PROMOTING RICE VALUE ADDITION THROUGH INCLUSIVE BUSINESS MODEL

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ABSTRACT

More than half of farm households in Thailand are in the rice sector. Majority of them are smallholders, and they are struggling with higher costs and lower yield rate, as well as rising competition in the global market. These reflect the need to move up the rice value chain based on innovation and institutional support.

This paper tries to illustrate how to apply a new business model of Inclusive Business to realize the value chain upgrading and to link smallholder farmers to the markets. The research has used the case-study method and longitudinal study with community enterprises and agricultural cooperatives. A key finding is that trust and collaboration among stakeholders is crucial to bring about mutual learning and value chain development.

The study will continue to work closely with local and institutional actors to create a platform for Inclusive Business. Policy recommendation will also be formulated to mitigate institutional barriers and to broaden adoption of Inclusive Business by visionary and proactive farmer organizations in Thailand.

Keywords: Inclusive Business Model; Value chain development, Rice sector

INTRODUCTION

The rice sector covers 3.7 million households or around 60 % of Thailand's 23 million farmers. A half of Thailand's cultivated land is devoted to rice farming with annual output of 30 million tons of paddy rice or 20 million tons of milled rice. Domestic rice consumption is around 10 million tons of milled rice, and half of the harvest serves overseas demand. In 2017, Thailand exported 11 million tons of rice, up by 15 % year revenue rose by 15 % to US$5.37 billion. Of its total annual exports, 70 % is white rice, while the rest is Thai jasmine rice and parboiled rice.

Despite these ongoing developments, the Thai rice sector is facing challenging circumstances, especially in the context of global market. Thailand has been a major exporter in the world's rice market, mainly to China and the US. The current market situation shows that competition is multiplying and Thailand is facing stiffer competition
India, Vietnam, Cambodia, Myanmar, have overtaken Thailand as the leader in exports of white rice. This is mainly due to the following: 1) some importing countries tend to expand their domestic rice production areas and thus reduce the amount of rice imported; and 2) the expansion of rice production in the ASEAN region, especially in Vietnam and Cambodia, which can approach Thai quality but at lower prices, thus replacing imports from Thailand, both in the ASEAN and European markets. Further, Vietnamese fragrant rice is starting to crowd out Thai jasmine or Hom-mali rice in the East Asian and American markets. These have been threatening Thailand’s market share which has been declining, as results of reduction in both volume and value.

In terms of production, most rice farmers are considered to be in the small-scale category according to the farm size. The average land holding is about 3.5 hectares per household in which the majority of them holds only 1.5-2 hectares, while 30% of them do not own the land they farm. During the past decade, Thai farmers faced with rising costs of farm inputs, labor shortage, and risks arising from climatic conditions, which had negative consequences for yields. According to USDA, the rice yield in Thailand is about 2.8 tons per hectare, lower than in neighboring countries, and cost is more expensive than competitors with an estimated cost of US$1,000 per hectare (Thai Ministry of Commerce, 2016). Meanwhile, government’s price intervention policy, aiming to raise price prices, did not stimulate farmers to improve cost efficiency, quality management, and sustainability of farm land. Further, farmers were encouraged to borrow from banks to buy fertilizers and pesticides to maximize production volume.

Consequently, farmers did not pursue an entrepreneurial approach and create addition value to their rice. Thai smallholder farmers, with around 2 hectares that produced 6 tons of rice, could generally earn only US$2,400 per year (US$400/ton; farm gate price of freshly harvested paddy), subtracts the costs of US$2,000, then the farmers obtained profits of US$400-500 per year/household. As a result, a large number of farmers are still heavily in debt, in which average farmer household carries around US$3,700 in debt, plunging them into deeper poverty and forcing them to seek help from the new government. On the contrary, rice exporters always survive in the market. Despite higher costs, traders could switch to other markets whereby demand for Thai rice continues to grow, especially in the Middle East and African countries, yet strong competition and low prices would restrain their profit margins.

