

## **Value Chain Management in Agricultural Co-operatives, Thailand Innovation for competitiveness and fair-trade approaches**

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### **Abstract:**

This Participatory Action Research project put an emphasis on how to manage supply chain for **business network** which consists of 16 agricultural co-operatives with a total of 55,713 members occupying 653,594 acres of rice field. The long-term goal of this business network entitled "Thai Co-operatives Hom Mali Rice Value Network" is to institutionize the new business model that promotes coordination among business network and encourages fairness to producers and consumers. As a result, Koet Bun Rice Brand was created under this new business network to communicate the unique opportunity for consumer to help the small farmers grow high quality Hom Mali rice. The learning process obtained through this process has shifted the paradigm of the co-operatives' leaders and managers in terms of supply chain management concept. Moreover, the business network has established a mutual fund and a strategic plan to maintain the influential role of Koet Bun Rice brand in order to protect the image of Thai Hom Mali Rice.

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## 1. Reflexive Statement

Since 2000, we have begun to conduct a research on co-operatives under the support from Thailand Research Fund. The research is called a research series of “Co-operative Movement Development and Fair trade”. It is mainly aimed to establish a research system which can bring about an innovation and new knowledge collection in order to support Thai co-operatives development. Hopefully, by 2016, the year to celebrate a century of Thai co-operatives, people will have had the spirit to help one another in developing our country.

The research project has been done as a participatory action research with the full support from four sectors; cooperator, government, entrepreneur, and academic person. In the past 10 years (2000 – 2010), we have been able to apply the knowledge collection we have obtained from research as the principle strategies of the 1<sup>st</sup> Co-operative Development Plan (2003 – 2006) and the 2<sup>nd</sup> Co-operative Development Plan (2007 – 2011). In the past two years of the implementation of the 2<sup>nd</sup> Plan, the development framework has been set in terms of the vision and strategies as follows:

This report explores the 4<sup>th</sup> Strategy of the 2<sup>nd</sup> Co-operative Development Plan<sup>2</sup> which is to promote supply chains management of co-operatives by conducting the research project on Thai Co-operative Hom Mali Rice<sup>3</sup> Value Network as an pilot project. This research project has brought us to learning and development of a new business form of agricultural co-operatives to enhance their competitiveness and the development of Fair trade.

## 2. Introduction

Thai Co-operatives is established by the registration under the Co-operative Act B.E. 1999. The Co-operatives is classified into 7 categories such as Agricultural, Fisheries, Land and Settlement, Consumer, Service, Thrift and Credit and Credit Union.

In 2009, there are 10,400 co-operatives institutions with 10.6 million members, or 15.9% of the total population in Thailand. Co-operatives operate with 34,346 million U.S. dollars and manage 5 categories of businesses for the members. The business values create 37,000 million U.S. dollars or 16% of the country’s GDP. The main business is loan business while for agricultural co-operatives, it is product collecting businesses. For the last three years (2007-2009) business values increase more than 27.7%. (Cooperative Auditing Department, 2010).

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<sup>2</sup> For the 2<sup>nd</sup> Co-operatives Development Plan and its strategies see Appendix

<sup>3</sup> Hom Mali Rice and Jasmine Rice are interchangeable terms.

Agricultural Co-operatives have 2 outstanding economic agricultural products which are Para Rubber and Paddy. These 2 products are important to create income to members. The values of collecting Paddy and Para Rubber are 454 million U.S. dollars and 1,010 million U.S. dollars respectively. In 2010, we expected the increasing rate of the 2 products to be 12% for Paddy and 54% for Para Rubber.

