-friendly innovation. With the support of the Uplands Program, a group of 11 early innovators applied for a grant from a national agency (iTAP) to receive co-funding for purchasing 30,000 paper bags.

<sup>11</sup> He sold 375 kg to a local high-end supermarket chain that paid 50 Baht per kg of high-quality litchi.

uncertainty, as price offers and the agreement conditions were revealed late, past the peak of the harvesting season in 2009.

In the case of the dried litchi processing and marketing cooperative, the adoption of various technical and institutional innovations in the first two years – as depicted in Figure 3 – supports the idea of innovation adoption as a multi-dimensional, iterative learning and action process, involving a series of technical, institutional and socio-organizational innovation components at different stages of the process.

**Figure 3.** Sequence of progressive innovations in the litchi processing and marketing cooperative of Mae Sa Noi and Mae Sa Mai from 2007-2008



Yet the learning process has also been marked by failed attempts and setbacks. The processing cooperative experienced a number of difficulties in the early stages, such as technical problems in handling the dryer. Drying experiments with chili, tomatoes and sweet peppers were discontinued due to a perceived lack of marketing opportunities. Female cooperative members were initially enthusiastic about the production of litchi jam, but found it difficult to ensure product quality and to identify a reliable market.

Eventually, drying of litchi turned out to be the only promising type of processing and adding value for the cooperative members. Yet, the trade of dried litchi via local retailers has faced considerable challenges. Legal constraints have

rendered it impossible for the litchi processing cooperative to apply for a Good Manufacturing Practice (GMP) certificate which is a prerequisite for marketing their products in local supermarkets. Being members of an ethnic minority group settling in a national park, they do not have officially documented land ownership rights. Hence, the processing facility could not be legally registered to date. With support from the Uplands Program and its Thai counterparts, the Hmong villagers have repeatedly requested an official letter from the National Park authorities certifying that they have the right to permanently settle in the present location, but to no avail.

Surprisingly, the litchi processing cooperative appears to face fewer constraints when exporting their dried litchis to European markets. Neither the French natural food retailer – that ordered two shipments of dried organic litchi from the cooperative in 2009 – nor the fair trade organization in Germany – that expressed its interest in importing dried litchi starting from the 2012 season – insisted on having the drying process certified under the Thai GMP scheme, as long as the dried litchi are produced under hygienic conditions and contain no agrochemical residues.

This is in sharp contrast with the marketing of fresh litchi. Farmers involved in the marketing network with the British-based hypermarket chain via a Thai cooperative learned quickly that the quality standards for their litchi were not as strictly applied as initially claimed by their new business partners. Whereas in the first negotiations GAP certification was mentioned as an absolute prerequisite for supplying fresh litchi to the hypermarket chain, it turned out that non-GAP certified farmers could also sell their litchi through this new marketing channel, particularly if the supply network could not fulfill the daily quota for the Thai cooperative with litchis from their GAP-certified orchards.

Yet exporters of fresh litchi face much stricter regulations than those governing local value chains. In the 2010 season, a Thai export company worked with a group of farmers in one of the Hmong villages towards obtaining a GlobalGAP certification to enable exports to overseas markets. This first attempt failed miserably when one of the farmers failed to comply with the strict rules on pesticide application, and chemical residues in one shipment were detected at the country of destination. As a consequence, the shipment was rejected by the importing agency, causing a considerable financial loss to the export company and a loss of trust in the capacity of local farmers to engage in collective efforts towards complying with the high food safety standards for fresh fruit exports. “Learning it the hard way” was thus an essential component of the learning process for major actors in the network.

#### 4. Convergence of expectations: Negotiating terms of trade and balancing power differentials

Convergence of expectations among the actors in the network – the third principle of the strategic niche management concept – is closely linked with the principle of experiential learning. Various patterns of interaction were created within the litchi processing and marketing network to share knowledge and experiences on market demands and mechanisms, the private companies' structure, logistics and product specifications, and Hmong farmers' practices and litchi production and processing systems. These dynamic exchanges required on-going adjustments of the partners' roles and of the venture's objectives and strategies of implementation<sup>12</sup>. The major expectations of the actors in the network are summarized in Table 4.

