Formation of FVC
and groups of small scale farmers in Thailand

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The Global Agricultural Imperative

Introduction

In the coming decades, the food world is facing a daunting challenge to meet the needs of 9.3 billion people by 2050. Agriculture is not only expected to produce more food, but also more raw materials for biofuels, biochemical and fibers. Nearly doubling current agricultural production with less resource (land, water and phosphate resources) in a manner that is both socially acceptable and environmentally sustainable seems to be a gargantuan task.

Our challenge is clear. How can we manage through the current storms and foster more sustainable inclusive growth during the agricultural business cycle, both now and in the years ahead?

Our response and top priority must be to foster productivity and competitiveness throughout the agricultural value chain and in every phase of the business cycle. All participants in the value chain, regardless of scale, need to be able to manage costs and risk, invest for innovation and growth, and continue to collaborate so the world can more sustainably produce sufficient nutritious, affordable food, as well as feed, fiber and biofuel for our growing global population.

Agriculture system must rise to the challenge of improving productivity to meet growing demand while becoming increasingly focused on sustainability.

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Stakeholders around the world are considering the elements of a more holistic approach that meets the challenges of food security and responsible management of resources within a framework of inclusive business models. Resolving the current and future imbalances in food supply is virtually impossible without tapping into the underused agricultural production potentials of small-scale farms at the bottom of the pyramid. Taking this as a point of departure, many questions arise with respect to the way the transformation of smallholder agriculture can be realized.

Thai GDP averaged at 7-8%. After 1997, however, economic growth rate slowed down to average at 3-4%. Thailand has been under the middle income trap for almost 20 years. Couple with the fact that the country is becoming an aging society and the majority of the people remain poor, it is time for Thailand to move forward to what is called “Thailand 4.0.” The 20 years national strategy, is expected to help the country to achieve sustainable development. It is crucial for Thailand to have clear directions for long-term development.
Thailand 4.0 focuses on a “value-based economy,” as the country needs to deal effectively with disparities and the imbalance between the environment and society.

Thailand 4.0 has three elements, which mark a significant change in the country’s economy and production.

1) The first element aims to enhance the country’s standing to become a high-income nation through developing it as a knowledge-based economy. With an emphasis on research and development, science and technology, creative thinking, and innovation.

2) In the second element, Thailand will move toward an “inclusive society” with equitable access to the fruits of prosperity and development.

3) The third element focuses on “sustainable growth and development,” in order to achieve economic growth and sustainable development without destroying the environment.

The Ministry of Agriculture and Cooperatives is also striving to introduce “Smart Agriculture,” as part of the Thailand 4.0 economic model. Thus, Thailand emphasizes strengthening the development of small scale farmers and the agricultural sector. In order to enhance national competitiveness, the Government has given high priority to science and technology, as well as innovation, to create high-value added products.
Moving up value chain

The CAI is an organization in the Faculty of Economics, Kasetsart University. CAI has played an essential role as the organization supporting the research to develop the cooperative system in Thailand for the past decade. Moreover, the CAI aims to foster, co-ordinate and promote the dissemination of interdisciplinary research related to co-operative economy in Thailand with related parties. The Development of Co-operatives and Fairtrade Research Programs (The DC&F) is the main research program of CAI supported by Thailand Research Fund (TRF) since 2004.

The DC&F research program

This research framework aim to reinforce the co-operative value of the nation, moving up value chain into co-op' business, and bringing them forward to national and international levels.

In the first four stages, we focus on area-based research and Value Network Implementation, through Supply Chain Management in Co-op. Business.