The empirical information shows that the significant limitations of agricultural co-operative business are: (1) a lack of holistic management, which links the production database of the members to business plan, (2) and education and training for the co-operative leaders and managers, especially to encourage them to ‘think’ rather than just ‘receiving knowledge’ from others so as to empower them to carry out an effective and efficient management performance to deal with sudden changes in the economic system. As a result of these limitations, we have seen, time after time, many problems of agricultural co-operatives, for example, loss from incorrect price forecasts, risks of dealing the business with the public sector, as well as inefficient management of economic resources, resulting in high cost per unit and difficulty in solving occupational problems of the members.<sup>4</sup>

Fortunately, as a member of the National Committee of Co-operatives Development (NCCD) and the Coordinator Team of Thailand Research Fund (TRF), that authorized the strategic development during the 2<sup>nd</sup> Co-operative Development Plan, we have appointed the Participatory Action Research, that focuses on the transformation of ideas and process management among cooperators who participated in the research projects. From 2009 to 2010, there has been six related projects which are Thai Co-operative Hom Mali Rice Value Network, Rubber Value Network, Fruit Value Network, Coffee Value Network, Cassava Value Network, and Moral Rice Value Network. The results from Thai Co-operative Hom Mali Rice Value Network which has just been completed are presented below.

### **3. The Context of Cooperatives Participated in Research Project**

There are 16 agricultural co-operatives from five provinces in the northeastern part of Thailand participating in the research project. The area is known as “Thung Kula Ronghai”, the best location in Thailand for growing Hom Mali Rice which is done only once a year.

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<sup>4</sup> The details are based on Juthatip Patrawart and others, 2010, Co-operatives Transformation and Fairtrade, research report under research series on “The Co-operative Movement Development and Fairtrade”, supported by Thailand Research Fund (TRF).

Those 16 agricultural co-operatives comprise of 15 primary agricultural co-operatives and a provincial agricultural co-operative federation, with a total of 52,613 members occupying 632,661 acre of rice field and having earned 27 million U.S. dollars from Hom Mali rice gathering in 2009. These co-operatives consist of five large co-operatives with more than 5,000 members, three central co-operatives with more than 2,000 members, and seven small co-operatives with 530 – 2,000 members, and one provincial federation with 44 primary co-operatives as its members.

The objective of the research is aimed at an initiative of new management models that is relevant to value chain management. This can be done by integrating social capital and economy assets together in order to create the power of negotiation and bring forth the benefits to the members and small farmers who have encountered the occupational problems.

#### 4. Conceptual Framework and Research Methodology: Learning Process to Competitiveness

The framework of the research has brought ‘value network connection<sup>5</sup>’ and ‘integrated supply chain management<sup>6</sup>’ together to the process of participatory action research, see Figure 1, which was designed to consist of four main operational activities. These activities presented in Figure 1 were the learning process through coaching, the network connection which is relevant to value chain management, the operational of business model of network, and the evaluation of network’s performance. It was expected that a new business network occurred from the research would result in value creation and value added to co-operative business and solve the occupational problems in the long run.

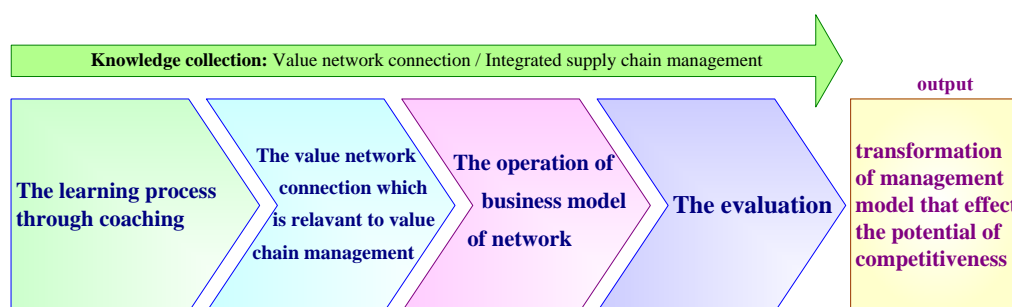


Figure 1: Research methodology

<sup>5</sup> The process of network creation is an innovation of community economic development, a mix of the co-operative value (philosophy), people, and organization, to create a proactive management approach (strategic aspect). This approach can result in the horizontal integration which links and organizes proper relationship among members. Each member helps one another in planning and doing economics, social, academic, seminar, as well as welfare activities, which are all about occupation and the locals’ way of life, which can sustain their mutual happiness.