**Table 4.** Major actors in the litchi processing and marketing network and their expectations

Actor	Type of organization	Major expectations
Hmong fresh litchi marketing network	Inter-village private trading alliance	Higher and more stable prices and secure market throughout the season for fresh litchi; quick payment after delivery of the produce
Hmong litchi processing cooperative	Cooperative on shareholder basis (non-registered)	High and stable prices; extending the sales season through processing; secure market channels, preferably overseas
British-based hypermarket chain	Private company	Procuring fresh, high-grade litchi with no chemical residues from organized farmers; higher profit margin by eliminating middlemen
French natural food retailer	Private company	Procuring fresh or 'slow-dried' litchi produced under natural, chemical-free conditions from individual growers or farmer groups; supply over an extended period
Thai export company	Private company	Procuring fresh litchi in export quality (GlobalGAP-certified); high profit margin through sales to Europe; long-term business relations with both farmers and EU importers
Department of Agriculture	Public agency	Training farmers and providing certification for Good Agricultural Practices (GAP)
The Uplands Program and its Thai partners	Publicly funded research network	Initiating pro-poor innovation processes and building partnerships that can be studied in an action-research context

<sup>12</sup> A.-M. Tremblay and A. Neef, *Collaborative Market Development as a Pro-Poor and Pro-Environmental Strategy*, 20 Enterprise Development & Microfinance (2009), 220-234.

Hmong litchi growers and processors are relatively homogeneous as regards their expectations from the new trade arrangements with the hypermarket chain, Thai exporters and European companies. They want to obtain prices that are higher than the ones offered by middlemen or at the wholesale market in Chiang Mai and they expect a timely payment after delivering their produce. Being risk-averse as smallholder farmers, they are interested in having secure market channels over the entire season and in discussing terms of trade prior to the beginning of the harvesting season. Risk aversion also appears to be one of the reasons why many farmers still maintain their previous economic and social ties with middlemen.

The expectations of the purchasers of fresh and dried litchi, by contrast, are much more varied, except for their common objective of developing long-term business relations. The hypermarket chain does not want to negotiate with individual Hmong farmers, but prefers to operate via a Thai cooperative vendor. By eliminating the middlemen from the value chain and dealing with farmers' cooperatives it pursues a two-fold strategy: increasing its profit margin and improving its corporate image as "a company that helps smallholder farmers in Thailand". The company is not very strict with regard to agro-chemical use in orchard management, as long as no residues can be found in the fruits. The French natural food retailer, by contrast, has a strong commitment to 'natural', i.e. chemical-free, production processes, while being more flexible with regard to the business relation, which can be concluded either with individual growers or with groups of farmers. The company prefers to work through intermediary actors, e.g. a Thai exporter and the Uplands Program. The German-based fair-trade organization expects to work with farmer groups that adhere to certain social standards rather than with individual producers and puts somewhat less priority on ecological issues. In contrast to the other private actors in the network, this organization wants to communicate directly with the local producers, if it finally decides to engage in a long-term microtrade arrangement with the Hmong processing and marketing cooperative. Moreover, the additional benefit for the community has to be clearly evident to the fair-trader, thus supporting the basic cooperative setting of the processing group.

The Uplands Program with its various Thai partners played a key role in mediating between the various actors in the network and in balancing power differentials between large private companies and public agencies on one side and loosely organized and traditionally marginalized smallholders on the other side. It also facilitated the information diffusion process concerning the various process and product specifications for fresh and dried litchi as required by the private companies. The initiation of face-to-face negotiations was particularly crucial for a gradual alignment of dissenting expectations between suppliers and purchasers. In fact, all personal contacts between the representatives of the Hmong processing

and marketing network and private companies were organized by staff from the Uplands Program.

The central role of the Uplands Program in establishing this complex, multi-stakeholder partnership structure begs the question of the long-term sustainability of the network and the replicability of the approach in other marginal areas of northern Thailand and the wider region. The local trade with fresh litchi through the hypermarket chain which has been going on successfully for three seasons is likely to continue after the withdrawal of researchers. This was also confirmed in a statement of one of the group leaders in a recent meeting of the marketing network. Moreover, the success of one farmer exporting high-quality fresh litchi with the Thai export company in 2011 will probably enhance the motivation of other orchard owners to comply with GlobalGAP standards to be eligible for exporting their fresh produce.