Since 2014, The Moving up Value Chain has employed as growth engine for competitiveness and sustainability of co-ops' system.
The New Business Model: Research Output from VCD

Other 140 models in 57 provinces

Sampran Model
Nakhon Pathom Province

Moral Rice Value Network
Yasothon Province

Kitchkood Model
Chanthaburi Province

Value Network of Hommali Rice Thailand
Roi Et Province

Farmer Shop
Bangkok Province

Tilapia value chain
Petchaburi province

The challenges for small-scale farmers

poor access to services & finance
poor post-harvest & transport facilities
fluctuating prices

The challenge for small-scale farmers is to find entrepreneurial solutions in an approach that does not expose them to even more risk. The entrepreneurial food chain innovations that increase yield and mitigate risks have the best chances of being adopted. In an environment with multiple challenges such as increased variability of agrological conditions, poor access to services and finance, fluctuating energy prices and poor post-harvest and transport facilities, this is not a task whereby small farmers can succeed entirely on their own.
A value chain is the integrated activities that cover from upstream to downstream (final consumers). The upstream activities comprise input development and production. The activities of midstream consists of product processing, storage, and packaging. Meanwhile, the downstream activities are marketing and distribution of products to consumers. The value chain development has to manage the relationships among business partners. Also it involves some mechanisms for information flows among stakeholders to drive business operations to achieve the mutual goals.

Moreover, there are some facilitative supports from government offices, financial institutions and others such as the provision of basic infrastructures, laws, rules of quality products, research, trainings and suggestions on new innovations and technologies.
A comprehensive value chain approach in food markets

These features allow farmers as primary producers to benefit from better terms of trade, as exemplified by the fair trade market chains. A key factor influencing the linking of small-scale farms to markets and integrating them into the global food chain is the interplay between power and profit, i.e. the distribution of costs, risks and benefits, along a food supply chain. Smallholders tend to be the weakest link, especially in buyer-driven chains. The new vision for agriculture requires making a solid commitment to the three PPP dimensions and providing consumers with information on this topic will be considered an integrated component of the corporate strategy and business model.

The DC&F research program was designed to consist of 4 operation/activities. It was expected that a new business model derived from VCD Framework would effect the potential of competitiveness and sustainability for small scale farmers.
The value chain development comprises nine steps: 1) destination of target groups (it can be farmers’ group or cooperatives), 2) value chain analysis, 3) determination of business concept, 4) determination of strategic approaches, 5) determination of target markets and marketing strategic plan, 6) design of business system under the value chain, 7) making business action plans, 8) implementation to achieve common mutual goals 9) monitoring and controlling of results.
The Kitchakood Model is a business model of the Kitchakood Agricultural Co-operatives Ltd. in Chanthaburi province. It adopted the Value Chain Development platform in search of a solution to the highly volatile fruit markets, the challenges faced by the co-operative members. The strategic framework for creating the Fruit Value Network and its economic and social implications for the communities.
Chanthaburi Province is situated on the east coast of Thailand. The province covers 6,388 sq.km. The majority of the population is made up of farmers and fishermen. Chanthaburi Province produces the largest share of produce at the national fruit market. The most common tropical fruit tree species are the Mangosteen, Durian Sala and Rambutan.
The Kitchkood Business Model

Target Market of Products

- Network of Cooperatives: 457.01 Tons, 0.5 Million US$
- Provincial Markets: 74.66 Tons, 53,142 US$
- Other Markets: 3.44 Tons, 2,857 US$
- Retail/wholesale: 3,201.72 Tons, 2.5 Million US$
- International markers: 9,777 Tons, 15 Million US$

Source: The Department of Agriculture, July 2015
1) Empowering the new generations with the wisdom of the members, and passing along the objectives, methodology and the Cooperative’s values to the next generation. Members will then feel a sense of belonging and ownership for the Cooperative Union, so that the next generation inherits these values and passes them on. By promoting group participation activities, we can create good relations between farmers and members. Finally, an agenda will be set for an annual meeting so farmers and members can participate in Cooperative planning together and continue to operate towards the achievement of similar short-term goals.

2) Educate farmers and members by providing relevant information, like marketing trends, transportation systems, harvesting techniques, etc. The goal is to help them adapt to the current global context of rapid change. Encourage members to produce only the best quality fruits, be self-sufficient and exchange knowledge and experience with other farmers and members.