<sup>6</sup> The connection of business alliances which is the cooperation from businesses under supply chain, establishes a model of supply chain business management, a result of cooperation strategy which affects the potential of competitiveness of the business so as to distribute products and services from producers to customers.

## 5. Research Outcomes:

The participatory action research under our coaching team produced the following outcomes.

**5.1** After the SWOT analysis the Hom Mali rice business, the network discovered the unique business opportunity in this competitive market which can only be achieved through the coordination of 16 agricultural co-operatives instead of individual business model. Therefore, the first outcome of participatory action research, **the Thai Co-operative Hom Mali Rice Value Network**, has been created through horizontal integration with the cooperation of 16 agricultural co-operatives.

**5.2** During the operation of the business network to achieve the target goals, the co-operatives' representatives from each co-operative agreed to develop the **3-year strategic plan** with the following details;

### **5.2.1 Vision** of Thai Co-operative Hom Mali Rice Value Network

**“To Promote the Value Creation of Hom Mali Rice from Thai Co-operatives  
Worldwide”**

### **5.2.2 Missions** of the network which are:

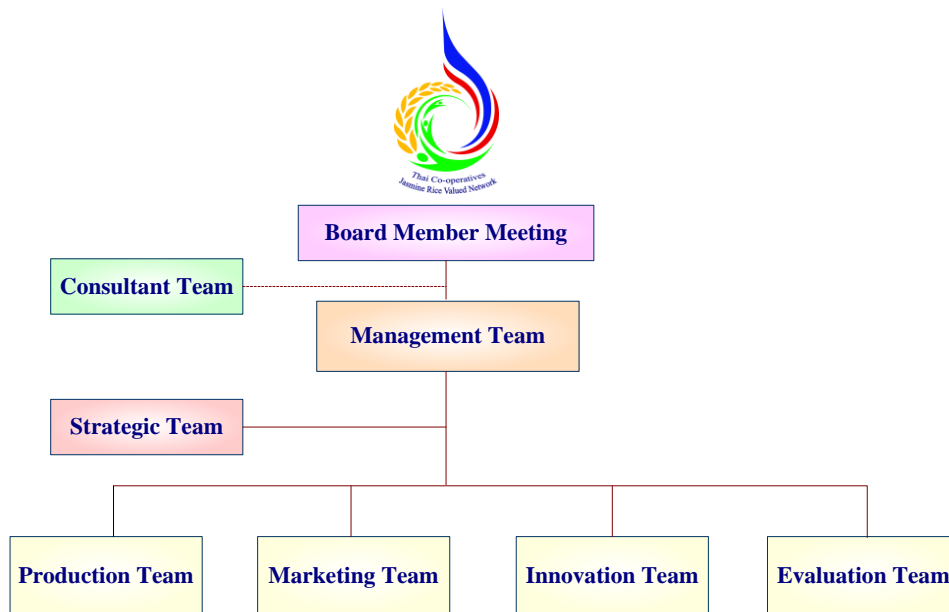
- a) Production support in order to reduce the production cost and develop good agricultural practices
- b) Product gathering under the network business plan
- c) Product processing under the idea of pooling resource
- d) Product marketing and development through the strategic team
- e) R&D, HR evaluation and development

**5.2.3 Strategic map** which is designed based on the cooperation of the associates by taking into consideration four aspects: learning and growth; internal process; value creation and value added prospective; and target groups which can take part in the movement of value network and Fair trade development.

For the administration of business network, the representatives of participated co-operatives agreed to indicate the following **Organizational Structure**, see Figure 2. This Organizational Structure optimizes the combination of social capital and economic assets from those 16 agricultural co-operatives. Yet, all of which remain independently operating under the plan of primary cooperatives.

The top level of this network is the Board Members who are the representatives from 16 participated co-operatives. The consultant team advises the Board members and managerial team on value chain management concepts. On the other hand, the strategic team has been assigned the strategic missions, for example the brand building operation or new market creation. The managerial team comprises of 4 supporting teams; the production, marketing, innovation (value creation) and evaluation teams.