International microtrade with dried litchi may have a certain potential as a niche activity within the network, but it appears to require sustained external support in terms of quality control, packaging and marketing arrangements. A positive signal is that the German-based fair trade organization wants to establish direct links with the cooperative and that the daughter of one of the cooperative leaders can speak English and may be able to take over the role of intermediary actor after the phasing out of the Uplands Program in 2012.

## **B. The Case of Community-based Vanilla Processing and Marketing in Tanzania**

### **1. Background and origin of vanilla production in Tanzania**

Vanilla is the second highest-priced agricultural commodity in the world after saffron. It is produced from seed pods of an orchidaceous plant through complex curing processes. Among its world production which accounts for 9,800 tons per year, Indonesia supplies about 50%, while the rest comes from islands in the Indian Ocean, such as Madagascar and Reunion, and in the South Pacific, as well as from China and Mexico (FAO 2011<sup>13</sup>). New growers in East African countries, particularly Uganda and Tanzania, joined the market in the 1980s. Yet, despite their favorable growing environment for the crop and fairly high quality of the products, selling channels provided for growers are limited due to the relatively small amount of production and poor transportation access that are less attractive for investors.

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<sup>13</sup> FAOSTAT (<http://faostat.fao.org>)

Vanilla production is characterized by three essential components: plant husbandry, processing, and marketing. While the plant generally grows well under a humid tropical climate without fertilizer applications and pesticides, it requires a highly labor-intensive care, such as hand pollination of flowers. Harvested green pods are then cured through blanching, sweating, sun- and room-drying and conditioning, a process that takes up to four months until they become dark brown, flavorful “vanilla beans” ready for consumption.

Vanilla production in northwestern Tanzania is mostly done by small-scale farmers. The Haya ethnic group in northwestern Tanzania grows vanilla in their home gardens (*kibanja*) in association with banana and other food crops such as maize, beans and taro. While coffee has been a major cash crop in *kibanja* since the early 20th century<sup>14</sup>, its fluctuating price and high cost of inputs motivated farmers to shift to other crops. As *kibanja* provides a perfect natural environment for the growth of vanilla – which requires sufficient shades, humidity and organic matters – this highly valuable cash crop can be incorporated into their indigenous farming system without disturbing their food production and with virtually no extra inputs, aside from labor<sup>15</sup>.

## 2. Network building: vanilla growers taking their own initiative in processing and marketing

In the mid-1980s, a group of four farmers from several villages in Bukoba district, Kagera region located at the west of Lake Victoria organized the so-called Kagera Rare Crops Growers, and introduced vanilla which they had brought from Uganda to the case study area. The crop spread widely among farmers during the 1990s after a Belgium-based NGO called Mayawa (*Maendeleo ya Wakulima*, meaning “farmers’ development” in Swahili) started several activities, such as distribution of seedlings and host trees, farm training, collecting, curing, and exporting to Europe. The quality of vanilla produced in this area came to be renowned for its good fragrance emanating from its high vanillin content of over 3% (while top-grade products in Madagascar, for instance, contain around 2% only). Its expansion was boosted in the early 2000s when the world market price of vanilla peaked due to short supplies from Madagascar which had been hit by cyclones.

In 2002, a group of 30 entrepreneurial farmers of Kamachumu village in Muleba district, Kagera region set up the Kamachumu Vanilla Farmers Association (*Kavanifa*). Being supported with a small fund by a Japanese research project which saw the potential of this crop for livelihood improvement, they encouraged farmers to introduce vanilla in their *kibanja* through distribution of

<sup>14</sup> Tibazarwa, C. M., *Economic Revolutions in Bahaya History* (Devon: Merlin Books, 1994).