3) Promote a food safety policy for farmers and members, in which they must be aware and can implement Good Agricultural Practices (GAP) standard at their farms. Encourage farmers and members to participate in GAP, and submit to farm audits (Q-Mark). Above all, assure that fruit production is traceable, to ensure quality for customers and help promote access to marketing channels.
Kitchakood’s best practices

4) Encourage member to understand and realize the importance of doing daily record-keeping, which would include historical production, production and trade levels, etc. This information will help farmers and the Cooperative Union make joint decisions for production and marketing plans for subsequent seasons.

5) Encourage members to meet with other groups or members of the Cooperatives Union so members can exchange experience and skills. The Cooperatives can follow up with their production activities, and help members come up with solutions during the process.

6) Promote “learning by doing” for farm groups managing fruit quality development processes and marketing channels.

Kitchakood Agricultural Cooperative Ltd.

Vision: To be the organizational center for agricultural production and business development working towards the stability and happiness of farmers and members.

Goal:
1. Cooperative member participate in organization activities and promote Cooperative business.
2. The quality of agricultural products from members is guaranteed and generates a higher selling price at market.
3. Cooperative business is managed effectively and efficiently and shepherds the completion of organizational and community activities.
4. Cooperative management system contributes to efficient operations.
5. Cooperative members and their families live healthy, positive lives.

At present, the Khao Kitchakood Co-ops is honored as the valuable Agri. Co-ops. The Living Learning Center was established in order to distribute knowledge sharing for public. The center provide training services as well to others, counting national and international visitors.
Case Study IV: The Sampran Model

The Sampran Value Business Group is another innovative value network business model. It is located at the Rose Garden Hotel, Sampran district, Nakorn Prathom province. The business group was founded by the owner of Rose Garden Hotel. The CAI provided the group with technical support in applying the principles of self-help and mutual help to overcome pollution from chemical-based farming in the neighborhood. The model promoted farmers’ understanding and awareness of the benefits of organic farming that could contribute to their better living conditions and economic success.

In this project, the “Sukjai Market” (Happy Market) was set up as a weekend market, where orchard farmers in the surrounding communities could bring their organic products to sell free of charges. The production of organic products was under close supervision of the CAI and the Rose Garden Hotel. Participating farmers did not only earn more than 1 million baht a month from selling their organic products, but they also learned about the principles of marketing, food safety as well as Good Agricultural Practice (GAP). Hence, the Sukjai Market has become the living learning center for everyone in the community.
The Strategic Framework for the Sampran Value Business Group.

Origin:
Under the highly controverisal economic and social issues between the Rose Garden Hotel and Sampran district, the Co-operative Academic Institute has involved in the dispute settlement process by using the community-based resolution which resulted in the promotion of the organic agricultural activities which not only will promote the sustainable economy in the community but also the harmonious society within the district.

Operation:
Under the “Sampran Value-based business” framework supported by the Thailand Research Fund, the Sukhaj Market and Living Learning Center: For Awareness have developed skills and experience of participating partners which has been running for 3 phases between 2009-2013.

Evaluation:
- Sukhaj Market is the brand for community market which has been widely recognized by media and public organization as well as private enterprise and communities. 
- Currently, the daily gross revenue is over 100,000 Baht, 23 million Baht in total since opening the market with over 50 participating entrepreneurs.
- The living learning center has various activities for organic farming which has so far been participated by over 500 visitors.
- Pilot farming areas for IFORM certified products. Eventually, the Rose Garden Hotel has received the AREA award from Enterprise Asia for the best social enterprise in Asia.

Identify Condition:
Community leaders uses the participatory based approach to analyze the statement of problems and identify solution under the advisory team assistance which resulted in the creation of the “Sampran Value-based business” which has a joint mission to promote organic agricultural practices which has the Rose Garden Hotel as the focal organization in promoting the knowledge and supports for the development of organic agricultural practices in the area that will promote the sustainable economic development in the region.

Design:
Using the Rose Garden Hotel’s strength in management skill, they have establish the Sukhaj Market (Happy Market) as the mechanism for raising the awareness and training of organic agricultural practices for farmers, communities members and consumers in order to achieve the mutual goal.