Rice export competition (all types)¹

![Rice export competition graph](https://benchmark.televisory.com/blogs/-/blogs/rice-industry-outlook-2018; Accessed 25 April 2018)

Lessons from the past help many smallholder farmers to learn and embrace a new mindset under which they are less inclined to wait for government support or sell their rice solely through middlemen traders. They are also encouraged to combine their rice farmyards and join hands as collective farming in order to increase the bargaining power and reduce costs, as well as adopt management practices to upgrade food safety and quality. In addition, soft loans were provided to support farmers to have processing facilities and to set-up farmer organization in forms of cooperatives or community-based enterprises in order to reap their own benefits from value added activities and trading. Many proactive farmers have modernized their approach by adopting better practices, creating their own rice brands, and selling their rice via traditional marketing and online channels, apart from diverting their crops and developing organic farming.

Nevertheless, it seems to be not easy for smallholder farmers to act as entrepreneurs and compete in trading business in the globalized world. Many factors still restrict farmers’ capabilities to extend their roles into the demand side of the chain. This formed rationales for the study to explore and test a new business model of Inclusive Business as a tool for farmer organizations to upgrade their value creation and to tap into a broader market.

REVAMPING BUSINESS MODEL FOR FARMER ORGANIZATION

Farmer organizations’ capabilities in value creation and marketing

Today, across Thailand, rice-farmers are gradually open in learning to adopt new knowledge and business skills. With regard to small-scale rice farmers, farmer groups and cooperatives have been working more actively in developing products and management system. This includes an increased consideration for more technology adoption, governance system, and logistics management. Nevertheless, the future broad attainment to such practices would not be straightforward due to internal and institutional limitations.

A key factor that determines competitiveness of the small-scale farmer organizations in Thailand is to build up capabilities in their trading functions and partnership with other actors in the demand chain. Thai farmer organizations try to adjust to new context by enhancing market channels and value creation, so as to maintain market access and sufficient revenue, thereby being able to support local social-economic sustainability. Nevertheless, most farmer organizations need to pay much effort on their agricultural production and processing activities. There are thus a limited number of farmer organizations in Thailand that are ready to extend their roles into rice value chains and to compete globally.

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In fact, Thailand has established the Agricultural Cooperatives Federation of Thailand (ACFT), including 76 provincial federations affiliated. These trading arms are supposed to act as a bridge between demand and supply sides of the chain, focusing on non-production activities such as market information, R&D, branding, and distribution, as well as technological services. However, the ACFT is still in transition period to develop business performance and closer collaboration with farmer organizations. Therefore, the current situation implies that, to foster competitiveness of farmer organizations and cooperative federation, they should be encouraged to revise business model that grounds between business entity and social enterprise for local economy.

Likewise, Patrawart (2015) analyzed business performance of agricultural cooperatives in Thailand, and found that the cooperatives were not sufficient to achieve both economic and social objectives, due to their internal characteristics of administration and personality of cooperative managers, and level of participation among farmer-members, as well as their capability in terms of marketing and trading business. In addition to the organizational factors, the limited capabilities in marketing and value creation can be explained by institutional constraints in terms of government measures to unleash entrepreneurial capabilities and marketing activities among cooperatives / farmer organizations. However, business eco-system in Thailand has been improving in the way to support grassroots economic development and community-based enterprises.

**Fostering value creation economy and inclusive development**

Inspired by the economic reform policy and the Sufficiency Economy Philosophy of the late King Bhumibol Adulyadej, the Thai government has formulated a national strategy towards value creation economy and inclusive growth. Thailand’s 4.0 Strategy and its 20-Year Plan were set to direct the country to become more technology-driven and with higher value addition to ensure economic growth together with qualities of human and natural environments. Accelerating adoption of technology and standards is thus a key to this strategy, and this can be done through collaboration between public, private, and knowledge partners (Pracharat Network).