Figure 2: Organization structure of Thai Co-operative Hom Mali Rice Value Network



Note: The Organizational Structure of Thai Co-operative Hom Mali Rice Value Network. The Logo presented on the top of the diagram is the Network's Logo.

**5.3** The new Hom Mali Rice Brand is the third research outcome of this participatory action research. The network operation has created the new branding for the network's Thai Hom Mali Rice Product called "Koet Bun Rice". Koet Bun Rice is a brand of the second-class 100% quality Hom Mali rice. The brand presents to customers the image of Hom Mali rice which is the product from quality small farmers who use agricultural co-operatives as their marketing channels. The word, "Koet Bun" is inspirational to the customers as they are 'making merit by purchasing from small farmers. (Figure 3)

Figure 3: The brand - Koet Bun Rice



Note: Koet Bun Rice is a brand of the second-class 100% quality Thai Hom Mali Rice. The brand presents to customers the image of Thai Hom Mali Rice which is the product from quality small farmers who use agricultural co-operatives as the marketing channels. The word, “Koet Bun” is inspirational to the customers as they are making merit by purchasing from small farmers.

## 6. Consequence of Value Network: Thai Hom Mali Rice Network

The operation of the Thai Co-operatives Hom Mali Rice Value Network has transformed the operation of participated co-operatives in the following 3 major programs.

The first transformation is an initiative of the demo farm for farmers to raise an awareness of Good Agricultural Practices (GAP) and its valuable benefits to the value creation of their product. The involvement of participated farmers in the GAP certification process has created a paradigm shift in their production process which led to the cost reduction, production efficiency and knowledge management on the quality of production processes for the farmers.

The second transformation is an identification of inefficiency and an opportunity for resource sharing in operation process of 16 participated co-operatives. The participatory action research

deliver pragmatic solutions for the development of supply chain management of Hom Mali Rice network. Each participated co-operative take the responsibility in the supply chain of Hom Mali Rice production that fits their core competency. This reallocation of responsibilities among participated co-operatives regarding their core competency eliminates the leakage and exploits the benefits from resource sharing in the operation of Hom Mali Rice production. For instance, the large co-operatives with ISO / GMP certification on their mills are responsible for gathering, transporting, and processing the products according to the network business plan. The middle-size co-operatives with the seed processing plants are responsible for producing and selling quality seeds to the network associates. Those experts in the production of biological fertilizers are responsible for producing and selling fertilizer to the associates who join the project. The network management committee passed a resolution to entrust six agricultural co-operatives that have GMP standard mills with the packaging and distribution of the products under “Koet Bun” brand.

The third transformation derives from the new knowledge collection from the making of Koet Bun Brand from the Hom Mali Rice Value Network. The discussion among the researchers before the research completion suggested that the branding process which links the integrated supply chain management and “value network connection” could reflect more clearly on the holistic management. In addition, this can raise awareness among those relevant to recognize the importance of supply chain activities at all levels. The first level is the support to the production of the members. The second level is the business plan based on the cooperation principle in order to optimize the use of economic resources. The last level is the connection of new business alliances in order to create new market channels and new brands.

Figure 4 presents the diagram of the consequence of Thai Hom Mali Rice Value Network as described in this section.