<sup>15</sup> Mizuno, K., *Vanilla Production in East Africa*, 22 *Journal of the Japanese Agricultural Systems Society*, no. 2 (special issue) (2006), 62-63.



seedlings and mutual learning on plant husbandry among farmers. After two years, they started harvesting vanilla pods and sold them to the NGO Mayawa at a price as high as \$16/kg for the fresh produce, which exceeded by far the price of any other crop. The retail price in the world market also rose to \$300/kg for the dried “vanilla beans”, which is convertible into \$60/kg for the fresh seed pods (the product weight decreases by 80% after curing). Other NGOs (e.g. World Vision) and governmental projects, such as KAEMP (Kagera Agricultural and Environmental Management Program), also started incorporating vanilla production into their livelihood improvement programs, by providing farmers with materials and technical assistance.

However, after 2006, the world price of vanilla dropped drastically due to the recovery in Madagascar and a production increase in other emerging countries, such as Indonesia. The farm-gate price went down to \$2/kg, which was quite disappointing for the growers, considering their high labor input. While some farmers gave up the crop and uprooted their plants, various farmers’ groups including *Kavanifa* started collecting the fresh pods from farmers and did the curing themselves. An export marketing channel was provided by the Japanese fair-trade project named “*FairVanilla*”, which was established by the initial research team. They purchased the products from *Kavanifa* and sold to private consumers and small retail shops and restaurants in Japan through a website<sup>16</sup> that provides detailed information about the products, producers and project backgrounds.

The amount of production and sales of *Kavanifa* kept increasing from some kilograms of dried pods in 2006 to 130 kg in 2011, which was purchased at \$3,500 (\$27/kg) by *FairVanilla*. Farmers received 5,000 Tanzanian Shillings (\$2.7) per kg for the fresh pods as an initial payment, and the remaining profit after subtracting collecting, curing, and management costs is to be redistributed to the members as the second payment, resulting in a fairly agreeable income for farmers. The selling price in Japan by *FairVanilla* varies from \$50 to \$200/kg depending on product grades and package sizes, which are quite satisfactory for home consumers and business customers considering the product’s outstanding quality.

In addition to the direct export of vanilla beans to Japan, a small local selling channel was also initiated in 2009. A group of vanilla farmers in Morogoro region, central Tanzania, who started vanilla production under the support of a JOCV (Japan Overseas Cooperation Volunteers) project since early 2000s, proposed Tanzania Tea Blenders (TTB), a major tea company in the country, to produce “vanilla tea” using their vanilla as an ingredient. TTB accepted the idea and made a contract with the group to purchase grinded vanilla pods, i.e. vanilla

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<sup>16</sup> See [www.fairvanilla.jp](http://www.fairvanilla.jp)

powder. Since the production in Morogoro was not sufficient to supply the full amount required, they contacted *Kavanifa* for cooperation, as they had already established a partnership since their visit to Kagera for a technical exchange in 2006. The offer was attractive for *Kavanifa* not only because they could diversify their marketing channels, but also because they could sell products with poor quality in terms of shape – short or split pods, yet with good flavor – which are less valued in the international market, but well acceptable as powdering materials. TTB's vanilla tea has been sold at supermarkets and souvenir shops in the capital city of Dar es Salaam, as well as in Japan through a Tokyo-based fair-trade organization.

### 3. Experiential learning: individual learning versus group-based learning approaches

While many individual vanilla farmers in the Kagera region received technical assistance by Mayawa and other NGO- and government-based projects, members of *Kavanifa* took an alternative approach of mutual learning among farmers in improving their plant husbandry and curing techniques. This was possible due to the nature of the crop, which is well adaptable to the local farming system represented by *kibanja*, and easily introducible without special land preparation, farm facilities or additional land. The members did not only come together frequently to exchange their experiences and information, but also organized study tours to distant villages where experienced farmers could demonstrate their advanced skills.

In contrast with the simplicity in plant husbandry, curing is a crucial value-adding process that requires higher levels of knowledge and experience, as well as some facilities and equipment. In order to maintain a high export quality, *Mayawa* limited their purchase from farmers to fresh materials only and cured the entire lots by their own facility. However, some farmers started making efforts on self-curing since the farm-gate price has dropped in the mid-2000s, thus seeking higher profits. In the case study area, three types of approaches were observed; 1) trials by farmers at an individual level, 2) facilitation and technical supports given to farmers' groups by projects, and 3) self-learning and improvement initiatives taken by a farmers' group.