Utilization:
- The completion of organic agricultural training for 500 Nakon Prathom farmers.
- The expansion of the value-based business enterprise in Sampran district toward the organic agricultural hub in the region.
- Establishment of the living learning center for public advocacy.

Sampran Model: A PPPP, People-Public-Private-Partnership Business Model for Sustainability

Funding from Thailand Research Fund and Thai Health Promotion Foundation

Upstream/ Producer  →  Midstream/ Processing  →  Downstream/ Consumer

Kasetsart University (Bangkok)
- Faculty of Economics
  - Research with Co-operative Academic Institute
- Faculty of Agriculture
  - Organic agriculture knowledge

Kasetsart University (Nakornpathom)
- Faculty of Engineering
  - ‘Farm to Firm’ project and logistics
  - www.sokjaoorganics.com
  - Post harvest knowledge

Kasetsart University (Bangkok)
- Faculty of Agriculture
  - Food processing using organic raw materials

Kasetsart University (Nakornpathom)
- Faculty of Engineering
  - ‘Farm to Firm’ project and logistics
  - www.sokjaoorganics.com
  - Post harvest knowledge

Ministry of Agriculture and Cooperatives
- Land Development Department
  - PGS pilot project with TOAF and ADB

Ministry of Commerce
- Department of Internal Trade
  - Organic Village project

Ministry of Commerce
- Department of Internal Trade
  - Organic Farm Outlet project
  - Bliss Festival Dec 2016 sponsorship

Thailand Convention & Exhibition Bureau (TCEB)/ Thailand Incentive and Convention Association (TICA)/ Thai Hotels Association (THA)
- ‘Farm to Functions’ project where hotels and convention centres buy organic rice directly from groups of farmers

Tourism Authority of Thailand
- Promotion of organic agro-tourism and sustainable tourism
- Bliss Festival Dec 2016 sponsorship

Lesson learned visualization by Kasetsart University (Bangkok)
Lesson learned from the Sampran Model was the community-based business model that applies the value chain development concept in designing the business system and uses the co-operative value in stimulating partnership by defining resolutions and common goals as the Ultimate Goal which consists of Sustainability and Happiness Society. Stakeholders can take part in all activities conducted under the value chain as well.

This new relationship management and an appropriate operating process eventually brought about the PPP Business Model which has now been a living learning center for more than 3,000 local and international visitors per month.
The strategic framework value chain development

www.cai.ku.ac.th

The value chain development comprises nine steps: 1) determination of target groups (it can be farmers’ group or cooperatives), 2) value chain analysis, 3) determination of business concept, 4) determination of strategic approaches, 5) determination of target markets and marketing strategic plan, 6) design of business system under the value chain, 7) making business action plans, 8) implementation to achieve common mutual goals 9) monitoring and controlling of results.
Value Chain Mapping by Actors

Mapping Value Adding

Fresh Fish
Dried Fish
Fried Fish
Framework of Business Plan Formulation

Tilapia value chain of Pho Phra group
Tilapia farming in earthen pond

The popular species of tilapia: Chitralada 3

Fish catching

The process of output grading
Investing Sustainable Value Chains

Climate change and land degradation, along with the decline in critical natural resources are driving actors along the agricultural value chain to produce, manufacture, transport and retail food more sustainably. Sustainable value chains are also driven by market forces, particularly by consumers who are increasingly interested in buying — often at premium prices — products that are responsibly and sustainably sourced.

Improving the sustainability of an agricultural value chain requires a significant investment in research, technology development and training, as well as certification processes to inform consumers about sustainability achievements. Public-private partnerships bring together knowledge and funding to transform value chains and create new market opportunities for participants of all scales in the agricultural value chain.

To successfully monitor progress toward sustainability need to be integrated into a set of indicators that measure the environmental, social and economic impacts of agricultural value chains.