Under Thailand 4.0 Strategy, the Government has given high priority to move up the value chain by utilizing modern technology, cultural identity, and creativity in order to respond to demand trend and create price premium. Thai rice farmers are expected to become ‘smart farmers’ and work together as farmer groups/organizations. These are considered more effective ways to access technologies and upgrade their productivity, quality, and value addition. The transition towards agriculture 4.0, however, is slowly getting underway, along with reforms in business eco-system.

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The previous development reflects the need for a catalyst for change through a platform and partnership of multi-stakeholders. These include local knowledge institutes, governmental agencies, private sectors, and NGOs / social enterprises that join hands in sharing motivation, information, resources, and technology. This kind of engagement is vital to mobilize support and collective force to prevent unfair practice by large trading firms and to influence government’s policies. As depicted above, social enterprise and fair-trade business, together with societal partner, play a key role in bridging between smallholder farmers’ production and downstream sides of the chain. And this research tries to explore how to cultivate and facilitate the roles of this model in realizing inclusive growth.

INCLUSIVE BUSINESS MODEL FOR AGRICULTURAL TRADE

Conceptual background of Inclusive Business Model

According to practical guidance by FAO, Inclusive Business Model is for-profit companies, commercially viable, while enhancing participation of smallholder farmers in the value chain. More specifically, ADB defines Inclusive Business as private sector that involves the poor and lower income groups (those with an income level lower than $3 international poverty line or Base of Pyramid/BoP), both as suppliers, distributors, and consumers. International Finance Corporation (IFC) has been laying the foundation of this business model for a majority of people; so do other development banks Europe and G20 conference that perceive Inclusive Business Model as a tool to achieve SDGs. Despite a common understanding, Inclusive Business in agriculture may focus on different aspects. Some focus on improving productivity of smallholder farming. Others focus on sourcing from farmers and providing them with better market access and equitable trading conditions. Despite a newly recognized concept, there was a vast array of initiatives that are in line with Inclusive Business. They include fair-trade practice and value-chain development programs. The concept of an Inclusive Business could perhaps be a model that compliments value-chain thinking with a practical steps and a set of plausible supportive measures, as well as a continual promotion through several forum ad international institutes.

Adoptions of Inclusive Business Model

Many patterns of unitization of Inclusive Business (IBM) have emerged in linking smallholder farmers to the markets. First, some IBM companies prefer to work with farmer/agricultural organizations rather than individuals. Local producers such as cooperatives and farmer-owned enterprises will be guided by the IBM companies that play role as intermediary actor in demand side, through practices of fair-trade contract farming and out-grower schemes (top-down IBM). In the context where market linkages are initiated by local producers, IBM tends to be informal in which farmer-traders play key connectors. In many cases, the traders are members of the rural community who facilitate not only direct market linkages but also support their suppliers (bottom-up). The third pattern is driven external partners or combination with many stakeholders. This starts from the assumption that the existing market is

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not effective in terms of equity and that new skills and knowledge need to be developed to facilitate favorable linkages for all partners. These collective actions are often led by NGOs and local universities and supported by governmental agencies.

Enabling factors for Inclusive Business

To enable broader adoption of Inclusive Business Model, favorable business environment is needed in many ways. First, challenges facing Inclusive Businesses is to manage their supply chain as results of fragmented production network, transaction and logistics costs. Creating a platform for communication is a key factor to facilitate collaboration and partnership with external partners, especially learning institutes and service providers. Second, Inclusive Businesses often lack trading skills and purchasing / bargaining power. They are typically small with limited financial resources, and these characteristics have impacts on the reliability of market access for member-farmers. In addition to demand information, Inclusive Businesses need support in terms of networking and financial capital, as well as trust-building for co-investments and scaling-up of their businesses. Another challenge is to promote inclusive agribusiness to transform the mindset among agricultural organization, and to reorient farmers from subsistence farming to ‘farming as a business’.