The first case was not very successful, due to a lack of experience and the volume of processing being too small to ensure the quality of the final product. In the second case, some NGO- and government-based projects assisted farmers' groups to install curing facilities such as blanching pots, drying racks, conditioning boxes, and store houses, and provided training on curing techniques. Although they immediately came up with a significant amount of produce with sufficient quality, their marketing channels still remained limited, most of which

were spontaneous purchases by individual buyers from Uganda. As their demand for the products kept decreasing due to the market situation, all of the three groups interviewed became inactive and curing facilities were left unused by 2011.

The third case applies to *Kavanifa*'s experience. While most farmers kept selling fresh pods to Mayawa in the early stage, core members of the group started curing with a small amount collected from cooperative farmers and gained skills during 2006 to 2008. Again, mutual learning among members and exchanges with experienced producers were the key elements in improving their skills. In 2009, the confident group was equipped with essential curing tools and started purchasing fresh pods from member farmers under support from the *FairVanilla* project, which was simultaneously developing export markets to complete the value chain.

The contrasting results from the different approaches suggest that small-scale cooperative trials and self-improvement efforts initiated by farmers with limited external support were best suited for achieving the goals of establishing a successful vanilla processing and marketing network.

#### 4. Convergence of expectations: The producers' pride and the consumers' consciousness of the story behind the product

Needless to say, the primary interest of vanilla farmers is to gain a fair profit from their products. Many of the farmers who joined vanilla growing after seeing its remarkable price in the early 2000s became disappointed by the time their crops yielded a regular harvest, which coincided with the drop of the farm-gate price. Membership of *Kavanifa*, which exceeded 40 at its peak, has not much decreased in numbers, but a certain ratio of farmers became less active as a consequence of the reduced profit margins. As the current microtrade market development of vanilla between Tanzania and Japan is still under progress, a gradual increase in the trading amount and improvement of the product quality are the network's priority targets to meet the expectations of both producers and consumers.

Aside from direct economic incentives of the project, the uniqueness of the Haya society stemming from their historical and cultural backgrounds is considered an important stimulus for the vanilla business. Each *kibanja* strictly adheres to its owner according to a land tenure system that dates back to the pre-colonial era, making it an inheritable asset (Tibazarwa 1994). Until recently, well-educated Haya tended to leave their villages and find decent jobs in cities, leaving abundant, productive *kibanja* unutilized<sup>17</sup> until they return home after retirement. Since vanilla is regarded as a high-value and prestigious crop, it has a strong potential to maximize land and human resource utilization and motivate the

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<sup>17</sup> Such *kibanja*, that are left idle for many years, are called *kishambu* by the local people.

younger generation to remain in the village, which could “revitalize” rural communities, while maintaining pride and respect for their unique agricultural heritage and traditional lifestyles.

This potential to stop the exodus of young people to the cities and the associated social disintegration of rural communities is further enhanced by another remarkable feature of the vanilla business: participation of various family members in all stages of the supply chain, from production to processing and marketing. While coffee is commonly an activity that is dominated by male household heads who neither allow other family members to participate in its production cycle nor have them share the benefits from the coffee sales, in the case of vanilla production women, elders, and children play important roles in most of the interviewed households. Among the various tasks in growing and processing, hand pollination during the flowering season is the activity that is mostly done by women, who are likely to have greater skills in this sensitive manual task than men. They are also actively involved in the vanilla curing process. Keeping records of harvesting and selling is a task sometimes given to children.

Providing such information about the social, cultural, and economic situations of vanilla producers along with the products to consumers in Japan is a significant function of the *FairVanilla* project. While fair-trade business in general tends to emphasize the “help-the-poor” aspect of the trading which is supported by ethical consumers’ satisfaction of paying a higher price for high-value commodities, the FairVanilla project seeks to promote a deeper understanding among the customers of local people’s cultural and social challenges and the environment of northeastern Tanzania, in addition to supplying high-quality products at a reasonable price that makes the trade truly “fair” for both producers and consumers. This microtrade project also initiated a number of supporting activities, such as holding seminars for Japanese consumers and researchers and conducting exchange visits between Japan and Tanzania, which also contribute to achieving the project’s mission of fostering a durable multi-stakeholder partnership.