Figure 4: Research Outcome: Value Chain Management



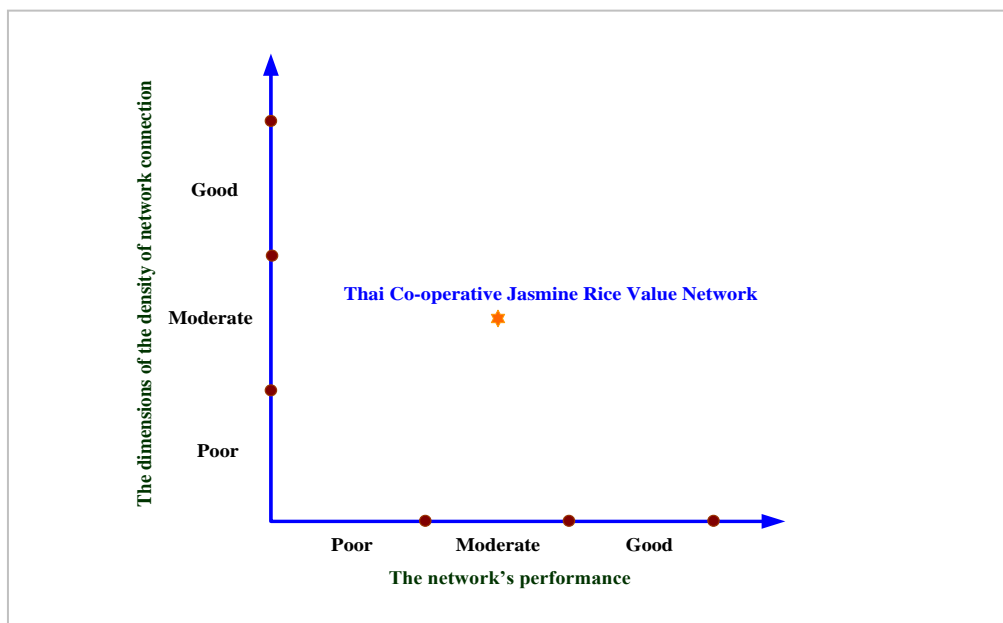


## 7. Project Evaluation

Two evaluations have been conducted to assess the outcomes from the participatory action research project. The first evaluation assesses the potential of the Hom Mali Rice Value Network while the second evaluation estimates the recognition of consumers on Koet Bun Rice.

Before the completion of the one-year research project, the central coordinator team of the project evaluated the Thai Co-operative Hom Mali Rice Value Network using two-dimensional matrix model – the vertical axis represents the density of network connection while the horizontal axis represents the network’s performance. Performance is measured by the gross income from Koet Bun Rice sales and trade volume between participated co-operatives (e.g. raw materials and human resource trading/sharing). Network connection is measured by the number of hours that the executives of participated co-operatives attend the meeting for knowledge sharing on joint operational goals for the network. This evaluation matrix is presented by Figure 5. It was found that Thai Co-operative Hom Mali Rice Value network was ‘moderate’ in both dimensions. This is because it was in a starting point and is currently under the second stage of the research process, aiming to transform the business method through the supply chain in order to reach the vision of the network. In the future, to improve the network in both dimensions, more coaching time is required to enrich the coordination among the participated co-operatives and improve the network performance. Moreover, it is anticipated that the time interval to the evaluation which is 12 months is insufficient to fully deliver the full performance of the network. The next evaluation scheduled in the next 12 months should give a credible evaluation result.

Figure 5: Two-dimension matrix for network evaluation



For the brand evaluation, brand tracking method by randomly selecting samples from the group of 100 samples of customers at Kaset Fair 2010, Kasetsart University, showed that 90% of interviewed customers' attitude were 'good' in terms of its value brand. Over 66% of interviewed customers are willing to buy products from small farmers again in the future because they will get good products and also make merit by helping the poor.<sup>7</sup>

## **8. Conclusion**

Under the overwhelming pressures from Free Trade Area (FTA) and price fluctuations in the international trade, production and operational costs are the decisive factors to the survival of agricultural producers in the market. As a result, the small farmers in agricultural co-operatives need to find a new management method that enhances competitiveness of the co-operatives and create the value added of products to the members.

Although the research period of the project was only one year, the nature of participatory action research methodology could significantly create learning and development opportunities for 200 participants from 16 co-operatives. For example, supply chain management, brand building, brand tracking, GAP, and integrated supply chain management. More importantly, the experience from participating in the platform of Thai Co-operative Hom Mali Rice Value Network has helped the co-operatives' executives to obtain the holistic management skills, raising the awareness on GAP among farmers, resource sharing management for management teams and the technique to open new marketing channel for the network.

Hence, the Thai Co-operatives Hom Mali Rice Value Network is an innovation for Thai agricultural co-operatives and a model of new management methods that can improve the competitiveness of the network and prepare for the Fair trade business opportunity in the future.