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5 Inclusive Business in APEC Study
(https://aimp2.apec.org/sites/PDB/Supporting%20Docs/Forms/Supporting%20Docs.aspx?RootFolder=%2fsites%2fPDB%2fSupporting%20Docs%2f2f139%2f2fProposal%20Attachments%20%28if%20any%29&FolderCTID=&View=%7bCA72D0E0-295E-45DF-B491-F7BF6581A22F%7d; Accessed 5 May 2018)
Inclusive Business in the context rice sector of Thailand

This research takes rice production in Thailand as a context of study. Inclusive Business in Thai rice sector can be traced back to the early 1990s when Urmatt (www.urmatt.com) started engaging rural communities in northern Thailand to produce basmati rice through a fair-trade contract farming with hill tribes of north-east Thailand. By converting chemical farming to natural and organic production, Urmatt invested in knowledge transfer to smallholder farmers to upgrade rice for premium prices and market access in international markets. Local value capture is also increased through processing by-products, such as rice bran keenly sought by the cosmetics industry and the medical community. Farmers’ incomes have increased dramatically as a result, and new products have been developed such as chia seeds and organic eggs. Moreover, environmental degradation is averted in the process, while social capital in the rural areas contributes to stronger safety-net in the region.

The case of Urmatt show how SMEs, which account for over 97% of Thai business entities, can adopt business model for inclusive growth. Meanwhile, Inclusive Business Model can also be utilized by some capable agricultural cooperatives (around 3,500 cooperatives) and community-based enterprises (70,000 enterprises) in Thailand. The business model will be a catalyst that unleashes potential among the local economy enterprises, and transforms them from sufficiency-based towards profit-making and sharing economy. This research selected two prominent case-studies of a cooperative (Banlad Agricultural Cooperative, Ltd.) and a community-enterprise (Tung-thong Yangyuen Organic Community-Enterprise) that have been operating business in accordance with Inclusive Business Model, aiming to understand their transition path and actual implementation, as well as results of Inclusive Business Model.

PARTICIPATORY ACTION RESEARCH THROUGH COLLABORATIVE PLATFORM

Conceptual framework

This study has been guided by a concept of ‘Value Network and Fair Trade’ derived from our previous action researches. The concept focuses on connecting strategic partners along the value chain and network of societal stakeholders. According to Patrawart (2007), to facilitate value creation and market access, smallholder farmer

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organizations need to develop cooperation with external partners, and a partnership platform for all related actors to play roles and share resources and capabilities. Similarly, to enable cooperatives and community enterprises to adopt Inclusive Business Model, collaborative platform has been constructed to allow related organizations to take part in upgrading capabilities of the enterprises, thereby enhancing their ability to increase the price premium and competitiveness in today’s market system.

Based on this concept, platform creation involves three key dimensions (see figure below):
1. Developing entrepreneurial leaders based on four-dimensional characteristics, cooperative spirit;
2. Improving business operation through strategic management; and
3. Utilizing integrated supply chain management and the fair trade principle

Value network and fair trade platform

This framework of value chain upgrading through public-private partnership has been utilized in previous researches on co-operative development in Thailand. Several steps have been planned to conduct the case studies, using lessons learned from earlier works of value chain development such as Satjatham Value Network of Hommali Rice, Kitchakut Fruit Value Network, Sampran Value Business Cluster (Patrawart, 2007).
Methodology and context of study

This research employed the participatory action research approach using case study methods led by the Co-operative Academic Institute (CAI), Kasetsart University. The platform creation and activities to develop the value chains of Inclusive Business have been collaboratively operated by many organizations including cooperatives, community enterprise, SME exporter, local agricultural-related agencies. The pilot cases of promoting adoption of Inclusive Business Model among cooperative and community enterprise have been conducted in two provinces in Thailand; Tung Thong Yungyuen Community Enterprise in Suphanburi province and Banlad Agricultural Cooperative in Phetchaburi province. The results of case studies are expected to be applicable to cooperatives and community enterprises in other to broaden adoption of the business model in other provinces in Thailand.
RESULTS FROM CASE STUDIES: BANLAD AGRICULTURAL COOPERATIVE AND TUNG-THONG YANYUEN ORGANIC COMMUNITY-ENTERPRISE