#### **IV. SYNTHESIS AND CONCLUSION**

Evidence from the comparative study of the two cases underscores the pivotal role of external, non-profit seeking and trustworthy intermediaries in the formative period of community-based and pro-poor microtrade arrangements. In the litchi case in Thailand, such intermediaries were essential for providing access to new information, searching for alternative marketing channels and fostering

certification and quality control, but also for establishing a ‘level playing field’ among actors that had different levels of power and capacity at the outset of the newly developed networks. Enabling face-to-face contacts between suppliers and purchasers was a key driver in establishing social trust, developing shared values<sup>18</sup> and helping expectations converge. In the vanilla case in Tanzania, the role of the intermediary was also to provide ethical consumers in Japan with more profound social and cultural background information about the producers in Tanzania. This case also provides evidence that microtrade can be established without substantial financial investments, if it builds on direct, well-targeted grassroots support and long-term commitment from outsiders.

Both case studies also seem to suggest that microtrade arrangements with high-value agricultural products need some form of producer organization to reduce transaction costs, to achieve the necessary economies of scale and to negotiate better terms of trade for small-scale producers<sup>19</sup> (cf. Barret 2008; Vermeulen et al. 2008). Informal groups of farmers working together at the local level may be preferable to more formalized cooperative structures because they may be more flexible and permeable with regard to access of newcomers.

The two successful cases of litchi microtrade from individual growers in Thailand are probably somewhat exceptional. They only worked because the activities were embedded in a pre-existing wider network of public and private actors<sup>20</sup>, information channels and communication structures.

Our studies also suggest that microtrade in the agricultural sector may be particularly successful if the traded product has a sufficiently high value per unit<sup>21</sup>, if producers already have long-standing marketing experience, and if both domestic and export channels continue to co-exist after establishing the microtrade partnership. Microtrade with low-value agricultural products and/or connecting former subsistence farmers directly with international market channels may not be considered as feasible options.

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<sup>18</sup> This resonates with the studies of Davies and Ryals (2010) who found that shared values were crucial in the formative stages of fair trade partnerships, see I.A. Davies and L. J. Ryals, *The Role of Social Capital in the Success of Fair Trade*, 96 Journal of Business Ethics (2010), 317-338.

<sup>19</sup> C.B. Barrett, *Smallholder Market Participation: Concepts and Evidence from Eastern and Southern Africa*, 33 Food Policy (2008), 299-317 and S. Vermeulen, J. Woodhill, F. Proctor and R. Delnoye, *Chain-Wide Learning for Inclusive Agrifood Market Development: A Guide to Multistakeholder Processes for Linking Small-Scale Producers to Modern Markets* (London: International Institute for Environment and Development, 2008).

<sup>20</sup> The importance of public-private partnerships, particularly in the initial stages of attempts to link smallholder farmers to international supply chains, is also emphasized by C. Narrod, D. Roy, J. Okello, B. Avendaño, K. Rich and A. Thorat, *Public-Private Partnerships and Collective Action in High Value Fruit and Vegetable Supply Chains*, 34 Food Policy (2009), 8-14.

<sup>21</sup> Exemplified in this paper by the cases of dried litchi, GlobalGAP-certified fresh litchi, organic litchi, and fair-trade vanilla.

On a conceptual level, we found that the framework of strategic niche management (SNM) can serve as a sufficiently robust theoretical and analytical foundation for the microtrade concept. Providing niches, i.e. protected spaces, in the form of proto-markets and various types of institutional support, have proven particularly important in the formative stages of the multi-stakeholder alliances from which microtrade arrangements could then emerge. Yet the development of such niches may not necessarily lead to mainstreaming and wider dissemination, as proposed by SNM theorists. Questions of transferability, replicability and sustainability of such initiatives still remain and need to be addressed by further empirical studies.

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