The second stage of the project, to be commenced in 2011, has now been endorsed financially by the Thailand Research Fund. Its main objective is to promote Koet Bun Rice brand to be the brand of Thai Hom Mali rice in the international market which has been negatively affected by the FTA recently. In fact, due to FTA conditions, Thai Hom Mali Rice has been attacked by the supply of low quality Hom Mali rice from neighbor countries which has severely undermined the trademark

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<sup>7</sup> The descriptive statistics of interviewed participants can be summarize as follow: 85% of participants were first time buyers of Koet Bun Rice and 75% did not affiliate to any co-operatives. Most of participants (45%) were government officials while 36% and 19% were entrepreneur and other occupations respectively.

of Thai Hom Mali Rice in the global market. We hope that, as the co-operators, we can use the brand 'Koet Bun Rice' and co-operative values to protect the image of Thai Hom Mali rice in a sustainable manner.

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## Appendix

### The 2<sup>nd</sup> Co-operatives Development Plan (2007-2011)

#### Vision

“Determine to create value networks of the co-operative system in order to reach the target of peace and happiness of the nation”

#### Strategies

- 1<sup>st</sup> Strategy:** To encourage the Thai Nationals to have faith and belief in the Co-operative Values and philosophy of sufficiency economy.
- 2<sup>nd</sup> Strategy:** To develop potentiality of leaders and those involved in co-operatives so as to become changed leaders ready to manage the co-operatives becoming self-reliant organizations.
- 3<sup>rd</sup> Strategy:** To develop the capability of co-operatives to be highly qualified as the organization with efficiency, effectiveness and good governance.
- 4<sup>th</sup> Strategy:** To promote supply chain management of co-operatives to competitiveness.
- 5<sup>th</sup> Strategy:** To develop a co-operative financial system contributory to the state of self-reliance and co-operation among co-operatives.

**Figure A.1 Map of Participated Co-operatives**



**Note:** The map presents a research area of 15 primary agricultural co-operatives and 1 provincial agricultural co-operatives which comprise of 55,713 members, 653,594 acre of cropping areas and 35 million U.S. dollars (volume of rice gathering business in 2009).

**Table A.1 Characteristics of Participated Co-operatives in the Network**

<b>Participated Co-operatives (Network Member)</b>	<b>Co- operative's Member (Person/Co-ops)</b>	<b>Business Volume (USD)</b>	<b>Cultivating Area (Acre)</b>
1. Kasetvisai co-ops. Ltd.	7,976	6,570,220.40	148,572.56
2. Phonsai co-ops. Ltd.	1,058	42,566.57	8,366.94
3. Suwanapum co-ops. Ltd.	2,553	1,409,150.00	40,379.60
4. Pimai co-ops. Ltd.	9,347	7,566,666.67	113,046.66
5. Krasung co-ops. Ltd.	3,326	293,629.93	26,302.89
6. Patumrat co-ops. Ltd.	2,080	2,203,777.83	13,981.81
7. Borabu co-ops. Ltd.	12,617	3,710,933.33	97,113.88
8. Nang Rong co-ops. Ltd.	4,624	5,167,570.10	46,623.96
9. Prasart co-ops. Ltd.	5,770	1,201,771.00	55,357.85
10. Suwanapoom1 Land reform co-ops. Ltd.	664	14,614.03	7,876.63
11. Suwanapoom2 Land reform co-ops. Ltd.	598	4,493.07	7,093.71
12. Suwanapoom3 Land reform co-ops. Ltd.	530	5,742.73	6,326.61
13. Suwanapoom4 Land reform co-ops. Ltd.	594	2,500.00	5,871.89
14. Suwanapoom5 Land reform co-ops. Ltd.	876	1,886.33	14,994.07
15. Chumponburi co-ops. Ltd.	3,100	5,500,000	12,257.81
16. The Agri. Co-ops. Federation of Buriram Ltd.	44 co-ops.	2,175,000.00	49,426.65
<b>Total</b>	<b>55,713</b>	<b>35,870,521.99</b>	<b>653,593.52</b>

Note: Table A.1 presents descriptive statistics of participated co-operatives in the network. Business volumes represent the volume of rice gathering in 2009 for each co-operative.  
Source: Patrawart (2009)