Case Study 1: Banlad Agricultural Cooperative, Phetchaburi Province

The action research resulted in a creation of platform for collaboration. Smallholder farmers in Banlad district have been supported by many actors, thereby preparing their readiness to be included in IBM. 40 farmers have been upgraded in terms of functions, process, and products, through a continual process of learning (14 activities), and GAP rice system was set up based on participatory guarantee system. The capacity building activities have been conducted through the platform that allowed many external alliances can take part, especially the Rice Seed Center in Rachaburi province, aiming to obtain standard recognition and more access in broader markets within this year of 2018.

After the action research, comparative assessments were conducted to estimate changes in farmers’ performance. Twenty-four farmers were found to have higher performance in terms of environmental awareness, business vision / Thailand 4.0, production planning technique, sustainable development practice, branding and managerial skills, as well as fair-trade and value chain development process. The study validated the applicability of value chain and network framework to facilitate adoption of IBM by farmer organization. In addition, assessment was also conduct to identify supportive measures need to improve business eco-system for IBM. The analysis revealed that key factors for IBM in the case of Banlad include visionary leaders, previous experiences in trading and service businesses, financial readiness, and progressive mindset to adopt innovation and new business model.

Nevertheless, many challenges still exist for BAC to overcome, especially how to collectively adjust production patterns from chemical farming to non-chemical and organic farming in the future. Based on the challenges, a logical framework was constructed as a guideline for strategic planning for IBM development in Banlad district. The strategy is based on an objective “to enhance capabilities among smallholder farmers to develop from GAP rice to organic production so as to attain the vision of inclusive growth”. Further, this strategic direction was cascaded down to a road map of action and practical business plan for further adoption and implementation of IBM in Banlad district.

The business plan for IBM was approved by the 40th executive committee of Banlad Agricultural Cooperative. Consequently, the future plan of IBM will be implemented by sub-committee of IBM and IBM working group under supervision of BAC directing manager. This include practical actions such as a plan to purchase GAP rice from standardized farm in this year of 2018. There are 23 farmers that will benefit, with estimated quantity of rice (Chainat and Suphanburi Rice) around 100 tones, price at about US$44,000 (1,375,000 baht), and net profit margin at US$6,762 (209,630 baht). In addition, the brand of ‘Banlad’s IBM Rice’ will be initially promoted (5 kg. and 1 kg. packages) aiming to serve target markets mainly from farmer-members in Banlad district (9,000 households) and local universities, hospitals, and restaurants in neighboring areas. Meanwhile, 1 kg. package of rice will be promoted to general consumers outside Banlad so as to introduce the concept and business model of IBM as a tool to encourage smallholder farmers and inclusive growth in Thailand.

Thong Thong Yangyoun Community Group, Supunburi Province

In the first year of project, 31 farmers have been upgraded in terms of functions, process, and products through the process of seven learning activities. The comparative assessments has shown improved performance in terms of environmental awareness, business vision / Thailand 4.0, production planning technique, sustainable development practice, branding and managerial skills, as well as fair-trade and value chain development. Meanwhile, the assessment of eco-system supporting the IBM adoption in this case reflected the need to uplift administrative capacities of this enterprise in order to enhance participation and engage more in business development through IBM approach.

To enable further development based on IBM, we formulated a strategic direction of “driving the community enterprise towards organic farming and better livelihoods and sustainable community development”. The strategies to achieve this goal include 1) creating mechanism to develop capabilities among famer-members towards organic production (Smart Farmers) 2) implementing IBM development plan for rice sector together with strategic partners in public and private partners 3) implementing action plan for enhancing value creation of commodity and processed products developed by wife-groups in the Tung Thong neighborhood areas.