Inclusive sustainability concept can help policymakers make strategic investments that not only improve food and nutrition security, but also do maximizes the use of natural resources and produces economic and social value for people along the agricultural value chain.
Case Study V: The Farmer Shop Business Model

Vision: The alternative retail store which consumer and producer are mutual owner.

Slogan: Not for profit but far long term co-operative relationship in cooperation with members.

The Farmer Shop Model focus on utilizing knowledge capital, social capital and economic capital to increase value of agricultural products toward the creative business model with Value Chain Development.

The Vision of the Farmer Shop is “The Retail Store that Producers and Consumers are Mutual Owner”.

The Farmer Shop as a New Business Model

The new business model that has rearranged the relation of stakeholders in the value chain. It was done in coordination with the supply side. (include co-ops, SMEs, community enterprise) and demand side (include consumer who are member.) Its’ ultimate goal is to develop value chain management system strengthening the fair trade and sustainable practices among participate partners, from both producing and consuming side.
Implementation

The research result show that the Farmer Shop has rearrange the relation of value chain management into alternative solution of SMEs, OTOP, Co-ops to access the new market and consumer within their community and beyond. On the other hand, consumers can access the quality goods at the fair price and able to help supporting the small through their consumers.

Lesson Learned from the Farmer Shop Business Model

The research result at the 3rd year show that Farmer Shop business model will utilize 5 cover value which result from the VCD, that are

1) The demand creation for the local farmers’ products within the community through the business mechanism will reduce the problem on market accessibility and low bargaining power of local farmers.
2) The capacity building for the partners in the supply side will enable them to improve the quality of products and their competitiveness.
3) The advocacy campaign for consumers on food safety and locality as well as the fair trade philosophy will promote consumers’ awareness.
4) This Business Model will be scale-up and extend to various community shop across the country in order community dev. goal the “Civil State Smile Shop”.
5) This business model will establish social movement that inspires individuals and community to aware the value of fair trade system.
At present; The Farmer Shop Business Model has been modified into the Civil State Smile Shop (C3S) by Agrarian Reform Sub-Committee, National Council Reform. These approach is to establish a new business model in local and urban community through “Start –up” Target group.
Homthong banana international business started in the year 1999 with the operation of the Banlad Agricultural Cooperative Limited which began a campaign to connect Homthong banana with the consumer cooperatives of Sue Tor Ken of Japan (Pal System). Since the year 1999. At present it has exported 17 tons of Kluai Homthong per week to Japan.

Introduction to Ban Lad Agricultural Cooperatives Ltd.

- Establish year: 1975
- Member: 9,000
- Banana registration farmers: 600
- Cultivate 6,000 Rai

website: www.banlat-coop.com
The registration farmers in Banlad Agriculture Cooperative produce pesticide-free HomeThong Banana. A Value chain is initiated when between Sue Tor Key Co-ops (Pal System), Banlad Agri. Co-ops (Banlad) and Pan Pacific Food Corporation., Ltd. (PPFC). The cooperative works in many roles, manages land for members to ensure that banana fruits reach specification, harvesting, transportation, recording the database for each farmer, sorted, washed and dried, divided into smaller bunches, packed in plastics and vacuumed, placed in boxes, and refrigerated at 14 degree Celsius, waiting to be exported. These bananas are transported and shipped to Japan by PPFC and its strategic partners. It takes 14 days in the process from leaving a dock at Banlad until it is ready for sale to consumer members of Pal System. Farmers at Banlad also grow banana, domestically sold to modern-trade retailer and hotels. The cooperative acts as central buyer and distributor.

Banlad farmers operate under a contract farming system. They receive information on production methods, input, credit and extensive support from the cooperative. The registered farmers follow certain guidelines for producing bananas. They refrain from using chemical fertilizers or pesticides, use the land for banana production only, record of their cultivation (include: the farmer’s name and code; the cultivation area; crop numbers; transplant dates).
Farmers in the group have to abide the terms of the contract that includes planting method, specification of bananas, demand and schedule of delivery, etc. It usually takes approximately 9-11 months for a banana sprout to grow and bear fruits; and banana tree normally bears fruit every three months.

Nowadays, a productivity of Homethong bananas is three tons per rai per year.
### Cost of production

**1 rai, 400 banana suckers,**

1. Soil preparation  
   61.28 USD
2. Banana suckers  
   35.02 USD
3. Labor costs  
   17.51 USD
4. Gasoline  
   87.54 USD
5. Compost, manure  
   87.54 USD
6. Chemical fertilizer  
   105.05 USD
7. Plastic bags for covering bananas  
   65.66 USD
8. Tree braces  
   52.52 USD
9. Rope for tree braces  
   2.92 USD
10. Fixed cost (Estimate)  
    68.57 USD

**Total costs**  
583.60 USD

Estimate revenue 400 bunches x 2.91 USD  
= 1167.20 USD/Rai

*Source: Banlad Agri. Co-ops.*

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### Production of Homthong Banana: Contract Farming with price guarantee: Growing cycle from planting to harvesting is 9-10 months

1 rai (1,600 sq.m.) for approximately 400 suckers

Homthong banana blossom

Covering banana bunches helps improve bananas’ appearance and protect bananas from insects.
Harvesting and deliver banana by Co-op staff

When it is 50-60 days after harvesting banana blossoms, harvest the banana bunches.

Using sponges and air bubbles

System Managing with traceability features

Separate and weigh banana bunches at the factory

1st cleaning Trim the bunch

High pressure wind tunnel
Packing

Drying and checking for pests

Using foam cushioning

Tagging LOT No. (Traceability)

Packing

Air-exhausting before sealing

Complete packages

Keeping the packages at 13-14 degree Celsius before delivering

Weighing each box to be approximately 12-13 kg.
Banlad has developed an electronic traceability system which allows Japanese consumers to trace back necessary information on origins and production.

Key success factors: Banlad Agri. Co-ops.

A number of factors have been key to this success story.

First, banlad has been able to organize the farmers and reduce the transaction cost.

Second, adoption of an e-traceability system helped retain the Japanese organic market.

Third, farmers have been provided with appropriate technology, quality specifications, credit and technical service.

Fourth, Banlad has maintained the strong value chain management for product upgrading, process upgrading, functional upgrading and Chanel upgrading in order to achieve sustainability.
Conclusion

• Lessons learned from the DC&F Research Program in the past decade pointed out that it is necessary for co-operatives, as an organization for the members and community, to adjust the mindset and operating processes. The challenge is how co-operatives can apply the co-operative spirits in effectively improving the human capital, the organization, and the business system for the benefits of the members and community following the sustainable development.

• The case study mentioned earlier showed the conceptual framework and platform for enhancing the co-operative operation using value chain development concept. This can lead to functional upgrading, process upgrading, product upgrading, and chain upgrading. Stakeholders from public sector, academic sector, private sector, and communities can also take part in the business system to achieve their mutual goals.

• The conceptual framework and platform using value chain development will mitigate co-operative weaknesses and difficulties which are resulted from economy structural problems in the New Economy. Moreover, they will provide more opportunities in learning and applying appropriate technological innovation in the business as well as systematically network the business with strategic partners based on the co-operative value so that co-operatives will be more competitive.

Recommendations from The DC&F research program (TRF, 2017)

1.) To promote the implementation of the learning support system based on "the Capacity Building Framework" which can open access and create understanding among farmers in order to develop attitude, mindset, and working life following the sustainable development.

2.) To support research especially participatory action research to promote the value chain development in agricultural institutions following "the Value Chain Development Framework", which can enhance business capability of the agricultural institutions as self-reliance institutions that make use of innovation effectively.

3.) To disseminate business models with best practice for the value chain development in inclusive business between small scale farmers and stakeholders as community learning centers. These centers are allowed for public access for knowledge dissemination so that people in the community can realize the importance of the models and apply them to create development businesses that can balance the economy, society, and environment based on the national development policy and strategy for the country’s prosperity, stability, and sustainability.
Discussion

Thank you for your attention

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