This case study of IBM Rice was preceded in parallel with market trial activities, organized by Kasetsart University’s Market for Community-Support Agriculture Project and KU Food Market, and interactions with customers provide deeper demand information for IBM rice project to redesign the products in line with customers’ preferences. Further, information received from the market trials were also utilized by the project of Color Rice and
Riceberry Packaging Development Project, thereby helping the IBM rice to improve its package as well. Besides, overall results of consumer survey revealed that target customers in the university were satisfied with the pilot products in levels of high-very high satisfaction.

With regard to future development of IBM, this case study showed that restructuring and upgrading of administrative functions did help TungThong. CE to take in and implement IBM project. Other key factors were to form strategy working group as a core team to convince and coordinate with other farmer-members, and to set up a learning center on IBM at TungThong. CE as a forum to discuss and absorb IBM practice. In addition, to expand product variety from rice to processed product, we encouraged wife-groups to produce fried-banana snack and sell them through online application. This activity, among a set of technical, managerial, and market trainings, was found to be an effective tool to engage more farmers to join IBM rice project due to their wives have been convinced, thereby drawing more attention and participation from rice farmers as well.

**KEY RESEARCH FINDINGS AND RECOMMENDATIONS**

The global agenda of sustainable development leads the international community to achieve the SDGs, and IBM is one of a collective efforts promoted in many global fora. Adoption of IBM has shown benefits not only for large and SME firms but also farmer organizations that are capable to make use of this new practice. Although cooperatives and community enterprises may apply IBM into their ongoing business operation, diffusion of this innovation for farmer organization in Thailand is not straightforward and thus required supporting system. Coordination mechanism is needed to connect related stakeholders and create trust for partnership among parties from upstream to downstream of rice value chains as well as public actor supporting along the chain. Such coordination should also be linked with partners in target market as well so as to gain market insights and requirements in terms of food safety and standards. Based on these findings, a key recommendation is to develop a central unit or platform for sharing knowledge and information, as well as sharing resources and budget from various parties with particular specializations. The IBM Development Platform should place emphasis on following tasks 1) providing three dimensions of learning for smallholder farmers to upgrade their capabilities in all aspects 2) facilitate value chain development process 3) connecting and encouraging trust and collaboration among multi-stakeholders in order to realize the same goals.

Despite the need of the Platform, one concern commonly raised during the focus groups is fragmented support from governmental agencies and this also results in time-consumed for farmer organizations and farmer-members to participate while taking care of their farming activities. Therefore, integrated programme and dialogue with local people should be conducted in accordance with their demand and also with target markets. In addition to the platform creation, much policy issues could be derived from case studies in order to mitigate existing constraints as follows:

- Smallholder farmers (except community leaders) often lack of experience in modern agri-business, entrepreneurial mindset, and managerial skills. To facilitate adoption of IBM by farmer organizations, these internal characteristics of participants need to be upgraded in order to prepare them for business development, value creation, and upgrading process.
- Farmer organizations normally use conventional channels to distribute and market their commodities and products. This is based on the traditional perception of farmer organization to separate trading function from production activities, and allow trading firms to reap more benefits from their produce. Also, farmer organizations may have to invest in trade and logistics infrastructures (e.g. silo, dry field), as well as capital to finance their purchasing/bargaining power and distribution costs. A limited number of farmer organizations that are capable of adopting IBM should thus be selected and supported taking into account their readiness.
- Technological transfer and product innovation will be helpful for zero-waste management of agricultural supplies and the problem of contract-farming in which some buyers cannot accept all of the produce from farmer-members. IBM adoption by farmer organizations should thus be developed in parallel with product innovation together with knowledge/technical partners.
- Regional branding needs a strong effort from farmer-members to produce based on the same quality and standards with consistent and timely delivery. A majority of farmers’ organizations in Thailand seem to have a lack of governing system to control such collective production, resulting in weaker good will to create a common brand or to collectively respond to upcoming demand trend, thereby limiting their ability to engage in IBM and competition in the markets.
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